

**MWRA EMPLOYEES' RETIREMENT BOARD SPECIAL MEETING**

**AGENDA**

**Thursday, September 28, 2023 10:00 a.m.  
MWRA, 2 Griffin Way  
Chelsea, MA 02150**

Item 1 10:00 a.m. Meeting called to order

**NEW BUSINESS**

**Manager Due Diligence Presentations**

Item 2 10:00 a.m. Lord Abbett – Kewjin Yuoh and Gregory Balewicz

Item 3 10:10 a.m. SEG Baxter Street – Kerry Dempsey and Matt Pickering

Item 4 10:20 a.m. Corbin – Carrie Napoletano and Craig Bergstrom

Item 5 10:30 a.m. PRIM – Francesco Daniele

Item 6 10:40 a.m. UBS – Kevin Zychowski

Item 7 10:50 a.m. Schroder International – Karim El Nokali and John Gallagher

Item 8 11:00 a.m. Coho Partners, Ltd. – Wayne LeSage

Item 9 11:10 a.m. ABS – Tommy Kelley and Natascha Williams

Item 10 11:20 a.m. CarVal Investors – Kerry Fauver

Item 11 11:30 a.m. Park Square Capital – Matthias Alt, Tucker Bryan, and Jason Oberg

Item 12 11:40 a.m. Cerberus – Keith Chernoff and Chris Schiermbock

Item 13 11:50 a.m. Alcentra – Nina Moore

Item 14 12:00 p.m. HarbourVest – Maryellen Doyle and David Krauser

Item 15 12:10 p.m. Apogem Capital (Private Advisors) – Julia Seelye and Bryan Pendleton

Item 16 12:20 p.m. Hamilton Lane – Tim D’Arcy and Chelsea Larsen

Item 17 Custody Search Discussion – VOTE

a) Updated Custody Pricing Worksheet – State Street

b) Updated Custody Pricing Worksheet – Wilmington Trust

**The Board reserves the right to consider items on the agenda out of order. The listing of items is those reasonably anticipated by the Chair to be discussed received at least forty-eight (48) hours prior to the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law. Items identified for discussion in Executive Session may be conducted in open session, in addition to, or in lieu of discussion in Executive Session.**

**Date of next scheduled Retirement Board meeting is Thursday, October 26, 2023, 10:00 a.m., Chelsea**



**Firm:** Lord, Abbett & Co. LLC

**Strategy/Product:** Lord Abbett Core Fixed Income Strategy

**Client:** MWRA Employee's Retirement System

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

##### **1. Have there been any changes in ownership or management in the past year?**

As a registered investment advisor, Lord Abbett discloses certain ranges of ownership interests in our Form ADV, which has been included as *Attachment I*. From time to time, individual ownership interest levels may be adjusted, however, other than ranges in our Form ADV, we do not disclose specific ownership interest levels. The information included herein does not include former Partners or their spouses or other beneficiaries who maintain an ownership interest.

Please see below for the changes to management in the past year.

Effective September 6, 2023, Randy Stuzin, joined the firm as Partner, Chief Legal Officer. In this role, and as the successor of Lawrence Stoller, Partner, General Counsel, Mr. Stuzin will be responsible for the firm's global Legal and Compliance functions. Last year, Mr. Stoller announced his intention to retire. We are thoughtful about succession planning and business continuity to ensure a seamless transition of leadership. Mr. Stuzin reports to Douglas Sieg, Managing Partner and CEO.

Effective March 27, 2023, Mary Ann Picciotto, Managing Director was appointed Global Chief Compliance Officer of Lord Abbett. In April, she was appointed Chief Compliance Officer of the Lord Abbett Family of Mutual Funds. Joseph M. McGill, Partner, the former Chief Compliance Officer of the firm and the Funds retired from the firm in the second quarter of 2023.

Effective December 31, 2022, Stacy Allen, Partner, Chief Risk Officer, retired after almost 20 years with Lord Abbett. In addition, Alec Crawford, Former Partner and Chief Investment Risk Officer, retired effective December 31<sup>st</sup>, 2022. Kate Orozco,



Managing Director, Head of Enterprise Risk Management, will continue to oversee enterprise risk, which includes operational, reputational, strategic, and third-party risk management. Ms. Orozco reports directly to Douglas Sieg, Managing Partner.

Effective October 1, 2022, Thomas Malone, Partner, Partner, Co-Head of Client Services, retired from the firm after 30 years of service. As a result, Patrick Browne, Partner, assumed the role of Head of Client Services, having previously served as Co-Head with Mr. Malone. Mr. Browne reports directly to Douglas B. Sieg, CEO and Managing Partner.

## 2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

Please refer to the table below for the requested information on the Firm:

Year:	Total AUM (\$ Billions)	Total Net Flows <sup>5</sup> (\$ Billions)	Accounts Gained/Lost <sup>6</sup>
August 31, 2023	\$190.0 <sup>1</sup>	(\$9.58)	6/5
2022	\$194.0 <sup>2</sup>	(\$32.98)	16/11
2021	\$255.3 <sup>3</sup>	\$24.6	28/9
2020	\$223.7 <sup>3</sup>	\$6.4	9/13
2019	\$205.2 <sup>3</sup>	\$27.1	5/10
2018	\$162.4 <sup>4</sup>	\$9.9	22/14

<sup>1</sup>Includes \$1.0 billion for which Lord Abbett provides investment models to managed account sponsors.

<sup>2</sup>Includes \$1.1 billion for which Lord Abbett provides investment models to managed account sponsors.

<sup>3</sup>Includes \$1.2 billion for which Lord Abbett provides investment models to managed account sponsors.

<sup>4</sup>Includes \$1.3 billion for which Lord Abbett provides investment models to managed account sponsors.

<sup>5</sup>Flows exclude exchanges between funds.

<sup>6</sup>Reflects institutional accounts: institutional separate accounts, sub-advised, Private Funds, Collective Investment Trusts ("CITs"). Due to omnibus reporting we often do not have transparency into individual account holders in pooled vehicles.

## 3. Have there been any new or discontinued products in the past year?

Yes, there have new product launches and closures in past year.

In June 2023, we launched the Special Situations Income Offshore Access Fund. The vehicle is a Cayman-domiciled feeder fund into our existing, domestic Special Situations Income Fund, designed for our offshore client base. The fund will seek to deliver high current income and total return through a flexible strategy investing across a broad range of global fixed income sectors. The Fund is managed by Todd Soloman, Portfolio Manager, Eric Kang, Managing Director, Portfolio Manager and Kearney Posner, CFA, Partner, Portfolio Manager.

In May of 2023, we launched the Investment Grade Floating Rate Fund. The Fund seeks a high level of income by investing primarily in floating or adjustable rate



instruments that are rated investment grade, including, but not limited to: collateralized loan obligations (CLOs), asset-backed securities (ABS), floating rate corporate debt of U.S. and non-U.S. issuers, mortgage-backed securities (MBS), commercial mortgage-backed securities (CMBS), and securities issued by or guaranteed by the U.S. Government. The Fund is managed by Adam Castle, CFA, Partner, Portfolio Manager, Yoana Koleva, CFA, Partner, Portfolio Manager, Harris Trifon, Managing Director, Portfolio Manager, and Robert A. Lee, Partner, Co-Head of Taxable Fixed Income.

Additionally in the second quarter, we launched two new funds for offshore investors, both of which have been structured as UCITS vehicles. The Lord Abbett Global Funds- Short Duration High Yield Fund seeks to deliver high current income and the opportunity for capital appreciation by investing in high yield debt securities. The Fund is managed by Steven F. Rocco, CFA, Partner, Co-Head of Taxable Fixed Income, Christopher Gizzo, CFA, Partner, Deputy Director of Leveraged Credit, and Karen Gunnerson, Portfolio Manager. Furthermore, the Lord Abbett Global Funds- Global Health Care Fund, which will seek to deliver long-term growth of capital by investing primarily in stocks of companies within the health care sector. The Fund is also classified as Article 8 under SFDR, as it will promote social characteristics by investing in health care and well-being themes. The Fund will be managed by Matthew DeCicco, CFA, Partner, Director of Equities, Devesh Karandikar, Portfolio Manager, Heidi Lawrence, Portfolio Manager, and Samantha Shevins, Managing Director, Portfolio Manager.

In October 2022, the Developing Growth Fund was reopened to new investors, as the Fund had capacity to accommodate new investors with assets well below peak levels. The strategy's total capacity will continue to be evaluated on an ongoing basis through diligent monitoring of a variety of factors to ensure that the investment process may be executed successfully. As of December 31, 2022, the Series Fund - Developing Growth Portfolio remains closed to new investors.

#### **4. Are any products capacity constrained?**

Lord Abbett assesses capacity on an ongoing basis based on the investment universe and asset inflows and outflows, employing a consistent framework for determining when to close or re-open a strategy. Our Investment Risk Management Team uses quantitative metrics to determine thresholds and appropriate ownership levels of securities across portfolios. This team then collaborates with the respective portfolio management teams and their dedicated traders to understand unique characteristics of their processes, trading practices and patterns, client and prospectus guidelines, and empirical data over long periods of time related to the asset class of the strategy. The goal is to have a disciplined process for capacity management, with flexibility to adapt this process to each asset class and its distinct characteristics.



We believe that planning for the long-term growth of our business must be aligned with the long-term investment expectations of our clients. Success in our investment strategies can create the need to close them to new investors, a particular subset of investors, or certain investment platforms in order to achieve this balance, particularly in asset classes that are more capacity-constrained, such as small-cap and micro-cap equities. Over our long history, we have demonstrated a commitment to this principle and closed a number of our investment strategies, including small-cap and micro-cap equity strategies. In these circumstances we plan for strategy closings with a focus on doing so well before any headwinds could arise with regards to alpha generation or liquidity constraints. As such, we will typically implement a “soft close” for an equity strategy well below the point of full capacity. A soft close still allows existing investors in a strategy to rebalance into or add to an existing position. Currently, our Micro Cap Growth Fund is closed to new investors. We do not believe that current asset levels for any Funds, including our small-cap and micro-cap equity products, constrain our ability to execute upon investment strategies.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

Lord, Abbett & Co. LLC is not currently the subject of material regulatory, compliance or litigation issues.

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

We are firmly committed to diversity and inclusion in the workplace. At Lord Abbett, we believe our employees are our greatest asset. As an independent firm, we value the breadth of insight and expertise made possible by a diverse culture. Our belief in the power of diverse perspectives guides our efforts to engage, develop, and retain a wide array of outstanding talent. We are committed to providing each individual with the resources and tools they need to fulfill their potential, deliver an exceptional client experience, make a positive long-term impact on our firm, and contribute to the community in which we live and work.

We conduct mandatory Respectful Workplace training designed to prevent harassment and discrimination, consistent with our core values and applicable law. This training addresses standards of behavior under our culture as well as prohibited conduct such as harassment, discrimination, and retaliation under state and federal law. To promote leadership accountability for diversity, equity, and inclusion, dedicated training for leaders also addresses the special role they play in preventing and ensuring appropriate handling of incidents of harassment and discrimination. We also conduct LGBTQ allyship training in partnership with PFLAG.



We established employee-led Inclusion Networks, which are essential in bringing people together to deepen the sense of belonging and promote an inclusive work environment. The chairs, executive sponsors, and allies of our inclusion networks serve on our Inclusion Council, which fosters cross-transparency, alignment, and active collaboration to support an engaged, thriving community of diverse talent. The council promotes inclusion through heritage month programming, allyship education, career development initiatives, community engagement, and other efforts.

To ensure we share our career opportunities as broadly as possible, we actively market our opportunities across a diverse array of platforms, including targeted career sites for students and alumni from all-women's colleges. We have a dedicated Talent Acquisition team with extensive asset management recruiting experience across disciplines. As needed, we deploy search firms to further supplement our internal resources.

In our principles-led environment, our people are empowered to make arrangements and adjust schedules to suit both their responsibilities at home and at work. This could include using collaboration tools and technology to work flexibility, leveraging benefits like homework connection to identify tutors or support at times of need as well as using our physical space with intention. In addition, we offer paid parental leave to support the ability of new parents to care for and bond with their children.

We also have established diversity targets and KPIs designed to promote accountability for diversity outcomes and identify levers for improvement.

### **Portfolio Management Team**

**1. Have there been any changes in the portfolio management team in the past year?**

No, there have not been any changes made to the portfolio management team in the past year.

**2. Are there any expected changes to the team in the future (planned additions or departures)?**

We do envision periodic additions and departures of team members. There are currently no expected or planned departures to the taxable fixed income team. On the occasion that a portfolio manager should leave the firm, we would continue to manage portfolios utilizing the same disciplined investment style and an assessment of resources would be undertaken to determine the investment team's needs. We continually assess staffing resources to ensure that we adequately expand to meet our clients' needs.



## Process

### 1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

There have not been significant changes in the areas listed above during the past year.

## Philosophy

### 1. Describe recent changes in investment philosophy, if any.

There have been no recent changes in the investment philosophy.

## Portfolio

### 1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please refer to *Attachment II* for portfolio holdings and *Attachment III* for geographic exposure. All other information will be included in the meeting presentation.

### 2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

Please refer to the table below for the requested information on the Core Fixed Income strategy:

Year:	Total AUM (\$ millions)	Total Net Flows <sup>1</sup> (\$ millions)	Accounts Gained/Lost <sup>2</sup>
August 31, 2023	\$4,811.6	\$821.0	1/0
2022	\$3,883.1	\$42.0	0/0
2021	\$3,908.2	\$274.1	3/1
2020	\$3,613.8	\$241.8	1/1
2019	\$2,955.8	\$215.4	0/0
2018	\$2,390.3	(\$1,767.9)	1/1
2017	\$4,268.9	(\$413.6)	3/2

<sup>1</sup>Flows exclude exchanges between funds.

<sup>2</sup>Reflects institutional account: institutional separate accounts, sub-advised, Private Funds, and Collective Investment Trusts ("CITs"). Due to omnibus reporting we often do not have transparency into individual account holders in pooled vehicles.





**3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.**

Please refer to the tables below for the requested investor concentration and AUM breakdown attributable to the top five investors of the Core Fixed Income strategy as of August 31, 2023:

<b>Investor Concentration</b>	<b>% of AUM</b>
Mutual Fund	61.41%
Taft Hartley	26.93%
Hospital	3.87%
Commingled Investment Trust ("CIT")	2.79%
Insurance	0.67%
Public	0.59%
Corporate	0.26%
Retirement Platform	3.48%

<b>Top 5 Investors*</b>	<b>% of AUM</b>
Institutional Investor 1 (Taft Hartley)	11.56%
Institutional Investor 2 (Taft Hartley)	3.12%
Institutional Investor 3 (Hospital)	2.01%
Institutional Investor 4 (Taft Hartley)	1.86%
Institutional Investor 5 (Hospital)	1.85%

*\*Reflects institutional separate accounts. Due to omnibus reporting we often do not have transparency into individual account holders in pooled vehicles.*

### **Performance / Market Outlook**

**1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

Please refer to the meeting presentation for requested performance.

**2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

Over the past 3-year period in a post-COVID market environment which has included heightened uncertainty and interest rate volatility, the strategy has outperformed the benchmark by over 40 bps average annualized. This outperformance has been driven by the strategy's flexible, multi-sector approach.



We strive to provide a product that can adapt to changing market conditions, but there are certain environments where our strategy may be more in favor than others. As a duration-neutral strategy, we do not seek to add value by interest rate anticipation. Instead, we follow a disciplined approach of model-informed sector rotation, research-driven security selection, and rigorous risk management in an effort to generate consistent risk-adjusted returns relative to the benchmark. Our strategy tends to be in favor during periods of low interest rate volatility. As we typically emphasize credit sectors, this strategy will tend to outperform during periods of narrowing credit spreads and improving economic growth. Although we strive to rotate into sectors that may perform well in an economic slowdown, the strategy may be challenged during periods of widening credit spreads, typically experienced during environments of economic contraction or recession. While there may be periods where this strategy is challenged, this process has led to consistent returns relative to the benchmark over full market cycles.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

While there are still challenges in the global economic backdrop, including U.S. Federal Reserve (Fed) policy and economic uncertainty, the opportunity set for fixed income is compelling today. Higher bond yields mean higher return expectations across the board.

Strong balance sheets and attractive carry make the investment-grade corporates segment look particularly attractive in the face of broader economic uncertainty. Yields heading into the second half of 2023 are at post-global financial crisis (GFC) highs, and the regional banking crisis appears mostly contained. However, we advise a cautious approach overall, with a particular emphasis on so-called "recession tails." We prefer high-quality senior financials, regulated utilities issuing debt at a discount, and disciplined energy companies.

Consumer credit, via the ABS market, is buoyed by strong loan origination fundamentals and a generally healthy U.S. consumer, with a tight labor market serving as a strong tailwind. Agency mortgage-backed securities (MBS) have repriced following Fed balance sheet reduction and some regional bank liquidations, resulting in unusually wide spread levels that appear to be cheap compared to other high-quality asset classes. CMBS face substantially higher defaults in some stressed areas such as office space, but that stress has resulted in widespread underperformance, creating some compelling opportunities with high levels of dispersion.

Overall, while there is still considerable uncertainty about the future path of the Fed, and whether they can engineer a soft landing, the cushion provided by the highest yields since before the financial crisis, combined with solid overall credit



fundamentals, makes fixed income a particularly compelling asset class at present, with attractive overall risk / reward characteristics.

Based on this outlook, we continue to maintain a portfolio that is both up-in-quality and up-in-liquidity.

- 4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

Please refer to the meeting presentation for the requested account history, contributions, distributions, and current value.

# Massachusetts Water Resources Authority Employee Retirement System

October 5<sup>th</sup>, 2023



LORD ABBETT®

The information contained herein is being provided at your request and is intended solely for your review of the account and may not be used for any other purposes.



# Relationship Overview





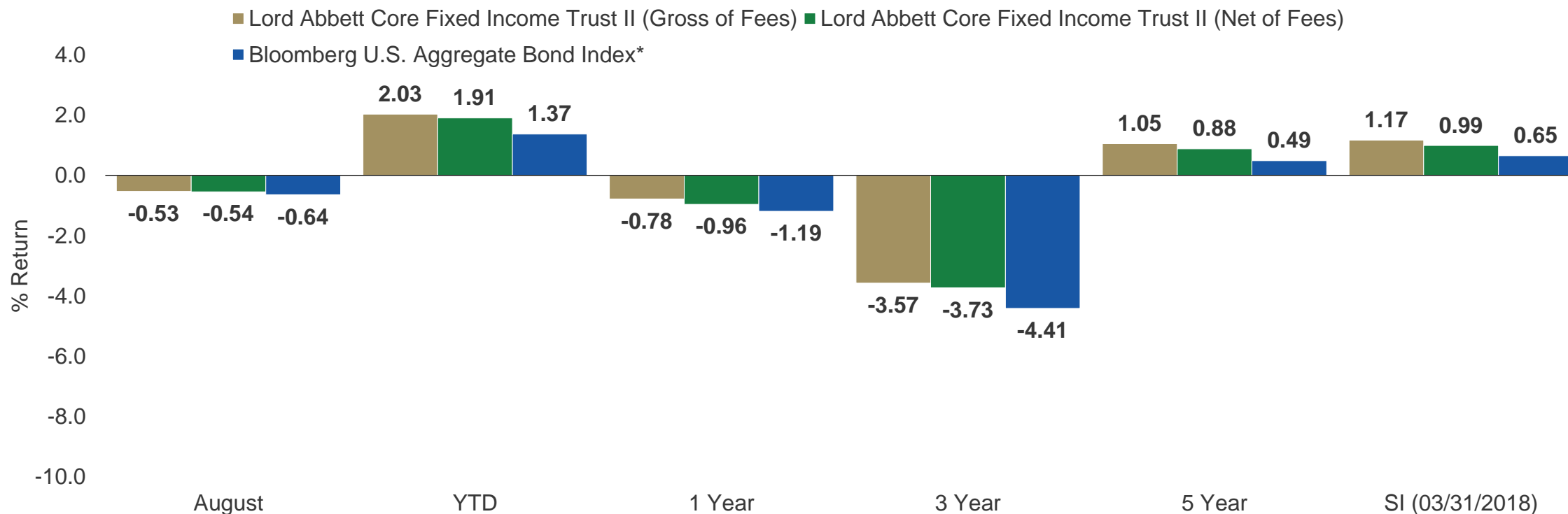
# Investment Summary

<b>Massachusetts Water Resources Authority Employee Retirement System</b>	
<b>Investment Strategy</b>	<b>Core Fixed Income</b>
Initial Funding March 29, 2018	\$10,148,571
Contributions	8/15/2018: \$2,000,000 6/04/2018: \$3,500,000 11/19/2019: \$6,000,000 7/02/2020: \$2,000,000 11/24/2020: \$3,000,000 9/02/2021: \$7,000,000 10/07/2021: \$5,000,000 9/09/2022: \$2,000,000 7/11/2022: \$2,000,000
Withdrawals	3/23/2020: (\$3,000,000) 11/28/2022: (\$1,000,000)
Market Value August 31, 2023	\$36,908,941.55
Appreciation/Depreciation	\$26,760,370.55



# Average Annual Rates of Return

(AS OF 08/31/2023)

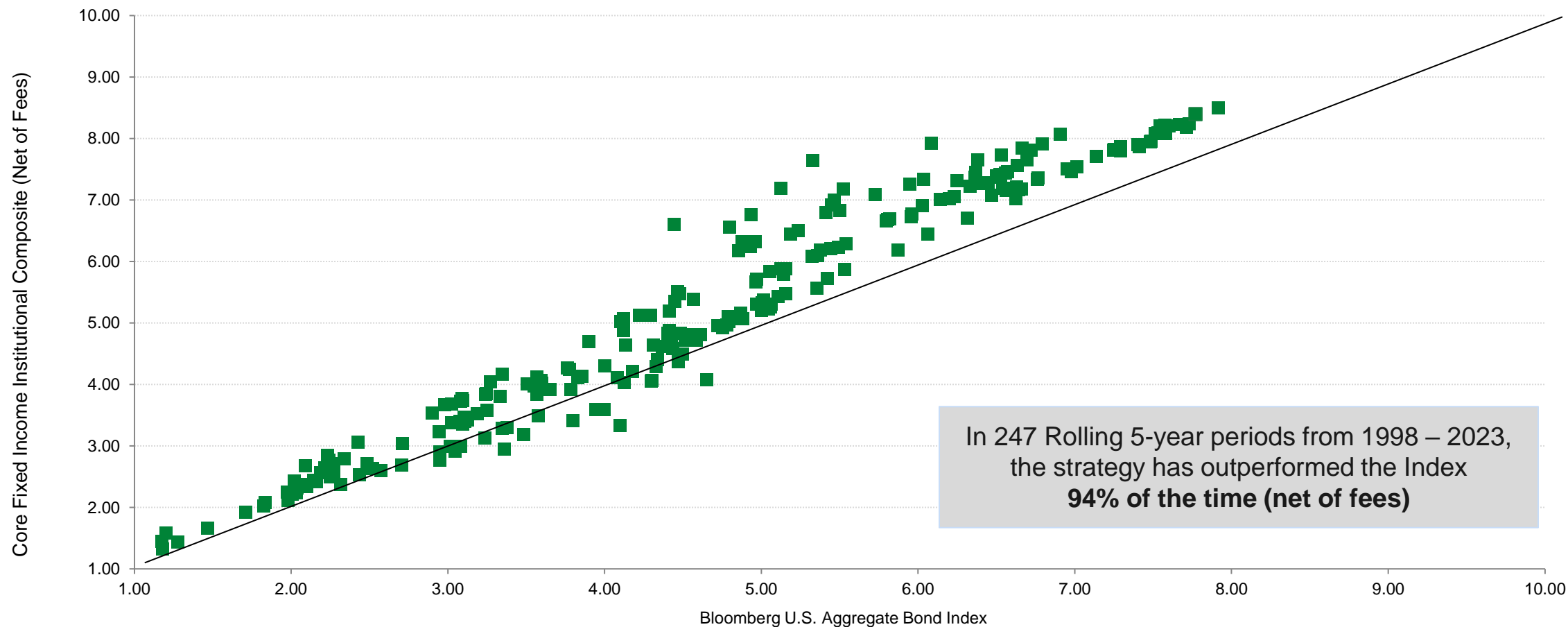


**Past performance is not a reliable indicator or guarantee of future results.** Returns for periods of less than one year are not annualized. Net of fees performance reflects the deduction of the highest applicable fee that would be charged based on the fee schedule for this Trust without the benefit of breakpoints.\*Source: Bloomberg Index Services Limited.



# Core Fixed Income: Consistent Returns vs. Index

EXCESS RETURNS VS. BLOOMBERG U.S. AGGREGATE BOND INDEX\*  
(ROLLING 5 YEAR RETURNS: 01/01/1998 – 06/30/2023)



**Past performance is not a reliable indicator or guarantee of future results.** Net of fees performance of the Core Fixed Income Institutional Composite reflects the deduction of the highest applicable management fee ("Model Net Fee") that would be charged based on the fee schedule appropriate to a typical institutional separate account investor for this mandate without the benefit of breakpoints. Please be advised that the composite may include other investment products that are subject to management fees that are inapplicable to a typical institutional separate account investor but are in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be lower, than the Model Net Fee performance. However, such Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to a typical institutional separate account investor to the gross performance of the composite. Please refer to the GIPS Report in the Appendix for important performance information.

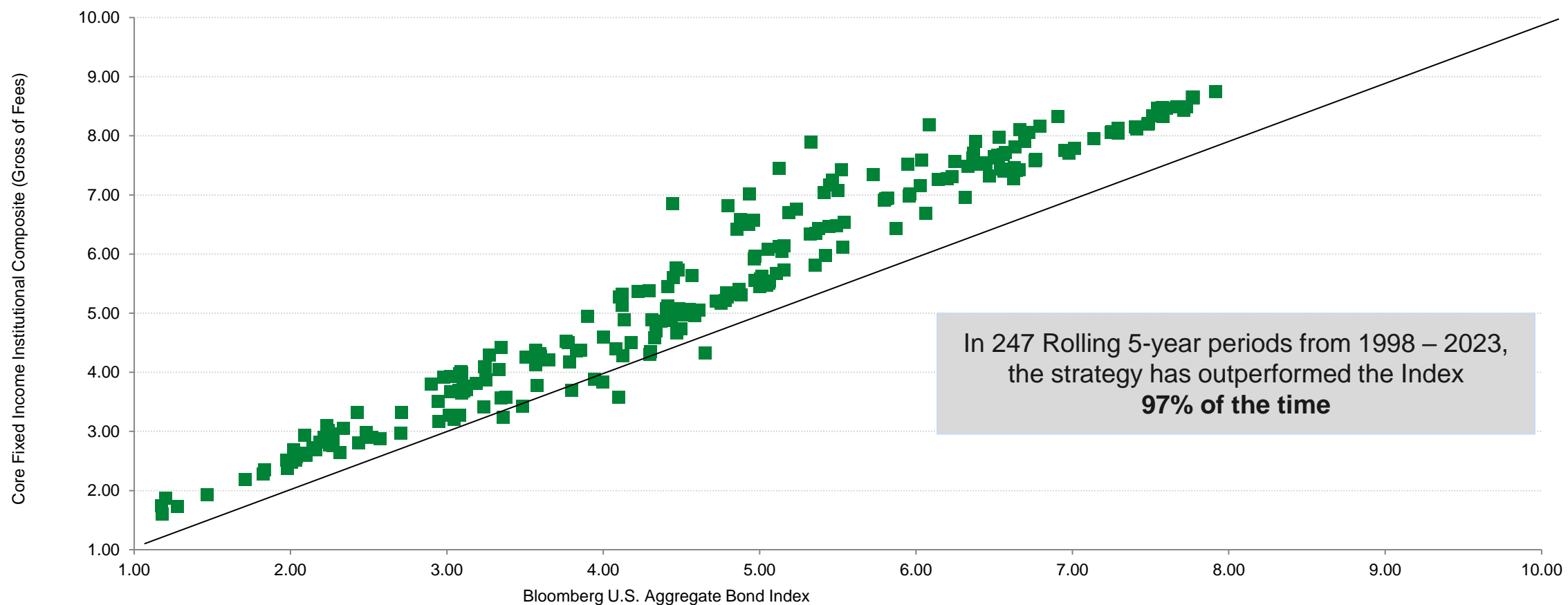
\*Source: Bloomberg Index Services Limited. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment.





# Core Fixed Income: Consistent Returns vs. Index

EXCESS RETURNS VS. BLOOMBERG U.S. AGGREGATE BOND INDEX\*  
(ROLLING 5 YEAR RETURNS: 01/01/1998 – 06/30/2023)

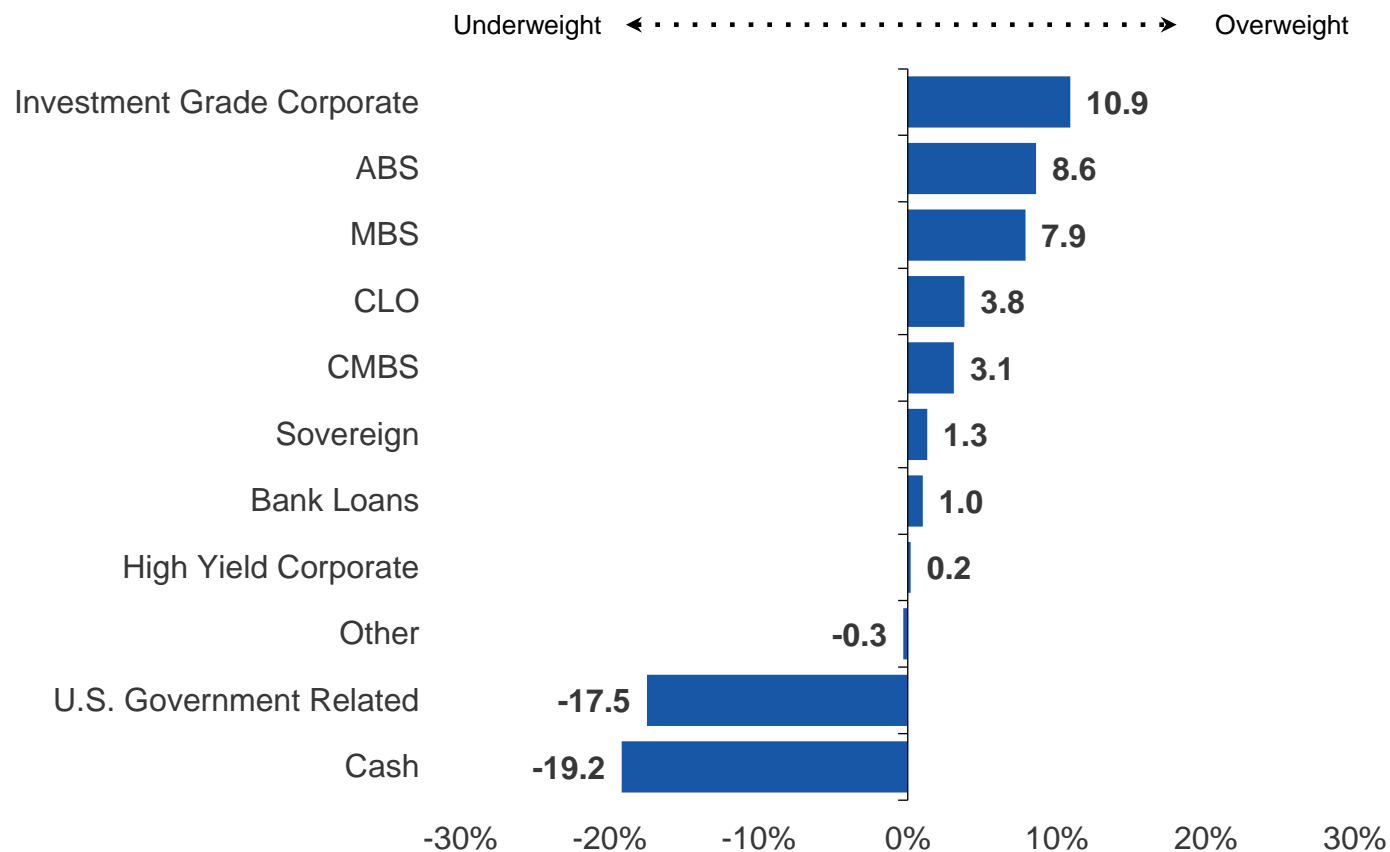


**Past performance is not a reliable indicator or guarantee of future results.** Please refer to the GIPS Report in the Appendix for important performance information, including the effect of fees on performance. \*Source: Bloomberg Index Services Limited.



# Sector Allocation

(AS OF 08/31/2023)



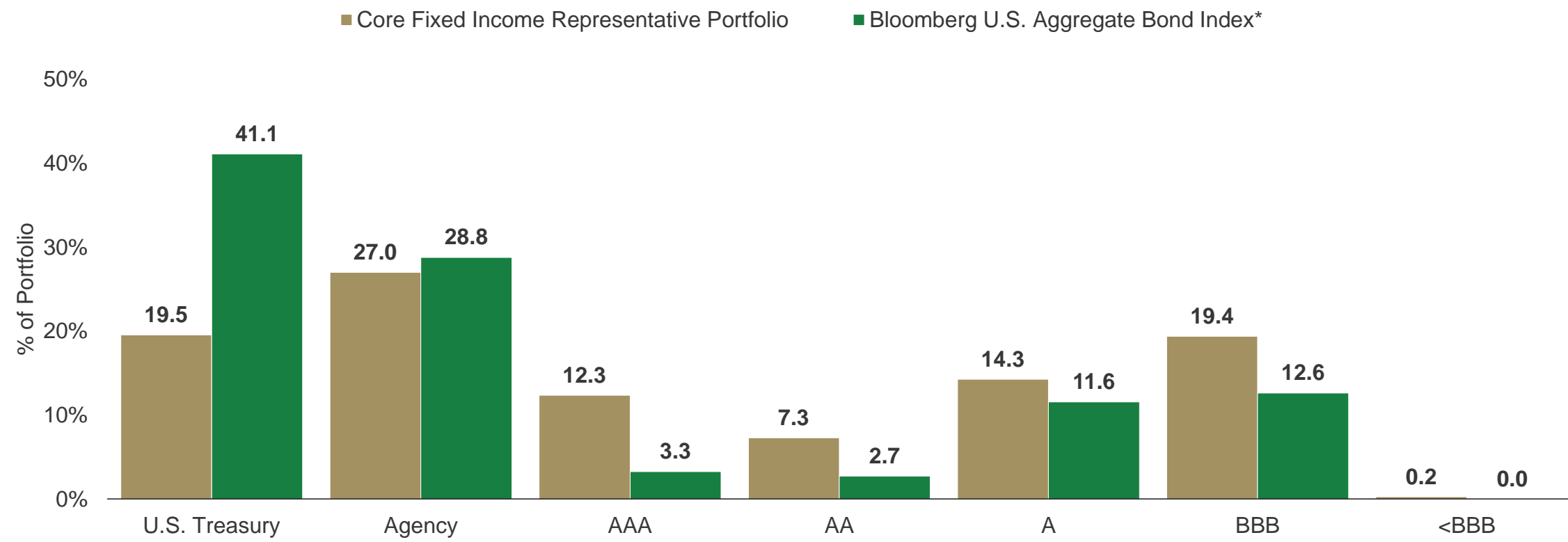
Core Fixed Income Representative Portfolio	Bloomberg U.S. Aggregate Bond Index*
35.7%	24.8%
9.1%	0.5%
34.8%	26.9%
3.8%	0.0%
4.8%	1.7%
4.7%	3.4%
1.0%	0.0%
0.2%	0.0%
0.3%	0.6%
24.7%	42.2%
-19.2%	0.0%

Source: FactSet. Please see Appendix for information "About FactSet," including information about Other securities. Sectors are based upon GICS classifications; sectors may include many industries. Sector allocations exclude cash and therefore total allocations may not equal 100%. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for investment. The portfolio is actively managed and sector allocations will vary over time. "Other" may include municipal bonds and non-index holdings. Due to the fact that we report allocations on a trade date and not a settlement date basis, cash may appear negative as a result of forward settling instruments such as "To Be Announced" mortgage-backed securities. Totals may not equal 100% due to rounding. \*Source: Bloomberg Index Services Limited.



# Credit Quality Distribution

(AS OF 08/31/2023)

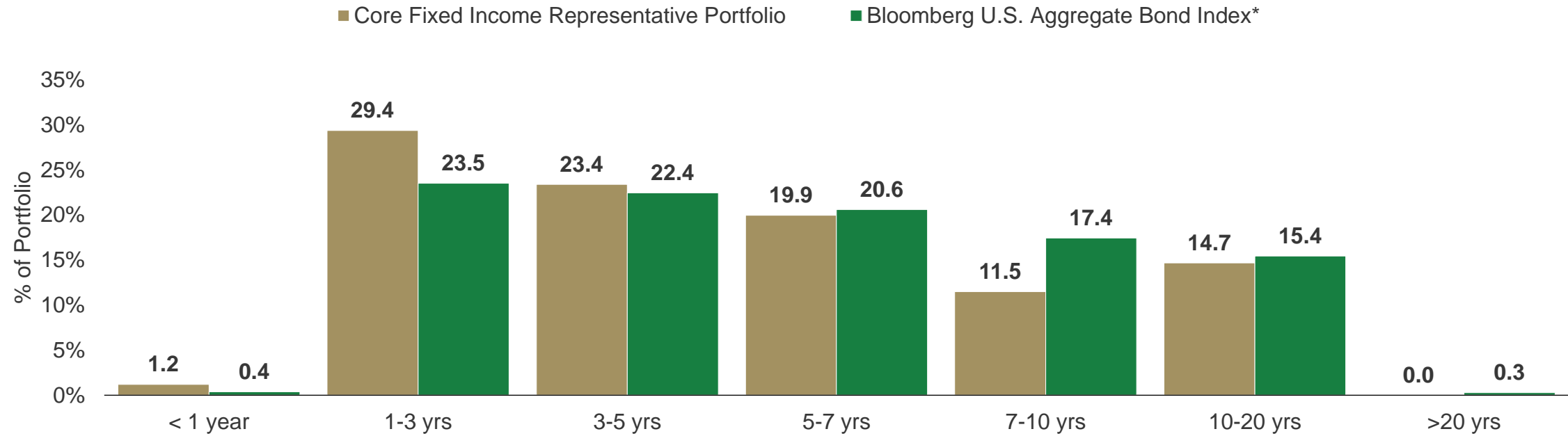


Ratings (other than U.S. Treasury securities or securities issued or backed by U.S. agencies) provided by Standard & Poor's, Moody's, and Fitch. For certain securities that are not rated by any of these three agencies, credit ratings from other agencies may be used. Where the rating agencies rate a security differently, Lord Abbett uses the median, but if there are only two ratings, the lower rating is used. A portion of the portfolio's securities may not be rated. Breakdown is not an S&P credit rating or an opinion of S&P as to the creditworthiness of such portfolio. \*Source: Bloomberg Index Services Limited.



# Duration Distribution

(AS OF 08/31/2023)



	Core Fixed Income Representative Portfolio	Bloomberg U.S. Aggregate Bond Index*
Average Life	8.9 Years	8.5 Years
Average Spread Duration	4.1 Years	3.7 Years
Average Effective Duration	6.1 Years	6.3 Years

Comparison of partial durations is a percentage of the segment partials relative to the sum of partials. Totals may not equal 100% due to rounding. The portfolio is actively managed and portfolio characteristics may change significantly over time. \*Source: Bloomberg Index Services Limited.



# Portfolio Characteristics

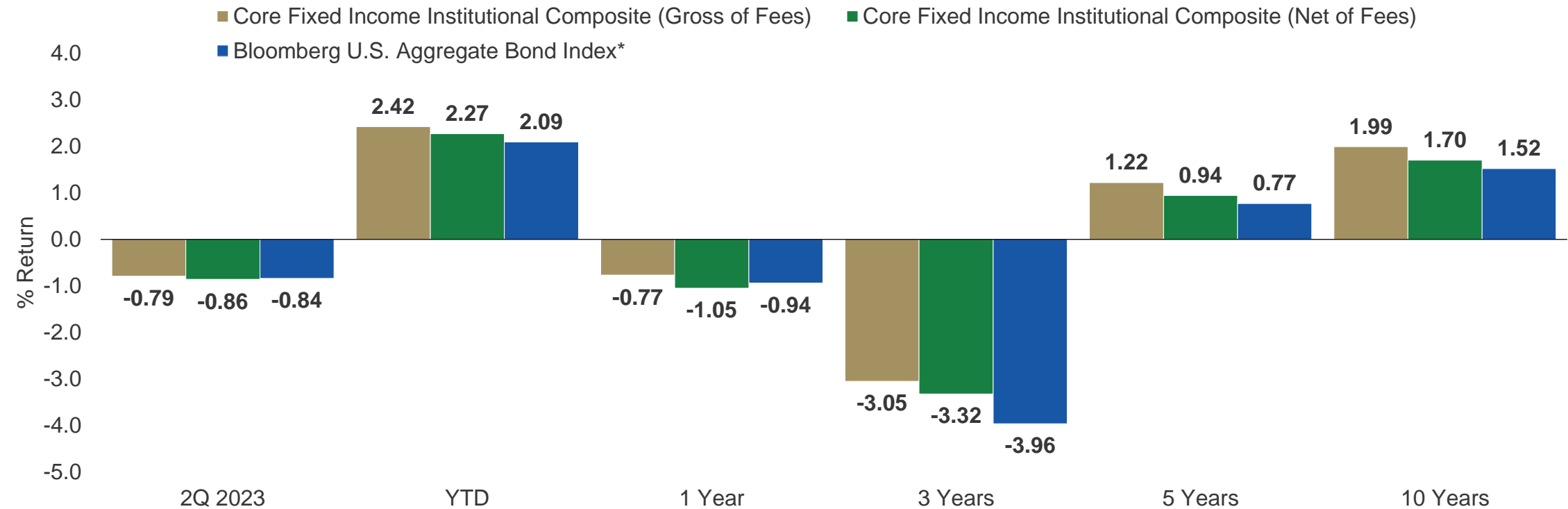
(AS OF 08/31/2023)

	Core Fixed Income Representative Portfolio	Bloomberg U.S. Aggregate Bond Index*
Average Coupon	4.2%	3.0%
Average Life	8.9 Years	8.5 Years
Average Maturity	8.9 Years	12.9 Years
Average Price	\$93.66	\$88.78
Average Spread Duration	4.1 Years	3.7 Years
Average Yield to Maturity	5.6%	5.0%
Average Effective Duration	6.1 Years	6.3 Years
Number of Issues	380	13,370



# Average Annual Rates of Return

(AS OF 06/30/2023)



**Past performance is not a reliable indicator or guarantee of future results.** Returns for periods of less than one year are not annualized. The gross performance shown does not reflect the deduction of investment advisory fees, but does reflect the deduction of any applicable transaction costs. Net of fees performance reflects the deduction of the highest applicable management fee ("Model Net Fee") that would be charged based on the fee schedule appropriate to a typical institutional separate account investor for this mandate without the benefit of breakpoints. Please be advised that the composite may include other investment products that are subject to management fees that are inapplicable to a typical institutional separate account investor but are in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be lower, than the Model Net Fee performance. However, such Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to a typical institutional separate account investor to the gross performance of the composite. \*Source: Bloomberg Index Services Limited. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment.



# Calendar Year Returns

	Core Fixed Income Institutional Composite (Gross of Fees)	Core Fixed Income Institutional Composite (Net of Fees)	Bloomberg U.S. Aggregate Bond Index*
2022	-13.07%	-13.31%	-13.01%
2021	-0.34%	-0.62%	-1.54%
2020	8.57%	8.27%	7.51%
2019	8.53%	8.23%	8.72%
2018	0.13%	-0.15%	0.01%
2017	4.10%	3.81%	3.54%
2016	3.32%	3.03%	2.65%
2015	0.15%	-0.12%	0.55%
2014	6.99%	6.68%	5.97%
2013	-1.35%	-1.64%	-2.02%

**Past performance is not a reliable indicator or guarantee of future results.** The gross performance shown does not reflect the deduction of investment advisory fees, but does reflect the deduction of transaction costs. Net of fees performance reflects the deduction of the highest applicable management fee ("Model Net Fee") that would be charged based on the fee schedule appropriate to a typical institutional separate account investor for this mandate without the benefit of breakpoints. Please be advised that the composite may include other investment products that are subject to management fees that are inapplicable to a typical institutional separate account investor but are in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be lower, than the Model Net Fee performance. However, such Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to a typical institutional separate account investor to the gross performance of the composite. Returns for periods of less than one year are not annualized. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment. \*Source: Bloomberg Index Services Limited.

# Relationship Team



<b>Massachusetts Water Resources Authority Employee Retirement System Relationship Team</b>	
For all client services inquiries, please email <a href="mailto:lordabbettclientservices@lordabbett.com">lordabbettclientservices@lordabbett.com</a>	
<b>Gregory Balewicz</b> Institutional Director, U.S. Institutional	<a href="mailto:gbalewicz@lordabbett.com">gbalewicz@lordabbett.com</a> T (201) 827-2470 C (508) 918-9992
<b>Timothy Poulin</b> Relationship Manager, U.S. Institutional	<a href="mailto:tpoulin@lordabbett.com">tpoulin@lordabbett.com</a> T (201) 827-2788
<b>Jennifer Gallagher</b> Client Service Specialist, U.S. Institutional	<a href="mailto:jgallagher@lordabbett.com">jgallagher@lordabbett.com</a> T (201) 827-2586
<b>Timothy Paulson</b> Investment Strategist	<a href="mailto:tpaulson@lordabbett.com">tpaulson@lordabbett.com</a> T (201) 827-2293
<b>Investment Team</b>	
<b>Robert Lee</b> Partner & Co-Head of Taxable Fixed Income	<b>Kewjin Yuoh</b> Partner & Portfolio Manager





# Investment Team and Process





# Experienced Investment Platform with Deep Domain Knowledge

**Robert A. Lee**  
Partner & Co-Head  
Taxable Fixed Income  
32 Years

**Steven F. Rocco, CFA**  
Partner & Co-Head  
Taxable Fixed Income  
22 Years

**Kewjin Yuoh**  
Partner & Portfolio Manager  
Investment Grade  
29 Years

**Harris Trifon**  
Managing Director &  
Portfolio Manager  
Real Estate Credit  
23 Years

**Andrew H. O'Brien, CFA**  
Partner & Portfolio Manager  
Corporates  
25 Years

**Christopher Gizzo, CFA**  
Partner & Deputy Director  
Leveraged Credit  
15 Years

**Giulio Martini**  
Partner & Director  
Strategic Asset Allocation  
38 Years

**Leah G. Traub, Ph.D.**  
Partner & Portfolio Manager  
Global Rates & Liquid Products  
22 Years

**Adam C. Castle, CFA**  
Partner & Portfolio Manager  
ABS  
15 Years

**Yoana Koleva, CFA**  
Partner & Portfolio Manager  
Corporates  
20 Years

**Kearney Posner, CFA**  
Partner & Portfolio Manager  
Bank Loans  
24 Years

**Mila Skulkina, CFA**  
Managing Director &  
Portfolio Manager  
Emerging Markets  
22 Years

## Global Rates

**Steven Zhou, CFA**  
Rates  
18 Years

**Zofia Koscielniak**  
Agency MBS  
13 Years

**Lana Hagenbuch**  
Agency MBS  
8 Years

## Convertibles

**Alan R. Kurtz**  
Managing Director  
Convertibles  
22 Years

**Jeremy Lehmann, CFA**  
Convertibles  
11 Years

## Securitized

**Loritta Cheng**  
ABS  
24 Years

**Peter Noel, CFA**  
CLO  
16 Years

**Jordan Kling, CFA**  
CMBS  
13 Years

**Thomas Pangia**  
CMBS  
12 Years

**Dillon Goad**  
CRE Credit  
10 Years

**Min Hua Mai**  
CMBS  
5 Years

**Aron Grufstedt**  
CLO  
18 Years

**Frank Zhi**  
RMBS  
14 Years

**Jessie Gong**  
Residential RE Credit  
12 Years

**Devin Hagens, CFA**  
ABS  
10 Years

**Taylor Harris, CFA**  
ABS  
6 Year

## Corporates

**Annika Lombardi**  
Managing Director  
European Corporates  
16 Years

**Gregory Benz, CFA**  
Corporates  
12 Years

**Ty Kern**  
Corporates  
11 Years

## Leveraged Credit

**Eric P. Kang**  
Managing Director  
Leveraged Credit  
24 Years

**Robert S. Clark, CFA**  
Multi-Sector  
26 Years

**Karen Gunnerson**  
High Yield  
13 Years

**Tony Graves, CFA**  
High Yield  
9 Years

**Todd Solomon**  
Special Situations  
27 Years

**Bridget E. Young**  
Bank Loans  
16 Years

**Elan Ariel, CFA**  
High Yield, Multi-Sector  
9 Years

**Alexander Green, CFA**  
Bank Loans  
8 Years

## Emerging Markets

**Matthew Claeson, CFA**  
Emerging Markets  
22 Years

**Shawn Yue**  
Emerging Markets  
12 Years

## Multi-Asset Strategies

**Jeffrey O. Herzog, Ph.D.**  
Managing Director  
Multi-Asset  
14 Years

**Jahiz Barlas, Ph.D.**  
Multi-Asset  
14 Years

## DATA-DRIVEN INSIGHTS & RISK MANAGEMENT

**17 Investment Professionals**  
16 Years Average

## GLOBAL TRADING

**10 Investment Professionals**  
14 Years Average

## GLOBAL CREDIT RESEARCH

**29 Investment Professionals**  
19 Years Average

80 Investment Professionals With an Average of 18 Years Industry Experience



# Investment Process

## Key Decisions



### KEY PEOPLE

- Portfolio Management
- Quantitative Research
- Risk Management
- Lead Portfolio Managers
- Portfolio Managers
- Sector Leaders
- Portfolio Managers
- Credit Analysts
- Sector Specialists

### PRIMARY INPUTS

- Risk / return analysis of asset class combinations
- Stress test and scenario analysis
- Economic and Market Environment
- Insights from Firm-wide Experts
- Fundamental Research View
- Assessment of Relative Value
- In-house Credit Research
- Credit Valuation Models

# Overall Portfolio Risk Allocation

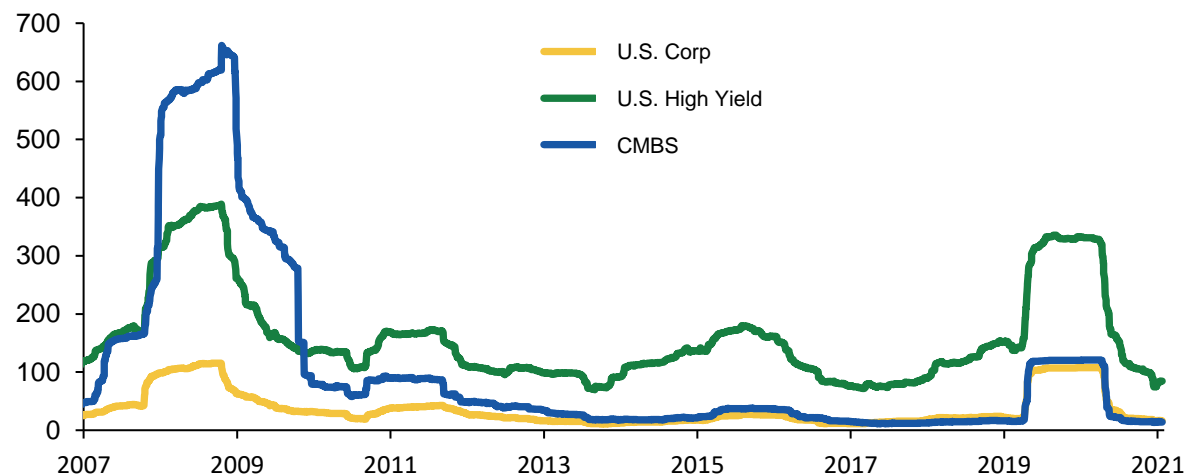
## Investment Process

How much risk?

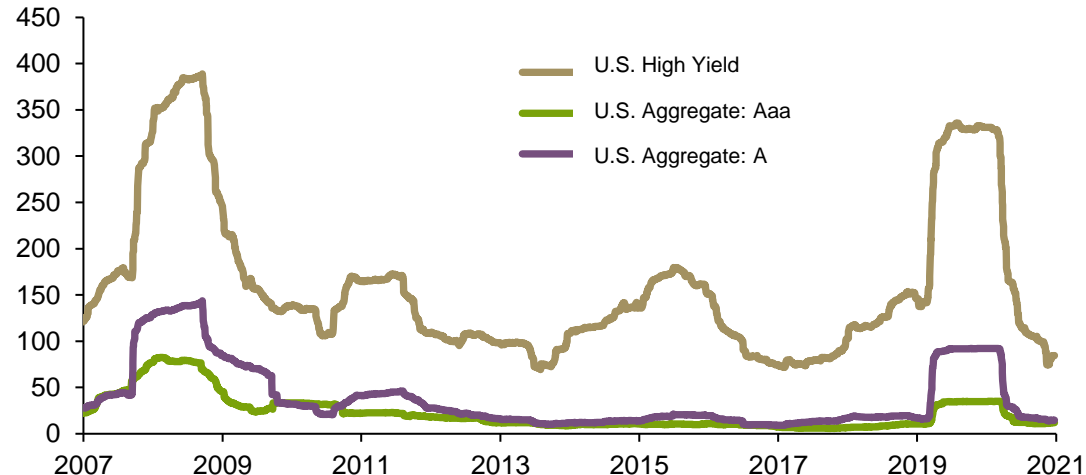
- **Effective Duration** is commonly used to estimate the price impact of rate movements
- **Spread Duration** estimates the price impact of a change in a bond's credit spread
- **Credit Adjusted Spread Duration** estimates a bond's responses to "generic" spread changes

### Major Historical drivers of spread volatility: Sector and Quality

Spread Volatility by Sector



Spread Volatility by Quality



Major drivers of spread volatility have been independent and have typically had stable ordering

Data as of 11/30/2021. The above data is based off the Bloomberg U.S. Corporate Index, Bloomberg U.S. High Yield, Bloomberg CMBS Index, Bloomberg U.S. Aggregate Aaa Index, Bloomberg U.S. Aggregate A Index respectively. For illustrative purposes only and is not meant to represent the characteristics of an actual portfolio managed by Lord Abbett. Does not constitute a recommendation nor investment advice, and should not be used as the basis for any investment decision. Source: Lord Abbett and Bloomberg Index Services Limited.

# Overall Portfolio Risk Allocation

## Investment Process



### Credit Adjusted Spread Duration



- Adjusts for relative spread volatility of sectors and ratings
- Allows for comparisons across sectors and asset classes

### Spread Volatility Betas

Sector Beta		Quality Beta	
MBS	0.39	AAA	0.40
Health	0.61	AA	0.56
<b>Corp</b>	<b>1.00</b>	<b>A-</b>	<b>1.00</b>
Lodging	1.26	BBB	1.30
CMBS	1.90	BB	1.89



### Example 1: BBB Rated CMBS 2-Year Spread Duration

Spread Duration	x	CMBS	x	BBB	=	CASD
2.00		1.90		1.30		4.94

Generic "Spreads"  1.00%  
 Example 1  4.94%

### Example 2: A- Rated Lodging Corporate 2-Year Spread Duration

Spread Duration	x	Lodging	x	A-	=	CASD
2.00		1.26		1.00		2.52

Generic "Spreads"  1.00%  
 Example 2  2.52%

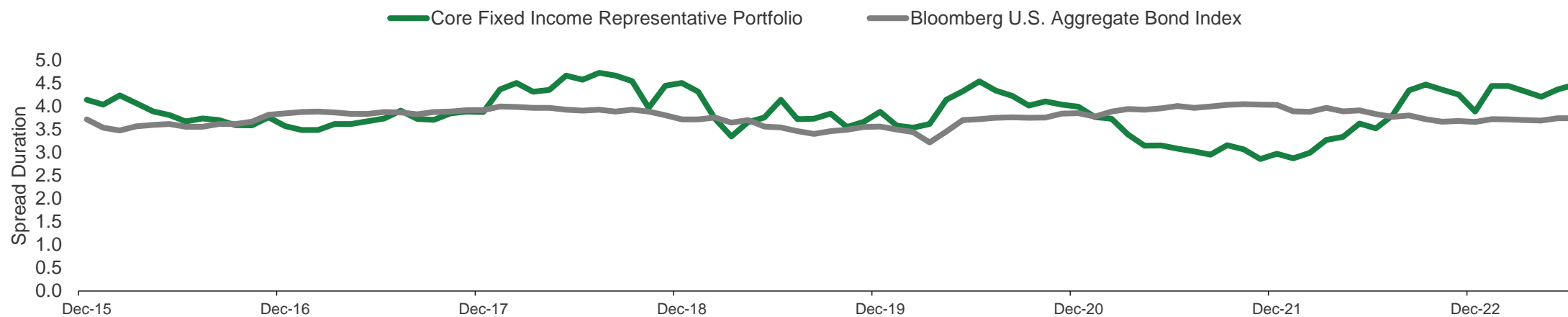
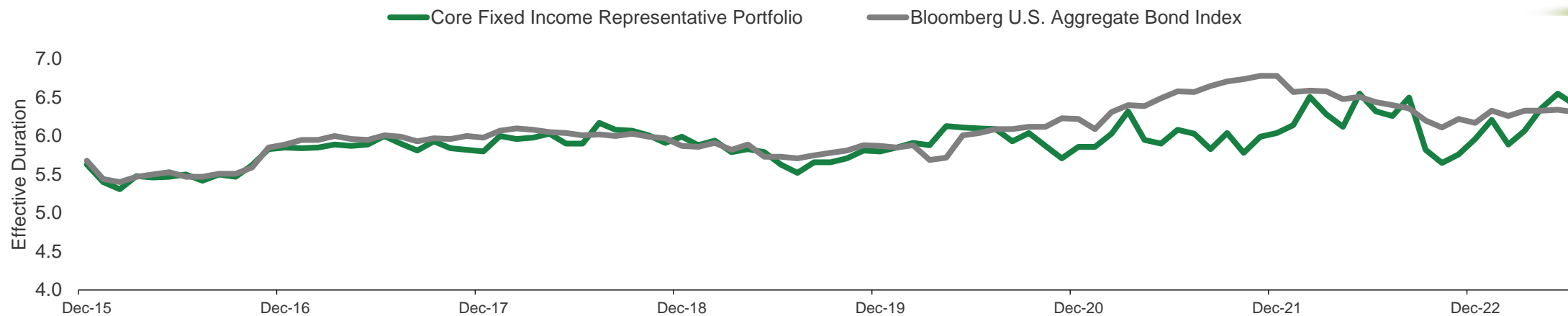
The above data is for illustrative purposes only and is not meant to represent the characteristics of an actual portfolio managed by Lord Abbett or any particular investment. Does not constitute a recommendation nor investment advice, and should not be used as the basis for any investment decision. Source: Lord Abbett.



# Effective Duration and Spread Duration Versus Index

- Active duration positioning considered in conjunction with credit positioning
- Both dimensions sized as part of a diversified set of active decisions

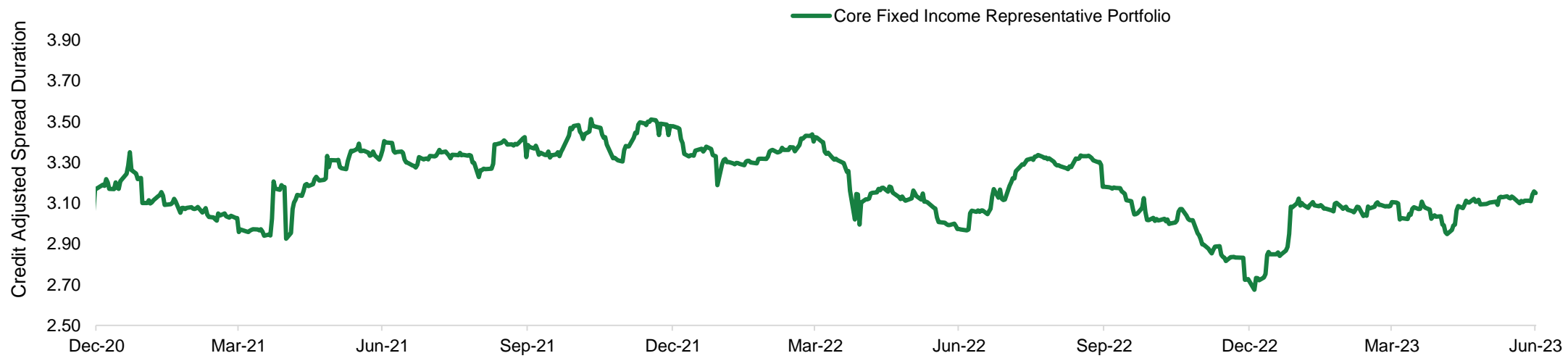
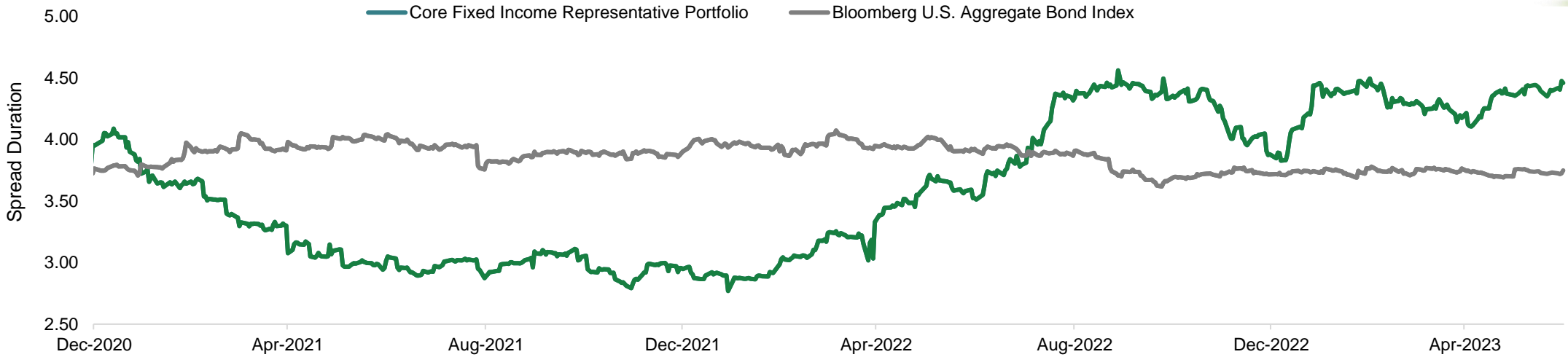
How much risk?





# Credit Adjusted Spread Duration

Credit Adjusted Spread Duration (CASD) gives the team a clearer picture of credit risk, varying based on the spread volatility of specific sectors and ratings.



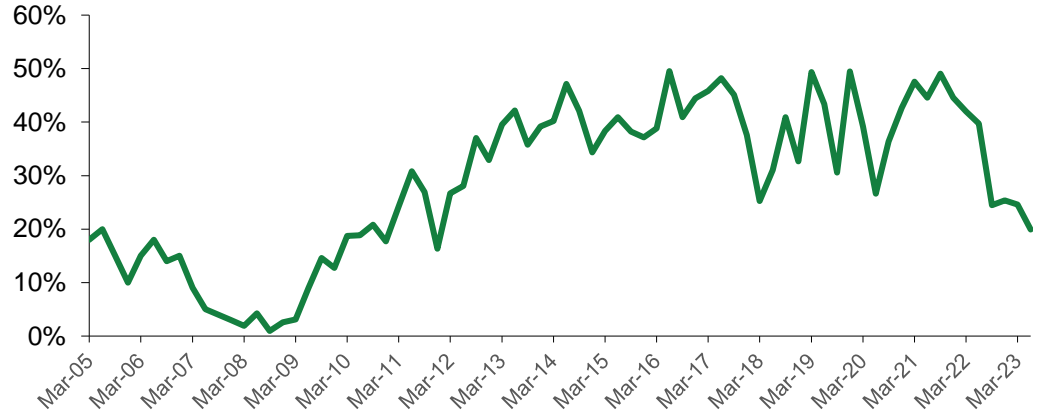
Source: Lord Abbett & Bloomberg Index Services Limited. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment. Data as of 06/30/2023. The information in the chart is based on historical data as of the date indicated. The representative portfolio is actively managed and portfolio characteristics may change over time.

# Core Fixed Income: Sector Rotation

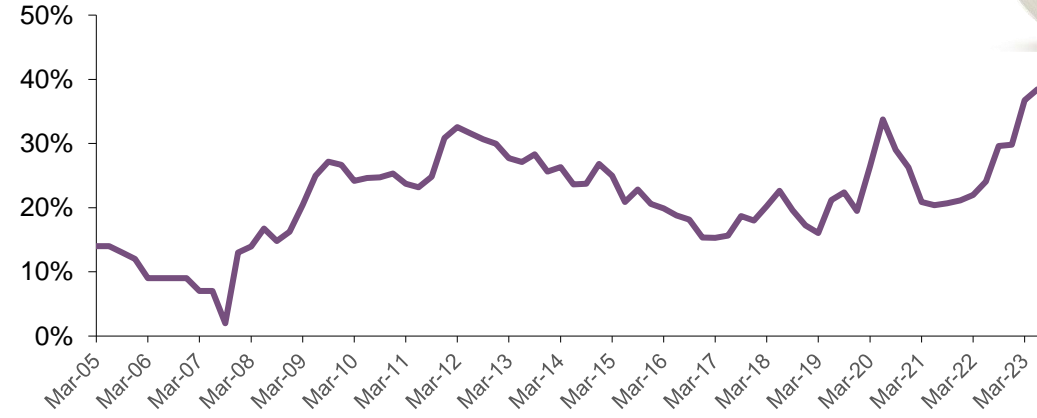
(AS OF 06/30/2023)



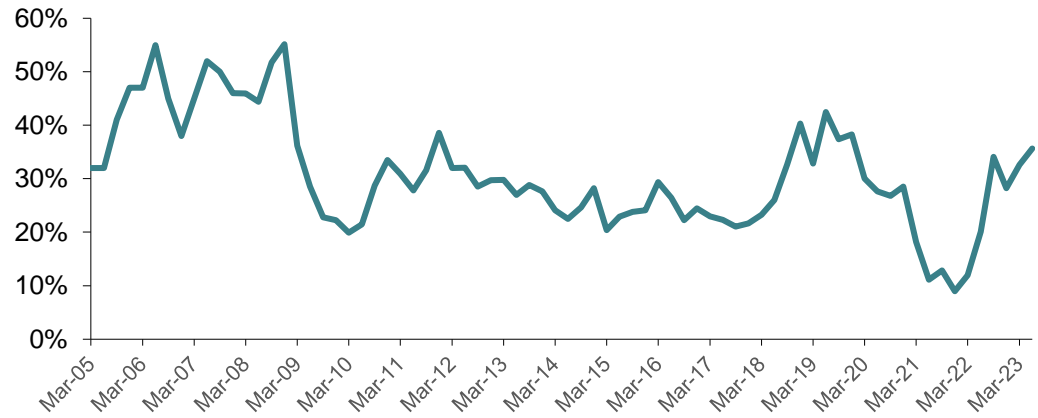
### U.S. Treasuries



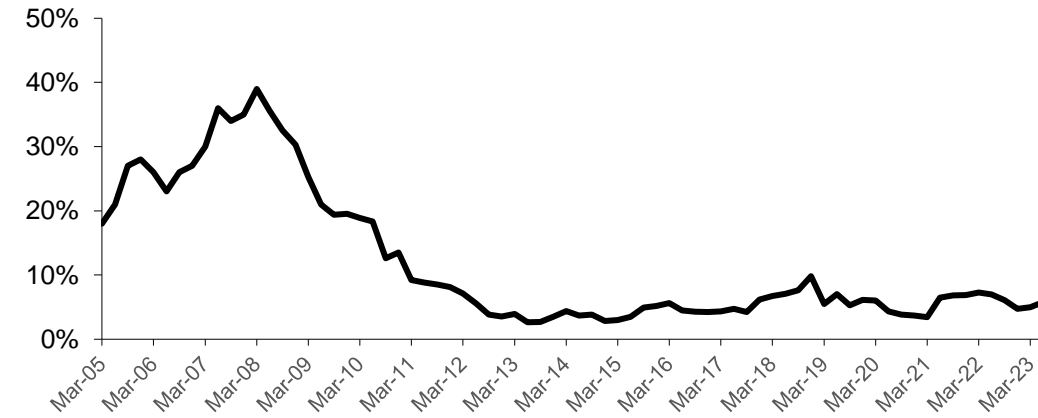
### Corporates



### U.S. Agency Mortgages



### CMBS





# Global Credit Research Team



**Gregory S. Parker, CFA**  
Partner & Director of Global Credit Research  
32 Years

<p><b>Kevin Coyne, CPA</b> Co-Head of U.S. Corporate Credit Research Gaming, Lodging &amp; Leisure, Media 29 Years</p>	<p><b>Andrew Bernstein</b> Co-Head of U.S. Corporate Credit Research Energy (E&amp;P, Services) 27 Years</p>	<p><b>John M. Novak, CFA</b> Head of Loan-Only &amp; Private Credit Research Industrials (Heavy Machinery, Transportation), Automotive &amp; Truck 27 Years</p>
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<p><b>Paul A. Langlois, CFA</b> Chemicals, Energy (Refiners, Storage, Pipelines) 31 Years</p>	<p><b>Sundar Varadarajan</b> Telecommunication (Telecom, Broadcasting) 29 Years</p>	<p><b>Jim MacMiller</b> Healthcare 28 Years</p>	<p><b>Murali Ganti, CPA</b> Healthcare (Facilities, Distribution, Services) 27 Years</p>	<p><b>Alan Danzig, CFA</b> Financials (Insurance, REITs); 25 Years</p>
<p><b>Jennifer Haaz</b> Consumer 25 Years</p>	<p><b>Ryan Butkus</b> Financials (Banks, Asset Managers, Special) 23 Years</p>	<p><b>Brian A. Ilardo</b> Consumer (Products, Restaurants, Tobacco); Services (Educational, Office) 23 Years</p>	<p><b>Raymond Wu, CFA</b> Industrials (Aero &amp; Defense, Machinery, Diversified) 23 Years</p>	<p><b>Ryan Miller, CFA</b> Consumer 22 Years</p>
<p><b>Matthew Albrecht</b> Metals and Mining; Coal 19 Years</p>	<p><b>Klim Fedoff, CFA</b> CEEMEA 19 Years</p>	<p><b>Yi Ding Chen</b> Technology 17 years</p>	<p><b>Colin Leong, CFA</b> European coverage: Consumer and TMT 17 years</p>	<p><b>Charles Spelina, CFA</b> European Industrials and Materials 16 years</p>
<p><b>Erchen Yan</b> Asia 16 years</p>	<p><b>Larry Liou, CFA</b> Utilities 14 Years</p>	<p><b>Emmi Palviainen, CFA</b> European Telecom 13 Years</p>	<p><b>Alexandre Marrucho</b> Latin America 12 Years</p>	<p><b>Komal Patel, CFA</b> Industrials 12 Years</p>
<p><b>Brittany Chen</b> Healthcare 10 years</p>	<p><b>Imman Akram</b> Materials 8 Years</p>	<p><b>Shiv Adhlakha</b> Energy 7 Years</p>	<p><b>Carmen Lin</b> Industrials 7 Years</p>	<p><b>Aaron Grand, CFA</b> Financials 5 Years</p>

- Narrow breadth promotes deep research focus
- Cumulative knowledge drives proactive idea generation
- Centralized structure allows for timely identification of sector trends and investment opportunities

29 Investment Professionals With an Average of 19 Years Industry Experience

# Proprietary Credit Analytics Platform



Which securities?

## PROPRIETARY VALUATION MODELS

- Proprietary valuation model assigns relative value score for all corporate bonds and loans
- Provides metrics to identify relative value across credits, as well as within an issuer's capital structure
- Credit Analytics Platform integrates quantitative relative value metrics with analysts' fundamental credit research opinion

LORD ABBETT LCAP

My LCAP | Analyst Coverage | Analyst Performance | Portfolio | Industries | Tools | Tables | Events

### Ford Motor Company

Bonds and Loans > Consumer Discretionary ( 1.19 ) > Automobiles and Components ( 1.18 ) > Automobiles ( 1.28 ) > Automobile Manufacturers ( 1.28 ) > Ford Motor Company ( 1.61 )

Bonds Only > Consumer Discretionary ( 1.08 ) > Automobiles and Components ( 1.16 ) > Automobiles ( 1.28 ) > Automobile Manufacturers ( 1.28 ) > Ford Motor Company ( 1.61 )

Loans Only > Consumer Discretionary ( 1.58 ) > Automobiles and Components ( 1.32 ) > Automobiles ( 1.25 ) > Automobile Manufacturers ( 1.25 ) > Ford Motor Company ( N/A )

<b>1.34</b> Spread Ratio (Analyst)	1-3: 1.45 7-10: 1.27 3-7: 1.24 10+: 1.44	<b>1.61</b> Spread Ratio (Agency)	1-3: 1.82 7-10: 1.45 3-7: 1.49 10+: 1.59	<b>B+</b> Credit Rating (Implied)	1-3: B+ 7-10: B+ 3-7: BB- 10+: B-	<b>BB</b> Credit Rating (Agency)	<b>BB+</b> Credit Rating (Agency)	<b>Medium</b> ESG RR (score: 30.0)
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Corporate Web Site | Moody's | LEAP | Issuer Overrides

Issues (72 Bonds, 1 Loans) | Views (Monthly) | Views (Changes) | Spread Ratio History | Holdings | Benchmarks | Docs | ESG

Tkr-Cpn-Mat	Port/ BM	Desc	Debt Type	S&P	Credit Rating				OAS			Spread Ratio		Sprd Dur		
					Mdy	Impld	Anlst	Agcy	Ccy	Src	Act	Anlst	Agcy		Anlst	Agcy
<a href="#">FNOTE 0.81 04/05/21</a>	P	FORD MOTOR..	SRNT-UNS	BB+	Ba2	B	BB	BB+	USD	LAPRICE	408	193	156	2.12	2.61	0.51
<a href="#">FNOTE 0.43 11/02/20</a>	P	FORD MOTOR..	SRNT-UNS	BB+	Ba2	B	BB	BB+	USD	LAPRICE	406	207	167	1.96	2.42	0.08
<a href="#">FNOTE 0.88 10/12/21</a>	P	FORD MOTOR..	SRNT-UNS	BB+	Ba2	B	BB	BB+	USD	LAPRICE	387	206	165	1.88	2.34	1.02
<a href="#">F 9.98 02/15/47</a>	B	FORD MOTOR..	SRDEB-UNS	BB+	Ba2	CC	BB	BB+	USD	LAPRICE	614	334	303	1.84	2.03	10.47
<a href="#">FNOTE 1.08 08/03/22</a>	P	FORD MOTOR..	SRNT-UNS	BB+	Ba2	B	BB	BB+	USD	LAPRICE	410	231	184	1.78	2.23	1.81
<a href="#">F 7.4 11/01/46</a>	B	FORD MOTOR..	SRDEB-UNS	BB+	Ba2	CCC-	BB	BB+	USD	YBINDE	538	309	281	1.74	1.91	11.31

Source: Lord Abbett. Provided for illustrative purposes only. The data contained herein is provided for informational purposes only and is intended to illustrate various inputs and outputs associated with proprietary tools used by Lord Abbett for valuation analysis and risk management. Does not constitute a recommendation nor investment advice, and should not be used as the basis for any investment decision. This is not a representation of any securities Lord Abbett purchased or would have purchased or that an investment in any securities of such issuers would be profitable.



# Comprehensive Risk Management

## RISK REPORTING GOALS

- Quantify all risk exposures
- Ensure that exposures are well understood and intentional
- Provide insight to properly assess risk/reward trade-offs

### **Monitor Credit and Interest Rate Exposure**

- CASD adjusts for relative volatility to compare securities across asset classes, sectors and ratings
- Proprietary volatility adjusted key rate durations
- Integrate Risk Exposures for Tracking Error Estimates

### **Manage Idiosyncratic Risk Exposure**

- Risk limits establish relative position and issuer limits by credit rating and maturity



# Firm Overview





“We believe an investment firm worthy of the name fosters a sound relationship between the house and the client.”

*– First line of the Lord Abbett Credo as printed in the Wall Street Journal, November 1929*

## Our Firm Beliefs

- The interests of our clients always come first
- We have a singular focus on the management of money
- Independent thinking shapes our perspective

## Our Investment Approach

- Active managers committed to generating alpha
- Collaborative teams utilizing disciplined, risk-informed processes
- Forward-looking, data-driven analysis fueling actionable insights



# Lord Abbett by the Numbers

## Our Firm

- Independent ownership spanning **93** years
- **47** Partners who play an active role in the day-to-day management of the firm
- **100%** of our revenue driven through active money management
- **3** years in a row on P&I's Best Places to Work List

## Our Business

- Assets under management **~\$193B**
- **180** investment professionals
- Managing assets for clients in **30+** countries
- **214** Institutional clients



We aspire to be the most respected asset manager in the world, admired for our people, our performance, our relationships, and our organizational agility.

## Our Vision Inspires Our Culture

We aspire to be the most respected asset manager in the world, admired for our people, our performance, our relationships, and our organizational agility.

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### Our Culture

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#### Principles-led

Empowers our leaders  
to create an environment of trust

#### Performance-oriented

Inspires our people to embody our values:  
Excellence, responsibility, transparency &  
collaboration

#### Purpose-driven

Embraces our mission:  
Securing a sustainable future for our  
clients, our people, and our world



# Taxable Fixed Income Assets Under Management

ASSETS UNDER MANAGEMENT BY STRATEGY AND ASSET CLASS  
(AS OF 06/30/2023)

Strategy	Assets
<b>Total Taxable Fixed Income</b>	<b>\$132,200,213,797</b>
Money Market	\$806,913,418
Ultra Short	\$10,511,171,002
Short Duration Income	\$59,000,487,231
Intermediate Government/Credit	\$624,543,592
Government	\$231,394,531
Core	\$4,656,697,767
Core Plus	\$8,604,618,828
Inflation Focused	\$1,609,538,970
Corporate Credit	\$3,053,747,400
Bank Loan	\$5,279,528,373
Multi Sector	\$23,786,755,142
Global Multi Sector	\$63,791,865
Climate Focused	\$49,922,827
Emerging Markets Corporate	\$44,462,417
Emerging Markets Bond	\$117,618,425
Short Duration High Yield	\$1,000,335,043
High Yield Core	\$4,388,676,614
High Yield Opportunistic	\$6,840,391,116
Global High Yield	\$42,649,590
Special Situations	\$63,054,704
Credit Opportunities	\$1,423,914,942

Asset Class	Assets
<b>Total Corporate Credit</b>	<b>\$86,440,419,832</b>
Investment Grade Corporate	\$51,853,011,107
U.S. IG Corporate	\$34,447,881,525
Non-U.S IG Corporate	\$17,405,129,582
High Yield Corporate	\$22,852,089,255
U.S. HY Corporate	\$18,978,899,010
Non-U.S. HY Corporate	\$3,873,190,245
Short Duration High Yield	\$3,516,346,838
U.S. HY Corporate	\$2,459,594,931
Non-U.S. HY Corporate	\$1,056,751,907
Bank Loans	\$8,218,972,632
<b>Total Securitized Products</b>	<b>\$36,898,615,471</b>
Commercial MBS	\$10,258,033,544
Asset Backed Securities	\$11,899,049,015
CLO	\$5,573,723,177
Residential MBS	\$9,167,809,735
<b>U.S. Government Related</b>	<b>\$7,257,222,159</b>
<b>Emerging Markets Debt</b>	<b>\$3,513,344,678</b>
EM Corporate	\$2,663,016,312
EM Sovereign US\$	\$841,949,536
EM Sovereign Non-US\$	\$8,378,830

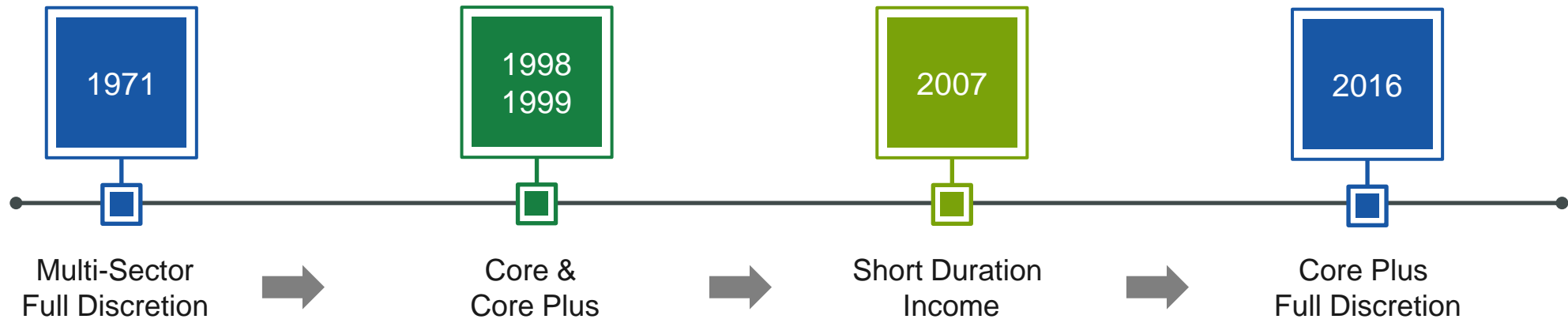
Assets under management data is as of 06/30/2023 unless noted and includes approximately \$623.5 million for which Lord Abbett provides investment models to managed account sponsors. In addition to the strategies listed above, the fixed income asset totals include the fixed income portion of the multi-asset class strategies managed by Lord Abbett. Strategy and Asset Class total assets may differ since only key asset classes are displayed.





# Lord Abbett Core & Core Plus Capabilities

Five decades of history in multi-sector investing



## Significant Scale Presence Across Credit Sectors

**\$132B IN GLOBAL FIXED INCOME AUM**

**Corporate Credit**  
**\$88.5B**

- IG Corporate:** \$51.9B
- HY Corporate:** \$26.4B
- Bank Loans:** \$8.2B
- Convertibles:** \$2.0B

**Securitized Products**  
**\$32.1B**

- Commercial MBS:** \$10.3B
- ABS:** \$11.9B
- CLO:** \$5.6B
- Residential MBS:** \$4.3B

**Government-Related**  
**\$12.1B**

- US Treasury:** \$6.4B
- Agency MBS:** \$4.9B
- Other\*:** \$0.8B

AUM as of 06/30/2023. Totals may not add up due to rounding. \* "Other" Government-related includes US Government Agency debentures, taxable municipals, and supranational issuers

# Core & Core Plus Fixed Income Suite



	Bloomberg U.S. Aggregate Bond Index	Core Fixed Income Representative Portfolio	Core Plus Total Return Representative Portfolio	Core Plus Full Discretion Representative Portfolio
<b>PORTFOLIO CHARACTERISTICS - AS OF 06/30/2023</b>				
Benchmark	Bloomberg U.S. Aggregate Bond Index	Bloomberg U.S. Aggregate Bond Index	Bloomberg U.S. Aggregate Bond Index	Bloomberg U.S. Aggregate Bond Index
Average Life	8.6 Years	9.7 Years	7.9 Years	7.9 Years
Effective Duration	6.3 Years	6.4 Years	6.0 Years	6.1 Years
Yield to Maturity	4.8%	5.5%	5.8%	6.1%
Average Credit Quality	AA	AA-	A+	A
<b>ASSET CLASS BREAKDOWNS</b>				
U.S. Government Related	42.1%	19.9%	11.0%	11.7%
Investment Grade Corporate	24.8%	38.5%	38.8%	44.0%
MBS	26.9%	35.7%	30.7%	26.3%
ABS	0.5%	9.7%	12.1%	9.0%
CMBS	1.7%	5.8%	4.3%	5.5%
High Yield Corporate	-	0.2%	6.8%	12.7%
Bank Loans	-	1.1%	0.7%	0.8%
CLO	-	4.2%	4.1%	4.2%
Other*	4.0%	4.4%	4.7%	3.6%
<b>AVAILABLE VEHICLES</b>				
Separate Account	-	Y	Y	Y
Mutual Fund	-	Y	Y	Y
CIT	-	Y	Y	N
Commingled Trust	-	N	N	N

\*Other consists of Sovereign, Municipals, and other allocations with minimal exposure. The Portfolio Characteristics and Asset Class Breakdown information is based on each strategy's representative portfolio. Asset class breakdown for each portfolio may not equal 100% due to rounding and the exclusion of cash.



# Lord Abbett Core & Core Plus Capabilities

## Key Characteristics

### **A Heritage of Multi-Sector Investing**

- Five decades of history managing multi-sector fixed income portfolios
- An unbiased approach, focused on identifying relative value through quantitative analysis and fundamental research

### **Collaborative Team with Deep Domain Knowledge**

- Extensive domain knowledge across a wide range of sectors offers an expansive opportunity set
- Constant communication across sector experts helps identify cross-sector relative value

### **Portfolio Construction and Risk Allocation Expertise**

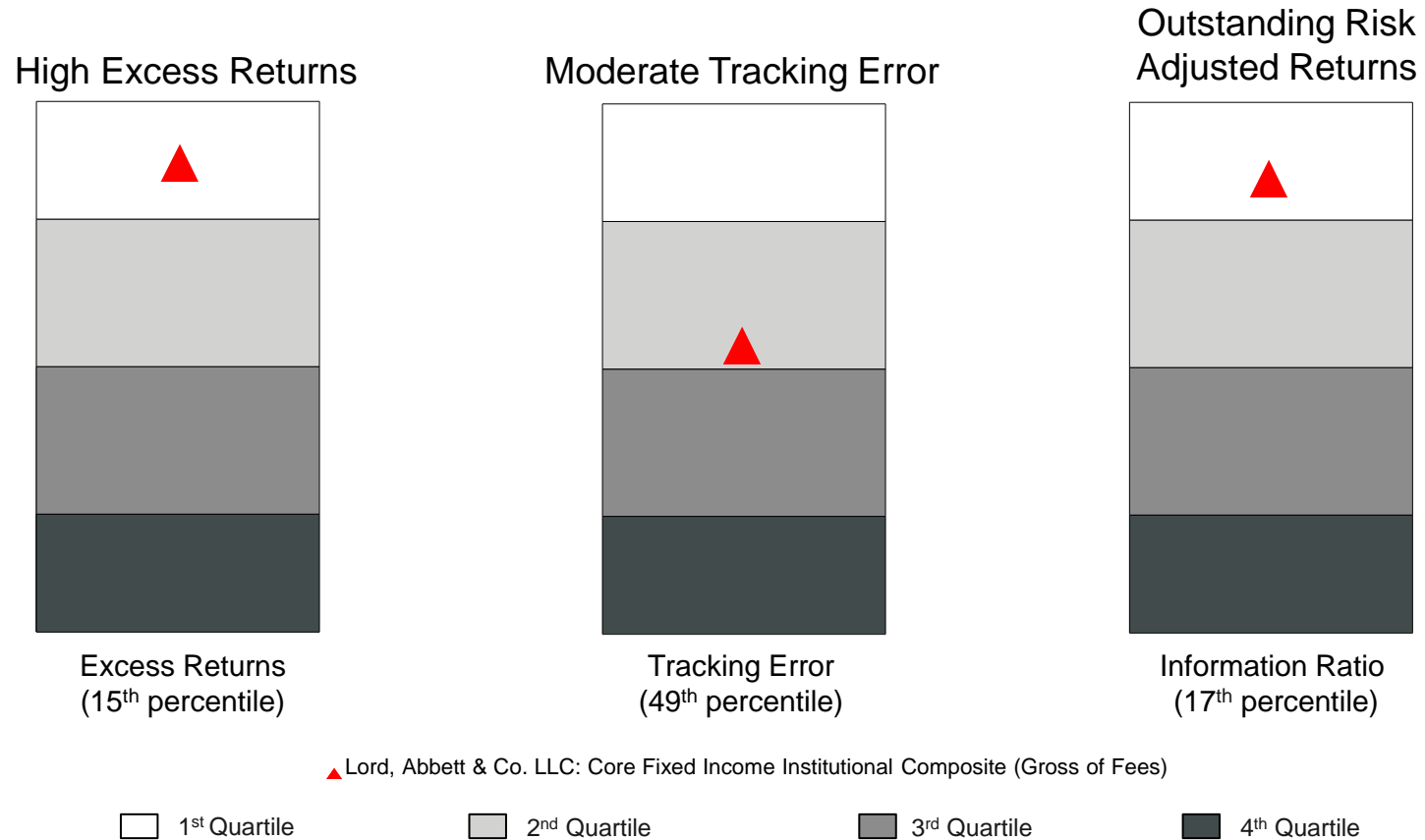
- Proprietary risk framework provides a common risk language
- Enables intentional allocations and distributed decision making

**Goal: Delivering Consistent Performance**



# Core Fixed Income: Historically Strong Long-Term Risk Adjusted Returns

SINCE INCEPTION  
(01/01/1998 – 06/30/2023)



The ranking data shown is provided by eVestment Alliance (“eVestment”). Lord Abbett pays eVestment a subscription fee for the use of their analytics system which produces the ranking data, but does not pay to be included in the ranking. Rankings are based on gross of fee performance as reported directly to eVestment by each investment manager, and therefore is limited to only investment managers who choose to report their performance to eVestment. As a result, the rankings may not accurately reflect the Lord Abbett strategy rankings amongst all of its peers.

Information on the number of managers included in each ranking is included below. Source: eVestment Alliance. Inception of the Core Fixed Income Institutional Composite is 01/01/1998. **Past Performance is not a reliable indicator or guarantee of future results.** eVestment rankings are based on gross performance. Please refer to the GIPS Report in the Appendix for additional performance information. (The peer group noted is defined by eVestment Alliance as “eA US Core Fixed Income Universe” and is comprised of 99 separate account and mutual fund portfolios, whose gross performance attributes for the time period 01/01/1998 through 03/31/2023 are represented above.)



# Core Fixed Income Standard Returns

As of 06/30/2023	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)
<b>Core Fixed Income Institutional Composite (Gross of Fees)</b>	<b>-0.77%</b>	<b>-3.05%</b>	<b>1.22%</b>	<b>1.99%</b>
<b>Core Fixed Income Institutional Composite (Net of Fees)</b>	<b>-1.05%</b>	<b>-3.32%</b>	<b>0.94%</b>	<b>1.70%</b>

**Past performance is not a reliable indicator or guarantee of future results.** Returns for periods of less than one year are not annualized. The gross performance shown does not reflect the deduction of investment advisory fees, but does reflect the deduction of any applicable transaction costs. Net of fees performance reflects the deduction of the highest applicable management fee ("Model Net Fee") that would be charged based on the fee schedule appropriate to a typical institutional separate account investor for this mandate without the benefit of breakpoints. Please be advised that the composite may include other investment products that are subject to management fees that are inapplicable to a typical institutional separate account investor but are in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be lower, than the Model Net Fee performance. However, such Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to a typical institutional separate account investor to the gross performance of the composite.



# Appendix





# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Robert A. Lee*</b>	Co-Head	32	26	ARM Capital Advisors; Kidder Peabody Asset Management; First Boston Corporation	BS, University of Pennsylvania
<b>Steven F. Rocco, CFA*</b>	Co-Head	22	19	FactSet	BA, Cornell University
<b>Kewjin Yuoh*</b>	Portfolio Manager	29	13	AllianceBernstein, LLP; Credit Suisse Asset Management; Sanford C. Bernstein & Co., Inc.	BS, Cornell University
<b>Andrew H. O'Brien, CFA*</b>	Portfolio Manager	25	25	N/A	BA, Princeton University
<b>Todd Solomon</b>	Portfolio Manager	27	4	TCW Distressed, LLC; Halcyon Capital Management; Triage Capital Management	BA, Union College; MBA, Columbia University
<b>Robert S. Clark, CFA</b>	Portfolio Manager	26	13	Turner Investment Partners; People's Bank	BS, Bryant College; MBA, Yale University
<b>Eric P. Kang**</b>	Portfolio Manager	24	8	MidOcean Credit Partners; Bell Point Capital; Citadel Investment Group	BS, University of Pennsylvania; MBA, University of Virginia



# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Kearney Posner, CFA*</b>	Portfolio Manager	24	8	Metropolitan Life Insurance Company; Radian Group; Goldman Sachs	BS, Georgetown University; MBA, University of Pennsylvania
<b>Mila Skulkina, CFA**</b>	Portfolio Manager	22	10	Sanders Capital, LLC; Bain & Company; Triton Pacific Capital Partners	BA, University of California; MBA, UCLA Anderson School of Management
<b>Leah G. Traub, Ph.D.*</b>	Portfolio Manager	22	16	Princeton Economics Group; National Bureau of Economic Research; Rutgers University	BA, University of Chicago; MA, Ph.D., Rutgers University
<b>Harris Trifon**</b>	Portfolio Manager	23	2	Western Asset Management; Deutsche Bank; Standard & Poor's	BA, University of Florida; MS, New York University
<b>Yoana Koleva, CFA*</b>	Portfolio Manager	20	12	Morgan Stanley; BlackRock	BA, The College of Saint Elizabeth
<b>Aron Grufstedt</b>	Portfolio Manager	18	<1	The Carlyle Group; CCMP Capital; Octagon Credit Investors, LLC	BS, Babson College
<b>Annika Lombardi**</b>	Portfolio Manager	16	6	Janus Capital International; Rogge Global Partners; Delaware Investments	BA, University of Pennsylvania
<b>Peter Noel, CFA</b>	Portfolio Manager	16	8	QBE Insurance; PFM Asset Management	BS, Carnegie Mellon University





# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Zofia Koscielniak</b>	Portfolio Manager	13	<1	Pacific Investment Management Company; Fannie Mae; Morgan Stanley	BS, Carnegie Mellon University MBA, Massachusetts Institute of Technology
<b>Christopher Gizzo, CFA*</b>	Deputy Director	15	15	N/A	BS, Cornell University
<b>Adam C. Castle, CFA*</b>	Portfolio Manager	15	8	Credit Suisse, AllianceBernstein	BS, Cornell University
<b>Karen Gunnerson</b>	Portfolio Manager	13	6	RBC Capital Markets; Bank of America Merrill Lynch	BS, University of Florida
<b>Jordan Kling, CFA</b>	Portfolio Manager	13	13	N/A	BA, Dartmouth College
<b>Ty Kern</b>	Portfolio Manager	11	2	Goldman Sachs Asset Management; BlackRock	BS, Ohio State University
<b>Devin Hagens, CFA</b>	Portfolio Manager	10	6	Bloomberg L.P.	BS, Cornell University
<b>Steven Zhou, CFA</b>	Associate Portfolio Manager	18	6	Deutsche Asset Management; JP Morgan Chase	BS, University of Maryland; MS, Carnegie Mellon University
<b>Bridget E. Young</b>	Associate Portfolio Manager	16	11	Morgan Stanley; Moody's Investors Service; CIFG Assurance	BA, University of Memphis; MPA, New York University
<b>Frank Zhi</b>	Associate Portfolio Manager	14	10	Commerzbank AG; BlackRock Inc.	BS, Columbia University; MS, Georgia Institute of Technology



# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Emmi Palviainen, CFA</b>	Associate Portfolio Manager	13	2	AXA Investment Managers; EFG Asset Management; Legal & General Investment Management	BS, Cass Business School, City University London
<b>Jessie Gong</b>	Associate Portfolio Manager	12	<1	Angelo Gordon; Morgan Stanley; Nomura Securities	BS, Huazhong University of Science & Technology; MS, Columbia University
<b>Gregory Benz, CFA</b>	Associate Portfolio Manager	12	7	Payden & Rygel Investment Management	BA, Occidental College
<b>Yuan (Shawn) Yue</b>	Associate Portfolio Manager	12	7	Potomac River Capital; Bank of America Merrill Lynch; MSCI	BS, Jilin University; MS, University of Chicago
<b>Dillon Goad</b>	Associate Portfolio Manager	10	4	Deutsche Bank Commercial Real Estate; KGS Alpha Real Estate LLC.; LNR Property LLC.	BBA, Texas A&M University
<b>Tony Graves, CFA</b>	Associate Portfolio Manager	9	2	Income Research + Management; Hartford Financial Services Group	BS, Indiana University; MBA, Yale School of Management
<b>Elan Ariel, CFA</b>	Associate Portfolio Manager	9	9	N/A	BS, University of Pennsylvania
<b>Alexander Green, CFA</b>	Associate Portfolio Manager	8	<1	River Capital	B.Com, University of Melbourne
<b>Lana Hagenbuch</b>	Associate Portfolio Manager	8	<1	BlackRock Inc	BA, Baruch College; MS, Baruch College



# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Taylor Harris, CFA</b>	Associate Portfolio Manager	6	<1	Reams Asset Management	BS, Indiana University; MBA, Indiana University
<b>Loritta Cheng</b>	Research Analyst	24	2	Metropolitan Life Insurance Company; Goldman Sachs; Deutsche Bank	BS, Columbia University; MBA, Columbia Business School
<b>Matthew Claeson, CFA</b>	Research Analyst	22	4	Compass Group, LLC; Santander Investment Securities; BNP Paribas	BA, Amherst University; MS, London School of Economics; MA, Columbia University
<b>Thomas Pangia</b>	Research Analyst	12	<1	Tolis Advisors; Cerberus Capital Management; JPMorgan Chase & Co.	BA, Pennsylvania State University
<b>Min Hua Mai</b>	Associate Research Analyst	5	5	N/A	BA, Boston University
<b>Marc Pavese, Ph.D.*</b>	Head of Data-Driven Insights	23	15	Genworth Financial; General Electric	BA, Columbia University; Ph.D., University of Pennsylvania
<b>Bjorn Flesaker, Ph.D.</b>	Director of Quantitative Research, Fixed Income	31	6	Prudential; Bloomberg, L.P.; Morgan Stanley	MM, BI Norwegian Business School; Ph.D., University of California at Berkeley
<b>Giulio Martini*</b>	Director of Strategic Asset Allocation	38	8	Anderson Global Macro LLC; Sanford C. Bernstein & Co. and AllianceBernstein	BA, University of Colorado; MA, Boston University
<b>Jeffrey O. Herzog, Ph.D.**</b>	Portfolio Manager	14	10	Oxford Economics LLC; Banco Bilbao Vizcaya Argentaria	M.A., Yale University; Ph.D., Cambridge University



# Global Credit Research Team Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Gregory S. Parker, CFA*</b>	Director of Global Credit Research	32	16	AIG SunAmerica Asset Management; Harbert Management Corporation; Schroder Investment Management	BS, St. Lawrence University; MBA, Babson College
<b>Kevin Coyne, CPA</b>	Co-Head of U.S. Corporate Credit Research	29	7	Goldman Sachs & Co.; Royal Bank of Canada Dain Rauscher; Corvis Corporation	BS, Villanova University; MBA, New York University
<b>Andrew Bernstein</b>	Co-Head of U.S. Corporate Credit Research	27	9	Credit Suisse; Shenkman Capital Management; The Bank of Tokyo Mitsubishi UFJ	BA, University of Michigan; MBA, Cornell University
<b>John M. Novak, CFA</b>	Head of Loan-Only & Private Credit Research	27	9	Mizuho Securities, USA, Inc.; Barclays Capital, Inc., Lehman Brothers	BS, Pennsylvania State University; MBA, New York University
<b>Paul A. Langlois, CFA</b>	Research Analyst	31	14	J&W Seligman & Co.; Triton Partners; Delaware Management Company	BS, Pennsylvania State University; MBA, Temple University
<b>Sundar Varadarajan</b>	Research Analyst	29	7	BNP Paribas; Knight Capital; Citadel Securities	B.Com., University of Madras; MBA, University of Rochester
<b>Jim MacMiller</b>	Research Analyst	28	<1	HPS Investment Partners; Columbia Threadneedle; Post Advisory Group	BA, University of California; MBA, University of Chicago
<b>Murali Ganti, CPA</b>	Research Analyst	27	6	Citigroup Inc.; BNP Paribas; Nomura Securities International, Inc.	BA, University at Buffalo; MBA, University of Rochester



# Global Credit Research Team Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Alan Danzig, CFA</b>	Research Analyst	25	11	J.P. Morgan; Fox-Pitt, Kelton; Stern Stewart & Co.	BS, University of Pennsylvania
<b>Jennifer Haaz</b>	Research Analyst	25	<1	The Carlyle Group; Katonah Capital	BA, Brandeis University
<b>Ryan Butkus</b>	Research Analyst	23	7	Citigroup; KPMG, LLP	BS, Muhlenberg College; MBA, Fordham University
<b>Brian A. Ilardo</b>	Research Analyst	23	20	UBS Warburg; Brean Murray & Co., Inc.; HealthJump	BS, Villanova University; MBA New York University
<b>Raymond Wu, CFA</b>	Research Analyst	23	8	Genworth Asset Management, Twin Capital Management, Gruss Asset Management	BA/BS, Duke University
<b>Ryan Miller, CFA</b>	Research Analyst	22	<1	Invesco Ltd; Aberdeen Asset Management Plc; JP Chase Morgan Bank	BA, Middlebury College
<b>Matthew Albrecht</b>	Research Analyst	19	7	UBS Investment Bank	BS, Bucknell University
<b>Klim Fedoff, CFA</b>	Research Analyst	19	10	TIAA-CREF; HSBC Bank	BS, Manhattan College



# Global Credit Research Team Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Yi Ding Chen	Research Analyst	17	2	Benefit Street Partners; Balyasny Asset Management; Canyon Partners	BA, University of Michigan
Colin Leong, CFA	Research Analyst	17	<1	Payden & Rygel Investment Management; MetLife Investments Limited; Royal Bank of Scotland PLC	BS, London School of Economics and Political Science
Charles Spelina, CFA	Research Analyst	16	<1	Jupiter Asset Management; Bluebay Asset Management; Accenture	BS, University of Durham
Erchen Yan	Research Analyst	16	2	EMSO Asset Management; TIAA Investments; Metlife Investments	BA, Wellesley College; MBA, University of Pennsylvania
Larry Liou, CFA	Research Analyst	14	2	Wells Capital Management; J.P. Morgan Securities LLC; Kaufman Bros LLC	BS, University of Michigan
Emmi Palviainen, CFA	Research Analyst	13	3	AXA Investment Managers; EFG Asset Management; Legal & General Investment Management	BS, Cass Business School, City University London
Alexandre Marrucho	Research Analyst	12	8	HSBC Securities; Pricewaterhouse Coopers	BS/BA Southern Illinois University; MS, Vanderbilt University
Komal Patel, CFA	Research Analyst	12	<1	Goldman Sachs; JPMorgan; Lazard Frères & Co.	BS, New York University



# Global Fixed Income Trading Team Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Andrew M. Khatri*</b>	Director of Global Trading	21	12	MarketAxess; Citigroup Global Markets Inc.; Wellington Management Company, LLP	BS, Boston College
<b>Shane M. Magoon*</b>	Director of Global Fixed Income Trading	20	19	State Street Corp.	BS, Villanova University; MBA, New York University
<b>Bryan Sheehan</b>	Trader	19	6	Nomura Securities; Barclays Capital; Lehman Brothers, Inc.	BS, University of Maryland
<b>Nickolas A. Prala</b>	Trader	18	8	UBS; Loomis Sayles; BNP Paribas	BA, Ohio University; MA, Ohio University
<b>Jason Stofkoper, CFA</b>	Trader	18	16	Nomura Securities	BA, Drew University
<b>Evan Tibbetts</b>	Trader	14	7**	JP Morgan Securities; Promontory Financial Group	BA, Haverford College
<b>Michael Collins, CFA</b>	Trader	11	2	Greylock Capital Management; Brencourt Advisors; Laidlaw & Company	BS, University of Wisconsin
<b>Patrick Daly, CFA</b>	Trader	12	11	ING Financial Partners	BS, Villanova University
<b>Geoffrey King, CFA</b>	Associate Trader	8	<1	BlackRock; North American Rates Trading; Financial Markets Advisory	BA, Vanderbilt University
<b>Seema Ahmed</b>	Trading Analyst	2	<1	Barclays Investment Bank	BS, University of Richmond



# Team Member Biographies

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
<b>Joseph M. Graham, CFA**</b>	Investment Strategist	24	8	HudsonView Capital Management; Route 3 Capital; Millennium Partners	BS, Washington University; MBA, University of Pennsylvania
<b>Don Annino, CFA</b>	Investment Strategist	28	17	Merrill Lynch	BA, St. Lawrence University
<b>Riz Hussain</b>	Investment Strategist	27	3	Barclays Capital; Morgan Stanley	BS, Cornell University; MBA, Columbia University
<b>Timothy Paulson</b>	Investment Strategist	24	9	Goldman Sachs	BA, Haverford College; MBA, Northwestern University
<b>Andrew Fox, CFA</b>	Investment Strategist	24	22	Prudential Securities	BA, Montclair State University
<b>Michael Cibelli, CFA</b>	Investment Strategist	17	15	Joseph Stevens & Co	BS, Wagner College
<b>Yuriy Minchuk, CFA</b>	Investment Strategist	11	6	Citigroup	BA, Baruch College
<b>Melanie Coffin, CFA</b>	Investment Strategist	8	5	Factset; Colgate Palmolive	BA, Lafayette College





# GIPS Report

The Global Investment Performance Standards (GIPS®) compliant performance results shown represent the investment performance record for the Lord, Abbett & Co. LLC (Lord Abbett) **Core Fixed Income Institutional Composite**. This composite is comprised of all fully discretionary portfolios managed on behalf of institutional investors investing primarily in various types of fixed-income securities, including securities issued by the U.S. government, its agencies and instrumentalities, mortgage-backed and other asset-backed securities, investment grade corporate debt, U.S.-dollar denominated investment-grade debt of non-U.S. issuers, senior loans and derivatives. Effective November 2017, only accounts with a value of \$40 million or more are included in the composite. Effective July 2014, only accounts with an initial value of \$50 million or more are included in the composite. Effective March 2012, only accounts with an initial value of \$40 million or more are included in the composite. Effective July 21, 2009, only accounts with an initial value of \$20 million or more are included in the composite. Effective January 2018, accounts funded on or before the 15th of the month will be included in the Composite effective the first day of the first following month. Accounts funded after the 15th of the month will be included effective on the first day of the second following month. Prior to January 2018, other than registered investment companies sponsored by Lord Abbett, accounts opened/funded on or before the 15th day of the month were included in the Composite effective the first day of the second following month and accounts opened/funded after 15th of the month were included effective on the first day of the third following month. Registered investment companies sponsored by Lord Abbett are included in the Composite in the first full month of management. Closed accounts are removed from the Composite after the last full month in which they were managed in accordance with applicable objectives, guidelines, and restrictions. Performance results are expressed in U.S. dollars and reflect reinvestment of any dividends and distributions. The Composite was created in 1999 and inception in 1998. A list of all composite and pooled fund investment strategies offered by the firm, with a description of each strategy, is available upon request. The type of portfolios in which each strategy is available (segregated account, limited distribution pooled fund, or broad distribution pooled fund) is indicated in the description of each strategy. Policies for valuing investments, calculating performance, and preparing GIPS Report are available upon request.

For GIPS® purposes, the firm is defined as Lord, Abbett & Co. LLC (“Lord Abbett”). Total Firm Assets are the aggregate fair value of all discretionary and non-discretionary assets for which the Firm has investment management responsibility. Accordingly, Total Firm Assets include, but are not limited to, mutual funds (all classes of shares), privately placed investment funds, non-U.S. domiciled investment funds, separate/institutional portfolios, individual portfolios and separately managed accounts (“Wrap Fee/SMA Portfolios”) managed by Lord Abbett. Total Firm Assets also include any collateralized, structured investment vehicle, such as a collateralized debt obligation or collateralized loan obligation, for which Lord Abbett has been appointed as the collateral manager. For the period prior to January 1, 2000, the definition of the Firm does not include any hedge fund or SMA program accounts where Lord, Abbett & Co. LLC did not have the records so long as it is impossible for Lord, Abbett & Co. LLC to have the records (within the meaning of relevant GIPS® standards interpretations). Total Firm Assets also exclude separately managed program accounts that involve model delivery.

The number of portfolios and total assets in the Composite, and the percentage of total “firm” assets represented by the Composite at the end of each calendar year for which performance information is provided are as follows:

Calendar Year Ended	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
# of Portfolios	5	7	9	9	7	7	8	8	6	5
Total Assets (\$M)	\$3,149	\$3,246	\$3,342	\$2,686	\$2,009	\$3,758	\$3,791	\$3,487	\$3,990	\$3,057
Percentage of Firm Assets	1.63%	1.28%	1.50%	1.32%	1.12%	2.41%	2.82%	2.81%	2.94%	2.25%
Total Firm Assets (\$M)	\$192,949	\$254,075	\$222,535	\$204,031	\$161,055	\$156,110	\$134,565	\$124,007	\$135,945	\$135,786
Dispersion	N/A	0.07	0.08	0.05	N/A	0.14	0.07	0.03	0.02	N/A
Lord Abbett Core Fixed Income Institutional Composite (Gross Annual)	-13.07%	-0.34%	8.57%	8.55%	0.12%	4.10%	3.32%	0.15%	6.99%	-1.35%
Lord Abbett Core Fixed Income Institutional Composite Gross (3 year Annualized Return)	-2.02%	5.51%	5.67%	4.20%	2.50%	2.51%	3.45%	1.87%	4.03%	4.48%
Lord Abbett Core Fixed Income Institutional Composite Gross (3 year Annualized Ex-Post Standard Deviation)	5.90%	3.70%	3.70%	2.75%	2.74%	2.72%	2.95%	2.86%	2.67%	2.76%
Lord Abbett Core Fixed Income Institutional Composite (Net Annual)	-13.31%	-0.62%	8.27%	8.25%	-0.16%	3.81%	3.03%	-0.12%	6.68%	-1.64%
Lord Abbett Core Fixed Income Institutional Composite Net (3 year Annualized Return)	-2.29%	5.22%	5.38%	3.90%	2.21%	2.22%	3.16%	1.58%	3.73%	4.19%
Bloomberg U.S Aggregate Bond Index (Annual)	-13.01%	-1.54%	7.51%	8.72%	0.01%	3.54%	2.65%	0.55%	5.97%	-2.02%
Bloomberg U.S Aggregate Bond Index (3 year Annualized Return)	-2.71%	4.79%	5.34%	4.03%	2.06%	2.24%	3.03%	1.44%	2.66%	3.26%
Bloomberg U.S Aggregate Bond Index (3 year Annualized Ex-Post Standard Deviation)	5.85%	3.40%	3.40%	2.91%	2.88%	2.82%	3.03%	2.92%	2.66%	2.75%
Supplemental Information:*										
Number of Portfolios Managed in Style*	21	21	21	20	18	17	19	22	19	20
Total Assets Managed in Style*	\$3,847	\$3,827	\$3,837	\$2,956	\$2,343	\$4,147	\$4,374	\$4,284	\$4,586	\$3,858



# GIPS Report

Dispersion is represented by the asset-weighted standard deviation, a measure that explains deviations of gross portfolio rates of return from the asset-weighted composite return. Only portfolios that have been managed within the Composite style for a full year are included in the asset-weighted standard deviation calculation. The measure may not be meaningful (N/A) for composites consisting of five or fewer portfolios or for periods of less than a full year.

The performance of the Composite is shown net and gross of advisory fees, and reflects the deduction of transaction costs. The deduction of advisory fees and expenses (and the compounding effect thereof over time) will reduce the performance results and, correspondingly, the return to an investor. Net performance of the Composite as presented in the table on the previous page reflects the deduction of a “model” advisory fee, calculated as the highest advisory fee, borne by any account (without giving effect to any performance fee that may be applicable) in the Composite (an annual rate of 0.28% of assets) and other expenses (including trade execution expenses). **For example, if \$10 million were invested and experienced a 10% compounded annual return for 10 years, its ending dollar value, without giving effect to the deduction of the advisory fee, would be \$25,937,425. If an advisory fee of 0.28% of average net assets per year for the 10-year period were deducted, the annual total return would be 9.69% and the ending dollar value would be \$25,284,711. The separate account management fee schedule is as follows: 0.28% on the first \$50 million, 0.20% on the next \$100 million, 0.16% on the next \$350 million, and 0.14% on all assets over \$500 million. The Pooled Fund management fee schedule is as follows: 0.19% on the first \$50 million, 0.17% on the next \$50 million, 0.15% on the next \$100 million, 0.13% on the next \$250 million, 0.11% on the next \$500 million, and 0.09% on all assets over \$1 billion.** The Pooled Fund expense ratio is 0.27%. Net-of-fee performance reflects the deduction of the highest applicable institutional advisory fee that would be charged to a new institutional client account based on the current fee schedule for this strategy. The composite includes one or more registered investment companies sponsored by Lord Abbett (“Lord Abbett Funds”) that are subject to fees and expenses that would be inapplicable to an institutional client account. Therefore, the actual performance of Lord Abbett Fund accounts included in the composite may be lower than the net-of-fee composite performance presented. Fees and expenses applicable to the Lord Abbett Funds are disclosed in each Fund’s Prospectus, which is available upon request. Past performance does not guarantee future results. Certain securities held in portfolios contained in this composite may have valuations determined using both subjective observable and subjective unobservable inputs. The Firm’s valuation hierarchy does not materially differ from the hierarchy in the GIPS Valuation Principles. Portfolios in this composite may have sector weights that vary significantly from the Index. Any portfolio with a market value of less than \$200 million will be excluded from the composite if the portfolio has an aggregate monthly inflow/outflow equal to or above 15% of the portfolio’s beginning monthly balance. Portfolios removed from composites will be treated as new accounts, and will adhere to the standard composite inclusion policy before being re-introduced to the composite.

\*Supplemental information includes accounts managed in Lord Abbett’s Core Fixed Income Style by not included in the Composite due to the existence of certain investment restrictions that have a material effect on implementation of Lord Abbett’s investment strategies.

Lord Abbett claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Lord Abbett has been independently verified for the periods 1993-2021. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm’s policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The Core Fixed income Institutional composite has had a performance examination for the periods 1998-2021. The verification and performance examination reports are available upon request.

The Bloomberg U.S. Aggregate Bond Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

Source: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively “Bloomberg”). Bloomberg owns all proprietary rights in the Bloomberg Indices. Bloomberg does not approve or endorse this material, or guarantee the accuracy or completeness of any information herein, or make any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, shall not have any liability or responsibility for injury or damages arising in connection therewith.

**Past performance is not a reliable indicator or a guarantee of future results.** Differences in account size, timing of transactions, and market conditions prevailing at the time of investment may lead to different results among accounts. Differences in the methodology used to calculate performance also might lead to different performance results than those shown. Composite performance is compared to that of an unmanaged index, which does not incur management fees, transaction costs, or other expenses associated with a managed account.

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The information contained herein is provided on the basis and subject to the explanations, caveats, and warnings set out in this notice and elsewhere herein. Any discussion of risk management is intended to describe Lord Abbett’s efforts to monitor and manage risk but does not imply low risk.

These materials do not purport to provide any legal, tax, or accounting advice.

**Any performance targets contained herein are subject to revision, and there can be no assurance that any product or strategy described herein will meet any such performance targets. An investor could lose some or all of its investment in such product or strategy. Past performance is not a guarantee or reliable indicator of future results. Investments are not guaranteed by Lord Abbett, its affiliates, or any governmental agency.**

The financial indices referenced herein as benchmarks are provided for information purposes only. Portfolio holdings and characteristics will differ from those of the benchmark(s), and such differences may be material. Factors affecting portfolio performance that do not affect benchmark performance may include portfolio rebalancing, the timing of cash flows, credit quality, diversification, and differences in volatility. In addition, financial indices do not reflect the impact of fees, applicable taxes, or trading costs, which reduce returns. Unless otherwise noted, financial indices assume reinvestment of dividends. You cannot make a direct investment in an index.

References to specific securities and issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. The securities referenced may or may not be held in portfolios managed by Lord Abbett and, if such securities are held, no representation is being made that such securities will continue to be held.

The information provided is not directed at any investor or category of investors and is provided solely as general information about Lord Abbett’s products and services and to otherwise provide general investment education. None of the information provided should be regarded as a suggestion to engage in or refrain from any investment-related course of action as neither Lord Abbett nor its affiliates are undertaking to provide impartial investment advice, act as an impartial adviser, or give advice in a fiduciary capacity. If you are an individual retirement investor, contact your financial professional (registered representatives of broker-dealers and associated persons of registered investment advisers) or other fiduciary about whether any given investment idea, strategy, product or service may be appropriate for your circumstances.

## **Bloomberg Index Information:**

Source: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively “Bloomberg”). Bloomberg owns all proprietary rights in the Bloomberg Indices. Bloomberg does not approve or endorse this material, or guarantee the accuracy or completeness of any information herein, or make any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, shall not have any liability or responsibility for injury or damages arising in connection therewith.

**Risks to Consider:** The strategies may invest in high-yield, lower-rated securities, sometimes called junk bonds. These securities carry increased risks of price volatility, illiquidity, and the possibility of default in the timely payment of interest and principal. The strategies may invest in debt securities of stressed and distressed issuers as well as in defaulted securities and debtor-in-possession financings. Distressed and defaulted instruments generally present the same risks as investments in below investment grade instruments. However, in most cases, these risks are of a greater magnitude because of the uncertainties of investing in an issuer undergoing financial distress. The strategies may invest in derivatives, which are subject to greater liquidity, leverage, and counterparty risk. Foreign or emerging market securities in which the strategy may invest may be adversely affected by economic, political, or regulatory factors and subject to currency volatility and greater liquidity risk. Collateralized Loan Obligations (CLOs) may involve a high degree of risk. CLOs are exposed to risks such as credit, default, liquidity, management, volatility, interest rate and credit risk. Special Situations includes distressed debt and other similar situations.

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# Important Information

## **Pensions & Investments Best Places to Work in Money Management:**

To participate in the Pensions & Investments Best Places to Work in Money Management ranking process, a firm had to have at least 20 employees in the U.S., have at least \$100 million of discretionary assets under management or advisement and be in business for at least one year. Once eligibility was determined, the ranking was determined using a two-part process. In part one, the employer completed a questionnaire about the firm's policies, practices, benefits and demographics. In part two, employees were emailed an engagement and satisfaction survey that consisted of 78 statements. Employees were asked to respond on a 1-to-5 scale of Disagree Strongly to Agree Strongly. Two questions also were asked: what the firm did to make it a place where people wanted to work, and things the company could do to increase employee satisfaction and productivity. Employee responses accounted for 75% of the total company score, with the employer responses making up the remaining 25%.



LORD ABBETT®

## MWRA Employees' Retirement System vs. Russell 1000 Value

USD

### Sector

Economic Sector - GICS Direct

12/31/2022 to 6/30/2023

	MWRA Employees' Retirement System			Russell 1000 Value	
	Port. Average Weight	Port. Total Return	Port. Contrib. To Return	Bench. Average Weight	Bench. Total Return
<b>Total</b>	<b>100.00</b>	<b>-0.59</b>	<b>-0.59</b>	<b>100.00</b>	<b>5.14</b>
<b>Communication Services</b>	<b>2.78</b>	<b>2.76</b>	<b>0.05</b>	<b>8.31</b>	<b>33.28</b>
<b>Information Technology</b>	<b>4.40</b>	<b>28.71</b>	<b>1.09</b>	<b>7.60</b>	<b>22.42</b>
<b>Consumer Discretionary</b>	<b>12.58</b>	<b>1.29</b>	<b>0.29</b>	<b>5.90</b>	<b>13.24</b>
<b>Industrials</b>	<b>8.25</b>	<b>24.15</b>	<b>1.84</b>	<b>10.79</b>	<b>12.82</b>
<b>Materials</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.42</b>	<b>6.19</b>
<b>Real Estate</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.60</b>	<b>4.62</b>
<b>Consumer Staples</b>	<b>24.51</b>	<b>-6.92</b>	<b>-1.78</b>	<b>7.56</b>	<b>1.16</b>
<b>Financials</b>	<b>13.57</b>	<b>-3.88</b>	<b>-0.68</b>	<b>20.84</b>	<b>0.07</b>
<b>[Cash]</b>	<b>3.23</b>	<b>2.42</b>	<b>0.08</b>	<b>--</b>	<b>--</b>
<b>Health Care</b>	<b>27.99</b>	<b>-4.44</b>	<b>-1.19</b>	<b>16.46</b>	<b>-4.16</b>
<b>Energy</b>	<b>2.70</b>	<b>-10.68</b>	<b>-0.30</b>	<b>7.97</b>	<b>-5.29</b>
<b>Utilities</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.54</b>	<b>-5.80</b>

Portfolio Holdings As Of Date:

MWRA Employees' Retirement System 12/31/2022 through 6/29/2023

Benchmark Holdings As Of Date:

Russell 1000 Value 1/03/2023 through 6/30/2023

ue	Variation			Attribution Analysis			
	Bench. Contrib. To Return	Average Weight Difference	Total Return Difference	Contrib. To Return Difference	Allocation Effect	Selection + Interaction	Total Effect
	<b>5.14</b>	--	<b>-5.73</b>	<b>-5.73</b>	<b>-1.86</b>	<b>-3.86</b>	<b>-5.73</b>
	<b>2.37</b>	<b>-5.54</b>	<b>-30.52</b>	<b>-2.31</b>	<b>-1.32</b>	<b>-0.73</b>	<b>-2.05</b>
	<b>1.66</b>	<b>-3.20</b>	<b>6.29</b>	<b>-0.57</b>	<b>-0.45</b>	<b>0.22</b>	<b>-0.23</b>
	<b>0.70</b>	<b>6.67</b>	<b>-11.95</b>	<b>-0.41</b>	<b>0.54</b>	<b>-1.41</b>	<b>-0.87</b>
	<b>1.40</b>	<b>-2.54</b>	<b>11.33</b>	<b>0.43</b>	<b>-0.22</b>	<b>0.93</b>	<b>0.71</b>
	<b>0.29</b>	<b>-4.42</b>	<b>-6.19</b>	<b>-0.29</b>	<b>-0.05</b>	--	<b>-0.05</b>
	<b>0.22</b>	<b>-4.60</b>	<b>-4.62</b>	<b>-0.22</b>	<b>0.01</b>	--	<b>0.01</b>
	<b>0.11</b>	<b>16.95</b>	<b>-8.08</b>	<b>-1.89</b>	<b>-0.67</b>	<b>-2.05</b>	<b>-2.72</b>
	<b>-0.14</b>	<b>-7.27</b>	<b>-3.95</b>	<b>-0.54</b>	<b>0.33</b>	<b>-0.56</b>	<b>-0.23</b>
	--	<b>3.23</b>	<b>2.42</b>	<b>0.08</b>	<b>-0.13</b>	--	<b>-0.13</b>
	<b>-0.71</b>	<b>11.53</b>	<b>-0.28</b>	<b>-0.48</b>	<b>-1.09</b>	<b>-0.08</b>	<b>-1.17</b>
	<b>-0.44</b>	<b>-5.27</b>	<b>-5.40</b>	<b>0.14</b>	<b>0.56</b>	<b>-0.17</b>	<b>0.39</b>
	<b>-0.32</b>	<b>-5.54</b>	<b>5.80</b>	<b>0.32</b>	<b>0.62</b>	--	<b>0.62</b>

Date	Account	Country	Weight
4/29/2022	Core Fixed Income CIT	Germany	0.05%
4/29/2022	Core Fixed Income CIT	Chile	0.11%
4/29/2022	Core Fixed Income CIT	Kazakhstan	0.11%
4/29/2022	Core Fixed Income CIT	South Africa	0.13%
4/29/2022	Core Fixed Income CIT	South Korea	0.13%
4/29/2022	Core Fixed Income CIT	France	0.17%
4/29/2022	Core Fixed Income CIT	Spain	0.21%
4/29/2022	Core Fixed Income CIT	Saudi Arabia	0.22%
4/29/2022	Core Fixed Income CIT	Taiwan	0.25%
4/29/2022	Core Fixed Income CIT	Sweden	0.25%
4/29/2022	Core Fixed Income CIT	Indonesia	0.26%
4/29/2022	Core Fixed Income CIT	Switzerland	0.29%
4/29/2022	Core Fixed Income CIT	Italy	0.29%
4/29/2022	Core Fixed Income CIT	Denmark	0.35%
4/29/2022	Core Fixed Income CIT	United Arab Emirates	0.36%
4/29/2022	Core Fixed Income CIT	Netherlands	0.36%
4/29/2022	Core Fixed Income CIT	Luxembourg	0.46%
4/29/2022	Core Fixed Income CIT	United Kingdom	0.55%
4/29/2022	Core Fixed Income CIT	China	0.65%
4/29/2022	Core Fixed Income CIT	Supra-National	0.67%
4/29/2022	Core Fixed Income CIT	Norway	0.77%
4/29/2022	Core Fixed Income CIT	Australia	0.88%
4/29/2022	Core Fixed Income CIT	Japan	1.07%
4/29/2022	Core Fixed Income CIT	Ireland	1.31%
4/29/2022	Core Fixed Income CIT	Canada	1.60%
4/29/2022	Core Fixed Income CIT	Cayman Islands	7.55%
4/29/2022	Core Fixed Income CIT	United States	80.96%



Date	Account	Country	Weight
8/31/2023	Core Fixed Income CIT	United States	81.40%
8/31/2023	Core Fixed Income CIT	Cayman Islands	4.87%
8/31/2023	Core Fixed Income CIT	Canada	3.73%
8/31/2023	Core Fixed Income CIT	United Kingdom	1.97%
8/31/2023	Core Fixed Income CIT	Switzerland	1.42%
8/31/2023	Core Fixed Income CIT	Norway	0.83%
8/31/2023	Core Fixed Income CIT	Ireland	0.73%
8/31/2023	Core Fixed Income CIT	Denmark	0.65%
8/31/2023	Core Fixed Income CIT	United Arab Emirates	0.55%
8/31/2023	Core Fixed Income CIT	Saudi Arabia	0.52%
8/31/2023	Core Fixed Income CIT	France	0.51%
8/31/2023	Core Fixed Income CIT	Netherlands	0.49%
8/31/2023	Core Fixed Income CIT	Japan	0.47%
8/31/2023	Core Fixed Income CIT	Indonesia	0.38%
8/31/2023	Core Fixed Income CIT	China	0.27%
8/31/2023	Core Fixed Income CIT	Australia	0.27%
8/31/2023	Core Fixed Income CIT	Panama	0.25%
8/31/2023	Core Fixed Income CIT	Spain	0.21%
8/31/2023	Core Fixed Income CIT	Italy	0.19%
8/31/2023	Core Fixed Income CIT	Mexico	0.19%
8/31/2023	Core Fixed Income CIT	Chile	0.11%

# FORM ADV

## UNIFORM APPLICATION FOR INVESTMENT ADVISER REGISTRATION AND REPORT BY EXEMPT REPORTING ADVISERS

Primary Business Name: LORD, ABBETT & CO. LLC

CRD Number: 110391

Annual Amendment - All Sections

Rev. 10/2021

12/21/2022 2:41:46 PM

**WARNING:** Complete this form truthfully. False statements or omissions may result in denial of your application, revocation of your registration, or criminal prosecution. You must keep this form updated by filing periodic amendments. See Form ADV General Instruction 4.

### Item 1 Identifying Information

Responses to this Item tell us who you are, where you are doing business, and how we can contact you. If you are filing an *umbrella registration*, the information in Item 1 should be provided for the *filing adviser* only. General Instruction 5 provides information to assist you with filing an *umbrella registration*.

A. Your full legal name (if you are a sole proprietor, your last, first, and middle names):

**LORD, ABBETT & CO. LLC**

B. (1) Name under which you primarily conduct your advisory business, if different from Item 1.A.

**LORD, ABBETT & CO. LLC**

List on *Section 1.B. of Schedule D* any additional names under which you conduct your advisory business.

(2) If you are using this Form ADV to register more than one investment adviser under an *umbrella registration*, check this box

If you check this box, complete a *Schedule R* for each relying adviser.

C. If this filing is reporting a change in your legal name (Item 1.A.) or primary business name (Item 1.B.(1)), enter the new name and specify whether the name change is of  your legal name or  your primary business name:

D. (1) If you are registered with the SEC as an investment adviser, your SEC file number: **801-6997**

(2) If you report to the SEC as an *exempt reporting adviser*, your SEC file number:

(3) If you have one or more Central Index Key numbers assigned by the SEC ("CIK Numbers"), all of your CIK numbers:

**CIK Number**

728100

E. (1) If you have a number ("CRD Number") assigned by the *FINRA's CRD* system or by the *IARD* system, your *CRD* number: **110391**

If your firm does not have a *CRD* number, skip this Item 1.E. Do not provide the *CRD* number of one of your officers, employees, or affiliates.

(2) If you have additional *CRD* Numbers, your additional *CRD* numbers:

No Information Filed

F. *Principal Office and Place of Business*

(1) Address (do not use a P.O. Box):

Number and Street 1:

90 HUDSON STREET

City:

JERSEY CITY

State:

New Jersey

Number and Street 2:

Country:

United States

ZIP+4/Postal Code:

07302-3973

If this address is a private residence, check this box:

List on *Section 1.F. of Schedule D* any office, other than your principal office and place of business, at which you conduct investment advisory business. If you are applying for registration, or are registered, with one or more state securities authorities, you must list all of your offices in the state or states to which you are applying for registration or with whom you are registered. If you are applying for SEC registration, if you are registered only with the SEC, or if you are reporting to the SEC as an exempt reporting adviser, list the largest twenty-five offices in terms of numbers of employees as of the end of your most recently completed fiscal year.

(2) Days of week that you normally conduct business at your *principal office and place of business*:

Monday - Friday  Other:

Normal business hours at this location:

9:00 A.M. - 5:00 P.M.

(3) Telephone number at this location:

201-827-2000

(4) Facsimile number at this location, if any:

201-536-3979

(5) What is the total number of offices, other than your *principal office and place of business*, at which you conduct investment advisory business as of the end of your most recently completed fiscal year?

G. Mailing address, if different from your *principal office and place of business* address:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

If this address is a private residence, check this box:

H. If you are a sole proprietor, state your full residence address, if different from your *principal office and place of business* address in Item 1.F.:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

Yes No

I. Do you have one or more websites or accounts on publicly available social media platforms (including, but not limited to, Twitter, Facebook and LinkedIn)?

*If "yes," list all firm website addresses and the address for each of the firm's accounts on publicly available social media platforms on Section 1.I. of Schedule D. If a website address serves as a portal through which to access other information you have published on the web, you may list the portal without listing addresses for all of the other information. You may need to list more than one portal address. Do not provide the addresses of websites or accounts on publicly available social media platforms where you do not control the content. Do not provide the individual electronic mail (e-mail) addresses of employees or the addresses of employee accounts on publicly available social media platforms.*

J. Chief Compliance Officer

(1) Provide the name and contact information of your Chief Compliance Officer. If you are an *exempt reporting adviser*, you must provide the contact information for your Chief Compliance Officer, if you have one. If not, you must complete Item 1.K. below.

Name:

Other titles, if any:

Telephone number:

Facsimile number, if any:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

Electronic mail (e-mail) address, if Chief Compliance Officer has one:

(2) If your Chief Compliance Officer is compensated or employed by any *person* other than you, a *related person* or an investment company registered under the Investment Company Act of 1940 that you advise for providing chief compliance officer services to you, provide the *person's* name and IRS Employer Identification Number (if any):

Name:

IRS Employer Identification Number:

K. Additional Regulatory Contact Person: If a person other than the Chief Compliance Officer is authorized to receive information and respond to questions about this Form ADV, you may provide that information here.

Name:

Titles:

Telephone number:

Facsimile number, if any:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

Electronic mail (e-mail) address, if contact person has one:

Yes No

L. Do you maintain some or all of the books and records you are required to keep under Section 204 of the Advisers Act, or similar state law, somewhere other than your *principal office and place of business*?

*If "yes," complete Section 1.L. of Schedule D.*

Yes No

M. Are you registered with a *foreign financial regulatory authority*?

*Answer "no" if you are not registered with a foreign financial regulatory authority, even if you have an affiliate that is registered with a foreign financial regulatory authority. If "yes," complete Section 1.M. of Schedule D.*

Yes No

N. Are you a public reporting company under Sections 12 or 15(d) of the Securities Exchange Act of 1934?

Yes No

O. Did you have \$1 billion or more in assets on the last day of your most recent fiscal year?

If yes, what is the approximate amount of your assets:

\$1 billion to less than \$10 billion

\$10 billion to less than \$50 billion

\$50 billion or more

For purposes of Item 1.O. only, "assets" refers to your total assets, rather than the assets you manage on behalf of clients. Determine your total assets using the total assets shown on the balance sheet for your most recent fiscal year end.

P. Provide your *Legal Entity Identifier* if you have one:  
549300JN4JHMFPO31Y81

A *legal entity identifier* is a unique number that companies use to identify each other in the financial marketplace. You may not have a *legal entity identifier*.

#### SECTION 1.B. Other Business Names

No Information Filed

#### SECTION 1.F. Other Offices

No Information Filed

#### SECTION 1.I. Website Addresses

List your website addresses, including addresses for accounts on publicly available social media platforms where you control the content (including, but not limited to, Twitter, Facebook and/or LinkedIn). You must complete a separate Schedule D Section 1.I. for each website or account on a publicly available social media platform.

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.LINKEDIN.COM/COMPANY/LORD-ABBETT-&-CO-LLC/](https://www.linkedin.com/company/lord-abbett-&-co-llc/)

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.YOUTUBE.COM/USER/LORDABBETTCO](https://www.youtube.com/user/lordabbettco)

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.GLASSDOOR.COM/OVERVIEW/WORKING-AT-LORD-ABBETT-AND-CO-EI\\_IE151331.11,29.HTM](https://www.glassdoor.com/overview/working-at-lord-abbett-and-co-ei_ie151331.11,29.htm)

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.INSTAGRAM.COM/LORDABBETT/](https://www.instagram.com/lordabbett/)

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.LORDABBETT.COM](https://www.lordabbett.com)

Address of Website/Account on Publicly Available Social Media Platform: [HTTPS://WWW.TWITTER.COM/LORDABBETT](https://www.twitter.com/lordabbett)

#### SECTION 1.L. Location of Books and Records

Complete the following information for each location at which you keep your books and records, other than your *principal office and place of business*. You must complete a separate Schedule D, Section 1.L. for each location.

Name of entity where books and records are kept:  
INSTITUTIONAL SHAREHOLDER SERVICES INC.

Number and Street 1:  
702 KING FARM BOULEVARD

Number and Street 2:  
SUITE 400

City: ROCKVILLE State: Maryland Country: United States ZIP+4/Postal Code: 20850

If this address is a private residence, check this box:

Telephone Number: 301-556-0500 Facsimile number, if any: 301-556-0491

This is (check one):  
 one of your branch offices or affiliates.

a third-party unaffiliated recordkeeper.

other.

Briefly describe the books and records kept at this location.

PROXY VOTING RECORDS AND CLASS ACTION FILINGS.

Name of entity where books and records are kept:

FIS GLOBAL

Number and Street 1:

3 VAN DE GRAAFF DRIVE

Number and Street 2:

City:

BURLINGTON

State:

Massachusetts

Country:

United States

ZIP+4/Postal Code:

01803

If this address is a private residence, check this box:

Telephone Number:

781-743-1114

Facsimile number, if any:

781-238-0902

This is (check one):

one of your branch offices or affiliates.

a third-party unaffiliated recordkeeper.

other.

Briefly describe the books and records kept at this location.

CODE OF ETHICS TRANSACTIONAL AND HOLDINGS DATA.

Name of entity where books and records are kept:

IHS MARKIT

Number and Street 1:

5430 LBJ FREEWAY

Number and Street 2:

SUITE 800

City:

DALLAS

State:

Texas

Country:

United States

ZIP+4/Postal Code:

75240

If this address is a private residence, check this box:

Telephone Number:

972-581-6549

Facsimile number, if any:

This is (check one):

one of your branch offices or affiliates.

a third-party unaffiliated recordkeeper.

other.

Briefly describe the books and records kept at this location.

TRANSACTIONAL DATA, SECURITY MASTER DATA AND REFERENTIAL MASTER DATA FOR CERTAIN INVESTMENTS.

Name of entity where books and records are kept:

GLOBAL RELAY COMMUNICATIONS INC.

Number and Street 1:

220 CAMBIE STREET

Number and Street 2:

2ND FLOOR

City:

VANCOUVER

State:

Country:

Canada

ZIP+4/Postal Code:

V6B 2M9

If this address is a private residence, check this box:

Telephone Number:

Facsimile number, if any:

This is (check one):

- one of your branch offices or affiliates.  
 a third-party unaffiliated recordkeeper.  
 other.

Briefly describe the books and records kept at this location.

CERTAIN ELECTRONIC MESSAGES

Name of entity where books and records are kept:

FISERV INVESTMENT SERVICES

Number and Street 1:

10 EXCHANGE PLACE

City:

JERSEY CITY

State:

New Jersey

Number and Street 2:

23RD FLOOR

Country:

United States

ZIP+4/Postal Code:

07302

If this address is a private residence, check this box:

Telephone Number:

201-332-2020

Facsimile number, if any:

201-946-9543

This is (check one):

- one of your branch offices or affiliates.  
 a third-party unaffiliated recordkeeper.  
 other.

Briefly describe the books and records kept at this location.

CLIENT DATA, HOLDINGS, TRANSACTIONS, AND PERFORMANCE COMPOSITES.

Name of entity where books and records are kept:

BLOOMBERG L.P.

Number and Street 1:

731 LEXINGTON AVENUE

City:

NEW YORK

State:

New York

Number and Street 2:

Country:

United States

ZIP+4/Postal Code:

10022

If this address is a private residence, check this box:

Telephone Number:

212-318-2000

Facsimile number, if any:

917-369-5000

This is (check one):

- one of your branch offices or affiliates.  
 a third-party unaffiliated recordkeeper.  
 other.

Briefly describe the books and records kept at this location.

MISCELLANEOUS TRADE-RELATED COMMUNICATIONS AND BACK-UP TRADE TICKETS FOR FIXED-INCOME SECURITIES AND DERIVATIVES.

Name of entity where books and records are kept:

HANZO ARCHIVES INC.

Number and Street 1:

77 WATER STREET

City:

NEW YORK

State:

New York

Number and Street 2:

8TH FLOOR

Country:

United States

ZIP+4/Postal Code:

10005

If this address is a private residence, check this box:

Telephone Number:  
+44 7917715176

Facsimile number, if any:

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.  
WEB RECORDS FOR LORDABBETT.COM

Name of entity where books and records are kept:  
GRM INFORMATION MANAGEMENT SERVICES INC.

Number and Street 1:  
6 JOANNA CT.

Number and Street 2:

City:  
EAST BRUNSWICK

State:  
New Jersey

Country:  
United States

ZIP+4/Postal Code:  
08816

If this address is a private residence, check this box:

Telephone Number:  
866-947-6932

Facsimile number, if any:  
201-798-4427

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.  
BROAD ARRAY OF RECORD TYPES IN PAPER FORM.

Name of entity where books and records are kept:  
BOX, INC.

Number and Street 1:  
900 JEFFERSON AVENUE

Number and Street 2:

City:  
REDWOOD CITY

State:  
California

Country:  
United States

ZIP+4/Postal Code:  
94063

If this address is a private residence, check this box:

Telephone Number:  
1-877-729-4269

Facsimile number, if any:

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.  
CLOUD-BASED ARCHIVING SOLUTION TO RETAIN CERTAIN ELECTRONIC RECORDS AND ASSIST WITH FILING.

Name of entity where books and records are kept:  
ADVISER COMPLIANCE ASSOCIATES, LLC

Number and Street 1:  
8401 COLESVILLE ROAD

City:  
SILVER SPRING

State:  
Maryland

Number and Street 2:  
SUITE 700

Country:  
United States

ZIP+4/Postal Code:  
20910-6340

If this address is a private residence, check this box:

Telephone Number:  
301-495-7850

Facsimile number, if any:

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.

CLOUD-BASED STORAGE OF COMPLIANCE DOCUMENTATION RELATING TO ADVERTISING AND MARKETING.

Name of entity where books and records are kept:

MICROSOFT CORPORATION - ARCHIVING IN OFFICE 365

Number and Street 1:  
ONE MICROSOFT WAY

City:  
REDMOND

State:  
Washington

Number and Street 2:

Country:  
United States

ZIP+4/Postal Code:  
98052

If this address is a private residence, check this box:

Telephone Number:  
425-882-8080

Facsimile number, if any:  
425-936-7329

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.

CLOUD-BASED ARCHIVING SOLUTION TO RETAIN CERTAIN ELECTRONIC RECORDS.

Name of entity where books and records are kept:

STATE STREET BANK AND TRUST COMPANY, INVESTOR SERVICES - MIDDLE OFFICE

Number and Street 1:  
ONE LINCOLN STREET

City:  
BOSTON

State:  
Massachusetts

Number and Street 2:

Country:  
United States

ZIP+4/Postal Code:  
02111

If this address is a private residence, check this box:

Telephone Number:  
(617) 786-3000

Facsimile number, if any:

This is (check one):

- one of your branch offices or affiliates.
- a third-party unaffiliated recordkeeper.
- other.

Briefly describe the books and records kept at this location.

MAINTAINS CERTAIN RECORDS AND INFORMATION RELATED TO PROVISION OF BACK OFFICE SERVICES.



SECTION 1.M. Registration with Foreign Financial Regulatory Authorities

No Information Filed

Item 2 SEC Registration/Reporting

Responses to this Item help us (and you) determine whether you are eligible to register with the SEC. Complete this Item 2.A. only if you are applying for SEC registration or submitting an annual updating amendment to your SEC registration. If you are filing an umbrella registration, the information in Item 2 should be provided for the filing adviser only.

A. To register (or remain registered) with the SEC, you must check at least one of the Items 2.A.(1) through 2.A.(12), below. If you are submitting an annual updating amendment to your SEC registration and you are no longer eligible to register with the SEC, check Item 2.A.(13). Part 1A Instruction 2 provides information to help you determine whether you may affirmatively respond to each of these items.

You (the adviser):

- (1) are a large advisory firm that either: (a) has regulatory assets under management of \$100 million (in U.S. dollars) or more; or (b) has regulatory assets under management of \$90 million (in U.S. dollars) or more at the time of filing its most recent annual updating amendment and is registered with the SEC;
(2) are a mid-sized advisory firm that has regulatory assets under management of \$25 million (in U.S. dollars) or more but less than \$100 million (in U.S. dollars) and you are either: (a) not required to be registered as an adviser with the state securities authority of the state where you maintain your principal office and place of business; or (b) not subject to examination by the state securities authority of the state where you maintain your principal office and place of business;
(3) Reserved
(4) have your principal office and place of business outside the United States;
(5) are an investment adviser (or subadviser) to an investment company registered under the Investment Company Act of 1940;
(6) are an investment adviser to a company which has elected to be a business development company pursuant to section 54 of the Investment Company Act of 1940 and has not withdrawn the election, and you have at least \$25 million of regulatory assets under management;
(7) are a pension consultant with respect to assets of plans having an aggregate value of at least \$200,000,000 that qualifies for the exemption in rule 203A-2(a);
(8) are a related adviser under rule 203A-2(b) that controls, is controlled by, or is under common control with, an investment adviser that is registered with the SEC, and your principal office and place of business is the same as the registered adviser;
(9) are an adviser relying on rule 203A-2(c) because you expect to be eligible for SEC registration within 120 days;
(10) are a multi-state adviser that is required to register in 15 or more states and is relying on rule 203A-2(d);
(11) are an Internet adviser relying on rule 203A-2(e);
(12) have received an SEC order exempting you from the prohibition against registration with the SEC;
(13) are no longer eligible to remain registered with the SEC.

State Securities Authority Notice Filings and State Reporting by Exempt Reporting Advisers

C. Under state laws, SEC-registered advisers may be required to provide to state securities authorities a copy of the Form ADV and any amendments they file with the SEC. These are called notice filings. In addition, exempt reporting advisers may be required to provide state securities authorities with a copy of reports and any amendments they file with the SEC. If this is an initial application or report, check the box(es) next to the state(s) that you would like to receive notice of this and all subsequent filings or reports you submit to the SEC. If this is an amendment to direct your notice filings or reports to additional state(s), check the box(es) next to the state(s) that you would like to receive notice of this and all subsequent filings or reports you submit to the SEC. If this is an amendment to your registration to stop your notice filings or reports from going to state(s) that currently receive them, uncheck the box(es) next to those state(s).

Jurisdictions

Table with 4 columns of state abbreviations (AL, AK, AZ, AR, CA, CO, CT, IL, IN, IA, KS, KY, LA, ME, NE, NV, NH, NJ, NM, NY, NC, SC, SD, TN, TX, UT, VT, VI) and checkboxes indicating selection status.

<input checked="" type="checkbox"/> DE	<input checked="" type="checkbox"/> MD	<input checked="" type="checkbox"/> ND	<input checked="" type="checkbox"/> VA
<input checked="" type="checkbox"/> DC	<input checked="" type="checkbox"/> MA	<input checked="" type="checkbox"/> OH	<input checked="" type="checkbox"/> WA
<input checked="" type="checkbox"/> FL	<input checked="" type="checkbox"/> MI	<input checked="" type="checkbox"/> OK	<input checked="" type="checkbox"/> WV
<input checked="" type="checkbox"/> GA	<input checked="" type="checkbox"/> MN	<input checked="" type="checkbox"/> OR	<input checked="" type="checkbox"/> WI
<input type="checkbox"/> GU	<input checked="" type="checkbox"/> MS	<input checked="" type="checkbox"/> PA	<input checked="" type="checkbox"/> WY
<input checked="" type="checkbox"/> HI	<input checked="" type="checkbox"/> MO	<input checked="" type="checkbox"/> PR	
<input checked="" type="checkbox"/> ID	<input checked="" type="checkbox"/> MT	<input checked="" type="checkbox"/> RI	

If you are amending your registration to stop your notice filings or reports from going to a state that currently receives them and you do not want to pay that state's notice filing or report filing fee for the coming year, your amendment must be filed before the end of the year (December 31).

#### SECTION 2.A.(8) Related Adviser

If you are relying on the exemption in rule 203A-2(b) from the prohibition on registration because you *control*, are *controlled by*, or are under common *control* with an investment adviser that is registered with the SEC and your *principal office and place of business* is the same as that of the registered adviser, provide the following information:

Name of Registered Investment Adviser

CRD Number of Registered Investment Adviser

SEC Number of Registered Investment Adviser

-

#### SECTION 2.A.(9) Investment Adviser Expecting to be Eligible for Commission Registration within 120 Days

If you are relying on rule 203A-2(c), the exemption from the prohibition on registration available to an adviser that expects to be eligible for SEC registration within 120 days, you are required to make certain representations about your eligibility for SEC registration. By checking the appropriate boxes, you will be deemed to have made the required representations. You must make both of these representations:

- I am not registered or required to be registered with the SEC or a *state securities authority* and I have a reasonable expectation that I will be eligible to register with the SEC within 120 days after the date my registration with the SEC becomes effective.
- I undertake to withdraw from SEC registration if, on the 120th day after my registration with the SEC becomes effective, I would be prohibited by Section 203A(a) of the Advisers Act from registering with the SEC.

#### SECTION 2.A.(10) Multi-State Adviser

If you are relying on rule 203A-2(d), the multi-state adviser exemption from the prohibition on registration, you are required to make certain representations about your eligibility for SEC registration. By checking the appropriate boxes, you will be deemed to have made the required representations.

If you are applying for registration as an investment adviser with the SEC, you must make both of these representations:

- I have reviewed the applicable state and federal laws and have concluded that I am required by the laws of 15 or more states to register as an investment adviser with the *state securities authorities* in those states.
- I undertake to withdraw from SEC registration if I file an amendment to this registration indicating that I would be required by the laws of fewer than 15 states to register as an investment adviser with the *state securities authorities* of those states.

If you are submitting your *annual updating amendment*, you must make this representation:

- Within 90 days prior to the date of filing this amendment, I have reviewed the applicable state and federal laws and have concluded that I am required by the laws of at least 15 states to register as an investment adviser with the *state securities authorities* in those states.

#### SECTION 2.A.(12) SEC Exemptive Order

If you are relying upon an SEC *order* exempting you from the prohibition on registration, provide the following information:

Application Number:

803-

Date of *order*:

#### Item 3 Form of Organization

If you are filing an *umbrella registration*, the information in Item 3 should be provided for the *filing adviser* only.

A. How are you organized?

- Corporation
- Sole Proprietorship

- Limited Liability Partnership (LLP)
- Partnership
- Limited Liability Company (LLC)
- Limited Partnership (LP)
- Other (specify):

If you are changing your response to this Item, see *Part 1A Instruction 4*.

B. In what month does your fiscal year end each year?  
SEPTEMBER

C. Under the laws of what state or country are you organized?  
State Country  
Delaware United States

If you are a partnership, provide the name of the state or country under whose laws your partnership was formed. If you are a sole proprietor, provide the name of the state or country where you reside.

If you are changing your response to this Item, see *Part 1A Instruction 4*.

#### Item 4 Successions

	<b>Yes</b>	<b>No</b>
A. Are you, at the time of this filing, succeeding to the business of a registered investment adviser, including, for example, a change of your structure or legal status (e.g., form of organization or state of incorporation)?	<input type="radio"/>	<input checked="" type="radio"/>

If "yes", complete *Item 4.B.* and *Section 4 of Schedule D*.

B. Date of Succession: (MM/DD/YYYY)

If you have already reported this succession on a previous Form ADV filing, do not report the succession again. Instead, check "No." See *Part 1A Instruction 4*.

#### SECTION 4 Successions

No Information Filed

#### Item 5 Information About Your Advisory Business - Employees, Clients, and Compensation

Responses to this Item help us understand your business, assist us in preparing for on-site examinations, and provide us with data we use when making regulatory policy. [Part 1A Instruction 5.a.](#) provides additional guidance to newly formed advisers for completing this Item 5.

##### Employees

If you are organized as a sole proprietorship, include yourself as an employee in your responses to *Item 5.A.* and *Items 5.B.(1), (2), (3), (4), and (5)*. If an employee performs more than one function, you should count that employee in each of your responses to *Items 5.B.(1), (2), (3), (4), and (5)*.

A. Approximately how many *employees* do you have? Include full- and part-time *employees* but do not include any clerical workers.  
730

B. (1) Approximately how many of the *employees* reported in 5.A. perform investment advisory functions (including research)?  
252

(2) Approximately how many of the *employees* reported in 5.A. are registered representatives of a broker-dealer?  
292

(3) Approximately how many of the *employees* reported in 5.A. are registered with one or more *state securities authorities* as *investment adviser representatives*?  
187

(4) Approximately how many of the *employees* reported in 5.A. are registered with one or more *state securities authorities* as *investment adviser representatives* for an investment adviser other than you?  
0

(5) Approximately how many of the *employees* reported in 5.A. are licensed agents of an insurance company or agency?  
0

(6) Approximately how many firms or other *persons* solicit advisory *clients* on your behalf?

In your response to Item 5.B.(6), do not count any of your employees and count a firm only once – do not count each of the firm's employees that solicit on your behalf.

## Clients

In your responses to Items 5.C. and 5.D. do not include as "clients" the investors in a private fund you advise, unless you have a separate advisory relationship with those investors.

- C. (1) To approximately how many *clients* for whom you do not have regulatory assets under management did you provide investment advisory services during your most recently completed fiscal year?

0

- (2) Approximately what percentage of your *clients* are non-United States persons?

1%

- D. For purposes of this Item 5.D., the category "individuals" includes trusts, estates, and 401(k) plans and IRAs of individuals and their family members, but does not include businesses organized as sole proprietorships.

The category "business development companies" consists of companies that have made an election pursuant to section 54 of the Investment Company Act of 1940. Unless you provide advisory services pursuant to an investment advisory contract to an investment company registered under the Investment Company Act of 1940, do not answer (1)(d) or (3)(d) below.

Indicate the approximate number of your *clients* and amount of your total regulatory assets under management (reported in Item 5.F. below) attributable to each of the following type of *client*. If you have fewer than 5 *clients* in a particular category (other than (d), (e), and (f)) you may check Item 5.D.(2) rather than respond to Item 5.D.(1).

The aggregate amount of regulatory assets under management reported in Item 5.D.(3) should equal the total amount of regulatory assets under management reported in Item 5.F.(2)(c) below.

If a *client* fits into more than one category, select one category that most accurately represents the *client* to avoid double counting *clients* and assets. If you advise a registered investment company, business development company, or pooled investment vehicle, report those assets in categories (d), (e), and (f) as applicable.

Type of Client	(1) Number of Client(s)	(2) Fewer than 5 Clients	(3) Amount of Regulatory Assets under Management
(a) Individuals (other than <i>high net worth individuals</i> )	14895	<input type="checkbox"/>	\$ 5,870,429,790
(b) <i>High net worth individuals</i>	2935	<input type="checkbox"/>	\$ 7,106,981,247
(c) Banking or thrift institutions		<input type="checkbox"/>	\$
(d) Investment companies	69		\$ 166,448,854,359
(e) Business development companies			\$
(f) Pooled investment vehicles (other than investment companies and business development companies)	33		\$ 14,965,309,815
(g) Pension and profit sharing plans (but not the plan participants or government pension plans)	101	<input type="checkbox"/>	\$ 4,142,986,720
(h) Charitable organizations	37	<input type="checkbox"/>	\$ 1,353,591,898
(i) State or municipal <i>government entities</i> (including government pension plans)	17	<input type="checkbox"/>	\$ 5,603,565,707
(j) Other investment advisers	7	<input type="checkbox"/>	\$ 1,034,563,556
(k) Insurance companies	10	<input type="checkbox"/>	\$ 1,237,046,970
(l) Sovereign wealth funds and foreign official institutions		<input type="checkbox"/>	\$
(m) Corporations or other businesses not listed above	342	<input type="checkbox"/>	\$ 3,416,847,074
(n) Other:		<input type="checkbox"/>	\$

## Compensation Arrangements

- E. You are compensated for your investment advisory services by (check all that apply):

- (1) A percentage of assets under your management  
 (2) Hourly charges  
 (3) Subscription fees (for a newsletter or periodical)  
 (4) Fixed fees (other than subscription fees)  
 (5) Commissions  
 (6) *Performance-based fees*  
 (7) Other (specify):

## Item 5 Information About Your Advisory Business - Regulatory Assets Under Management

### Regulatory Assets Under Management

- F. (1) Do you provide continuous and regular supervisory or management services to securities portfolios? Yes No

- (2) If yes, what is the amount of your regulatory assets under management and total number of accounts?

U.S. Dollar Amount

Total Number of Accounts

Discretionary:	(a)	\$ 210,145,613,581	(d)	18,440
Non-Discretionary:	(b)	\$ 1,034,563,555	(e)	7
Total:	(c)	\$ 211,180,177,136	(f)	18,447

Part 1A Instruction 5.b. explains how to calculate your regulatory assets under management. You must follow these instructions carefully when completing this Item.

(3) What is the approximate amount of your total regulatory assets under management (reported in Item 5.F.(2)(c) above) attributable to *clients* who are non-United States persons?

\$ 12,681,077,912

## Item 5 Information About Your Advisory Business - Advisory Activities

### Advisory Activities

G. What type(s) of advisory services do you provide? Check all that apply.

- (1) Financial planning services
- (2) Portfolio management for individuals and/or small businesses
- (3) Portfolio management for investment companies (as well as "business development companies" that have made an election pursuant to section 54 of the Investment Company Act of 1940)
- (4) Portfolio management for pooled investment vehicles (other than investment companies)
- (5) Portfolio management for businesses (other than small businesses) or institutional *clients* (other than registered investment companies and other pooled investment vehicles)
- (6) Pension consulting services
- (7) Selection of other advisers (including *private fund* managers)
- (8) Publication of periodicals or newsletters
- (9) Security ratings or pricing services
- (10) Market timing services
- (11) Educational seminars/workshops
- (12) Other(specify): IMPERSONAL INVESTMENT ADVISORY SERVICES

Do not check Item 5.G.(3) unless you provide advisory services pursuant to an investment advisory contract to an investment company registered under the Investment Company Act of 1940, including as a subadviser. If you check Item 5.G.(3), report the 811 or 814 number of the investment company or investment companies to which you provide advice in Section 5.G.(3) of Schedule D.

H. If you provide financial planning services, to how many *clients* did you provide these services during your last fiscal year?

- 0
- 1 - 10
- 11 - 25
- 26 - 50
- 51 - 100
- 101 - 250
- 251 - 500
- More than 500

If more than 500, how many?  
(round to the nearest 500)

In your responses to this Item 5.H., do not include as "clients" the investors in a private fund you advise, unless you have a separate advisory relationship with those investors.

I. (1) Do you participate in a *wrap fee program*? Yes  No

(2) If you participate in a *wrap fee program*, what is the amount of your regulatory assets under management attributable to acting as:

(a) *sponsor* to a *wrap fee program*

\$ 0

(b) portfolio manager for a *wrap fee program*?

\$ 14,473,595,252

(c) *sponsor* to and portfolio manager for the same *wrap fee program*?

\$ 0

If you report an amount in Item 5.I.(2)(c), do not report that amount in Item 5.I.(2)(a) or Item 5.I.(2)(b).

If you are a portfolio manager for a *wrap fee program*, list the names of the programs, their sponsors and related information in Section 5.I.(2) of Schedule D.

If your involvement in a *wrap fee program* is limited to recommending *wrap fee programs* to your clients, or you advise a mutual fund that is offered through a *wrap fee program*, do not check Item 5.I.(1) or enter any amounts in response to Item 5.I.(2).

J. (1) In response to Item 4.B. of Part 2A of Form ADV, do you indicate that you provide investment advice only with respect to limited types of investments? Yes  No

(2) Do you report *client* assets in Item 4.E. of Part 2A that are computed using a different method than the method used to compute your regulatory assets under Yes  No

management?

K. Separately Managed Account *Clients*

(1) Do you have regulatory assets under management attributable to *clients* other than those listed in Item 5.D.(3)(d)-(f) (separately managed account *clients*)?

Yes No

*If yes, complete Section 5.K.(1) of Schedule D.*

(2) Do you engage in borrowing transactions on behalf of any of the separately managed account *clients* that you advise?

*If yes, complete Section 5.K.(2) of Schedule D.*

(3) Do you engage in derivative transactions on behalf of any of the separately managed account *clients* that you advise?

*If yes, complete Section 5.K.(2) of Schedule D.*

(4) After subtracting the amounts in Item 5.D.(3)(d)-(f) above from your total regulatory assets under management, does any custodian hold ten percent or more of this remaining amount of regulatory assets under management?

*If yes, complete Section 5.K.(3) of Schedule D for each custodian.*

L. Marketing Activities

(1) Do any of your *advertisements* include:

Yes No

(a) Performance results?

(b) A reference to specific investment advice provided by you (as that phrase is used in rule 206(4)-1(a)(5))?

(c) *Testimonials* (other than those that satisfy rule 206(4)-1(b)(4)(ii))?

(d) *Endorsements* (other than those that satisfy rule 206(4)-1(b)(4)(ii))?

(e) *Third-party ratings*?

(2) If you answer "yes" to L(1)(c), (d), or (e) above, do you pay or otherwise provide cash or non-cash compensation, directly or indirectly, in connection with the use of *testimonials*, *endorsements*, or *third-party ratings*?

(3) Do any of your *advertisements* include *hypothetical performance* ?

(4) Do any of your *advertisements* include *predecessor performance* ?

**SECTION 5.G.(3) Advisers to Registered Investment Companies and Business Development Companies**

If you check Item 5.G.(3), what is the SEC file number (811 or 814 number) of each of the registered investment companies and business development companies to which you act as an adviser pursuant to an advisory contract? You must complete a separate Schedule D Section 5.G.(3) for each registered investment company and business development company to which you act as an adviser.

SEC File Number  
811 - 00005

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000006806	\$ 0

SEC File Number  
811 - 02145

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b><i>Parallel Managed Account</i> Regulatory assets under management</b>
S000006820	\$ 22,338,792,219

SEC File Number  
811 - 02871

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b><i>Parallel Managed Account</i> Regulatory assets under management</b>
S000006834	\$ 593,694,722

SEC File Number  
811 - 02924

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b><i>Parallel Managed Account</i> Regulatory assets under management</b>
S000006869	\$ 0

SEC File Number  
811 - 03364

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b><i>Parallel Managed Account</i> Regulatory assets under management</b>
S000050621	\$ 515,741,439

SEC File Number  
811 - 03691

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b><i>Parallel Managed Account</i> Regulatory assets under management</b>
S000001450	\$ 211,877,942

SEC File Number  
811 - 03942

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b>Parallel Managed Account Regulatory assets under management</b>
S000007531	\$ 0
S000007537	\$ 0
S000007538	\$ 0
S000007539	\$ 0
S000031145	\$ 0
S000031146	\$ 0
S000031147	\$ 0
S000049302	\$ 0

SEC File Number  
811 - 05476

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b>Parallel Managed Account Regulatory assets under management</b>
S000001454	\$ 0
S000042725	\$ 11,461,542
S000062561	\$ 0

SEC File Number  
811 - 05876

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

<b>Series ID</b>	<b>Parallel Managed Account Regulatory assets under management</b>
S000007297	\$ 1,776,023,061
S000007298	\$ 2,926,340,108
S000007299	\$ 22,338,792,219
S000007300	\$ 37,790,752
S000007301	\$ 439,711,225
S000007304	\$ 985,549,939
S000028719	\$ 3,047,379,616
S000028721	\$ 4,900,850,127
S000045029	\$ 63,465,855,807

SEC File Number  
811 - 06650

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.



Series ID	Parallel Managed Account Regulatory assets under management
S000006998	\$ 142,858,111
S000006999	\$ 52,851,584
S000007001	\$ 0

SEC File Number  
811 - 07538

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000007138	\$ 230,352,596
S000007139	\$ 0
S000007140	\$ 0
S000007142	\$ 311,857,700
S000007143	\$ 0
S000007144	\$ 627,560,378
S000007183	\$ 120,042,746
S000022492	\$ 0
S000032915	\$ 209,874,475
S000055621	\$ 44,773,643
S000064461	\$ 0
S000064462	\$ 0
S000064833	\$ 0
S000066722	\$ 0

SEC File Number  
811 - 07953

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000044688	\$ 449,566,297

SEC File Number  
811 - 07988

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000007276	\$ 436,392,577
S000007277	\$ 993,888,198
S000007278	\$ 4,609,289,779
S000007279	\$ 13,222,709,094
S000007280	\$ 3,161,148,973
S000007281	\$ 0

S000007282	\$ 0
S000007283	\$ 0
S000019792	\$ 422,216,488
S000031962	\$ 0
S000051773	\$ 1,473,990,215
S000055282	\$ 1,128,165,745
S000056808	\$ 0
S000056809	\$ 0

SEC File Number  
811 - 08894

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000068109	\$ 62,633,819,789

SEC File Number  
811 - 10371

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000068466	\$ 34,385,687
S000068467	\$ 0
S000070264	\$ 0
S000072312	\$ 0

SEC File Number  
811 - 23148

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
S000054040	\$ 5,197,679,825

SEC File Number  
811 - 23325

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
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S000068977

\$ 63,426,867,851

SEC File Number  
811 - 23383

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
	\$ 0

SEC File Number  
811 - 23655

Provide the regulatory assets under management of all *parallel managed accounts* related to a registered investment company (or series thereof) or business development company that you advise.

Series ID	Parallel Managed Account Regulatory assets under management
	\$ 0

#### SECTION 5.I.(2) *Wrap Fee Programs*

If you are a portfolio manager for one or more *wrap fee programs*, list the name of each program and its *sponsor*. You must complete a separate Schedule D Section 5.I.(2) for each *wrap fee program* for which you are a portfolio manager.

Name of *Wrap Fee Program*

ACCESS

Name of *Sponsor*

UBS FINANCIAL SERVICES INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 7163

*Sponsor's* CRD Number (if any):

8174

Name of *Wrap Fee Program*

AVISEN SECURITIES LTD. LOCKWOOD SEPARATE ACCOUNT PROGRAM (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

AVISEN WEALTH MANAGEMENT, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 65833

*Sponsor's* CRD Number (if any):

125977

Name of *Wrap Fee Program*

BENJAMIN F. EDWARDS & CO. SMA COVERED (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

BENJAMIN F. EDWARDS & COMPANY, INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71421

*Sponsor's CRD* Number (if any):

146936

Name of *Wrap Fee Program*

BENJAMIN F. EDWARDS & CO. SMA NON-COVERED (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

BENJAMIN F. EDWARDS & COMPANY, INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71421

*Sponsor's CRD* Number (if any):

146936

Name of *Wrap Fee Program*

BENJAMIN F. EDWARDS & CO. SMA PORTFOLIOS COVERED (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

BENJAMIN F. EDWARDS & COMPANY, INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71421

*Sponsor's CRD* Number (if any):

146936

Name of *Wrap Fee Program*

BENJAMIN F. EDWARDS & CO. SMA PORTFOLIOS NON-COVERED (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

BENJAMIN F. EDWARDS & COMPANY, INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71421

*Sponsor's CRD* Number (if any):

146936

Name of *Wrap Fee Program*

CANTELLA & CO., INC. (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

CANTELLA & CO., INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 60841

*Sponsor's CRD Number (if any):*

13905

*Name of Wrap Fee Program*

CONNECT

*Name of Sponsor*

STIFEL, NICOLAUS & COMPANY, INCORPORATED

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 10746

*Sponsor's CRD Number (if any):*

793

*Name of Wrap Fee Program*

CONSULTING & EVALUATION SERVICES

*Name of Sponsor*

MORGAN STANLEY

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 70103

*Sponsor's CRD Number (if any):*

149777

*Name of Wrap Fee Program*

CONSULTING SERVICES

*Name of Sponsor*

RAYMOND JAMES & ASSOCIATES, INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 10418

*Sponsor's CRD Number (if any):*

705

*Name of Wrap Fee Program*

CONSULTING SERVICES SELECTS SUB-ADVISORY PROGRAM

*Name of Sponsor*

US TRUST

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

-

*Sponsor's CRD Number (if any):*

*Name of Wrap Fee Program*

CONSULTING SOLUTIONS

Name of *Sponsor*

RBC CAPITAL MARKETS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 13059

*Sponsor's* CRD Number (if any):

31194

Name of *Wrap Fee Program*

CONSULTS

Name of *Sponsor*

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 14235

*Sponsor's* CRD Number (if any):

7691

Name of *Wrap Fee Program*

DIVERSIFIED MANAGED ALLOCATIONS

Name of *Sponsor*

WELLS FARGO CLEARING SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 37967

*Sponsor's* CRD Number (if any):

19616

Name of *Wrap Fee Program*

DYNAMIC ALLOCATION PORTFOLIOS - UMA PROGRAM

Name of *Sponsor*

CITIGROUP GLOBAL MARKETS INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 3387

*Sponsor's* CRD Number (if any):

7059

Name of *Wrap Fee Program*

EMPIRE SMA

Name of *Sponsor*

EMPIRE FINANCIAL MANAGEMENT COMPANY, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 106958

*Sponsor's* CRD Number (if any):

146097

Name of *Wrap Fee Program*

ENVESTNET UNIFIED MANAGED PLATFORM

Name of *Sponsor*

ENVESTNET PMC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 57260

*Sponsor's* CRD Number (if any):

111694

Name of *Wrap Fee Program*

ENVESTNET UNIFIED MANAGED PLATFORM

Name of *Sponsor*

MASS MUTUAL LIFE INVESTOR SERVICES

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

-

*Sponsor's* CRD Number (if any):

Name of *Wrap Fee Program*

ENVESTNET WEALTH MANAGEMENT SOLUTIONS

Name of *Sponsor*

ENVESTNET PMC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 57260

*Sponsor's* CRD Number (if any):

111694

Name of *Wrap Fee Program*

FIDUCIARY SERVICES

Name of *Sponsor*

MORGAN STANLEY

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70103

*Sponsor's* CRD Number (if any):

149777

Name of *Wrap Fee Program*

FIDUCIARY SERVICES

Name of *Sponsor*

CITIGROUP GLOBAL MARKETS INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 3387

*Sponsor's CRD* Number (if any):

7059

Name of *Wrap Fee Program*

FIELDPOINT SEPARATELY MANAGED ACCOUNTS (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

FIELDPOINT PRIVATE SECURITIES LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 78295

*Sponsor's CRD* Number (if any):

18975

Name of *Wrap Fee Program*

FIELDPOINT SMA PQJ

Name of *Sponsor*

FIELDPOINT PRIVATE SECURITIES LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 78295

*Sponsor's CRD* Number (if any):

18975

Name of *Wrap Fee Program*

HARBOR SEPARATELY MANAGED ACCOUNT (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

HARBOR INVESTMENT ADVISORY, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70893

*Sponsor's CRD* Number (if any):

151085

Name of *Wrap Fee Program*

INVESTMENT MANAGEMENT SERVICES

Name of *Sponsor*

MORGAN STANLEY

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70103

*Sponsor's CRD* Number (if any):

149777

Name of *Wrap Fee Program*



Name of *Sponsor*

J.P. MORGAN SECURITIES LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 3702

*Sponsor's* CRD Number (if any):

79

Name of *Wrap Fee Program*

LOCKWOOD MANAGED ACCOUNT COMMAND PROGRAM

Name of *Sponsor*

SANCTUARY ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 99364

*Sponsor's* CRD Number (if any):

226606

Name of *Wrap Fee Program*

LOCKWOOD MANAGED ACCOUNTS PROGRAM

Name of *Sponsor*

MADISON AVENUE SECURITIES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 69919

*Sponsor's* CRD Number (if any):

23224

Name of *Wrap Fee Program*

LOCKWOOD MANAGED ACCOUNTS PROGRAM

Name of *Sponsor*

THE INVESTMENT CENTER, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 35826

*Sponsor's* CRD Number (if any):

17839

Name of *Wrap Fee Program*

LOCKWOOD MANAGED ACCOUNTS PROGRAM

Name of *Sponsor*

ARVEST WEALTH MANAGEMENT

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 63738

*Sponsor's CRD Number (if any):*

42057

*Name of Wrap Fee Program*

LOCKWOOD MANAGED ACCOUNTS PROGRAM

*Name of Sponsor*

NATIONWIDE PLANNING ASSOCIATES INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

8 - 45310

*Sponsor's CRD Number (if any):*

31029

*Name of Wrap Fee Program*

LOCKWOOD SPONSORED PROGRAM

*Name of Sponsor*

LOCKWOOD ADVISORS INC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 52378

*Sponsor's CRD Number (if any):*

106108

*Name of Wrap Fee Program*

LOCKWOOD/PERSHING ADVISOR SOLUTIONS LLC MANAGED CONNECT PROGRAM

*Name of Sponsor*

COASTAL BRIDGE ADVISORS

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 70943

*Sponsor's CRD Number (if any):*

152569

*Name of Wrap Fee Program*

LOCKWOOD/PERSHING ADVISOR SOLUTIONS LLC MANAGED CONNECT PROGRAM

*Name of Sponsor*

LIBERTY WEALTH ADVISORS, LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 76718

*Sponsor's CRD Number (if any):*

161997

*Name of Wrap Fee Program*

LOCKWOOD/PERSHING ADVISORS SOLUTIONS LLC MANAGED CONNECT PROGRAM

*Name of Sponsor*

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 110114

*Sponsor's CRD Number (if any):*

287603

*Name of Wrap Fee Program*

LOCKWWOD MANAGED ACCOUNTS PROGRAM

*Name of Sponsor*

INDEPENDENT FINANCIAL PARTNERS

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 69511

*Sponsor's CRD Number (if any):*

125112

*Name of Wrap Fee Program*

LPL MODEL WEALTH PORTFOLIOS PROGRAM

*Name of Sponsor*

LPL FINANCIAL LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 10970

*Sponsor's CRD Number (if any):*

6413

*Name of Wrap Fee Program*

MANAGED 360 PROGRAM

*Name of Sponsor*

LOCKWOOD ADVISORS INC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 52378

*Sponsor's CRD Number (if any):*

106108

*Name of Wrap Fee Program*

MANAGED ACCOUNT ACCESS

*Name of Sponsor*

CHARLES SCHWAB & CO., INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 29938

*Sponsor's CRD Number (if any):*

5393

Name of *Wrap Fee Program*

MANAGED ACCOUNT ADVISOR (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

WADDELL & REED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 16720

*Sponsor's* CRD Number (if any):

866

Name of *Wrap Fee Program*

MANAGED ACCOUNT CONSULTING

Name of *Sponsor*

UBS FINANCIAL SERVICES INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 7163

*Sponsor's* CRD Number (if any):

8174

Name of *Wrap Fee Program*

MANAGED ACCOUNT DIRECT

Name of *Sponsor*

PERSHING ADVISOR SOLUTIONS LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 47425

*Sponsor's* CRD Number (if any):

36671

Name of *Wrap Fee Program*

MANAGED ACCOUNT SELECT PROGRAM

Name of *Sponsor*

CHARLES SCHWAB & CO., INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 29938

*Sponsor's* CRD Number (if any):

5393

Name of *Wrap Fee Program*

MANAGED ASSET PROGRAM - ELITE CHOICE (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

SANDERS MORRIS HARRIS LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 66300

*Sponsor's CRD* Number (if any):

20580

Name of *Wrap Fee Program*

MANAGED ASSET PROGRAM- ELITE (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

SANDERS MORRIS HARRIS LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 66300

*Sponsor's CRD* Number (if any):

20580

Name of *Wrap Fee Program*

MANAGER ACCESS NETWORK

Name of *Sponsor*

LPL FINANCIAL LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 10970

*Sponsor's CRD* Number (if any):

6413

Name of *Wrap Fee Program*

MANAGER ACCESS SELECT

Name of *Sponsor*

LPL FINANCIAL LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 10970

*Sponsor's CRD* Number (if any):

6413

Name of *Wrap Fee Program*

MANAGER SELECT ACCOUNT PROGRAM

Name of *Sponsor*

EQUITABLE ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 14065

*Sponsor's CRD* Number (if any):

6627

Name of *Wrap Fee Program*

MANAGER SELECT ACCOUNT PROGRAM

Name of *Sponsor*

LPL FINANCIAL LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 10970

*Sponsor's* CRD Number (if any):

6413

Name of *Wrap Fee Program*

MANAGER'S CHOICE 19T (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

AMERICAN PORTFOLIOS FINANCIAL SERVICES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 37085

*Sponsor's* CRD Number (if any):

18487

Name of *Wrap Fee Program*

MARKETPLACE

Name of *Sponsor*

CHARLES SCHWAB & CO., INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 29938

*Sponsor's* CRD Number (if any):

5393

Name of *Wrap Fee Program*

MASTERS

Name of *Sponsor*

WELLS FARGO CLEARING SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 37967

*Sponsor's* CRD Number (if any):

19616

Name of *Wrap Fee Program*

MERRILL LYNCH INVESTMENT ADVISORY PROGRAM

Name of *Sponsor*

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 14235

*Sponsor's* CRD Number (if any):

7691

Name of *Wrap Fee Program*

MERRILL LYNCH STRATEGIC PORTFOLIO ADVISOR

Name of *Sponsor*

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 14235

*Sponsor's* CRD Number (if any):

7691

Name of *Wrap Fee Program*

MILL CREEK CAPITAL ADVISORS, LLC

Name of *Sponsor*

MILL CREEK CAPITAL ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 67173

*Sponsor's* CRD Number (if any):

141470

Name of *Wrap Fee Program*

NATIONWIDE PLANNING ASSOCIATES/NPA ASSET MANAGEMENT, LLC (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

NATIONWIDE PLANNING ASSOCIATES INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 45310

*Sponsor's* CRD Number (if any):

31029

Name of *Wrap Fee Program*

NATIONWIDE PLANNING ASSOCIATES/NPA ASSET MANAGEMENT, LLC (THROUGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

CITIGROUP GLOBAL MARKETS INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 3387

*Sponsor's* CRD Number (if any):

7059

Name of *Wrap Fee Program*

OPPORTUNITY PROGRAM

Name of *Sponsor*

STIFEL, NICOLAUS & COMPANY, INCORPORATED

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 10746

*Sponsor's CRD Number (if any):*

793

*Name of Wrap Fee Program*

OUTSIDE MANAGED PROGRAM

*Name of Sponsor*

RAYMOND JAMES & ASSOCIATES, INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 10418

*Sponsor's CRD Number (if any):*

705

*Name of Wrap Fee Program*

PLATINUM SOLUTIONS (THROUGH LOCKWOOD ADVISORS, INC.)

*Name of Sponsor*

LINCOLN INVESTMENT

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 14059

*Sponsor's CRD Number (if any):*

519

*Name of Wrap Fee Program*

PRECIPIO WEALTH MANAGEMENT LLC (THROUGH PERSHING ADVISOR SOLUTIONS)

*Name of Sponsor*

PRECIPIO WEALTH MANAGEMENT LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 70369

*Sponsor's CRD Number (if any):*

150310

*Name of Wrap Fee Program*

PRIVATE ADVISORY NETWORK

*Name of Sponsor*

WELLS FARGO CLEARING SERVICES, LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 37967

*Sponsor's CRD Number (if any):*

19616



Name of *Wrap Fee Program*

PRIVATE BANK UMA PROGRAM

Name of *Sponsor*

US TRUST

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

-

*Sponsor's* CRD Number (if any):

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SAGEPOINT FINANCIAL, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 64721

*Sponsor's* CRD Number (if any):

133763

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FSC SECURITIES CORPORATION

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 42017

*Sponsor's* CRD Number (if any):

7461

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

180 WEALTH ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 110219

*Sponsor's* CRD Number (if any):

284921

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

PRUDENTIAL FINANCIAL PLANNING SERVICES

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 52208

*Sponsor's CRD* Number (if any):

5685

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ONE CHARLES PRIVATE WEALTH

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 109973

*Sponsor's CRD* Number (if any):

286635

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SPC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 20404

*Sponsor's CRD* Number (if any):

110692

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

COMMONWEALTH FINANCIAL NETWORK

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 41541

*Sponsor's CRD* Number (if any):

8032

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FIFTH THIRD SECURITIES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 63623

*Sponsor's CRD* Number (if any):

628

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

JAFFE TILCHIN INVESTMENT PARTNERS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 67720

*Sponsor's* CRD Number (if any):

143608

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

CITIZENS SECURITIES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 61902

*Sponsor's* CRD Number (if any):

39550

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

INDEPENDENT FINANCIAL GROUP, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 62667

*Sponsor's* CRD Number (if any):

7717

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

VOYA FINANCIAL ADVISORS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 46585

*Sponsor's* CRD Number (if any):

2882

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

TRINITYPOINT WEALTH, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 113394

*Sponsor's* CRD Number (if any):

297165

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

WOODBURY FINANCIAL SERVICES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 54905

*Sponsor's* CRD Number (if any):

421

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

AMERIPRISE FINANCIAL SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 28543

*Sponsor's* CRD Number (if any):

6363

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

HIGHTOWER ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 69625

*Sponsor's* CRD Number (if any):

145323

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FFEC WEALTH PARTNERS LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 34082

*Sponsor's* CRD Number (if any):

16507

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ROYAL ALLIANCE ASSOCIATES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 54859

*Sponsor's* CRD Number (if any):

23131

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ROBERT W. BAIRD & CO. INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 7571

*Sponsor's* CRD Number (if any):

8158

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KESTRA ADVISORY SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 56126

*Sponsor's* CRD Number (if any):

283330

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

TRIAD HYBRID SOLUTIONS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 80075

*Sponsor's* CRD Number (if any):

171070

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FIRST ALLIED ADVISORY SERVICES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 66653

*Sponsor's* CRD Number (if any):

137888

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

REHMANN FINANCIAL

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 64587

*Sponsor's* CRD Number (if any):

123047

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KOVACK ADVISORS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 63048

*Sponsor's* CRD Number (if any):

140808

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

NORTHLINE WEALTH MANAGEMENT LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 107657

*Sponsor's* CRD Number (if any):

150422

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

STRATOS WEALTH PARTNERS, LTD

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71457

*Sponsor's* CRD Number (if any):

153184

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

TRUIST ADVISORY SERVICES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 107729

Sponsor's CRD Number (if any):

283390

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

BEIRNE WEALTH CONSULTING SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 77726

*Sponsor's* CRD Number (if any):

167103

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ADVISORY SERVICES NETWORK

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71112

*Sponsor's* CRD Number (if any):

146051

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KESTRA INVESTMENT SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 49672

*Sponsor's* CRD Number (if any):

42046

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

OFS

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 20076

*Sponsor's* CRD Number (if any):

107335

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 118078

*Sponsor's CRD Number (if any):*

306909

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

PNC INVESTMENTS

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 66195

*Sponsor's CRD Number (if any):*

129052

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

PKS ADVISORY SERVICES, LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 62147

*Sponsor's CRD Number (if any):*

125648

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

ROCKEFELLER CAPITAL MANAGEMENT

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 114033

*Sponsor's CRD Number (if any):*

291361

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

SANTANDER SECURITIES

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 56796

*Sponsor's CRD Number (if any):*

41791



Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SECURITIES AMERICA ADVISORS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 45628

*Sponsor's* CRD Number (if any):

110518

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SPC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 20404

*Sponsor's* CRD Number (if any):

110692

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SNOWDEN CAPITAL ADVISORS LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 72332

*Sponsor's* CRD Number (if any):

157299

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

STILLWATER CAPITAL ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70060

*Sponsor's* CRD Number (if any):

149946

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

VENTURI PRIVATE WEALTH

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 78932

*Sponsor's CRD* Number (if any):

169576

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KESTRA PRIVATE WEALTH SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71936

*Sponsor's CRD* Number (if any):

155193

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ARBOR POINT ADVISORS

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 77135

*Sponsor's CRD* Number (if any):

165127

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

BANCWEST INVESTMENT SERVICES, INC. (BWIS)

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71300

*Sponsor's CRD* Number (if any):

29357

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KEEL POINT, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 62249

*Sponsor's CRD* Number (if any):

127902

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

CADARET GRANT & CO INC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 42709

*Sponsor's* CRD Number (if any):

10641

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

CAMBRIDGE INVESTMENT RESEARCH ADVISORS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 63930

*Sponsor's* CRD Number (if any):

134139

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

D.A. DAVIDSON & CO.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 45761

*Sponsor's* CRD Number (if any):

199

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ELK RIVER WEALTH MANAGEMENT LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 118102

*Sponsor's* CRD Number (if any):

307263

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FIRST HORIZON ADVISORS, INC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 78594

*Sponsor's* CRD Number (if any):

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FUSION FAMILY WEALTH, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 78339

*Sponsor's* CRD Number (if any):

168254

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

GW & WADE, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 27292

*Sponsor's* CRD Number (if any):

105394

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

HILLTOP SECURITIES INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 55529

*Sponsor's* CRD Number (if any):

6220

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

INFINEX INVESTMENTS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 67242

*Sponsor's* CRD Number (if any):

35371

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

INSIGHT SECURITIES, INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 12999

*Sponsor's CRD Number (if any):*

5611

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

J P TURNER & COMPANY CAPITAL MANAGEMENT, LLC

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 67970

*Sponsor's CRD Number (if any):*

124446

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

J. W. COLE ADVISORS, INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 60722

*Sponsor's CRD Number (if any):*

112294

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

KINETIC FINANCIAL

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 118383

*Sponsor's CRD Number (if any):*

283034

*Name of Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

*Name of Sponsor*

VALLEY FINANCIAL MANAGEMENT, INC.

*Sponsor's SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):*

801 - 113685

*Sponsor's CRD Number (if any):*

105387

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

LINCOLN FINANCIAL SECURITIES CORPORATION

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 23151

*Sponsor's* CRD Number (if any):

3870

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

COASTAL BRIDGE ADVISORS

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70943

*Sponsor's* CRD Number (if any):

152569

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

HIGHTOWER ADVISORS, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 69625

*Sponsor's* CRD Number (if any):

145323

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

NEWEDGE SECURITIES, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 27663

*Sponsor's* CRD Number (if any):

10674

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

MID ATLANTIC FINANCIAL MANAGEMENT, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 21527

*Sponsor's CRD* Number (if any):

109771

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

MONTE FINANCIAL GROUP, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70207

*Sponsor's CRD* Number (if any):

150119

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

PRUDENTIAL FINANCIAL PLANNING SERVICES

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 52208

*Sponsor's CRD* Number (if any):

5685

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

ADVANCED ASSET MANAGEMENT ADVISORS, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 61760

*Sponsor's CRD* Number (if any):

119859

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

FOUNTAINHEAD ADVISORS

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 79472

*Sponsor's CRD* Number (if any):

156185

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

SPC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 20404

*Sponsor's* CRD Number (if any):

110692

Name of *Wrap Fee Program*

PRIVATE LABEL (THROUGH ENVESTNET)

Name of *Sponsor*

KESTRA INVESTMENT SERVICES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

8 - 49672

*Sponsor's* CRD Number (if any):

42046

Name of *Wrap Fee Program*

RBC CAPITAL MARKETS ADVISOR PROGRAM (THROUGH ENVESTNET)

Name of *Sponsor*

ALEXANDER CAPITAL WEALTH MANAGEMENT LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 112997

*Sponsor's* CRD Number (if any):

157714

Name of *Wrap Fee Program*

SEI MANAGED ACCOUNT PROGRAM

Name of *Sponsor*

SEI INVESTMENTS MANAGEMENT CORP

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 24593

*Sponsor's* CRD Number (if any):

105146

Name of *Wrap Fee Program*

SELECT UMA

Name of *Sponsor*

MORGAN STANLEY

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 70103

*Sponsor's* CRD Number (if any):

149777



Name of *Wrap Fee Program*

SEPARATE ACCOUNT EXCHANGE PROGRAM

Name of *Sponsor*

TD AMERITRADE, INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 60469

*Sponsor's* CRD Number (if any):

7870

Name of *Wrap Fee Program*

SEPARATE ACCOUNT NETWORK

Name of *Sponsor*

FIDELITY INVESTMENTS

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

-

*Sponsor's* CRD Number (if any):

Name of *Wrap Fee Program*

SPECTRUM INVESTMENT PROGRAM

Name of *Sponsor*

BB&T SECURITIES, LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 77145

*Sponsor's* CRD Number (if any):

142785

Name of *Wrap Fee Program*

STRATEGIC WEALTH PORTFOLIO

Name of *Sponsor*

UBS FINANCIAL SERVICES INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 7163

*Sponsor's* CRD Number (if any):

8174

Name of *Wrap Fee Program*

STRATIS

Name of *Sponsor*

J.P. MORGAN SECURITIES LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 3702

*Sponsor's* CRD Number (if any):

79

Name of *Wrap Fee Program*

UMA PROGRAM

Name of *Sponsor*

JANNEY MONTGOMERY SCOTT LLC

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 7258

*Sponsor's* CRD Number (if any):

463

Name of *Wrap Fee Program*

UNIFIED MANAGED ACCOUNT PROGRAM

Name of *Sponsor*

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 14235

*Sponsor's* CRD Number (if any):

7691

Name of *Wrap Fee Program*

VICTUS CAPITAL WEALTH - SINGLE CONTRACT (THOURGH LOCKWOOD ADVISORS, INC.)

Name of *Sponsor*

VICTUS CAPITAL WEALTH

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 71919

*Sponsor's* CRD Number (if any):

154899

Name of *Wrap Fee Program*

WEALTH MANAGEMENT SOLUTIONS UMA (THROUGH ENVESTNET ASSET MANAGEMENT, INC.)

Name of *Sponsor*

HSBC GLOBAL ASSET MANAGEMENT (USA) INC.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 25999

*Sponsor's* CRD Number (if any):

105686

Name of *Wrap Fee Program*

Name of *Sponsor*

WESTERN INTERNATIONAL SECURITIES

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 68953

*Sponsor's* CRD Number (if any):

39262

Name of *Wrap Fee Program*

WILLIAM BLAIR COMPREHENSIVE FEE PROGRAM (THROUGH ENVESTNET)

Name of *Sponsor*

WILLIAM BLAIR &amp; COMPANY L.L.C.

*Sponsor's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-):

801 - 688

*Sponsor's* CRD Number (if any):

1252

**SECTION 5.K.(1) Separately Managed Accounts**

After subtracting the amounts reported in Item 5.D.(3)(d)-(f) from your total regulatory assets under management, indicate the approximate percentage of this remaining amount attributable to each of the following categories of assets. If the remaining amount is at least \$10 billion in regulatory assets under management, complete Question (a). If the remaining amount is less than \$10 billion in regulatory assets under management, complete Question (b).

Any regulatory assets under management reported in Item 5.D.(3)(d), (e), and (f) should not be reported below.

If you are a subadviser to a separately managed account, you should only provide information with respect to the portion of the account that you subadvise.

End of year refers to the date used to calculate your regulatory assets under management for purposes of your *annual updating amendment*. Mid-year is the date six months before the end of year date. Each column should add up to 100% and numbers should be rounded to the nearest percent.

Investments in derivatives, registered investment companies, business development companies, and pooled investment vehicles should be reported in those categories. Do not report those investments based on related or underlying portfolio assets. Cash equivalents include bank deposits, certificates of deposit, bankers' acceptances and similar bank instruments.

Some assets could be classified into more than one category or require discretion about which category applies. You may use your own internal methodologies and the conventions of your service providers in determining how to categorize assets, so long as the methodologies or conventions are consistently applied and consistent with information you report internally and to current and prospective clients. However, you should not double count assets, and your responses must be consistent with any instructions or other guidance relating to this Section.

(a) Asset Type	Mid-year	End of year
(i) Exchange-Traded Equity Securities	6 %	5 %
(ii) Non Exchange-Traded Equity Securities	0 %	0 %
(iii) U.S. Government/Agency Bonds	7 %	6 %
(iv) U.S. State and Local Bonds	17 %	18 %
(v) <i>Sovereign Bonds</i>	1 %	1 %
(vi) Investment Grade Corporate Bonds	14 %	17 %
(vii) Non-Investment Grade Corporate Bonds	24 %	21 %
(viii) Derivatives	15 %	15 %
(ix) Securities Issued by Registered Investment Companies or Business Development Companies	0 %	0 %
(x) Securities Issued by Pooled Investment Vehicles (other than Registered Investment Companies or Business Development Companies)	13 %	15 %
(xi) Cash and Cash Equivalents	2 %	3 %
(xii) Other	0 %	0 %

Generally describe any assets included in "Other"

(b) Asset Type	End of year
----------------	-------------

(i) Exchange-Traded Equity Securities	%
(ii) Non Exchange-Traded Equity Securities	%
(iii) U.S. Government/Agency Bonds	%
(iv) U.S. State and Local Bonds	%
(v) <i>Sovereign Bonds</i>	%
(vi) Investment Grade Corporate Bonds	%
(vii) Non-Investment Grade Corporate Bonds	%
(viii) Derivatives	%
(ix) Securities Issued by Registered Investment Companies or Business Development Companies	%
(x) Securities Issued by Pooled Investment Vehicles (other than Registered Investment Companies or Business Development Companies)	%
(xi) Cash and Cash Equivalents	%
(xii) Other	%

Generally describe any assets included in "Other"

## SECTION 5.K.(2) Separately Managed Accounts - Use of *Borrowings* and Derivatives

No information is required to be reported in this Section 5.K.(2) per the instructions of this Section 5.K.(2)

If your regulatory assets under management attributable to separately managed accounts are at least \$10 billion, you should complete Question (a). If your regulatory assets under management attributable to separately managed accounts are at least \$500 million but less than \$10 billion, you should complete Question (b).

(a) In the table below, provide the following information regarding the separately managed accounts you advise. If you are a subadviser to a separately managed account, you should only provide information with respect to the portion of the account that you subadvise. End of year refers to the date used to calculate your regulatory assets under management for purposes of your *annual updating amendment*. Mid-year is the date six months before the end of year date.

In column 1, indicate the regulatory assets under management attributable to separately managed accounts associated with each level of gross notional exposure. For purposes of this table, the gross notional exposure of an account is the percentage obtained by dividing (i) the sum of (a) the dollar amount of any *borrowings* and (b) the *gross notional value* of all derivatives, by (ii) the regulatory assets under management of the account.

In column 2, provide the dollar amount of *borrowings* for the accounts included in column 1.

In column 3, provide aggregate *gross notional value* of derivatives divided by the aggregate regulatory assets under management of the accounts included in column 1 with respect to each category of derivatives specified in 3(a) through (f).

You may, but are not required to, complete the table with respect to any separately managed account with regulatory assets under management of less than \$10,000,000.

Any regulatory assets under management reported in Item 5.D.(3)(d), (e), and (f) should not be reported below.

(i) Mid-Year

Gross Notional Exposure	(1) Regulatory Assets Under Management	(2) Borrowings	(3) Derivative Exposures					
			(a) Interest Rate Derivative	(b) Foreign Exchange Derivative	(c) Credit Derivative	(d) Equity Derivative	(e) Commodity Derivative	(f) Other Derivative
Less than 10%	\$ 459,100,000	\$	1.01 %	0 %	0 %	0 %	%	%
10-149%	\$ 8,277,100,000	\$	22.07 %	10.06 %	0.05 %	0 %	%	%
150% or more	\$	\$	%	%	%	%	%	%

Optional: Use the space below to provide a narrative description of the strategies and/or manner in which *borrowings* and derivatives are used in the management of the separately managed accounts that you advise.

(ii) End of Year

Gross Notional Exposure	(1) Regulatory Assets Under Management	(2) Borrowings	(3) Derivative Exposures					
			(a) Interest Rate Derivative	(b) Foreign Exchange Derivative	(c) Credit Derivative	(d) Equity Derivative	(e) Commodity Derivative	(f) Other Derivative
Less than 10%	\$ 174,000,000	\$	0.47 %	0 %	0.01 %	0.01 %	%	%
10-149%	\$ 7,678,366,000	\$	20.77 %	8.01 %	0.1 %	0 %	%	%
150% or more	\$	\$	%	%	%	%	%	%

Optional: Use the space below to provide a narrative description of the strategies and/or manner in which *borrowings* and derivatives are used in the management of the separately managed accounts that you advise.

- (b) In the table below, provide the following information regarding the separately managed accounts you advise as of the date used to calculate your regulatory assets under management for purposes of your *annual updating amendment*. If you are a subadviser to a separately managed account, you should only provide information with respect to the portion of the account that you subadvise.

In column 1, indicate the regulatory assets under management attributable to separately managed accounts associated with each level of gross notional exposure. For purposes of this table, the gross notional exposure of an account is the percentage obtained by dividing (i) the sum of (a) the dollar amount of any *borrowings* and (b) the *gross notional value* of all derivatives, by (ii) the regulatory assets under management of the account.

In column 2, provide the dollar amount of *borrowings* for the accounts included in column 1.

You may, but are not required to, complete the table with respect to any separately managed accounts with regulatory assets under management of less than \$10,000,000.

Any regulatory assets under management reported in Item 5.D.(3)(d), (e), and (f) should not be reported below.

Gross Notional Exposure	(1) Regulatory Assets Under Management	(2) Borrowings
Less than 10%	\$	\$
10-149%	\$	\$
150% or more	\$	\$

Optional: Use the space below to provide a narrative description of the strategies and/or manner in which *borrowings* and derivatives are used in the management of the separately managed accounts that you advise.

### SECTION 5.K.(3) Custodians for Separately Managed Accounts

Complete a separate Schedule D Section 5.K.(3) for each custodian that holds ten percent or more of your aggregate separately managed account regulatory assets under management.

- (a) Legal name of custodian:  
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
- (b) Primary business name of custodian:  
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
- (c) The location(s) of the custodian's office(s) responsible for *custody* of the assets :
- |                   |                    |                           |
|-------------------|--------------------|---------------------------|
| City:<br>NEW YORK | State:<br>New York | Country:<br>United States |
|-------------------|--------------------|---------------------------|
- (d) Is the custodian a *related person* of your firm? Yes No
- (e) If the custodian is a broker-dealer, provide its SEC registration number (if any)  
8 - 7221
- (f) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)
- (g) What amount of your regulatory assets under management attributable to separately managed accounts is held at the custodian?  
\$ 8,670,520,790

- (a) Legal name of custodian:  
THE BANK OF NEW YORK MELLON
- (b) Primary business name of custodian:  
THE BANK OF NEW YORK MELLON
- (c) The location(s) of the custodian's office(s) responsible for *custody* of the assets :
- |                   |                    |                           |
|-------------------|--------------------|---------------------------|
| City:<br>NEW YORK | State:<br>New York | Country:<br>United States |
|-------------------|--------------------|---------------------------|
- (d) Is the custodian a *related person* of your firm? Yes No
- (e) If the custodian is a broker-dealer, provide its SEC registration number (if any)  
-
- (f) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)

- (g) What amount of your regulatory assets under management attributable to separately managed accounts is held at the custodian?
- \$ 10,910,086,423

## Item 6 Other Business Activities

In this Item, we request information about your firm's other business activities.

A. You are actively engaged in business as a (check all that apply):

- (1) broker-dealer (registered or unregistered)
- (2) registered representative of a broker-dealer
- (3) commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
- (4) futures commission merchant
- (5) real estate broker, dealer, or agent
- (6) insurance broker or agent
- (7) bank (including a separately identifiable department or division of a bank)
- (8) trust company
- (9) registered municipal advisor
- (10) registered security-based swap dealer
- (11) major security-based swap participant
- (12) accountant or accounting firm
- (13) lawyer or law firm
- (14) other financial product salesperson (specify):

*If you engage in other business using a name that is different from the names reported in Items 1.A. or 1.B.(1), complete Section 6.A. of Schedule D.*

- B. (1) Are you actively engaged in any other business not listed in Item 6.A. (other than giving investment advice)?
- (2) If yes, is this other business your primary business?

*If "yes," describe this other business on Section 6.B.(2) of Schedule D, and if you engage in this business under a different name, provide that name.*

Yes No

Yes No

- (3) Do you sell products or provide services other than investment advice to your advisory *clients*?

*If "yes," describe this other business on Section 6.B.(3) of Schedule D, and if you engage in this business under a different name, provide that name.*

## SECTION 6.A. Names of Your Other Businesses

No Information Filed

## SECTION 6.B.(2) Description of Primary Business

Describe your primary business (not your investment advisory business):

If you engage in that business under a different name, provide that name:

## SECTION 6.B.(3) Description of Other Products and Services

Describe other products or services you sell to your *client*. You may omit products and services that you listed in Section 6.B.(2) above.

If you engage in that business under a different name, provide that name:

## Item 7 Financial Industry Affiliations

In this Item, we request information about your financial industry affiliations and activities. This information identifies areas in which conflicts of interest may occur between you and your *clients*.

A. This part of Item 7 requires you to provide information about you and your *related persons*, including foreign affiliates. Your *related persons* are all of your *advisory affiliates* and any *person* that is under common *control* with you.

You have a *related person* that is a (check all that apply):

- (1) broker-dealer, municipal securities dealer, or government securities broker or dealer (registered or unregistered)
- (2) other investment adviser (including financial planners)
- (3) registered municipal advisor
- (4) registered security-based swap dealer
- (5) major security-based swap participant
- (6) commodity pool operator or commodity trading advisor (whether registered or exempt from registration)

- (7) futures commission merchant
- (8) banking or thrift institution
- (9) trust company
- (10) accountant or accounting firm
- (11) lawyer or law firm
- (12) insurance company or agency
- (13) pension consultant
- (14) real estate broker or dealer
- (15) sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
- (16) sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

Note that Item 7.A. should not be used to disclose that some of your employees perform investment advisory functions or are registered representatives of a broker-dealer. The number of your firm's employees who perform investment advisory functions should be disclosed under Item 5.B.(1). The number of your firm's employees who are registered representatives of a broker-dealer should be disclosed under Item 5.B.(2).

Note that if you are filing an umbrella registration, you should not check Item 7.A.(2) with respect to your relying advisers, and you do not have to complete Section 7.A. in Schedule D for your relying advisers. You should complete a Schedule R for each relying adviser.

For each related person, including foreign affiliates that may not be registered or required to be registered in the United States, complete Section 7.A. of Schedule D.

You do not need to complete Section 7.A. of Schedule D for any related person if: (1) you have no business dealings with the related person in connection with advisory services you provide to your clients; (2) you do not conduct shared operations with the related person; (3) you do not refer clients or business to the related person, and the related person does not refer prospective clients or business to you; (4) you do not share supervised persons or premises with the related person; and (5) you have no reason to believe that your relationship with the related person otherwise creates a conflict of interest with your clients.

You must complete Section 7.A. of Schedule D for each related person acting as qualified custodian in connection with advisory services you provide to your clients (other than any mutual fund transfer agent pursuant to rule 206(4)-2(b)(1)), regardless of whether you have determined the related person to be operationally independent under rule 206(4)-2 of the Advisers Act.

## SECTION 7.A. Financial Industry Affiliations

Complete a separate Schedule D Section 7.A. for each *related person* listed in Item 7.A.

1. Legal Name of *Related Person*:

LORD ABBETT (IRELAND) LIMITED

2. Primary Business Name of *Related Person*:

LORD ABBETT (IRELAND) LIMITED

3. *Related Person's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-)

-

or

Other

4. *Related Person's*

(a) CRD Number (if any):

(b) CIK Number(s) (if any):

No Information Filed

5. *Related Person* is: (check all that apply)

- (a)  broker-dealer, municipal securities dealer, or government securities broker or dealer
- (b)  other investment adviser (including financial planners)
- (c)  registered municipal advisor
- (d)  registered security-based swap dealer
- (e)  major security-based swap participant
- (f)  commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
- (g)  futures commission merchant
- (h)  banking or thrift institution
- (i)  trust company
- (j)  accountant or accounting firm
- (k)  lawyer or law firm
- (l)  insurance company or agency
- (m)  pension consultant
- (n)  real estate broker or dealer
- (o)  sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
- (p)  sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

6. Do you *control* or are you *controlled* by the *related person*?

Yes No



7. Are you and the *related person* under common *control*?
8. (a) Does the *related person* act as a qualified custodian for your *clients* in connection with advisory services you provide to *clients*?    
 (b) If you are registering or registered with the SEC and you have answered "yes," to question 8.(a) above, have you overcome the presumption that you are not operationally independent (pursuant to rule 206(4)-2(d)(5)) from the *related person* and thus are not required to obtain a surprise examination for your *clients'* funds or securities that are maintained at the *related person*?    
 (c) If you have answered "yes" to question 8.(a) above, provide the location of the *related person's* office responsible for *custody* of your *clients'* assets:  
 Number and Street 1: \_\_\_\_\_ Number and Street 2: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ ZIP+4/Postal Code: \_\_\_\_\_  
 If this address is a private residence, check this box:
9. (a) If the *related person* is an investment adviser, is it exempt from registration?    
 (b) If the answer is yes, under what exemption?
10. (a) Is the *related person* registered with a *foreign financial regulatory authority*?    
 (b) If the answer is yes, list the name and country, in English of each *foreign financial regulatory authority* with which the *related person* is registered.
- | Name of Country/English Name of Foreign Financial Regulatory Authority |
|--|
| Ireland - Central Bank of Ireland                                      |
11. Do you and the *related person* share any *supervised persons*?
12. Do you and the *related person* share the same physical location?

1. Legal Name of *Related Person*:  
LORD ABBETT DISTRIBUTOR LLC
2. Primary Business Name of *Related Person*:  
LORD ABBETT DISTRIBUTOR LLC
3. *Related Person's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-)  
8 - 216  
or  
Other
4. *Related Person's*  
 (a) *CRD* Number (if any):  
530  
 (b) CIK Number(s) (if any):  
No Information Filed
5. *Related Person* is: (check all that apply)
- (a)  broker-dealer, municipal securities dealer, or government securities broker or dealer
  - (b)  other investment adviser (including financial planners)
  - (c)  registered municipal advisor
  - (d)  registered security-based swap dealer
  - (e)  major security-based swap participant
  - (f)  commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
  - (g)  futures commission merchant
  - (h)  banking or thrift institution
  - (i)  trust company
  - (j)  accountant or accounting firm
  - (k)  lawyer or law firm
  - (l)  insurance company or agency
  - (m)  pension consultant
  - (n)  real estate broker or dealer
  - (o)  sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
  - (p)  sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

6. Do you *control* or are you *controlled* by the *related person*?

7. Are you and the *related person* under common *control*?

8. (a) Does the *related person* act as a qualified custodian for your *clients* in connection with advisory services you provide to *clients*?    
 (b) If you are registering or registered with the SEC and you have answered "yes," to question 8.(a) above, have you overcome the presumption that you are not



operationally independent (pursuant to rule 206(4)-2(d)(5)) from the *related person* and thus are not required to obtain a surprise examination for your *clients'* funds or securities that are maintained at the *related person*?

(c) If you have answered "yes" to question 8.(a) above, provide the location of the *related person's* office responsible for *custody* of your *clients'* assets:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

If this address is a private residence, check this box:

Yes No

9. (a) If the *related person* is an investment adviser, is it exempt from registration?

(b) If the answer is yes, under what exemption?

10. (a) Is the *related person* registered with a *foreign financial regulatory authority*?

(b) If the answer is yes, list the name and country, in English of each *foreign financial regulatory authority* with which the *related person* is registered.

No Information Filed

11. Do you and the *related person* share any *supervised persons*?

12. Do you and the *related person* share the same physical location?

1. Legal Name of *Related Person*:

LORD, ABBETT ASIA LLC

2. Primary Business Name of *Related Person*:

LORD, ABBETT ASIA LLC

3. *Related Person's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-)

-

or

Other

4. *Related Person's*

(a) *CRD* Number (if any):

(b) CIK Number(s) (if any):

No Information Filed

5. *Related Person* is: (check all that apply)

(a)  broker-dealer, municipal securities dealer, or government securities broker or dealer

(b)  other investment adviser (including financial planners)

(c)  registered municipal advisor

(d)  registered security-based swap dealer

(e)  major security-based swap participant

(f)  commodity pool operator or commodity trading advisor (whether registered or exempt from registration)

(g)  futures commission merchant

(h)  banking or thrift institution

(i)  trust company

(j)  accountant or accounting firm

(k)  lawyer or law firm

(l)  insurance company or agency

(m)  pension consultant

(n)  real estate broker or dealer

(o)  sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles

(p)  sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

Yes No

6. Do you *control* or are you *controlled* by the *related person*?

7. Are you and the *related person* under common *control*?

8. (a) Does the *related person* act as a qualified custodian for your *clients* in connection with advisory services you provide to *clients*?

(b) If you are registering or registered with the SEC and you have answered "yes," to question 8.(a) above, have you overcome the presumption that you are not operationally independent (pursuant to rule 206(4)-2(d)(5)) from the *related person* and thus are not required to obtain a surprise examination for your *clients'* funds or securities that are maintained at the *related person*?

(c) If you have answered "yes" to question 8.(a) above, provide the location of the *related person's* office responsible for *custody* of your *clients'* assets:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

If this address is a private residence, check this box:

9. (a) If the *related person* is an investment adviser, is it exempt from registration?

(b) If the answer is yes, under what exemption?

10. (a) Is the *related person* registered with a *foreign financial regulatory authority* ?

(b) If the answer is yes, list the name and country, in English of each *foreign financial regulatory authority* with which the *related person* is registered.

**Name of Country/English Name of Foreign Financial Regulatory Authority**

Other - JAPAN - KANTO LOCAL FINANCE BUREAU

11. Do you and the *related person* share any *supervised persons*?

12. Do you and the *related person* share the same physical location?

1. Legal Name of *Related Person*:

LORD ABBETT (UK) LTD.

2. Primary Business Name of *Related Person*:

LORD ABBETT (UK) LTD.

3. *Related Person's* SEC File Number (if any) (e.g., 801-, 8-, 866-, 802-)

-

or

Other

4. *Related Person's*

(a) *CRD* Number (if any):

(b) CIK Number(s) (if any):

No Information Filed

5. *Related Person* is: (check all that apply)

- (a)  broker-dealer, municipal securities dealer, or government securities broker or dealer
- (b)  other investment adviser (including financial planners)
- (c)  registered municipal advisor
- (d)  registered security-based swap dealer
- (e)  major security-based swap participant
- (f)  commodity pool operator or commodity trading advisor (whether registered or exempt from registration)
- (g)  futures commission merchant
- (h)  banking or thrift institution
- (i)  trust company
- (j)  accountant or accounting firm
- (k)  lawyer or law firm
- (l)  insurance company or agency
- (m)  pension consultant
- (n)  real estate broker or dealer
- (o)  sponsor or syndicator of limited partnerships (or equivalent), excluding pooled investment vehicles
- (p)  sponsor, general partner, managing member (or equivalent) of pooled investment vehicles

6. Do you *control* or are you *controlled* by the *related person*?

7. Are you and the *related person* under common *control*?

8. (a) Does the *related person* act as a qualified custodian for your *clients* in connection with advisory services you provide to *clients*?

(b) If you are registering or registered with the SEC and you have answered "yes," to question 8.(a) above, have you overcome the presumption that you are not operationally independent (pursuant to rule 206(4)-2(d)(5)) from the *related person* and thus are not required to obtain a surprise examination for your *clients'* funds or securities that are maintained at the *related person*?

(c) If you have answered "yes" to question 8.(a) above, provide the location of the *related person's* office responsible for *custody* of your *clients'* assets:

Number and Street 1:

Number and Street 2:

City:

State:

Country:

ZIP+4/Postal Code:

If this address is a private residence, check this box:

9. (a) If the *related person* is an investment adviser, is it exempt from registration?

(b) If the answer is yes, under what exemption?

PARTICIPATING AFFILIATE

10. (a) Is the *related person* registered with a *foreign financial regulatory authority* ?

(b) If the answer is yes, list the name and country, in English of each *foreign financial regulatory authority* with which the *related person* is registered.

**Name of Country/English Name of Foreign Financial Regulatory Authority**

United Kingdom - Financial Conduct Authority

11. Do you and the *related person* share any *supervised persons*?

12. Do you and the *related person* share the same physical location?

### Item 7 Private Fund Reporting

Yes No

B. Are you an adviser to any *private fund*?

If "yes," then for each *private fund* that you advise, you must complete a *Section 7.B.(1) of Schedule D*, except in certain circumstances described in the next sentence and in *Instruction 6 of the Instructions to Part 1A*. If you are registered or applying for registration with the SEC or reporting as an SEC exempt reporting adviser, and another SEC-registered adviser or SEC exempt reporting adviser reports this information with respect to any such *private fund* in *Section 7.B.(1) of Schedule D* of its Form ADV (e.g., if you are a subadviser), do not complete *Section 7.B.(1) of Schedule D* with respect to that *private fund*. You must, instead, complete *Section 7.B.(2) of Schedule D*.

In either case, if you seek to preserve the anonymity of a *private fund* client by maintaining its identity in your books and records in numerical or alphabetical code, or similar designation, pursuant to rule 204-2(d), you may identify the *private fund* in *Section 7.B.(1) or 7.B.(2) of Schedule D* using the same code or designation in place of the fund's name.

### SECTION 7.B.(1) Private Fund Reporting

Funds per Page: 15 Total Funds: 4

A. PRIVATE FUND

#### Information About the Private Fund

1. (a) Name of the *private fund*:

LORD ABBETT BANK LOAN TRUST

(b) *Private fund* identification number:

(include the "805-" prefix also)

805-5665927076

2. Under the laws of what state or country is the *private fund* organized:

State:

New Hampshire

Country:

United States

3. (a) Name(s) of General Partner, Manager, Trustee, or Directors (or *persons* serving in a similar capacity):

**Name of General Partner, Manager, Trustee, or Director**

LORD, ABBETT & CO. LLC

STATE STREET BANK AND TRUST COMPANY OF NEW HAMPSHIRE, TRUSTEE

(b) If filing an *umbrella registration*, identify the *filing adviser* and/or *relying adviser(s)* that sponsor(s) or manage(s) this *private fund*.

No Information Filed

4. The *private fund* (check all that apply; you must check at least one):

(1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940

(2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940

5. List the name and country, in English, of each *foreign financial regulatory authority* with which the *private fund* is registered.

No Information Filed

Yes No

6. (a) Is this a "master fund" in a master-feeder arrangement?

(b) If yes, what is the name and *private fund* identification number (if any) of the feeder funds investing in this *private fund*?

No Information Filed

(c) Is this a "feeder fund" in a master-feeder arrangement?

Yes No

(d) If yes, what is the name and *private fund* identification number (if any) of the master fund in which this *private fund* invests?

Name of *private fund*:

*Private fund* identification number:

(include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1) for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

8. (a) Is this *private fund* a "fund of funds"?

Yes No

NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, regardless of whether they are also *private funds* or registered investment companies.

(b) If yes, does the *private fund* invest in funds managed by you or by a *related person*?

9. During your last fiscal year, did the *private fund* invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)?

Yes No

10. What type of fund is the *private fund*?

hedge fund  liquidity fund  private equity fund  real estate fund  securitized asset fund  venture capital fund  Other *private fund*: POOLED FUND

NOTE: For definitions of these fund types, please see [Instruction 6 of the Instructions to Part 1A](#).

11. Current gross asset value of the *private fund*:

\$ 48,104,051

### Ownership

12. Minimum investment commitment required of an investor in the *private fund*:

\$ 1,000,000

NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund's* beneficial owners:

3

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:

1%

15. (a) What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:

0%

Yes No

(b) If the *private fund* qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940, are sales of the fund limited to *qualified clients*?

16. What is the approximate percentage of the *private fund* beneficially owned by non-*United States persons*:

0%

**Your Advisory Services**

Yes No

17. (a) Are you a subadviser to this *private fund*?  Yes  No

(b) If the answer to question 17.(a) is "yes," provide the name and SEC file number, if any, of the adviser of the *private fund*. If the answer to question 17.(a) is "no," leave this question blank.

No Information Filed

Yes No

18. (a) Do any investment advisers (other than the investment advisers listed in Section 7.B.(1).A.3.(b)) advise the *private fund*?  Yes  No

(b) If the answer to question 18.(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the *private fund*. If the answer to question 18.(a) is "no," leave this question blank.

No Information Filed

Yes No

19. Are your *clients* solicited to invest in the *private fund*?  Yes  No

*NOTE: For purposes of this question, do not consider feeder funds of the private fund.*

20. Approximately what percentage of your *clients* has invested in the *private fund*?

0%

**Private Offering**

Yes No

21. Has the *private fund* ever relied on an exemption from registration of its securities under Regulation D of the Securities Act of 1933?  Yes  No

22. If yes, provide the *private fund's* Form D file number (if any):

**Form D file number**

021-218814

**B. SERVICE PROVIDERS**

**Auditors**

Yes No

23. (a) (1) Are the *private fund's* financial statements subject to an annual audit?  Yes  No

(2) If the answer to question 23.(a)(1) is "yes," are the financial statements prepared in accordance with U.S. GAAP?  Yes  No

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

**Additional Auditor Information : 1 Record(s) Filed.**

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

DELOITTE & TOUCHE LLP

(c) The location of the auditing firm's office responsible for the *private fund's* audit (city, state and country):

City:

NEW YORK

State:

New York

Country:

United States

Yes No

(d) Is the auditing firm an *independent public accountant*?  Yes  No

(e) Is the auditing firm registered with the Public Company Accounting Oversight Board?  Yes  No

If yes, Public Company Accounting Oversight Board-Assigned Number:

34

(f) If "yes" to (e) above, is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules?  Yes  No

Yes No

(g) Are the *private fund's* audited financial statements for the most recently completed fiscal year distributed to the *private fund's* investors?  Yes  No

(h) Do all of the reports prepared by the auditing firm for the *private fund* since your last *annual updating amendment* contain unqualified opinions?  Yes  No

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

Prime Broker

Yes No

24. (a) Does the *private fund* use one or more prime brokers?

If the answer to question 24.(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

Custodian

Yes No

25. (a) Does the *private fund* use any custodians (including the prime brokers listed above) to hold some or all of its assets?

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

**Additional Custodian Information : 1 Record(s) Filed.**

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

(b) Legal name of custodian:  
STATE STREET BANK AND TRUST COMPANY

(c) Primary business name of custodian:  
STATE STREET BANK AND TRUST COMPANY

(d) The location of the custodian's office responsible for *custody* of the *private fund's* assets (city, state and country):

City:	State:	Country:
BOSTON	Massachusetts	United States

Yes No

(e) Is the custodian a *related person* of your firm?

(f) If the custodian is a broker-dealer, provide its SEC registration number (if any):

-

CRD Number (if any):

(g) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)

571474TGEMMWANRLN572

Administrator

Yes No

26. (a) Does the *private fund* use an administrator other than your firm?

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

**Additional Administrator Information : 1 Record(s) Filed.**

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

(b) Name of administrator:  
STATE STREET BANK AND TRUST COMPANY

(c) Location of administrator (city, state and country):

City:	State:	Country:
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Yes No

(d) Is the administrator a *related person* of your firm?

(e) Does the administrator prepare and send investor account statements to the *private fund's* investors?

Yes (provided to all investors)  Some (provided to some but not all investors)  No (provided to no investors)

(f) If the answer to question 26.(e) is "no" or "some," who sends the investor account statements to the (rest of the) *private fund's* investors? If investor account statements are not sent to the (rest of the) *private fund's* investors, respond "not applicable."

27. During your last fiscal year, what percentage of the *private fund's* assets (by value) was valued by a *person*, such as an administrator, that is not your *related person*?  
100%

Include only those assets where (i) such *person* carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such *person*.

### Marketers

Yes No

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes?

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

#### **Additional Marketer Information : 1 Record(s) Filed.**

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer, you must complete questions (b) through (g) separately for each marketer.

Yes No

(b) Is the marketer a *related person* of your firm?

(c) Name of the marketer:  
LORD ABBETT DISTRIBUTOR LLC

(d) If the marketer is registered with the SEC, its file number (e.g., 801-, 8-, or 866-):

8 - 216

and CRD Number (if any):

530

(e) Location of the marketer's office used principally by the *private fund* (city, state and country):

City:

JERSEY CITY

State:

New Jersey

Country:

United States

Yes No

(f) Does the marketer market the *private fund* through one or more websites?

(g) If the answer to question 28.(f) is "yes," list the website address(es):

No Information Filed

## A. PRIVATE FUND

### Information About the *Private Fund*

1. (a) Name of the *private fund*:

LORD ABBETT INTERNATIONAL SMALL CAP TRUST

(b) *Private fund* identification number:

(include the "805-" prefix also)

805-7610316127

2. Under the laws of what state or country is the *private fund* organized:

State:  
New Hampshire

Country:  
United States

3. (a) Name(s) of General Partner, Manager, Trustee, or Directors (or *persons* serving in a similar capacity):

No Information Filed

(b) If filing an *umbrella registration*, identify the *filing adviser* and/or *relying adviser(s)* that sponsor(s) or manage(s) this *private fund*.

No Information Filed

4. The *private fund* (check all that apply; you must check at least one):

- (1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940  
 (2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940

5. List the name and country, in English, of each *foreign financial regulatory authority* with which the *private fund* is registered.

No Information Filed

6. (a) Is this a "master fund" in a master-feeder arrangement?

Yes No

(b) If yes, what is the name and *private fund* identification number (if any) of the feeder funds investing in this *private fund*?

No Information Filed

Yes No

(c) Is this a "feeder fund" in a master-feeder arrangement?

(d) If yes, what is the name and *private fund* identification number (if any) of the master fund in which this *private fund* invests?

Name of *private fund*:

*Private fund* identification number:  
(include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1) for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

8. (a) Is this *private fund* a "fund of funds"?

Yes No

NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, regardless of whether they are also *private funds* or registered investment companies.

(b) If yes, does the *private fund* invest in funds managed by you or by a *related person*?

Yes No

9. During your last fiscal year, did the *private fund* invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)?

10. What type of fund is the *private fund*?

hedge fund  liquidity fund  private equity fund  real estate fund  securitized asset fund  venture capital fund  Other *private fund*: POOLED FUND

NOTE: For definitions of these fund types, please see [Instruction 6 of the Instructions to Part 1A](#).

11. Current gross asset value of the *private fund*:

\$ 120,401,527



## Ownership

12. Minimum investment commitment required of an investor in the *private fund*:

\$ 1,000,000

NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund's* beneficial owners:

2

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:

1%

15. (a) What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:

0%

Yes No

(b) If the private fund qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940, are sales of the fund limited to *qualified clients*?

16. What is the approximate percentage of the *private fund* beneficially owned by non-*United States persons*:

0%

## Your Advisory Services

Yes No

17. (a) Are you a subadviser to this *private fund*?

(b) If the answer to question 17.(a) is "yes," provide the name and SEC file number, if any, of the adviser of the *private fund*. If the answer to question 17.(a) is "no," leave this question blank.

No Information Filed

Yes No

18. (a) Do any investment advisers (other than the investment advisers listed in Section 7.B.(1).A.3.(b)) advise the *private fund*?

(b) If the answer to question 18.(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the *private fund*. If the answer to question 18.(a) is "no," leave this question blank.

No Information Filed

Yes No

19. Are your *clients* solicited to invest in the *private fund*?

NOTE: For purposes of this question, do not consider feeder funds of the *private fund*.

20. Approximately what percentage of your *clients* has invested in the *private fund*?

0%

## Private Offering

Yes No

21. Has the *private fund* ever relied on an exemption from registration of its securities under Regulation D of the Securities Act of 1933?

22. If yes, provide the *private fund's* Form D file number (if any):

Form D file number

021-228152

## B. SERVICE PROVIDERS

### Auditors

Yes No

23. (a) (1) Are the *private fund's* financial statements subject to an annual audit?

(2) If the answer to question 23.(a)(1) is "yes," are the financial statements prepared in accordance with U.S. GAAP?

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

Additional Auditor Information : 1 Record(s) Filed.

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must

complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

DELOITTE & TOUCHE LLP

(c) The location of the auditing firm's office responsible for the *private fund's* audit (city, state and country):

City:

NEW YORK

State:

New York

Country:

United States

(d) Is the auditing firm an *independent public accountant*?

Yes No

(e) Is the auditing firm registered with the Public Company Accounting Oversight Board?

If yes, Public Company Accounting Oversight Board-Assigned Number:

34

(f) If "yes" to (e) above, is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules?

(g) Are the *private fund's* audited financial statements for the most recently completed fiscal year distributed to the *private fund's* investors?

Yes No

(h) Do all of the reports prepared by the auditing firm for the *private fund* since your last *annual updating amendment* contain unqualified opinions?

Yes  No  Report Not Yet Received

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

Prime Broker

24. (a) Does the *private fund* use one or more prime brokers?

Yes No

If the answer to question 24.(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

Custodian

25. (a) Does the *private fund* use any custodians (including the prime brokers listed above) to hold some or all of its assets?

Yes No

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

**Additional Custodian Information : 1 Record(s) Filed.**

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

(b) Legal name of custodian:

STATE STREET BANK AND TRUST COMPANY

(c) Primary business name of custodian:

STATE STREET BANK AND TRUST COMPANY

(d) The location of the custodian's office responsible for *custody* of the *private fund's* assets (city, state and country):

City:

BOSTON

State:

Massachusetts

Country:

United States

(e) Is the custodian a *related person* of your firm?

Yes No

(f) If the custodian is a broker-dealer, provide its SEC registration number (if any):

-

CRD Number (if any):

(g) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)  
571474TGEMMWANRLN572

### Administrator

26. (a) Does the *private fund* use an administrator other than your firm?

Yes No

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

#### Additional Administrator Information : 1 Record(s) Filed.

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

(b) Name of administrator:

STATE STREET BANK AND TRUST COMPANY

(c) Location of administrator (city, state and country):

City:

BOSTON

State:

Massachusetts

Country:

United States

Yes No

(d) Is the administrator a *related person* of your firm?

(e) Does the administrator prepare and send investor account statements to the *private fund's* investors?

Yes (provided to all investors)  Some (provided to some but not all investors)  No (provided to no investors)

(f) If the answer to question 26.(e) is "no" or "some," who sends the investor account statements to the (rest of the) *private fund's* investors? If investor account statements are not sent to the (rest of the) *private fund's* investors, respond "not applicable."

27. During your last fiscal year, what percentage of the *private fund's* assets (by value) was valued by a *person*, such as an administrator, that is not your *related person*?  
100%

Include only those assets where (i) such *person* carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such *person*.

### Marketers

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes?

Yes No

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

#### Additional Marketer Information : 1 Record(s) Filed.

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer, you must complete questions (b) through (g) separately for each marketer.

(b) Is the marketer a *related person* of your firm?

Yes No

(c) Name of the marketer:

LORD ABBETT DISTRIBUTOR LLC

(d) If the marketer is registered with the SEC, its file number (e.g., 801-, 8-, or 866-):

8 - 216

and CRD Number (if any):

530

(e) Location of the marketer's office used principally by the *private fund* (city, state and country):

City:  
JERSEY CITY

State:  
New Jersey

Country:  
United States

Yes No

(f) Does the marketer market the *private fund* through one or more websites?

(g) If the answer to question 28.(f) is "yes," list the website address(es):

No Information Filed

## A. PRIVATE FUND

### **Information About the *Private Fund***

1. (a) Name of the *private fund*:

LORD ABBETT SHORT DURATION CREDIT TRUST

(b) *Private fund* identification number:

(include the "805-" prefix also)

805-6053693464

2. Under the laws of what state or country is the *private fund* organized:

State:  
New Hampshire

Country:  
United States

3. (a) Name(s) of General Partner, Manager, Trustee, or Directors (or *persons* serving in a similar capacity):

No Information Filed

(b) If filing an *umbrella registration*, identify the *filing adviser* and/or *relying adviser(s)* that sponsor(s) or manage(s) this *private fund*.

No Information Filed

4. The *private fund* (check all that apply; you must check at least one):

- (1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940
- (2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940

5. List the name and country, in English, of each *foreign financial regulatory authority* with which the *private fund* is registered.

No Information Filed

Yes No

6. (a) Is this a "master fund" in a master-feeder arrangement?

(b) If yes, what is the name and *private fund* identification number (if any) of the feeder funds investing in this *private fund*?

No Information Filed

Yes No

(c) Is this a "feeder fund" in a master-feeder arrangement?

(d) If yes, what is the name and *private fund* identification number (if any) of the master fund in which this *private fund* invests?

Name of *private fund*:

*Private fund* identification number:  
(include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1) for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

8. (a) Is this *private fund* a "fund of funds"? Yes No
- NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, regardless of whether they are also *private funds* or registered investment companies.
- (b) If yes, does the *private fund* invest in funds managed by you or by a *related person*?

9. During your last fiscal year, did the *private fund* invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)? Yes No
10. What type of fund is the *private fund*? Yes No
- hedge fund  liquidity fund  private equity fund  real estate fund  securitized asset fund  venture capital fund  Other *private fund*: POOLED FUND

NOTE: For definitions of these fund types, please see [Instruction 6 of the Instructions to Part 1A](#).

11. Current gross asset value of the *private fund*:  
\$ 654,516,825

### Ownership

12. Minimum investment commitment required of an investor in the *private fund*:  
\$ 1,000,000
- NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund's* beneficial owners:  
2

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:  
1%

15. (a) What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:  
0%

- (b) If the private fund qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940, are sales of the fund limited to *qualified clients*? Yes No

16. What is the approximate percentage of the *private fund* beneficially owned by non-*United States persons*:  
0%

### Your Advisory Services

17. (a) Are you a subadviser to this *private fund*? Yes No
- (b) If the answer to question 17.(a) is "yes," provide the name and SEC file number, if any, of the adviser of the *private fund*. If the answer to question 17.(a) is "no," leave this question blank.
- No Information Filed

18. (a) Do any investment advisers (other than the investment advisers listed in Section 7.B.(1).A.3.(b)) advise the *private fund*? Yes No
- (b) If the answer to question 18.(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the *private fund*. If the answer to question 18.(a) is "no," leave this question blank.
- No Information Filed

19. Are your *clients* solicited to invest in the *private fund*? Yes No
- NOTE: For purposes of this question, do not consider feeder funds of the *private fund*.

20. Approximately what percentage of your *clients* has invested in the *private fund*?

Private Offering

Yes No

21. Has the *private fund* ever relied on an exemption from registration of its securities under Regulation D of the Securities Act of 1933?

22. If yes, provide the *private fund's* Form D file number (if any):

**Form D file number**

021-247623

## B. SERVICE PROVIDERS

Auditors

Yes No

23. (a) (1) Are the *private fund's* financial statements subject to an annual audit?

(2) If the answer to question 23.(a)(1) is "yes," are the financial statements prepared in accordance with U.S. GAAP?

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

**Additional Auditor Information : 1 Record(s) Filed.**

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

DELOITTE &amp; TOUCHE LLP

(c) The location of the auditing firm's office responsible for the *private fund's* audit (city, state and country):

City:

NEW YORK

State:

New York

Country:

United States

Yes No

(d) Is the auditing firm an *independent public accountant*?

(e) Is the auditing firm registered with the Public Company Accounting Oversight Board?

If yes, Public Company Accounting Oversight Board-Assigned Number:

34

(f) If "yes" to (e) above, is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules?

Yes No

(g) Are the *private fund's* audited financial statements for the most recently completed fiscal year distributed to the *private fund's* investors?

(h) Do all of the reports prepared by the auditing firm for the *private fund* since your last *annual updating amendment* contain unqualified opinions?

Yes  No  Report Not Yet Received

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

Prime Broker

Yes No

24. (a) Does the *private fund* use one or more prime brokers?

If the answer to question 24.(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

Custodian

Yes No

25. (a) Does the *private fund* use any custodians (including the prime brokers listed above) to hold some or all of its assets?

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

**Additional Custodian Information : 1 Record(s) Filed.**

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

(b) Legal name of custodian:

STATE STREET BANK AND TRUST COMPANY

(c) Primary business name of custodian:

STATE STREET BANK AND TRUST COMPANY

(d) The location of the custodian's office responsible for *custody* of the *private fund's* assets (city, state and country):

City:

BOSTON

State:

Massachusetts

Country:

United States

Yes No

(e) Is the custodian a *related person* of your firm?

Yes  No

(f) If the custodian is a broker-dealer, provide its SEC registration number (if any):

-

CRD Number (if any):

(g) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)

571474TGEMMWANRLN572

**Administrator**

Yes No

26. (a) Does the *private fund* use an administrator other than your firm?

Yes  No

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

**Additional Administrator Information : 1 Record(s) Filed.**

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

(b) Name of administrator:

STATE STREET BANK AND TRUST COMPANY

(c) Location of administrator (city, state and country):

City:

BOSTON

State:

Massachusetts

Country:

United States

Yes No

(d) Is the administrator a *related person* of your firm?

Yes  No

(e) Does the administrator prepare and send investor account statements to the *private fund's* investors?

Yes (provided to all investors)  Some (provided to some but not all investors)  No (provided to no investors)

(f) If the answer to question 26.(e) is "no" or "some," who sends the investor account statements to the (rest of the) *private fund's* investors? If investor account statements are not sent to the (rest of the) *private fund's* investors, respond "not applicable."

27. During your last fiscal year, what percentage of the *private fund's* assets (by value) was valued by a *person*, such as an administrator, that is not your *related person*?

100%

Include only those assets where (i) such *person* carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such *person*.

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes?

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

**Additional Marketer Information : 1 Record(s) Filed.**

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer, you must complete questions (b) through (g) separately for each marketer.

(b) Is the marketer a *related person* of your firm?

Yes No

(c) Name of the marketer:  
LORD ABBETT DISTRIBUTOR LLC

(d) If the marketer is registered with the SEC, its file number (*e.g.*, 801-, 8-, or 866-):  
8 - 216  
and CRD Number (if any):  
530

(e) Location of the marketer's office used principally by the *private fund* (city, state and country):

City: JERSEY CITY State: New Jersey Country: United States

Yes No

(f) Does the marketer market the *private fund* through one or more websites?

(g) If the answer to question 28.(f) is "yes," list the website address(es):

No Information Filed

A. PRIVATE FUND

**Information About the *Private Fund***

1. (a) Name of the *private fund*:  
LORD ABBETT SMALL CAP GROWTH TRUST

(b) *Private fund* identification number:  
(include the "805-" prefix also)  
805-9501763748

2. Under the laws of what state or country is the *private fund* organized:

State: New Hampshire Country: United States

3. (a) Name(s) of General Partner, Manager, Trustee, or Directors (or *persons* serving in a similar capacity):

Name of General Partner, Manager, Trustee, or Director
LORD, ABBETT & CO. LLC
STATE STREET BANK AND TRUST COMPANY OF NEW HAMPSHIRE, TRUSTEE

(b) If filing an *umbrella registration*, identify the *filing adviser* and/or *relying adviser(s)* that sponsor(s) or manage(s) this *private fund*.

No Information Filed

4. The *private fund* (check all that apply; you must check at least one):

- (1) qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940
- (2) qualifies for the exclusion from the definition of investment company under section 3(c)(7) of the Investment Company Act of 1940



5. List the name and country, in English, of each *foreign financial regulatory authority* with which the *private fund* is registered.

No Information Filed

Yes No

6. (a) Is this a "master fund" in a master-feeder arrangement?

(b) If yes, what is the name and *private fund* identification number (if any) of the feeder funds investing in this *private fund*?

No Information Filed

Yes No

(c) Is this a "feeder fund" in a master-feeder arrangement?

(d) If yes, what is the name and *private fund* identification number (if any) of the master fund in which this *private fund* invests?

Name of *private fund*:

*Private fund* identification number:

(include the "805-" prefix also)

NOTE: You must complete question 6 for each master-feeder arrangement regardless of whether you are filing a single Schedule D, Section 7.B.(1) for the master-feeder arrangement or reporting on the funds separately.

7. If you are filing a single Schedule D, Section 7.B.(1) for a master-feeder arrangement according to the instructions to this Section 7.B.(1), for each of the feeder funds answer the following questions:

No Information Filed

NOTE: For purposes of questions 6 and 7, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

Yes No

8. (a) Is this *private fund* a "fund of funds"?

NOTE: For purposes of this question only, answer "yes" if the fund invests 10 percent or more of its total assets in other pooled investment vehicles, regardless of whether they are also *private funds* or registered investment companies.

(b) If yes, does the *private fund* invest in funds managed by you or by a *related person*?

Yes No

9. During your last fiscal year, did the *private fund* invest in securities issued by investment companies registered under the Investment Company Act of 1940 (other than "money market funds," to the extent provided in Instruction 6.e.)?

10. What type of fund is the *private fund*?

hedge fund  liquidity fund  private equity fund  real estate fund  securitized asset fund  venture capital fund  Other *private fund*: POOLED FUND

NOTE: For definitions of these fund types, please see [Instruction 6 of the Instructions to Part 1A](#).

11. Current gross asset value of the *private fund*:

\$ 108,129,275

### Ownership

12. Minimum investment commitment required of an investor in the *private fund*:

\$ 1,000,000

NOTE: Report the amount routinely required of investors who are not your *related persons* (even if different from the amount set forth in the organizational documents of the fund).

13. Approximate number of the *private fund's* beneficial owners:

2

14. What is the approximate percentage of the *private fund* beneficially owned by you and your *related persons*:

1%

15. (a) What is the approximate percentage of the *private fund* beneficially owned (in the aggregate) by funds of funds:

0%

Yes No

(b) If the private fund qualifies for the exclusion from the definition of investment company under section 3(c)(1) of the Investment Company Act of 1940, are sales of the fund limited to *qualified clients*?

16. What is the approximate percentage of the *private fund* beneficially owned by non-*United States persons*:

0%

**Your Advisory Services**

Yes No

17. (a) Are you a subadviser to this *private fund*?

(b) If the answer to question 17.(a) is "yes," provide the name and SEC file number, if any, of the adviser of the *private fund*. If the answer to question 17.(a) is "no," leave this question blank.

No Information Filed

Yes No

18. (a) Do any investment advisers (other than the investment advisers listed in Section 7.B.(1).A.3.(b)) advise the *private fund*?

(b) If the answer to question 18.(a) is "yes," provide the name and SEC file number, if any, of the other advisers to the *private fund*. If the answer to question 18.(a) is "no," leave this question blank.

No Information Filed

Yes No

19. Are your *clients* solicited to invest in the *private fund*?

*NOTE: For purposes of this question, do not consider feeder funds of the private fund.*

20. Approximately what percentage of your *clients* has invested in the *private fund*?

0%

**Private Offering**

Yes No

21. Has the *private fund* ever relied on an exemption from registration of its securities under Regulation D of the Securities Act of 1933?

22. If yes, provide the *private fund's* Form D file number (if any):

**Form D file number**

021-439680

**B. SERVICE PROVIDERS**

**Auditors**

Yes No

23. (a) (1) Are the *private fund's* financial statements subject to an annual audit?

(2) If the answer to question 23.(a)(1) is "yes," are the financial statements prepared in accordance with U.S. GAAP?

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

**Additional Auditor Information : 1 Record(s) Filed.**

If the answer to question 23.(a)(1) is "yes," respond to questions (b) through (h) below. If the *private fund* uses more than one auditing firm, you must complete questions (b) through (f) separately for each auditing firm.

(b) Name of the auditing firm:

DELOITTE & TOUCHE LLP

(c) The location of the auditing firm's office responsible for the *private fund's* audit (city, state and country):

City:

NEW YORK

State:

New York

Country:

United States

Yes No

(d) Is the auditing firm an *independent public accountant*?

(e) Is the auditing firm registered with the Public Company Accounting Oversight Board?

If yes, Public Company Accounting Oversight Board-Assigned Number:

(f) If "yes" to (e) above, is the auditing firm subject to regular inspection by the Public Company Accounting Oversight Board in accordance with its rules?

Yes No

(g) Are the *private fund's* audited financial statements for the most recently completed fiscal year distributed to the *private fund's* investors?

(h) Do all of the reports prepared by the auditing firm for the *private fund* since your last *annual updating amendment* contain unqualified opinions?

Yes  No  Report Not Yet Received

If you check "Report Not Yet Received," you must promptly file an amendment to your Form ADV to update your response when the report is available.

### Prime Broker

Yes No

24. (a) Does the *private fund* use one or more prime brokers?

If the answer to question 24.(a) is "yes," respond to questions (b) through (e) below for each prime broker the *private fund* uses. If the *private fund* uses more than one prime broker, you must complete questions (b) through (e) separately for each prime broker.

No Information Filed

### Custodian

Yes No

25. (a) Does the *private fund* use any custodians (including the prime brokers listed above) to hold some or all of its assets?

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

#### **Additional Custodian Information : 1 Record(s) Filed.**

If the answer to question 25.(a) is "yes," respond to questions (b) through (g) below for each custodian the *private fund* uses. If the *private fund* uses more than one custodian, you must complete questions (b) through (g) separately for each custodian.

(b) Legal name of custodian:  
STATE STREET BANK AND TRUST COMPANY

(c) Primary business name of custodian:  
STATE STREET BANK AND TRUST COMPANY

(d) The location of the custodian's office responsible for *custody* of the *private fund's* assets (city, state and country):

City:	State:	Country:
BOSTON	Massachusetts	United States

Yes No

(e) Is the custodian a *related person* of your firm?

(f) If the custodian is a broker-dealer, provide its SEC registration number (if any):

-  
CRD Number (if any):

(g) If the custodian is not a broker-dealer, or is a broker-dealer but does not have an SEC registration number, provide its *legal entity identifier* (if any)

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### Administrator

Yes No

26. (a) Does the *private fund* use an administrator other than your firm?

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

#### **Additional Administrator Information : 1 Record(s) Filed.**

If the answer to question 26.(a) is "yes," respond to questions (b) through (f) below. If the *private fund* uses more than one administrator, you must complete questions (b) through (f) separately for each administrator.

(b) Name of administrator:

STATE STREET BANK AND TRUST COMPANY

(c) Location of administrator (city, state and country):

City:

BOSTON

State:

Massachusetts

Country:

United States

Yes No

(d) Is the administrator a *related person* of your firm?

(e) Does the administrator prepare and send investor account statements to the *private fund's* investors?

Yes (provided to all investors)  Some (provided to some but not all investors)  No (provided to no investors)

(f) If the answer to question 26.(e) is "no" or "some," who sends the investor account statements to the (rest of the) *private fund's* investors? If investor account statements are not sent to the (rest of the) *private fund's* investors, respond "not applicable."

27. During your last fiscal year, what percentage of the *private fund's* assets (by value) was valued by a *person*, such as an administrator, that is not your *related person*?

100%

Include only those assets where (i) such *person* carried out the valuation procedure established for that asset, if any, including obtaining any relevant quotes, and (ii) the valuation used for purposes of investor subscriptions, redemptions or distributions, and fee calculations (including allocations) was the valuation determined by such *person*.

#### Marketers

Yes No

28. (a) Does the *private fund* use the services of someone other than you or your *employees* for marketing purposes?

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer you must complete questions (b) through (g) separately for each marketer.

#### Additional Marketer Information : 1 Record(s) Filed.

You must answer "yes" whether the *person* acts as a placement agent, consultant, finder, introducer, municipal advisor or other solicitor, or similar *person*. If the answer to question 28.(a) is "yes," respond to questions (b) through (g) below for each such marketer the *private fund* uses. If the *private fund* uses more than one marketer, you must complete questions (b) through (g) separately for each marketer.

Yes No

(b) Is the marketer a *related person* of your firm?

(c) Name of the marketer:

LORD ABBETT DISTRIBUTOR LLC

(d) If the marketer is registered with the SEC, its file number (e.g., 801-, 8-, or 866-):

8 - 216

and CRD Number (if any):

530

(e) Location of the marketer's office used principally by the *private fund* (city, state and country):

City:

JERSEY CITY

State:

New Jersey

Country:

United States

Yes No

(f) Does the marketer market the *private fund* through one or more websites?

(g) If the answer to question 28.(f) is "yes," list the website address(es):

No Information Filed

**SECTION 7.B.(2) *Private Fund* Reporting**1. Name of the *private fund*:

ANGELES DIVERSIFIED INCOME FUND

2. *Private fund* identification number:

(include the "805-" prefix also)

805-1275765520

3. Name and SEC File number of adviser that provides information about this *private fund* in Section 7.B.(1) of Schedule D of its Form ADV filing

Name:

ANGELES INVESTMENT ADVISORS

SEC File Number:

801 - 60042

**Yes No**4. Are your *clients* solicited to invest in this *private fund*? 

In answering this question, disregard feeder funds' investment in a master fund. For purposes of this question, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

1. Name of the *private fund*:

PERMANENS CAPITAL HIGH YIELD FUND, L.P.

2. *Private fund* identification number:

(include the "805-" prefix also)

805-7910785839

3. Name and SEC File number of adviser that provides information about this *private fund* in Section 7.B.(1) of Schedule D of its Form ADV filing

Name:

PERMANENS CAPITAL L.P.

SEC File Number:

801 - 72416

**Yes No**4. Are your *clients* solicited to invest in this *private fund*? 

In answering this question, disregard feeder funds' investment in a master fund. For purposes of this question, in a master-feeder arrangement, one or more funds ("feeder funds") invest all or substantially all of their assets in a single fund ("master fund"). A fund would also be a "feeder fund" investing in a "master fund" for purposes of this question if it issued multiple classes (or series) of shares or interests, and each class (or series) invests substantially all of its assets in a single master fund.

**Item 8 Participation or Interest in *Client* Transactions**

In this Item, we request information about your participation and interest in your *clients*' transactions. This information identifies additional areas in which conflicts of interest may occur between you and your *clients*. Newly-formed advisers should base responses to these questions on the types of participation and interest that you expect to engage in during the next year.

Like Item 7, Item 8 requires you to provide information about you and your *related persons*, including foreign affiliates.

**Proprietary Interest in *Client* Transactions**A. Do you or any *related person*:**Yes No**(1) buy securities for yourself from advisory *clients*, or sell securities you own to advisory *clients* (principal transactions)? (2) buy or sell for yourself securities (other than shares of mutual funds) that you also recommend to advisory *clients*? (3) recommend securities (or other investment products) to advisory *clients* in which you or any *related person* has some other proprietary (ownership) interest (other than those mentioned in Items 8.A.(1) or (2))? **Sales Interest in *Client* Transactions**B. Do you or any *related person*:**Yes No**(1) as a broker-dealer or registered representative of a broker-dealer, execute securities trades for brokerage customers in which advisory *client* securities are sold to or bought from the brokerage customer (agency cross transactions)?

- (2) recommend to advisory *clients*, or act as a purchaser representative for advisory *clients* with respect to, the purchase of securities for which you or any *related person* serves as underwriter or general or managing partner?
- (3) recommend purchase or sale of securities to advisory *clients* for which you or any *related person* has any other sales interest (other than the receipt of sales commissions as a broker or registered representative of a broker-dealer)?

### Investment or Brokerage Discretion

- C. Do you or any *related person* have *discretionary authority* to determine the: **Yes No**
- (1) securities to be bought or sold for a *client's* account?
- (2) amount of securities to be bought or sold for a *client's* account?
- (3) broker or dealer to be used for a purchase or sale of securities for a *client's* account?
- (4) commission rates to be paid to a broker or dealer for a *client's* securities transactions?
- D. If you answer "yes" to C.(3) above, are any of the brokers or dealers *related persons*?
- E. Do you or any *related person* recommend brokers or dealers to *clients*?
- F. If you answer "yes" to E. above, are any of the brokers or dealers *related persons*?
- G. (1) Do you or any *related person* receive research or other products or services other than execution from a broker-dealer or a third party ("soft dollar benefits") in connection with *client* securities transactions?
- (2) If "yes" to G.(1) above, are all the "soft dollar benefits" you or any *related persons* receive eligible "research or brokerage services" under section 28(e) of the Securities Exchange Act of 1934?
- H. (1) Do you or any *related person*, directly or indirectly, compensate any *person* that is not an *employee* for *client* referrals?
- (2) Do you or any *related person*, directly or indirectly, provide any *employee* compensation that is specifically related to obtaining *clients* for the firm (cash or non-cash compensation in addition to the *employee's* regular salary)?
- I. Do you or any *related person*, including any *employee*, directly or indirectly, receive compensation from any *person* (other than you or any *related person*) for *client* referrals?
- In your response to Item 8.I., do not include the regular salary you pay to an employee.*

*In responding to Items 8.H. and 8.I., consider all cash and non-cash compensation that you or a related person gave to (in answering Item 8.H.) or received from (in answering Item 8.I.) any person in exchange for client referrals, including any bonus that is based, at least in part, on the number or amount of client referrals.*

### Item 9 Custody

In this Item, we ask you whether you or a *related person* has *custody* of *client* (other than *clients* that are investment companies registered under the Investment Company Act of 1940) assets and about your custodial practices.

- A. (1) Do you have *custody* of any advisory *clients'*: **Yes No**
- (a) cash or bank accounts?
- (b) securities?

*If you are registering or registered with the SEC, answer "No" to Item 9.A.(1)(a) and (b) if you have custody solely because (i) you deduct your advisory fees directly from your clients' accounts, or (ii) a related person has custody of client assets in connection with advisory services you provide to clients, but you have overcome the presumption that you are not operationally independent (pursuant to Advisers Act rule 206(4)-2(d)(5)) from the related person.*

- (2) If you checked "yes" to Item 9.A.(1)(a) or (b), what is the approximate amount of *client* funds and securities and total number of *clients* for which you have *custody*:

U.S. Dollar Amount	Total Number of <i>Clients</i>
(a) \$	(b)

*If you are registering or registered with the SEC and you have custody solely because you deduct your advisory fees directly from your clients' accounts, do not include the amount of those assets and the number of those clients in your response to Item 9.A.(2). If your related person has custody of client assets in connection with advisory services you provide to clients, do not include the amount of those assets and number of those clients in your response to 9.A.(2). Instead, include that information in your response to Item 9.B.(2).*

- B. (1) In connection with advisory services you provide to *clients*, do any of your *related persons* have *custody* of any of your advisory *clients'*: **Yes No**
- (a) cash or bank accounts?
- (b) securities?

*You are required to answer this item regardless of how you answered Item 9.A.(1)(a) or (b).*

- (2) If you checked "yes" to Item 9.B.(1)(a) or (b), what is the approximate amount of *client* funds and securities and total number of *clients* for which your *related persons* have *custody*:

U.S. Dollar Amount	Total Number of <i>Clients</i>
--------------------	--------------------------------

(a) \$

(b)

C. If you or your *related persons* have *custody of client* funds or securities in connection with advisory services you provide to *clients*, check all the following that apply:

- (1) A qualified custodian(s) sends account statements at least quarterly to the investors in the pooled investment vehicle(s) you manage.
- (2) An *independent public accountant* audits annually the pooled investment vehicle(s) that you manage and the audited financial statements are distributed to the investors in the pools.
- (3) An *independent public accountant* conducts an annual surprise examination of *client* funds and securities.
- (4) An *independent public accountant* prepares an internal control report with respect to custodial services when you or your *related persons* are qualified custodians for *client* funds and securities.

*If you checked Item 9.C.(2), C.(3) or C.(4), list in Section 9.C. of Schedule D the accountants that are engaged to perform the audit or examination or prepare an internal control report. (If you checked Item 9.C.(2), you do not have to list auditor information in Section 9.C. of Schedule D if you already provided this information with respect to the private funds you advise in Section 7.B.(1) of Schedule D).*

D. Do you or your *related person(s)* act as qualified custodians for your *clients* in connection with advisory services you provide to *clients*? **Yes No**

- (1) you act as a qualified custodian
- (2) your *related person(s)* act as qualified custodian(s)

*If you checked "yes" to Item 9.D.(2), all related persons that act as qualified custodians (other than any mutual fund transfer agent pursuant to rule 206(4)-2(b)(1)) must be identified in Section 7.A. of Schedule D, regardless of whether you have determined the related person to be operationally independent under rule 206(4)-2 of the Advisers Act.*

E. If you are filing your *annual updating amendment* and you were subject to a surprise examination by an *independent public accountant* during your last fiscal year, provide the date (MM/YYYY) the examination commenced:

F. If you or your *related persons* have *custody of client* funds or securities, how many *persons*, including, but not limited to, you and your *related persons*, act as qualified custodians for your *clients* in connection with advisory services you provide to *clients*?

#### SECTION 9.C. *Independent Public Accountant*

No Information Filed

#### Item 10 Control Persons

In this Item, we ask you to identify every *person* that, directly or indirectly, *controls* you. If you are filing an *umbrella registration*, the information in Item 10 should be provided for the *filing adviser* only.

If you are submitting an initial application or report, you must complete Schedule A and Schedule B. Schedule A asks for information about your direct owners and executive officers. Schedule B asks for information about your indirect owners. If this is an amendment and you are updating information you reported on either Schedule A or Schedule B (or both) that you filed with your initial application or report, you must complete Schedule C.

A. Does any *person* not named in Item 1.A. or Schedules A, B, or C, directly or indirectly, *control* your management or policies? **Yes No**

*If yes, complete Section 10.A. of Schedule D.*

B. If any *person* named in Schedules A, B, or C or in Section 10.A. of Schedule D is a public reporting company under Sections 12 or 15(d) of the Securities Exchange Act of 1934, please complete Section 10.B. of Schedule D.

#### SECTION 10.A. *Control Persons*

No Information Filed

#### SECTION 10.B. *Control Person Public Reporting Companies*

No Information Filed

#### Item 11 Disclosure Information

In this Item, we ask for information about your disciplinary history and the disciplinary history of all your *advisory affiliates*. We use this information to determine whether to grant your application for registration, to decide whether to revoke your registration or to place limitations on your activities as an investment adviser, and to identify potential problem areas to focus on during our on-site examinations. One event may result in "yes" answers to more than one of the questions below. In accordance with General Instruction 5 to Form ADV, "you" and "your" include the *filing adviser* and all *relying advisers* under an *umbrella registration*.

Your *advisory affiliates* are: (1) all of your current *employees* (other than *employees* performing only clerical, administrative, support or similar functions); (2) all of your officers, partners, or directors (or any *person* performing similar functions); and (3) all *persons* directly or indirectly *controlling* you or *controlled* by you. If you are a "separately identifiable department or division" (SID) of a bank, see the Glossary of Terms to determine who your *advisory affiliates* are.

If you are registered or registering with the SEC or if you are an exempt reporting adviser, you may limit your disclosure of any event listed in Item 11 to ten years following the date of the event. If you are registered or registering with a state, you must respond to the questions as posed; you may, therefore, limit your disclosure to ten years following the date of an event only in responding to Items 11.A.(1), 11.A.(2), 11.B.(1), 11.B.(2), 11.D.(4), and 11.H.(1)(a). For purposes of calculating this ten-year period, the date of an event is the date the final order, judgment, or decree was entered, or the date any rights of appeal from preliminary orders, judgments, or decrees lapsed.

You must complete the appropriate Disclosure Reporting Page ("DRP") for "yes" answers to the questions in this Item 11.

	<b>Yes</b>	<b>No</b>
Do any of the events below involve you or any of your <i>supervised persons</i> ?	<input type="radio"/>	<input checked="" type="radio"/>

For "yes" answers to the following questions, complete a Criminal Action DRP:

A. In the past ten years, have you or any <i>advisory affiliate</i> :	<b>Yes</b>	<b>No</b>
(1) been convicted of or pled guilty or nolo contendere ("no contest") in a domestic, foreign, or military court to any <i>felony</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
(2) been <i>charged</i> with any <i>felony</i> ?	<input type="radio"/>	<input checked="" type="radio"/>

If you are registered or registering with the SEC, or if you are reporting as an exempt reporting adviser, you may limit your response to Item 11.A.(2) to charges that are currently pending.

B. In the past ten years, have you or any <i>advisory affiliate</i> :	<b>Yes</b>	<b>No</b>
(1) been convicted of or pled guilty or nolo contendere ("no contest") in a domestic, foreign, or military court to a <i>misdemeanor</i> involving: investments or an <i>investment-related</i> business, or any fraud, false statements, or omissions, wrongful taking of property, bribery, perjury, forgery, counterfeiting, extortion, or a conspiracy to commit any of these offenses?	<input type="radio"/>	<input checked="" type="radio"/>
(2) been <i>charged</i> with a <i>misdemeanor</i> listed in Item 11.B.(1)?	<input type="radio"/>	<input checked="" type="radio"/>

If you are registered or registering with the SEC, or if you are reporting as an exempt reporting adviser, you may limit your response to Item 11.B.(2) to charges that are currently pending.

For "yes" answers to the following questions, complete a Regulatory Action DRP:

C. Has the SEC or the Commodity Futures Trading Commission (CFTC) ever:	<b>Yes</b>	<b>No</b>
(1) <i>found</i> you or any <i>advisory affiliate</i> to have made a false statement or omission?	<input type="radio"/>	<input checked="" type="radio"/>
(2) <i>found</i> you or any <i>advisory affiliate</i> to have been <i>involved</i> in a violation of SEC or CFTC regulations or statutes?	<input type="radio"/>	<input checked="" type="radio"/>
(3) <i>found</i> you or any <i>advisory affiliate</i> to have been a cause of an <i>investment-related</i> business having its authorization to do business denied, suspended, revoked, or restricted?	<input type="radio"/>	<input checked="" type="radio"/>
(4) entered an <i>order</i> against you or any <i>advisory affiliate</i> in connection with <i>investment-related</i> activity?	<input type="radio"/>	<input checked="" type="radio"/>
(5) imposed a civil money penalty on you or any <i>advisory affiliate</i> , or <i>ordered</i> you or any <i>advisory affiliate</i> to cease and desist from any activity?	<input type="radio"/>	<input checked="" type="radio"/>

D. Has any other federal regulatory agency, any state regulatory agency, or any <i>foreign financial regulatory authority</i> :	<b>Yes</b>	<b>No</b>
(1) ever <i>found</i> you or any <i>advisory affiliate</i> to have made a false statement or omission, or been dishonest, unfair, or unethical?	<input type="radio"/>	<input checked="" type="radio"/>
(2) ever <i>found</i> you or any <i>advisory affiliate</i> to have been <i>involved</i> in a violation of <i>investment-related</i> regulations or statutes?	<input type="radio"/>	<input checked="" type="radio"/>
(3) ever <i>found</i> you or any <i>advisory affiliate</i> to have been a cause of an <i>investment-related</i> business having its authorization to do business denied, suspended, revoked, or restricted?	<input type="radio"/>	<input checked="" type="radio"/>
(4) in the past ten years, entered an <i>order</i> against you or any <i>advisory affiliate</i> in connection with an <i>investment-related</i> activity?	<input type="radio"/>	<input checked="" type="radio"/>
(5) ever denied, suspended, or revoked your or any <i>advisory affiliate's</i> registration or license, or otherwise prevented you or any <i>advisory affiliate</i> , by <i>order</i> , from associating with an <i>investment-related</i> business or restricted your or any <i>advisory affiliate's</i> activity?	<input type="radio"/>	<input checked="" type="radio"/>

E. Has any <i>self-regulatory organization</i> or commodities exchange ever:	<b>Yes</b>	<b>No</b>
(1) <i>found</i> you or any <i>advisory affiliate</i> to have made a false statement or omission?	<input type="radio"/>	<input checked="" type="radio"/>
(2) <i>found</i> you or any <i>advisory affiliate</i> to have been <i>involved</i> in a violation of its rules (other than a violation designated as a " <i>minor rule violation</i> " under a plan approved by the SEC)?	<input type="radio"/>	<input checked="" type="radio"/>
(3) <i>found</i> you or any <i>advisory affiliate</i> to have been the cause of an <i>investment-related</i> business having its authorization to do business denied, suspended, revoked, or restricted?	<input type="radio"/>	<input checked="" type="radio"/>
(4) disciplined you or any <i>advisory affiliate</i> by expelling or suspending you or the <i>advisory affiliate</i> from membership, barring or suspending you or the <i>advisory affiliate</i> from association with other members, or otherwise restricting your or the <i>advisory affiliate's</i> activities?	<input type="radio"/>	<input checked="" type="radio"/>

F. Has an authorization to act as an attorney, accountant, or federal contractor granted to you or any <i>advisory affiliate</i> ever been revoked or suspended?	<input type="radio"/>	<input checked="" type="radio"/>
--	-----------------------	----------------------------------

G. Are you or any <i>advisory affiliate</i> now the subject of any regulatory <i>proceeding</i> that could result in a "yes" answer to any part of Item 11.C., 11.D., or 11.E.?	<input type="radio"/>	<input checked="" type="radio"/>
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For "yes" answers to the following questions, complete a Civil Judicial Action DRP:

H. (1) Has any domestic or foreign court:	<b>Yes</b>	<b>No</b>
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(a) in the past ten years, *enjoined* you or any *advisory affiliate* in connection with any *investment-related* activity?

(b) ever *found* that you or any *advisory affiliate* were *involved* in a violation of *investment-related* statutes or regulations?

(c) ever dismissed, pursuant to a settlement agreement, an *investment-related* civil action brought against you or any *advisory affiliate* by a state or *foreign financial regulatory authority*?

(2) Are you or any *advisory affiliate* now the subject of any civil *proceeding* that could result in a "yes" answer to any part of Item 11.H.(1)?

## Item 12 Small Businesses

The SEC is required by the Regulatory Flexibility Act to consider the effect of its regulations on small entities. In order to do this, we need to determine whether you meet the definition of "small business" or "small organization" under rule 0-7.

Answer this Item 12 only if you are registered or registering with the SEC **and** you indicated in response to Item 5.F.(2)(c) that you have regulatory assets under management of less than \$25 million. You are not required to answer this Item 12 if you are filing for initial registration as a state adviser, amending a current state registration, or switching from SEC to state registration.

For purposes of this Item 12 only:

- Total Assets refers to the total assets of a firm, rather than the assets managed on behalf of *clients*. In determining your or another *person's* total assets, you may use the total assets shown on a current balance sheet (but use total assets reported on a consolidated balance sheet with subsidiaries included, if that amount is larger).
- *Control* means the power to direct or cause the direction of the management or policies of a *person*, whether through ownership of securities, by contract, or otherwise. Any *person* that directly or indirectly has the right to vote 25 percent or more of the voting securities, or is entitled to 25 percent or more of the profits, of another *person* is presumed to *control* the other *person*.

A. Did you have total assets of \$5 million or more on the last day of your most recent fiscal year? Yes No

*If "yes," you do not need to answer Items 12.B. and 12.C.*

B. Do you:  
(1) *control* another investment adviser that had regulatory assets under management (calculated in response to Item 5.F.(2)(c) of Form ADV) of \$25 million or more on the last day of its most recent fiscal year?

(2) *control* another *person* (other than a natural person) that had total assets of \$5 million or more on the last day of its most recent fiscal year?

C. Are you:  
(1) *controlled* by or under common *control* with another investment adviser that had regulatory assets under management (calculated in response to Item 5.F.(2)(c) of Form ADV) of \$25 million or more on the last day of its most recent fiscal year?

(2) *controlled* by or under common *control* with another *person* (other than a natural person) that had total assets of \$5 million or more on the last day of its most recent fiscal year?

## Schedule A

### Direct Owners and Executive Officers

1. Complete Schedule A only if you are submitting an initial application or report. Schedule A asks for information about your direct owners and executive officers. Use Schedule C to amend this information.

2. Direct Owners and Executive Officers. List below the names of:

(a) each Chief Executive Officer, Chief Financial Officer, Chief Operations Officer, Chief Legal Officer, Chief Compliance Officer (Chief Compliance Officer is required if you are registered or applying for registration and cannot be more than one individual), director, and any other individuals with similar status or functions;

(b) if you are organized as a corporation, each shareholder that is a direct owner of 5% or more of a class of your voting securities, unless you are a public reporting company (a company subject to Section 12 or 15(d) of the Exchange Act);

Direct owners include any *person* that owns, beneficially owns, has the right to vote, or has the power to sell or direct the sale of, 5% or more of a class of your voting securities. For purposes of this Schedule, a *person* beneficially owns any securities: (i) owned by his/her child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, sharing the same residence; or (ii) that he/she has the right to acquire, within 60 days, through the exercise of any option, warrant, or right to purchase the security.

(c) if you are organized as a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of your capital;

(d) in the case of a trust that directly owns 5% or more of a class of your voting securities, or that has the right to receive upon dissolution, or has contributed, 5% or more of your capital, the trust and each trustee; and

(e) if you are organized as a limited liability company ("LLC"), (i) those members that have the right to receive upon dissolution, or have contributed, 5% or more of your capital, and (ii) if managed by elected managers, all elected managers.

3. Do you have any indirect owners to be reported on Schedule B?  Yes  No

4. In the DE/FE/I column below, enter "DE" if the owner is a domestic entity, "FE" if the owner is an entity incorporated or domiciled in a foreign country, or "I" if the owner or executive officer is an individual.

5. Complete the Title or Status column by entering board/management titles; status as partner, trustee, sole proprietor, elected manager, shareholder, or member; and for shareholders or members, the class of securities owned (if more than one is issued).

6. Ownership codes are: NA - less than 5% B - 10% but less than 25% D - 50% but less than 75%  
A - 5% but less than 10% C - 25% but less than 50% E - 75% or more

7. (a) In the *Control Person* column, enter "Yes" if the *person* has *control* as defined in the Glossary of Terms to Form ADV, and enter "No" if the *person* does not have *control*. Note that under this definition, most executive officers and all 25% owners, general partners, elected managers, and trustees are *control persons*.

(b) In the PR column, enter "PR" if the owner is a public reporting company under Sections 12 or 15(d) of the Exchange Act.

(c) Complete each column.

FULL LEGAL NAME (Individuals: Last Name, First Name, Middle Name)	DE/FE/I	Title or Status	Date Title or Status Acquired MM/YYYY	Ownership Code	Control Person	PR	CRD No. If None: S.S. No. and Date of Birth, IRS Tax No. or Employer ID No.
DOW, ROBERT, STANLEY	I	NON-EXECUTIVE MEMBER	10/2012	A	N	N	1616509
FOSTER, DARIA, LOPRESTI	I	NON-EXECUTIVE MEMBER	04/2018	B	N	N	2811548
LYNCH, SUSAN, E	I	NON-EXECUTIVE MEMBER	07/2002	A	N	N	4603906
MCGILL, JOSEPH, MICHAEL	I	MEMBER, CHIEF COMPLIANCE OFFICER	01/2014	NA	N	N	1496983
SIEG, DOUGLAS, BLOOM	I	MEMBER, MANAGING PARTNER	04/2018	B	Y	N	2261001
STOLLER, LAWRENCE, BRUCE	I	MEMBER AND GENERAL COUNSEL	01/2019	NA	N	N	3076279
FANNON, ANGELA, L	I	MEMBER AND CHIEF FINANCIAL OFFICER	07/2019	NA	N	N	4282126

## Schedule B

### Indirect Owners

- Complete Schedule B only if you are submitting an initial application or report. Schedule B asks for information about your indirect owners; you must first complete Schedule A, which asks for information about your direct owners. Use Schedule C to amend this information.
- Indirect Owners. With respect to each owner listed on Schedule A (except individual owners), list below:
  - in the case of an owner that is a corporation, each of its shareholders that beneficially owns, has the right to vote, or has the power to sell or direct the sale of, 25% or more of a class of a voting security of that corporation;

For purposes of this Schedule, a *person* beneficially owns any securities: (i) owned by his/her child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, sharing the same residence; or (ii) that he/she has the right to acquire, within 60 days, through the exercise of any option, warrant, or right to purchase the security.
  - in the case of an owner that is a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 25% or more of the partnership's capital;
  - in the case of an owner that is a trust, the trust and each trustee; and
  - in the case of an owner that is a limited liability company ("LLC"), (i) those members that have the right to receive upon dissolution, or have contributed, 25% or more of the LLC's capital, and (ii) if managed by elected managers, all elected managers.
- Continue up the chain of ownership listing all 25% owners at each level. Once a public reporting company (a company subject to Sections 12 or 15(d) of the Exchange Act) is reached, no further ownership information need be given.
- In the DE/FE/I column below, enter "DE" if the owner is a domestic entity, "FE" if the owner is an entity incorporated or domiciled in a foreign country, or "I" if the owner is an individual.
- Complete the Status column by entering the owner's status as partner, trustee, elected manager, shareholder, or member; and for shareholders or members, the class of securities owned (if more than one is issued).
- Ownership codes are: C - 25% but less than 50% E - 75% or more  
D - 50% but less than 75% F - Other (general partner, trustee, or elected manager)
- In the *Control Person* column, enter "Yes" if the *person* has *control* as defined in the Glossary of Terms to Form ADV, and enter "No" if the *person* does not have *control*. Note that under this definition, most executive officers and all 25% owners, general partners, elected managers, and trustees are *control persons*.
  - In the PR column, enter "PR" if the owner is a public reporting company under Sections 12 or 15(d) of the Exchange Act.
  - Complete each column.

No Information Filed

## Schedule D - Miscellaneous

You may use the space below to explain a response to an Item or to provide any other information.

For Item 5.K.(1) Separately Managed Accounts, holdings percentages are calculated using market value for all assets other than derivatives. Holding percentages for derivatives reflect absolute notional value due to the requirement that each column total 100%. Please see Section 5.K.(2) for the gross notional derivatives exposure for regulatory assets under management attributable to separately managed accounts.

## Schedule R

No Information Filed

## DRP Pages

**CRIMINAL DISCLOSURE REPORTING PAGE (ADV)**

No Information Filed

**REGULATORY ACTION DISCLOSURE REPORTING PAGE (ADV)**

No Information Filed

**CIVIL JUDICIAL ACTION DISCLOSURE REPORTING PAGE (ADV)**

No Information Filed

**Part 2****Exemption from brochure delivery requirements for SEC-registered advisers**

SEC rules exempt SEC-registered advisers from delivering a firm brochure to some kinds of clients. If these exemptions excuse you from delivering a brochure to *all* of your advisory clients, you do not have to prepare a brochure.

Are you exempt from delivering a brochure to all of your clients under these rules?

Yes No



If no, complete the ADV Part 2 filing below.

Amend, retire or file new brochures:

Brochure ID	Brochure Name	Brochure Type(s)
124089	ADV PART 2A	Individuals, High net worth individuals, Pension plans/profit sharing plans, Foundations/charities, Government/municipal, Other institutional, Private funds or pools, Wrap program

**Part 3**

CRS	Type(s)	Affiliate Info	Retire
	Investment Advisor		

**Execution Pages****DOMESTIC INVESTMENT ADVISER EXECUTION PAGE**

You must complete the following Execution Page to Form ADV. This execution page must be signed and attached to your initial submission of Form ADV to the SEC and all amendments.

**Appointment of Agent for Service of Process**

By signing this Form ADV Execution Page, you, the undersigned adviser, irrevocably appoint the Secretary of State or other legally designated officer, of the state in which you maintain your *principal office and place of business* and any other state in which you are submitting a *notice filing*, as your agents to receive service, and agree that such *persons* may accept service on your behalf, of any notice, subpoena, summons, *order* instituting *proceedings*, demand for arbitration, or other process or papers, and you further agree that such service may be made by registered or certified mail, in any federal or state action, administrative *proceeding* or arbitration brought against you in any place subject to the jurisdiction of the United States, if the action, *proceeding*, or arbitration (a) arises out of any activity in connection with your investment advisory business that is subject to the jurisdiction of the United States, and (b) is *founded*, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these acts, or (ii) the laws of the state in which you maintain your *principal office and place of business* or of any state in which you are submitting a *notice filing*.

**Signature**

I, the undersigned, sign this Form ADV on behalf of, and with the authority of, the investment adviser. The investment adviser and I both certify, under penalty of perjury under the laws of the United States of America, that the information and statements made in this ADV, including exhibits and any other information submitted, are true and correct, and that I am signing this Form ADV Execution Page as a free and voluntary act.

I certify that the adviser's books and records will be preserved and available for inspection as required by law. Finally, I authorize any *person* having *custody* or possession of these books and records to make them available to federal and state regulatory representatives.

Signature:  
LAWRENCE B. STOLLER

Date: MM/DD/YYYY  
12/21/2022

Printed Name:  
LAWRENCE B. STOLLER

Title:  
MEMBER & GENERAL COUNSEL

Adviser CRD Number:

**NON-RESIDENT INVESTMENT ADVISER EXECUTION PAGE**

You must complete the following Execution Page to Form ADV. This execution page must be signed and attached to your initial submission of Form ADV to the SEC and all amendments.

### 1. Appointment of Agent for Service of Process

By signing this Form ADV Execution Page, you, the undersigned adviser, irrevocably appoint each of the Secretary of the SEC, and the Secretary of State or other legally designated officer, of any other state in which you are submitting a *notice filing*, as your agents to receive service, and agree that such persons may accept service on your behalf, of any notice, subpoena, summons, *order* instituting *proceedings*, demand for arbitration, or other process or papers, and you further agree that such service may be made by registered or certified mail, in any federal or state action, administrative *proceeding* or arbitration brought against you in any place subject to the jurisdiction of the United States, if the action, *proceeding* or arbitration (a) arises out of any activity in connection with your investment advisory business that is subject to the jurisdiction of the United States, and (b) is *founded*, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these acts, or (ii) the laws of any state in which you are submitting a *notice filing*.

### 2. Appointment and Consent: Effect on Partnerships

If you are organized as a partnership, this irrevocable power of attorney and consent to service of process will continue in effect if any partner withdraws from or is admitted to the partnership, provided that the admission or withdrawal does not create a new partnership. If the partnership dissolves, this irrevocable power of attorney and consent shall be in effect for any action brought against you or any of your former partners.

### 3. *Non-Resident* Investment Adviser Undertaking Regarding Books and Records

By signing this Form ADV, you also agree to provide, at your own expense, to the U.S. Securities and Exchange Commission at its principal office in Washington D.C., at any Regional or District Office of the Commission, or at any one of its offices in the United States, as specified by the Commission, correct, current, and complete copies of any or all records that you are required to maintain under Rule 204-2 under the Investment Advisers Act of 1940. This undertaking shall be binding upon you, your heirs, successors and assigns, and any *person* subject to your written irrevocable consents or powers of attorney or any of your general partners and *managing agents*.

### Signature

I, the undersigned, sign this Form ADV on behalf of, and with the authority of, the *non-resident* investment adviser. The investment adviser and I both certify, under penalty of perjury under the laws of the United States of America, that the information and statements made in this ADV, including exhibits and any other information submitted, are true and correct, and that I am signing this Form ADV Execution Page as a free and voluntary act.

I certify that the adviser's books and records will be preserved and available for inspection as required by law. Finally, I authorize any *person* having *custody* or possession of these books and records to make them available to federal and state regulatory representatives.

Signature:

Date: MM/DD/YYYY

Printed Name:

Title:

Adviser *CRD* Number:

110391

# Form ADV Part 2A Brochure

December 21, 2022

This brochure provides information about the qualifications and business practices of Lord, Abbett & Co. LLC. If you have questions about the contents of this brochure, please contact us at 201-827-2000 or by email at [ADVINFO@lordabbett.com](mailto:ADVINFO@lordabbett.com). The information in this brochure has not been approved or verified by the U.S. Securities and Exchange Commission ("SEC") or by any state securities authority.

Lord, Abbett & Co. LLC is registered as an investment adviser under the Investment Advisers Act of 1940, as amended (the "Advisers Act"). Lord, Abbett & Co. LLC is subject to the Advisers Act rules and regulations adopted by the SEC. Registration as an investment adviser does not imply any particular level of skill or training.

Additional information about Lord, Abbett & Co. LLC is also available on the SEC's website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).



LORD ABBETT®



## MATERIAL CHANGES

This brochure contains a variety of wording changes and clarifications from the last annual update dated December 22, 2021. Among these, we have updated, amended and expanded disclosures in the particular sections noted below. We believe that none of these changes or clarifications constitutes a material change from the last annual update.

- Under “Methods of Analysis, Investment Strategies, and Risk of Loss” we added information on the use of sustainable investing factors in our analysis and the impact that counterparty assessments may have on the availability of investment opportunities.
- Under “Other Financial Industry Activities and Affiliates” we have listed and described additional subsidiary entities providing financial or related services, including an entity deemed to be a Participating Affiliate under applicable SEC guidance.
- Under “Code of Ethics, Participation or Interest in Client Transactions and Personal Trading” we have updated the description of our policies relating to Personal Trading, Political Contributions, and Donations to Charities.
- Under “Sustainable Investing & Proxy Voting Policy” we made various clarifications and updates to align these provisions with our current proxy voting guidelines.
- We updated our “Investment Strategies” list and Appendix 1 listing our standard fee schedule.
- We have reorganized and updated certain risk factors in Appendix 2.



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Dear Client:

As a global asset manager that believes the interests of our clients always come first, we are committed to helping investors to understand and navigate their investment options. With this in mind, we have created this document to provide you with detailed information about Lord, Abbett & Co. LLC. The information herein summarizes key aspects of our approach to investment management, the types of strategies we offer, our trading practices, and the policies and procedures we have implemented to manage conflicts of interest.

We appreciate the trust and confidence that our clients have placed in Lord Abbett and hope this information helps you to better understand the structure of our firm, the services we provide, and our efforts to serve each of our clients fairly and equitably.

If you have any questions or would like any additional information regarding specific references within this document, please feel free to contact your relationship manager.

Regards,

A handwritten signature in black ink, appearing to read 'D B Sieg', is written over a faint, light-colored watermark of the same signature.

Douglas B. Sieg  
CEO & Managing Partner





## ADVISORY BUSINESS

### Firm Overview

Lord, Abbett & Co. LLC (“Lord Abbett” or “the firm”) is an independent money management firm founded in 1929. Lord Abbett provides discretionary and nondiscretionary investment management services to a broad range of clients, including registered investment companies. Managing money is the singular focus of Lord Abbett. Substantially all of Lord Abbett’s investment and operations personnel are primarily located in Lord Abbett’s office in Jersey City, New Jersey. Lord Abbett is owned solely by current and former senior professionals of the firm (or by their estate or members of their family) and is not publicly traded. No individual or company owns 25% or more of Lord Abbett.

As of September 30, 2022, Lord Abbett’s regulatory assets under management were approximately \$211.2 billion, of which approximately \$210.2 billion were managed on a discretionary basis and approximately \$1.0 billion were managed on a nondiscretionary basis.

#### *Investment Advisory Services*

Lord Abbett manages equity, fixed-income, and multi-asset class portfolios across a wide range of investment strategies. Portfolio management teams employ a rigorous investment approach and the firm’s investment processes are supported by a strong internal focus on fundamental and quantitative research.

At Lord Abbett, we take great pride in the efforts of our investment research team. We have dedicated significant resources to this effort and continually work to improve our fundamental and quantitative research.

Lord Abbett provides investment advisory services to the following types of clients:

- **Institutional Clients**—Lord Abbett provides discretionary investment advice to U.S. and non-U.S. retirement and benefit plans, corporations, public funds, foundations, endowments, unions, insurance companies, religious and healthcare organizations, pooled investment vehicles, and family trusts. Lord Abbett also sponsors and provides discretionary investment advisory services to commingled funds offered on a private placement basis to eligible institutional investors.
- **Registered Investment Companies**—Lord Abbett provides investment advisory services to a family of SEC-registered investment companies (the “Lord Abbett Funds”) and registered investment companies sponsored by unaffiliated third parties.
- **Foreign Pooled Investment Vehicles**—Lord Abbett provides investment advisory services to a family of funds that are authorized and regulated by the Central Bank of Ireland pursuant to the European Communities (Undertakings for Collective Investment in Transferable Securities) Regulations, 2011 (the “Lord Abbett UCITS Funds”), to an alternative investment fund that is authorized and regulated by the Commission de Surveillance du Secteur Financier (“CSSF”) in Luxembourg pursuant to Part II of the Luxembourg Law of 17 December 2010 relating to undertakings for collective

investment (the “Lord Abbett Luxembourg Fund”), and to a Cayman Islands exempted company that is a feeder fund into one of the Lord Abbett Funds (the “Lord Abbett Cayman Fund” and, together with the Lord Abbett UCITS Funds and Lord Abbett Luxembourg Fund, the “Lord Abbett Global Funds”). In addition, Lord Abbett provides investment sub-advisory services to foreign pooled investment vehicles.

- **Managed Account Services**—Lord Abbett provides investment advisory services, as well as nondiscretionary security recommendations in the form of model portfolios, through its participation in two types of managed account or “wrap fee” programs. These programs are referred to as Managed Accounts and Model Portfolios.

—**Managed Accounts**—In traditional Managed Account programs, a client selects a financial institution sponsor (a “Sponsor”), which provides a bundle of services for a single fee. Typically, this bundle of services includes the research of firms such as Lord Abbett in order to be included as a discretionary investment adviser in the Sponsor’s program, payment of Lord Abbett’s investment advisory fee, ongoing monitoring and evaluation of Lord Abbett’s performance, execution of the client’s portfolio transactions, and/or custodial services for the client’s assets. In some Managed Account programs, so-called “dual contract” programs, the client enters into both an investment management agreement with Lord Abbett and a program agreement with the Sponsor. In a dual contract program, the investment management fee may not be included in the Sponsor’s bundled fee and, in those cases, the client pays the investment management fee directly to Lord Abbett.

—**Model Portfolios**—Pursuant to a master investment advisory services agreement, Sponsors of Model Portfolios receive Lord Abbett’s model securities portfolio for a particular investment style. Based on the model, the Sponsor or its designated representative, often referred to as an “overlay manager,” exercises investment discretion and executes each client’s portfolio transactions predicated on the Sponsor’s or overlay manager’s own investment judgment. Lord Abbett does not provide Model Portfolios based on the individual needs of any program client.

#### *Differences in Investment Management Services*

Lord Abbett provides investment management services through Managed Account and Model Portfolio programs, which generally differ from the investment advisory services it furnishes to other clients. Many of the primary differences include the investment types and strategies used. Managed Accounts and Model Portfolios generally tend to limit eligible investments to publicly traded equity securities and fixed-income securities, while other Lord Abbett client accounts may also invest in private placements and derivatives, as well as other instruments that are less liquid or not as freely traded. In addition, equity Managed Accounts do not participate in initial or secondary offerings because of the difficulty in obtaining sufficient allocations to distribute fairly across all client accounts.



Managed Accounts also at times have lower portfolio turnover than other Lord Abbett client accounts, especially in certain strategies. Finally, Managed Accounts and Model Portfolios typically have fewer holdings than other client portfolios. Lord Abbett typically relies on the program Sponsor or consultant/financial adviser to provide client portfolio reporting. Additional differences include the following:

- Equity securities transactions in Managed Accounts and Model Portfolios generally are executed through the Sponsor without a separate commission charge or at a fixed commission amount per trade negotiated by the Sponsor. Equity securities transactions for other Lord Abbett investment management clients are placed through broker-dealers selected by Lord Abbett and are subject to separate commission charges that are negotiated by Lord Abbett.
- In Managed Account and Model Portfolio programs, Lord Abbett will generally rely exclusively on the Sponsor's determination that its particular investment strategy is suitable for a Managed Account or Model Portfolio client, and will not seek to collect and conduct a review of any client information separate from the Sponsor. Please refer to the sections entitled *Methods of Analysis, Investment Strategies, and Risk of Loss* and *Investment Discretion* below for discussions of how Lord Abbett tailors its advisory services to the individual needs of its clients.

## FEES AND COMPENSATION

Lord Abbett's investment advisory fees typically are based on a percentage of the value of the account. Fees are set based on the investment strategy and the type and level of services provided. Fees for institutional client accounts normally are billed and payable in arrears based on month- or quarter-end assets, subject to adjustments for interim contributions to or withdrawals from an account.

Appendix 1 to this brochure contains Lord Abbett's standard institutional separate account fee schedules and the typical range of fees payable to Lord Abbett for Managed Account programs. Lord Abbett retains discretion to negotiate, and does negotiate, the fees charged to clients for investment advisory services, subject to applicable law. When Lord Abbett negotiates investment advisory fees, it takes into consideration a client's special circumstances, asset levels, service requirements or other factors, each as determined in Lord Abbett's sole discretion. Some fee schedules provide additional breakpoints on larger accounts, including investment companies or other pooled investment vehicles. Lord Abbett charges different advisory fees for different strategies and accounts and permits clients and financial advisors to aggregate the assets of related accounts to take advantage of breakpoints. Fees for Managed Account programs (other than dual-contract programs) are paid to Lord Abbett by the program's Sponsor from the single fee a client pays to the Sponsor.

From time to time, Lord Abbett has agreed on a performance-based fee structure with a qualified client, which fee structure will

be designed to be in compliance with the Advisers Act and other applicable law.

Lord Abbett's management fees do not include fees charged by a client's custodian or the fees and other expenses deducted by or paid to third party service providers from the assets of a non-proprietary fund in which a client account may invest. In addition, client accounts usually incur transaction costs when they buy and sell securities. For more information, please see the *Brokerage Practices* section below.

Lord Abbett provides investment advisory and administrative services to the Lord Abbett Funds. Lord Abbett receives investment advisory and administrative fees for its services typically paid monthly in arrears based on the average daily net assets of each Fund at annual rates described in each Lord Abbett Fund's Prospectus and Statement of Additional Information. Similarly, Lord Abbett receives investment advisory fees for its services to the Lord Abbett Global Funds, which fees accrue daily and are calculated and payable monthly in arrears at annual rates as described in each fund's offering documents.

## PERFORMANCE-BASED FEES AND SIDE-BY-SIDE MANAGEMENT

Lord Abbett charges both performance-based fees and asset-based fees. The management of accounts with performance-based fees has the potential to cause a conflict of interest by creating an incentive to favor accounts with performance-based fees in order to generate greater revenue for Lord Abbett. A similar conflict exists from managing client accounts paying a higher asset-based fee than other accounts or accounts containing assets owned by Lord Abbett, its employees, or its owners.

Lord Abbett has adopted securities allocation policies and procedures to address these potential conflicts of interest. These policies and procedures are reasonably designed to monitor and prevent Lord Abbett from inappropriately favoring one type of account over another. Further details on Lord Abbett's securities allocation policies and procedures are provided in the *Brokerage Practices* section below.

## TYPES OF CLIENTS

Lord Abbett provides advisory services to a variety of institutional clients, the Lord Abbett Funds and other registered investment companies sponsored by third parties, the Lord Abbett Global Funds, other foreign funds, privately offered commingled funds and various Managed Accounts. For institutional separate accounts, Lord Abbett typically requires a minimum account size that ranges between \$10-100 million based on the particular strategy being used for the account. Lord Abbett reserves the right, in its sole discretion, to waive or change investment minimums in certain circumstances.



Managed Accounts are typically smaller in size. The minimum account size for Managed Accounts is generally \$100,000, depending on the Sponsor's requirements, with the exception of accounts investing in municipal securities, for which the minimum account size is generally \$250,000. The minimum account size for a Managed Account under a dual contract program is generally \$100,000, with accounts investing in municipal securities generally subject to a \$250,000 to \$500,000 minimum. For one Model Portfolio program, the minimum account allocation can be as low as \$40,000.

## METHODS OF ANALYSIS, INVESTMENT STRATEGIES, AND RISK OF LOSS

### Methods of Analysis

Lord Abbett provides investment advisory services across a broad range of strategies and asset classes. The method of analysis varies based on each strategy. Our general investment approach and a brief description of the risks associated with our investment programs are described in this section. Please see Appendix 2 to this brochure and, if applicable, the disclosures or risk factors contained in any offering materials or other disclosure statements provided to you separately for a more complete description of the risks associated with Lord Abbett's investment activities.

#### *Equities*

Lord Abbett manages a wide range of equity investment products, including growth, core, and value oriented products. Some approaches focus on specific capitalization ranges—micro cap, small cap, mid cap, and large cap. Other approaches look for investment opportunities in more than one capitalization category or across all capitalization levels. Lord Abbett manages both domestic and international equity strategies. Lord Abbett's investment approach at its core is based on a belief in active management and risk controls. This belief is grounded in a foundation of fundamental and quantitative research.

Investments in equity markets are subject to many risks, including the risk of general market fluctuations and company-specific changes in profitability. Also, small and micro cap company securities tend to be more sensitive to changing economic conditions and tend to be more volatile and less liquid than equity securities of larger companies. In addition, investments in foreign companies may be adversely affected by political, economic, and social volatility, lack of transparency or inadequate regulatory and accounting standards, inadequate exchange control regulations, foreign taxes, higher transaction and other costs, and delays in settlement.

#### *Fixed Income*

Lord Abbett invests in fixed-income instruments across the spectrum of duration (from money market and short duration to intermediate to long bond) and credit (from investment grade to high yield and distressed) in both the taxable and tax-exempt marketplaces. Some approaches seek investment opportunities across various sectors,

including government, mortgage, corporate, municipal, bank loan, and emerging markets currency and debt, while others are limited to one or more of those sectors. Lord Abbett's fixed-income investment teams generally rely on a combination of fundamental and quantitative research capabilities to aid security selection within their portfolios.

Investments in both taxable and tax-exempt fixed-income securities are subject to many risks, including interest-rate, regulatory, liquidity, mortgage prepayment, issuer or credit, and distressed debt/default risks. With respect to interest rates, investors should be aware of the potential for unanticipated rapid changes in interest rates that could adversely affect investment performance. Tax-exempt bonds may be subject to adverse effects due to governmental actions, including actions by local, state, and regional governments, as well as municipal bankruptcies or credit events. Finally, convertible securities are subject to risks affecting both equity and fixed-income securities, including market, credit, and interest-rate risk.

#### *Sustainable Investing*

Lord Abbett considers (when appropriate) environmental, social, and governance ("ESG") factors in all of our strategies. In formulating its investment advice, Lord Abbett seeks to analyze and understand the ESG factors in order to properly assess the risk and return of the investment under consideration. In analyzing the risk/reward profile of an investment, Lord Abbett evaluates the impact of ESG risks on enterprise value and, as with any other risks, seeks to ensure that the expected return for every investment is commensurate with those risks.

The relevance of ESG factors will vary by asset class, sector, and strategy, and the use of ESG factors will depend in part on the portfolio management team and any regulatory, operational, or account considerations. Accordingly, Lord Abbett's use of ESG factors might differ from how other advisers use ESG factors. In most of our strategies, the identification of an ESG-related risk in a security will not necessarily exclude that particular security from investment if it might otherwise be a suitable and attractive investment. On the other hand, Lord Abbett's Climate Focused Bond strategy limits investments to those that we believe have, or will have, a positive impact on the climate, and we may in the future introduce additional strategies where ESG factors specifically limit what we may invest in. Lord Abbett's Sustainable Municipal Bond Fund seeks to invest in bonds from issuers that demonstrate strong ESG practices and profiles based on proprietary ESG analysis and specific bond issues whose proceeds are targeted towards positive social or environmental impacts.

#### *Counterparty Risk*

By its nature, investing in securities involves exposure to the risk that the counterparty to a transaction will fail to perform its obligations under the transaction. This risk arises in the context of ordinary securities purchases and sales, where a counterparty may be unable to satisfy its obligation to deliver cash or securities necessary to settle the transaction, and is especially pronounced in derivative or



other transactions that may not close or settle for an extended period of time and for which there may be no central clearinghouse or other facility that requires daily mark-to-market valuations, margin payments or other protections that are designed to reduce the financial impact of counterparty failure. In an effort to mitigate counterparty risk, Lord Abbett has adopted policies and procedures governing the evaluation and monitoring of counterparties and the manner in which it enters into transactions with such counterparties. As part of these policies, Lord Abbett reviews each counterparty through an initial approval process and then engages in ongoing monitoring to seek to identify changes in counterparty creditworthiness and to limit concentrated exposure to a single counterparty. While it is Lord Abbett's general policy to mitigate counterparty risk by trading with a range of counterparties, at times Lord Abbett will concentrate its trading in certain types of securities with a small number of counterparties or clearing firms, including in some cases a single counterparty, where it believes the risk of doing so is reasonable in relation to the benefits of such concentration. Lord Abbett's counterparty review procedures have the potential to limit opportunities to execute a trade in a security where the risk of transacting with a particular counterparty is believed to outweigh the benefit of the transaction.

## *General Risks*

In addition to the strategy-specific risks identified above, there are more general risks associated with investing. Investing in securities involves a risk of loss that all clients should be prepared to bear. If a security is denominated in a currency other than the U.S. dollar, there is a risk that the value of that security will be diminished due to fluctuations in the relative value of the foreign currency against the U.S. dollar. In some strategies Lord Abbett uses derivatives, such as swaps, forwards, futures, options on futures and other options, which are subject to additional risks, including that the value of the derivative does not correlate with the value of the underlying security, rate or index, that portfolio volatility increases due to the leverage associated with the use of derivatives, and that the counterparty to the derivative is unable to satisfy its obligations or Lord Abbett is not otherwise able to sell or close out its position.

## Research Information

Portfolio management teams generally use both qualitative and quantitative research in the investment process. Generally, each investment team leverages analysts who are organized by investment style along sector lines to conduct company research, including through on-site visits to companies, competitors, suppliers, and customers. Analysts also attend management meetings that occur at our offices in New Jersey and relevant industry conferences. Analysts may also use expert networks to conduct research. Sharing of information between investment teams occurs on a formal and informal basis, when not restricted by regulatory laws or contractual provisions. Regular investment meetings facilitate communication between the research analysts and among different portfolio management teams.

## Investment Guidelines, Client Requests, and Account Management

Lord Abbett seeks to manage accounts with the same strategy in a uniform manner. However, Lord Abbett agrees in some cases to accommodate requests to incorporate specific client direction into Lord Abbett's investment approach.

Lord Abbett seeks to accommodate reasonable requests by equity Managed Account clients or their investment consultants to consider tax-optimization strategies. In doing so, Lord Abbett generally will invest in exchange traded funds, or ETFs, to maintain a particular investment exposure while it seeks to avoid a tax "wash sale" result. This could result in a taxable event for that client leading to results that may differ from those of other Managed Account clients that are not seeking to optimize their tax profile.

Lord Abbett invests in unaffiliated ETFs, investment companies, and other commingled or pooled vehicles (e.g., CLOs, CDOs) for a variety of investment reasons, including to facilitate the handling of cash flows or trading, or to provide a more efficient means to obtain market exposure. Fees and expenses associated with investing in an investment company or other commingled or pooled vehicle, potentially including an embedded investment management fee, are in addition to the advisory fees paid by the client to Lord Abbett, and reduce the account's performance.

## *Litigation, Class Actions and Bankruptcies*

In its capacity as an investment manager, Lord Abbett is made aware of litigation and similar matters related to investments in client accounts. Where appropriate, Lord Abbett will consult with clients on such matters, but it is the client's responsibility to monitor and analyze its portfolio and consult with its own advisers and custodian about whether it may have claims that it should consider pursuing. As a general matter, Lord Abbett ordinarily does not, and regardless cannot without client written authorization, exercise any rights a client may have in participating in, commencing or defending suits or legal proceedings, such as class actions for investments held currently or previously in a client's account, although we ordinarily do so for the Lord Abbett Funds and may do so for the Lord Abbett Global Funds. Institutional separate account and Managed Account clients' custodians will ordinarily receive all documents relating to class action, bankruptcy, or other litigation matters because the client's securities are held in the client's name at its custodian, and such clients should direct their custodian and/or legal counsel as to the manner in which such matters should be handled.

In appropriate circumstances, Lord Abbett will actively seek to influence the direction and outcome of bankruptcies, reorganizations or other similar transactions, by serving on ad hoc creditor committees or taking similar discretionary actions. Lord Abbett is aware that such activities have a likelihood of imposing unique challenges and administrative burdens on institutional separate account clients and investors in commingled investment funds. For this reason, prior to commencing such activities with respect to a particular security, Lord Abbett generally will seek to liquidate such



security from the portfolios of institutional separate account clients and commingled investment funds. Nonetheless, at times it will be impossible or unusually challenging to liquidate such assets. Where an account holds a security that has entered into bankruptcy, reorganization or a similar transaction, subject to the terms of the investment management agreement with the applicable client, in certain cases Lord Abbett will enter into debtor-in-possession financing arrangements, restructuring support agreements, or other related arrangements (some of which involve releases of certain claims) on behalf of institutional separate account clients in order for those clients to participate in the bankruptcy, reorganization or other transaction. Any such actions taken by Lord Abbett will bind the client and limit the actions that the client can take with respect to the affected investments. For example, lockup agreements limit the ability of Lord Abbett and the client to sell a security for a certain time period, and nondisclosure agreements restrict the ability of Lord Abbett to communicate freely with clients regarding an investment or limit the client's ability to disclose certain information that it may receive from Lord Abbett relating to the investment.

## Investment Strategies

The following table lists Lord Abbett's investment strategies:

Domestic Equity	
Value Equity	Large Cap Durable Growth
Large Cap Value	Durable Mid Cap Growth
Mid Cap Value	Focused Durable Growth
SMID Cap Equity	Small Cap Innovation Growth
Small Cap Value	Micro Cap Innovation Growth
Equity Income	Large Cap Innovation Growth
Dividend Growth	Focused Innovation Growth
Durable Growth	Healthcare Equity
Focused Small Cap Value	
Global & International Equity	
International Small Cap	Global Equity
International Equity	Global Small Cap Equity
International Growth	Emerging Markets Equity
International Value	
Balanced	
Domestic Equity & Taxable Fixed Income	
Taxable Fixed Income	
Ultra Short Bond	Inflation Focused
Short Duration Core	Bank Loans
Short Duration Credit	Multi-Sector Core
Short Duration High Yield	Multi-Sector Strategic
Intermediate Government/Credit Core	Multi-Sector Opportunistic
Core Plus (Total Return)	Multi-Sector Full Discretion
Core Plus Full Discretion	High Yield Core
Long Duration	High Yield Core (High Quality)
Limited Duration	High Yield Core (High Quality)

Taxable Fixed Income (continued)	
Corporate Bond	Global High Yield
Corporate Credit	Global Multi-Sector
Emerging Markets Bond	Convertible Securities
Emerging Markets Corporate Debt	Credit Opportunities
Government	Climate Focused Bond
Short Duration Credit Plus	Special Situations
Global Bond	
Tax Free Income	
Short Duration	High Yield
Intermediate Duration	Short Duration High Yield
Long Duration	

Lord Abbett's Managed Account investment advisory services also include certain fixed-income investment strategies in which Lord Abbett will construct a laddered portfolio of municipal bonds that are designed to be held to maturity. Lord Abbett will purchase new bonds to replace maturing positions, but will generally not sell bonds prior to maturity absent a significant change in circumstances or outlook, such as with respect to an issuer or a particular sector.

## DISCIPLINARY INFORMATION

Neither Lord Abbett nor its management personnel have been the subject of legal or regulatory findings, or are the subject of any pending criminal proceedings, that are material to a client's or prospective client's evaluation of our advisory business or the integrity of the firm.

## OTHER FINANCIAL INDUSTRY ACTIVITIES AND AFFILIATIONS

In addition to its registration as an investment adviser under the Investment Advisers Act of 1940, Lord Abbett is registered as a commodity pool operator and commodity trading advisor under the Commodity Exchange Act.

Lord Abbett has the following subsidiary companies:

- Lord Abbett Distributor LLC**, a New York limited liability company, is registered as a broker-dealer under the U.S. Securities Exchange Act of 1934 and is a member of the Financial Industry Regulatory Authority, Inc. Lord Abbett Distributor is a limited purpose broker-dealer that serves solely as the principal underwriter for the Lord Abbett Funds, as distributor of the Lord Abbett Global Funds, and as placement agent for privately offered, commingled funds sponsored or subadvised by Lord Abbett.
- Lord Abbett (UK) Ltd.**, a private limited company incorporated in the United Kingdom, is authorized by the UK Financial Conduct Authority ("FCA") to carry out certain regulated sales and investment management activities. Lord Abbett (UK) Ltd. serves as a distributor of the Lord Abbett Global Funds and a sales office for Lord Abbett products and services. Lord Abbett (UK) Ltd. also conducts portfolio management services. Pursuant to a



Memorandum of Understanding (“MOU”) for the provision of investment advisory, research and other services to certain U.S. clients, Lord Abbett (UK) Ltd. is deemed to be a “Participating Affiliate” of Lord Abbett as this term has been used by the SEC’s Division of Investment Management in various no-action letters and related SEC staff guidance for unregistered affiliates.

- **Lord Abbett (Ireland) Limited**, a private company limited by shares incorporated in Ireland, is authorized by the Central Bank of Ireland pursuant to the European Communities (Undertakings for Collective Investment in Transferable Securities) Regulation 2011, as amended, as a management company and is the appointed manager of the Lord Abbett UCITS Funds and Lord Abbett Luxembourg Fund.
- **Lord, Abbett Asia LLC**, a Delaware limited liability company, provides client liaison services from its branch office located in Japan. Lord Abbett Asia also refers investment advisory business to Lord Abbett.
- **Lord Abbett (Middle East) Limited**, a private limited company organized under the laws of the United Arab Emirates and registered with the Dubai International Financial Centre (DIFC), serves as a Dubai sales office for the Lord Abbett Global Funds and for other Lord Abbett products and services.
- **Lord Abbett (Singapore) Pte. Ltd.**, an exempt private company limited by shares organized under the laws of Singapore, serves as a Singaporean sales office for the Lord Abbett Global Funds and for other Lord Abbett products and services.
- **Lord Abbett (Switzerland) GmbH**, a limited liability company (Gesellschaft mit beschränkter Haftung) organized under the laws of Switzerland, serves as a Swiss sales office for the Lord Abbett Global Funds and for other Lord Abbett products and services.
- **Lord Abbett (Uruguay) S.R.L.**, a limited liability company (sociedad de responsabilidad limitada) organized under the laws of Uruguay, serves as a wholesaler of the Lord Abbett Global Funds to locally licensed financial advisers and broker-dealers located in Argentina and Uruguay.

## CODE OF ETHICS, PARTICIPATION OR INTEREST IN CLIENT TRANSACTIONS AND PERSONAL TRADING

Lord Abbett has implemented a number of policies and procedures that are designed to manage any actual or potential conflicts of interest.

### Code of Ethics

Lord Abbett has adopted policies constituting its code of ethics (the “Code”) designed to set forth general ethical and fiduciary principles and the standard of conduct that we require of our personnel and to set forth certain restrictions on activities, such as personal trading and receipt of gifts and entertainment, which give rise to conflicts of interest. All personnel are required to certify annually that they have complied with the terms of the Code. Compliance with the Code is a condition of employment for all personnel and a violation of the

Code or any related policies may result in disciplinary action, which may include termination of employment. Below is a summary of key provisions of the Code, a copy of which may be obtained by any client or prospective client upon request by calling Lord Abbett’s Chief Compliance Officer at 201-827-2000.

### *Personal Trading*

In order to avoid conflicts of interest and to comply with our legal and regulatory obligations, the Code places restrictions on personal trading in accounts over which Lord Abbett personnel and/or certain immediate family members have investment discretion or accounts in which they have a beneficial interest. Lord Abbett investment personnel are subject to more stringent requirements. The Code prohibits certain types of investments and requires that certain other transactions be pre-approved, reported and/or subject to a 30-day holding period. Investment department personnel are subject to an additional 7 calendar day blackout period if the transaction in question is deemed to create a conflict of interest before or after Lord Abbett trades in that same security for any client.

### *Gifts and Entertainment*

The Code and Lord Abbett’s Gifts and Entertainment Policies and Procedures place limits on the receipt and provision of gifts, travel, and entertainment by Lord Abbett personnel. Occasionally, Lord Abbett personnel participate in entertainment opportunities related to legitimate business purposes, subject to the requirements and limitations set forth in the Code and the Gifts and Entertainment Policies and Procedures. Such requirements and limitations are intended to ensure that Lord Abbett employees avoid actual or potential conflicts of interest between their personal interests and those of the firm and its clients.

## Investments by Lord Abbett and Our Personnel in Products We Manage

Lord Abbett often provides the initial investment assets for newly launched investment funds, which is commonly referred to as “seeding” such funds. In addition, Lord Abbett occasionally seeds proprietary accounts for the purpose of evaluating a new investment strategy that eventually may be available to clients as a new mutual fund or other investment vehicle or for maintaining an existing strategy. Such funds or proprietary accounts also may serve the purpose of establishing a performance record to enable Lord Abbett to offer such an account’s investment style to clients. In some instances, Lord Abbett has engaged in proprietary trading in futures or other derivatives to hedge such seed investments or other proprietary investments by Lord Abbett in investment funds. In addition, some Lord Abbett personnel are investors in the Lord Abbett Funds or may maintain separate accounts in strategies that Lord Abbett manages for its clients. Lord Abbett’s management of accounts with proprietary interests alongside nonproprietary client accounts creates a potential incentive to favor the proprietary accounts over the nonproprietary accounts in the allocation of investment opportunities, aggregation and timing of investments.



Lord Abbett has established allocation policies and procedures that require Lord Abbett investment personnel to make purchase and sale decisions and allocate investment opportunities among accounts consistent with its fiduciary obligations, including avoiding favoring any accounts over others over time. Please see *Brokerage Practices—Trade Aggregation* and *—Allocation of Trade Executions* below for more information on these policies and procedures.

## Political Contributions

Lord Abbett partners and employees are not permitted to make or solicit monetary or in-kind political contributions for the purpose of obtaining or retaining business with government entities. Lord Abbett partners and employees, on their own behalf and on behalf of their spouses, domestic partners and immediate family members sharing the same household, are required to obtain approval from Lord Abbett before making a personal political contribution to any federal, state, local or U.S. territorial candidate, official, party or organization. Lord Abbett's Policies and Procedures are designed to comply with various federal, state, and local "pay-to-play" laws.

## Donations to Charities

Lord Abbett periodically makes donations to charitable organizations or provides sponsorships for charitable events. From time to time these donations or sponsorships are requested by clients or are supported by current or prospective clients, consultants or their respective employees, however such donations and sponsorships are never made to retain or gain advisory business and a number of factors are taken into account prior to approving a Lord Abbett donation.

## Identification and Resolution of Errors

It is Lord Abbett's policy to exercise appropriate care in making and implementing investment decisions on behalf of client accounts. Nonetheless, Lord Abbett may commit an error in the process of providing services to its clients, for example by purchasing a security or amount of a security that is inconsistent with a client's investment restrictions or executing a security purchase when a sale was intended. In such event, it is Lord Abbett's policy to ensure that clients do not incur a loss from errors caused by Lord Abbett. Lord Abbett has adopted policies and procedures relating to trade errors in an effort to ensure appropriate escalation and resolution of trade errors whenever they occur. Under these procedures, Lord Abbett will seek where practicable to correct an error without a financial impact on any client account, for example by reallocating a trade to Lord Abbett's error account or to another client account, prior to the settlement date, when such a reallocation is consistent with a legitimate investment decision on behalf of each account involved. Any gains in Lord Abbett's error account may be used to offset losses in the account incurred in connection with other erroneous transactions. Where reallocation is not permissible or practicable, Lord Abbett will engage in such transaction(s) in the affected client's account as may be necessary to correct the error and will reimburse the client for any loss caused by Lord Abbett; any gain realized by a client as a result of correcting such a trade

error generally shall remain in the client's account. While Lord Abbett is responsible for its own errors, it will not be responsible to correct the errors of third parties, such as broker-dealers, client custodians and Sponsors of Managed Account programs, unless Lord Abbett has otherwise expressly assumed this obligation. Generally, Lord Abbett will make reasonable efforts to attempt to have a third party correct any error the third party has caused, and Lord Abbett may in its sole discretion determine to provide financial or other assistance with the appropriate correction of errors committed by third parties. If Lord Abbett commits an error in an account that is part of a Managed Account program, Lord Abbett will generally be obligated to take actions in accordance with a different policy determined by the Sponsor of that program, which may include making use of an error account controlled by the Sponsor.

## Other Potential Conflicts of Interest

Lord Abbett recommends transactions to, and makes investment decisions on behalf of, clients based solely on investment considerations, including whether the investments are suitable for the client and are consistent with the client's investment objectives, policies and restrictions. Accordingly, Lord Abbett may invest a client's account in a manner that competes or conflicts with the investment of another client's account. For example, Lord Abbett may buy or sell a position in a client's account while undertaking for another client's account the same or a differing, including potentially opposite, investment strategy. Similarly, different investment teams may invest client accounts in different parts of an issuer's capital structure, which may result in Lord Abbett acting on behalf of one client in a manner inconsistent with the interest of another client in connection with corporate events such as proxy votes or distressed security workouts.

To the extent permitted by law and/or account guidelines, Lord Abbett will invest client accounts in securities issued by companies with which Lord Abbett has material business relationships, including companies that act as a Managed Account Sponsor, that distribute or place orders on behalf of clients for shares of the Lord Abbett Funds, that provide services, such as retirement and benefit plan administration, to Lord Abbett, or that are, or are related to, Lord Abbett clients. In addition, at times Lord Abbett personnel will buy or sell securities that Lord Abbett has recommended to, or purchased or sold on behalf of, clients. Lord Abbett also will buy or sell on behalf of clients or recommend to clients the purchase or sale of securities in which it or its personnel have a financial interest, including the Lord Abbett Funds. Moreover, Lord Abbett maintains brokerage or trading relationships with broker-dealers who are, or are an affiliate of, clients that have appointed Lord Abbett to serve as investment adviser or who have other business relationships with Lord Abbett or an affiliate, or the Lord Abbett Funds. These transactions are subject to the requirements and limitations set forth in the Code and related policies, as well as to the requirements of the Investment Advisers Act of 1940, the Investment Company Act of 1940 and/or other applicable laws.



It is Lord Abbett's policy that our clients' interests come first. Lord Abbett's ability to place and/or recommend transactions may be restricted by applicable regulatory requirements and/or its internal policies designed to comply with such requirements.

Lord Abbett contracts with third-party vendors to establish enhanced connectivity with broker-dealers through which the firm trades on behalf of client accounts. Lord Abbett receives payments from, or credits against amounts otherwise owed to, some of such vendors. These payments or credits are based on amounts paid by the broker-dealers to such vendors. In no case are the payments or credits to Lord Abbett dependent on the trading by Lord Abbett of any particular client's assets. Lord Abbett's selection of broker-dealers to execute client trades is based on considerations relating to best execution and is not impacted by these arrangements.

*Material Non-Public Information/Insider Trading:* Lord Abbett personnel may come into possession of material, non-public information ("MNPI") which, if disclosed, might affect an investor's decision to buy, sell or hold a security. Such MNPI may be received intentionally in order to consider a confidential investment opportunity or unintentionally as a result of inadvertent disclosure by a third party. It may also be received as a result of outside business activities engaged in by a Lord Abbett employee. Under applicable law, Lord Abbett personnel are generally prohibited from improperly disclosing or using such information for their personal benefit or for the benefit of any other person, regardless of whether that person is a client. Accordingly, should Lord Abbett personnel come into possession of MNPI with respect to an issuer, Lord Abbett is generally prohibited from communicating such information to, or using such information for the benefit of, clients, which could limit the ability of clients to buy, sell or hold certain investments. Lord Abbett shall have no obligation or responsibility to disclose such information to, or use such information for the benefit of, any person (including clients). Lord Abbett has implemented procedures and surveillance processes that prohibit the misuse of such information (e.g., illegal securities trading based on the information). Similarly, no employee who is aware of MNPI which relates to any other company or entity in circumstances in which such person is deemed to be an insider or is otherwise subject to restrictions under federal securities laws may buy or sell securities of that company or otherwise take advantage of, or pass on to others, such MNPI.

Participants in the bank loan market are often given the option of receiving certain non-public information while continuing to trade in that market. Lord Abbett ordinarily elects not to receive such non-public information in order to facilitate the free exchange of information among its investment teams.

*Account Valuation:* Lord Abbett ordinarily seeks to calculate its management fee for institutional separate account clients based on an account valuation determined by the client or its custodian. However, some institutional client contracts require Lord Abbett to determine its management fee based on market values determined by Lord Abbett. In such circumstances, Lord Abbett seeks to rely on independent third-party pricing vendors, and also seeks to reconcile such valuations with the client's or its custodian's values.

For this purpose, Lord Abbett will seek to reconcile differences between its own valuation and that of the client or its custodian when the difference exceeds five percent.

*Proprietary Investments.* Lord Abbett will occasionally invest proprietary money into investments that are not offered to Lord Abbett clients. While these investment decisions are unrelated to the investments made for Lord Abbett clients, such investments might conflict with investment decisions made for or recommended to Lord Abbett clients. It is Lord Abbett's policy that our clients' interests come first.

## BROKERAGE PRACTICES

Below we describe our core business practices relating to trading and brokerage. In addition, we provide information regarding certain conflicts of interest that arise in connection with the execution of trades for client accounts and describe the policies and procedures that we have designed and implemented to help us manage these conflicts of interest.

### Broker Selection and Best Execution

Generally, the discretionary investment authority granted to Lord Abbett by each client includes discretion over client brokerage. This means that Lord Abbett has discretion to select broker-dealers and negotiate the transaction costs, including commissions or bid-ask spreads, in the execution of client portfolio transactions. Clients in Managed Account, commission recapture, or directed brokerage programs, however, limit Lord Abbett's discretion with respect to the selection of broker-dealers. Please see the discussion below regarding Lord Abbett's client brokerage policies in these circumstances.

When exercising discretion over client brokerage, it is Lord Abbett's policy to seek "best execution," or the most favorable results under the circumstances, when placing orders for securities transactions for client accounts. We define best execution as a process, not a result: it is the process of executing transactions at prices and, if applicable, transaction costs that provide the most favorable total cost or proceeds reasonably obtainable under the circumstances (taking into account all relevant factors). Trading practices, regulatory requirements, liquidity, public availability of transaction information and transaction cost structures vary considerably from one market to another. Best execution incorporates many such factors, as well as the portfolio manager's investment intentions, and involves an evaluation of the trading process and execution results over extended periods. Lord Abbett's determination of best execution does not necessarily mean that the client is paying the lowest possible commission rate or bid-ask spread, as there are several additional important factors to consider when evaluating best execution in client brokerage. Among the factors Lord Abbett considers when selecting a broker-dealer are the broker-dealer's execution capabilities (including block positioning), financial stability, ability to maintain confidentiality, delivery capability, ability to obtain best price, operational and reputational risks, and the value and availability of research services or credit arrangements for the purpose of obtaining such research services. In addition, certain





clients may request that Lord Abbett seek to trade with certain broker-dealers while maintaining its obligation to seek best execution on all transactions. For such purpose, Lord Abbett may take such request into account in determining best execution notwithstanding that execution for the client is achieved in a manner that is different from an otherwise similarly situated client.

Accordingly, Lord Abbett will not select broker-dealers solely on the basis of “posted” or “standard” commission schedules, nor will it always seek advance competitive bidding for the most favorable commission rate or bid-ask spread applicable to a particular transaction. Lord Abbett has adopted policies and procedures designed to ensure that the choice of brokerage firm to execute transactions is based on considerations relevant to seeking best execution and not other factors, such as a broker’s ability to refer clients to Lord Abbett or distribute Lord Abbett Funds. Lord Abbett often uses alternative execution venues in lieu of placing transactions with a traditional brokerage firm to facilitate best execution and to reduce transaction costs.

In seeking to obtain best execution, Lord Abbett recognizes that some broker-dealers are better at executing some types of orders than others and it may be in the clients’ best interests to use a broker-dealer whose commission rates or bid-ask spreads are not the lowest but whose executions and other services Lord Abbett believes will result in lower overall transaction costs or more favorable or more certain results. From time to time, Lord Abbett will agree to have client accounts pay higher commission rates or other costs to broker-dealers on particular client transactions if Lord Abbett believes that the client has obtained best execution and the amount paid by the client is reasonable in relation to the overall value of the execution and any other services provided by the broker-dealer. The reasonableness of transaction costs is based on Lord Abbett’s view of the broker-dealer’s ability to provide professional services, competitive commission rates, research, and other services that will help Lord Abbett in providing investment advisory services to its clients, viewed in terms of either the particular transaction or Lord Abbett’s overall responsibility to its clients. In particular, Lord Abbett at times will agree to have client accounts pay higher commission rates to those broker-dealers whose execution abilities, brokerage or research services, or other legitimate and appropriate services are deemed helpful by Lord Abbett’s investment teams in the overall management of client accounts.

Subject to applicable law and when otherwise in the best interest of all participating client accounts, Lord Abbett will effect “cross” transactions between client accounts, including registered investment companies. In these cases, one client account will purchase securities held by another client account. Lord Abbett effects these transactions only (1) when it deems the transaction to be in the best interests of both client accounts and (2) at a price that Lord Abbett has determined by reference to independent market indicators, which Lord Abbett believes to constitute “best execution” for both accounts. Neither Lord Abbett nor any related party receives any compensation in connection with “cross” transactions. Lord Abbett is not obligated to seek to effect “cross” transactions and may be prohibited by legal or regulatory considerations from doing so with

respect to certain types of client accounts. Lord Abbett does not engage in “cross” transactions of fixed income securities

### *Managed Accounts*

Lord Abbett generally places all transactions in equities for Managed Accounts through the Sponsor or a broker-dealer firm designated by the Sponsor. For these types of equity transactions, Lord Abbett does not negotiate brokerage commissions since execution costs are included in the overall fees charged by the Sponsor or are set as a fixed commission amount per trade by the Sponsor. Lord Abbett’s practice avoids the incremental brokerage costs that would be incurred if Lord Abbett used for such transactions broker-dealers other than the Sponsor. Since execution costs are included in the client’s single fee agreed with the Sponsor and are not individually negotiated or are the result of a Sponsor’s direction, Lord Abbett typically does not monitor or evaluate the commission rates clients pay or the nature and quality of the services (i.e., best execution) they receive from Sponsors and their designated service providers, including broker-dealer firms. Occasionally, when deemed beneficial for clients, Lord Abbett will place equity transactions with broker-dealers other than the relevant Sponsor. As a result, the associated client accounts will pay brokerage commission costs that are in addition to the charges for execution otherwise included in the Sponsor’s overall fee.

For certain Managed Accounts taxable and tax exempt fixed-income and convertibles strategies, Lord Abbett will consistently execute fixed-income transactions at financial institutions other than the Sponsor. Such transactions ordinarily occur at net prices, meaning that the broker-dealer’s charge for the trade is built into the security’s purchase or sale price and is ultimately borne by the client in addition to any charges for execution otherwise included in the Sponsor’s overall fee. Each client should evaluate whether particular Managed Accounts are suitable for his or her needs, including the fees charged and services provided.

### *Transactions Involving Non-U.S. Securities and Depositary Receipts*

Some client accounts may not be able to hold non-U.S. securities in direct or “ordinary” form because of custodial limitations or other restrictions. In these cases, and subject to any investment guidelines or restrictions, Lord Abbett generally will buy depositary receipts (“DRs”) or arrange for the purchase of ordinary shares in non-U.S. markets that settle and convert into DRs. Fees and costs associated with each of the DR conversion and withdrawal transactions typically are included in the net price of the transaction and borne by the client.

### *Foreign Currency Transactions*

Lord Abbett engages in foreign currency transactions in some accounts or strategies. Where available and practicable, Lord Abbett believes it is in a client’s best interest to deal directly with a broker-dealer; however, third party broker-dealer transactions are not available for certain emerging market or certain restricted foreign securities and may be impracticable for some payments such as dividends. In these instances, Lord Abbett will trade foreign currency through a client’s custodian on a transaction-by-transac-



tion basis and/or via standing instructions. Lord Abbett will not be responsible for overseeing charges of, or execution quality provided by, a client's custodian; clients should contact their custodians directly for this information.

## Trade Aggregation

### *Equity Transactions*

When appropriate and feasible, Lord Abbett will seek to combine or "batch" multiple orders (purchase or sale) of the same security that are placed at or about the same time with the trading desk. Further, when a second order with respect to a security reaches the trading desk while another order in that security has not been completed, Lord Abbett will ordinarily batch the remainder of the earlier order with the second order. Portfolio managers have the ability to place orders with the equity trading desk indicating the immediacy with which the trade should be executed. Orders in the same security with differing levels of immediacy will generally not be aggregated. Moreover, orders placed for execution with price limits may not be aggregated with orders placed to be executed at the prevailing market price. In addition, not all similarly situated accounts will necessarily participate in the same batched order due to issues such as cash flow considerations, investment restrictions, tax concerns, and brokerage restrictions.

At times, Lord Abbett is not able to batch purchases and sales for all accounts or products it is managing, such as when an individually managed account client directs Lord Abbett to use a particular broker for a trade (sometimes referred to herein as "directed accounts") or when a client restricts Lord Abbett from selecting certain brokers to execute trades for such account (sometimes referred to herein as "restricted accounts").

When transactions for all products using a particular investment strategy are communicated to the equity trading desk at or about the same time, Lord Abbett generally will place trades first for transactions on behalf of the Lord Abbett Funds, Lord Abbett UCITS Funds, Lord Abbett Luxembourg Fund and nondirected, unrestricted individually managed institutional accounts, second for restricted accounts, third for Managed Accounts by Sponsor or consultant/financial adviser (as described below), and finally for directed accounts (see *Brokerage Practices—Directed Brokerage and Other Client Restrictions on Brokerage* section below for more details). Communication of changes to portfolio holdings information for Model Portfolios is handled separately near the end of the trading day or at the beginning of the next trading day, and generally after the completion of transactions for Managed Accounts. Lord Abbett may determine in its sole discretion to place transactions for one group of accounts before other accounts based on a variety of factors, including size of overall trade, the broker-dealer's commitment of capital, liquidity, or other conditions of the market, or confidentiality. Lord Abbett's overall policy is to treat similarly situated groups of accounts equitably over time.

Frequently, a batched order will not be fully filled during a trading day and will be canceled or subsequently filled or combined with orders for other accounts and then filled. Generally, each account

that participates in a particular batched order will do so at the average price for all transactions related to that batched order. However, in certain circumstances, significant account size disparity, use of algorithmic trading, and/or significant market price movements may cause some accounts to receive an average price different from the average price of the other accounts in the batched order.

Lord Abbett generally allocates securities purchased or sold in a batched transaction among participating client accounts on a pro rata basis. In certain strategies, however, a pro rata allocation of the securities or proceeds will not be possible or desirable, as described below. Lord Abbett will decide how to allocate the securities or proceeds according to each account's particular circumstances and needs, and in a manner Lord Abbett believes is fair and equitable to clients over time in light of a variety of factors.

### *Fixed-Income Transactions*

As is the case with equity transactions, transactions in fixed-income securities will ordinarily be batched and allocated pro rata among participating client accounts for transactions that are communicated to the trading desk at or about the same time. Unlike equity transactions, however, Lord Abbett generally will not batch fixed-income orders that are placed at separate times, even if the earlier order has not been completed when a second order reaches the trading desk, unless Lord Abbett believes that batching such orders will not impact trading of the earlier-placed order.

Some client accounts will be excluded from a batched transaction for a variety of reasons, including issuer requirements regarding minimum trade or lot size or client limitations on the use of certain broker-dealers. When an account is excluded from a batched trade, Lord Abbett will seek to purchase securities in that account in a manner that is fair and equitable to all client accounts over time, which may include purchasing a security for an excluded account first based on factors such as the availability of a desirable purchase opportunity that would not be suitable for the non-excluded client accounts. In addition, unlike the case of equity securities, when an account is excluded from or unable otherwise to participate in a transaction Lord Abbett's investment team often can purchase another fixed-income security with substantially similar investment characteristics.

### *Managed Accounts*

Lord Abbett generally will not batch equity transactions for Managed Accounts with transactions for the Lord Abbett Funds, Lord Abbett UCITS Funds, or Lord Abbett Luxembourg Fund and unrestricted (as to transaction execution) individually managed institutional accounts, and these clients will not derive the same advantage from batching orders as a single transaction for the purchase and sale of a particular security. Accounts subject to batching may receive more favorable results than accounts for which execution costs are covered as part of such service. Lord Abbett generally will batch equity transactions for Managed Accounts for execution through the same Sponsor or directed broker-dealer. Lord Abbett consistently places transactions in



certain fixed-income securities with or through firms other than the Managed Account Sponsor or directed broker-dealer. Such transactions occur at net prices that include the broker-dealer's charge for the trade and are ultimately borne by the client. Where Lord Abbett manages the same product for multiple Sponsors or consultants/financial advisers, Lord Abbett will rotate the order in which it places equity transactions among the relevant accounts. Lord Abbett normally uses a rotation methodology designed to avoid systematically favoring one Sponsor or group over another and to treat similarly situated groups of accounts equitably over time by assigning each Sponsor or group a place in the rotation for a particular trading day, and then moving the first Sponsor or group to the end of the rotation order the following trading day. Each succeeding Sponsor or group will move up a place in the rotation order each subsequent trading day. Lord Abbett deviates occasionally from this rotation methodology to take advantage of special opportunities in the market. For example, transactions in certain limited-supply securities typically will not be subject to this rotation methodology because not all Sponsors or directed broker-dealers will have access to, or an adequate supply of, such limited-supply securities. Lord Abbett will also place a Sponsor's or directed broker-dealer's transactions after those of other Sponsors/directed broker-dealers to avoid delays Lord Abbett deems too long in execution of transactions for such accounts. These accounts would be consistently placed at the end of the rotation schedule among Sponsors, which may disadvantage such accounts, depending on market conditions.

### *Model Portfolios*

Lord Abbett typically releases its Model Portfolio holdings information to a Sponsor daily. When the related Lord Abbett investment team makes core changes to the Model Portfolio, Lord Abbett generally will communicate its changes to the Sponsor at or near the end of the trading day and generally after the completion of the rotation methodology described above. For Sponsors unable to accept Model Portfolio changes at that time, Lord Abbett will communicate its Model Portfolio changes the following trading day morning. The Sponsor or an overlay manager is responsible for adjusting existing Model Portfolio accounts to conform to the core changes. Model Portfolio clients may experience account performance that is different from the results obtained when Lord Abbett exercises investment discretion due to the timing and implementation of orders by a Sponsor or overlay manager.

### *Derivatives Transactions*

Whenever practicable, Lord Abbett will seek to batch transactions in derivatives such as futures, swaps, and currency forwards among eligible client accounts. Because many derivatives require negotiation and execution of trading agreements between each client and each counterparty, some counterparties may be available to some client accounts and not others. When the counterparty that Lord Abbett believes can provide best execution for a particular transaction is unavailable to a portion of client accounts participating in that transaction, Lord Abbett is faced with a

choice. It may choose to trade with the preferred counterparty on behalf of the accounts to which that counterparty is available and trade the excluded client accounts with a different counterparty available to them, or it may choose to enter into a single trade with a counterparty that is available to all of the relevant accounts. In making this choice, Lord Abbett will balance the benefits of batching the transaction against the benefit of choosing the most desirable counterparty among those available to each client. Such decisions will be made subject to Lord Abbett's continuing obligation to treat all client accounts in a manner it believes is fair and equitable over time. All references to "swaps" in this document refer to swaps, security-based swaps, or both, as appropriate.

### *Mixed Asset Class Transaction Modeling*

When modeling orders for client accounts that include accounts that may invest across multiple asset classes, investment allocation varies. With respect to "mixed asset class accounts" managed by two or more portfolio manager teams (e.g., balanced strategy), the portfolio manager for a particular asset class will generally determine an account's positioning for pro rata allocation purposes based on the portfolio's target allocation to that asset class rather than the size of the account as a whole. However, for mixed asset class accounts managed by a single portfolio manager team (e.g., high yield), such accounts will be positioned for pro rata allocation purposes based on the total size of the account regardless of the target allocation to the relevant asset class. Thus, mixed asset class accounts managed by a single portfolio manager team may receive greater allocations than would otherwise be the case if the relevant asset class were managed on a stand-alone basis, which could negatively impact the allocations to and performance of other client accounts participating in these trades.

## Allocation of Trade Executions

Once a batched order is filled, Lord Abbett generally allocates the securities or cash on a pro rata basis among the participating client accounts. In the event that there is limited availability or limited liquidity for investments, however, a pro rata allocation may not be possible or desirable. For example, limited availability will exist at times, without limitation, in certain security types or categories such as fixed-income securities (including bank loans, municipal bonds, and high-yield securities), emerging markets, regulated industries, small and micro cap securities, and initial public offerings or new issues.

In these cases, Lord Abbett's investment management teams will make allocations that reflect a number of other factors based on Lord Abbett's good-faith assessment of the investment opportunity relative to the objectives, limitations, and requirements of each client account. These factors, which Lord Abbett applies in a manner that it believes is fair and equitable to clients over time, include, without limitation, some or all of the following: (1) client-specific considerations, including investment objectives, guidelines and restrictions, risk profile, and anticipated liquidity needs; (2) type



of account; (3) number of securities relative to size and expected future size of an account; (4) availability of other appropriate investment opportunities; (5) other holdings and/or prior allocation affecting an account; (6) rebalancing needs, such as over- or under-weighting in a particular investment, industry, sector, credit rating, maturity, and coupon or interest rate, of an account; (7) minimum denomination, increments, and round lot considerations; (8) issuer-imposed limitations; (9) tax considerations; (10) purchases for accounts with a disproportionate cash position or newly established accounts for which Lord Abbett is seeking to fully invest as promptly as possible; and (11) with respect to bank loans, dealer assignment fees. Accordingly, Lord Abbett will increase or decrease the amount of securities allocated to one or more accounts if necessary, under certain circumstances. Lord Abbett's allocation decisions among client accounts will potentially be more or less advantageous to any one account or group of accounts. As a result of these allocation issues, the amount, timing, structuring, or terms of an investment by a client account at times will differ from, and performance potentially will be lower than, investments and performance of other client accounts. Client accounts that either receive a less than pro rata or no allocation of an investment opportunity that performs well may experience lower performance overall.

## Client Commission Arrangements and Soft Dollars

It is Lord Abbett's policy to seek to obtain best execution on all client transactions over which Lord Abbett exercises discretion. It is generally the case that more than one broker-dealer can provide best execution, and in the case of equity transactions, if consistent with applicable law and regulation, Lord Abbett often selects broker-dealers that furnish Lord Abbett with proprietary and third-party brokerage and research services in connection with commissions paid on transactions it places for client accounts. The brokerage and research services Lord Abbett receives are within the eligibility requirements of Section 28(e) of the Securities Exchange Act of 1934 and, in particular, provide Lord Abbett with lawful and appropriate assistance in the provision of investment advice to client accounts. Such services include (1) furnishing advice as to the value of securities, the advisability of investing in, purchasing, or selling securities, and the availability of securities or purchasers or sellers of securities; (2) furnishing analyses and reports concerning issuers, industries, securities, economic factors and trends, portfolio strategy, and the performance of accounts; and (3) effecting securities transactions and performing functions incidental to securities transactions (such as clearance, settlement, and custody). Such services come in the form of research reports via electronic delivery or print, online data services, oral discussions with researchers and other experts, and meetings with company representatives and third party analysts.

Lord Abbett has entered into Client Commission Arrangements with a number of broker-dealers that it selects to execute client transactions. These Client Commission Arrangements provide for the broker-dealers to pay a portion of the commissions paid by eligible

client accounts for securities transactions to providers of certain research services designated by Lord Abbett, including research service providers that are affiliates of such broker-dealers or of Lord Abbett advisory clients. Lord Abbett initiates a significant percentage, and potentially up to all, of its clients' equity security transactions with broker-dealers pursuant to Client Commission Arrangements.

In addition to Client Commission Arrangements, certain full service broker-dealers (that is, broker-dealers that provide brokerage and execution services) also furnish proprietary research services on a "bundled" basis to Lord Abbett. Proprietary research may include research from an affiliate of the broker-dealer and services that provide access to unaffiliated industry experts. Bundled brokerage is a brokerage arrangement whereby the underlying commission is informally comprised of both trade execution and other services, most often investment research meant to assist with Lord Abbett's internal research process. These services are generally not offered on a stand-alone basis by broker-dealers.

The services that Lord Abbett receives from Client Commission Arrangements and "bundled" proprietary research include the use of expert referral networks. Expert referral networks provide access to industry consultants, vendors, and suppliers. Such services are commonly relied on by investment managers to supplement their investment process and gain unbiased industry insights. Lord Abbett uses a limited number of expert networks and monitors its use to ensure compliance with the law, as well as internal guidelines.

Lord Abbett believes that access to independent investment research is beneficial to its investment decision-making processes and, therefore, to its clients. Receipt of independent investment research allows Lord Abbett to supplement its own internal research and analysis and makes available the views of, and information from, individuals and the research staffs of other firms.

The receipt of research services from broker-dealers therefore does not tend to reduce the need for Lord Abbett to maintain its own research personnel. Further, Lord Abbett values the receipt of independent, supplemental viewpoints and analyses. Any investment advisory or other fees paid by clients to Lord Abbett are not reduced as a result of Lord Abbett's receipt of research services from broker-dealers. Also, the expenses of Lord Abbett would be increased substantially if it attempted to generate such additional information through its own staff or if it paid for these products or services itself. To the extent that research services of value are provided by or through such broker-dealers, Lord Abbett will not have to pay for such services itself. In addition, Lord Abbett from time to time selects broker-dealers that provide research services in order to ensure the continued receipt of such research services which Lord Abbett believes are useful in its investment decision-making process. Lord Abbett has an incentive to place trades through broker-dealers that provide Client Commission Arrangements or other research services. In addition, Lord Abbett has an incentive to place trades with broker-dealers with which it has



negotiated more favorable Client Commission Arrangements, rather than executing through a broker-dealer with an arrangement that is less favorable to Lord Abbett. To the extent that Lord Abbett uses brokerage commissions paid in connection with client portfolio transactions to obtain research services, the brokerage commissions paid by such clients might exceed those that would otherwise be paid for execution only. These circumstances give rise to actual and potential conflicts of interest. In order to manage such conflicts of interest, Lord Abbett has adopted internal procedures designed to ensure that (1) the value, type, and quality of any products or services it receives from broker-dealers are permissible under applicable law and (2) investment transactions are placed based solely on best execution considerations.

Lord Abbett believes that any brokerage and research services received from a broker-dealer are, in the aggregate, of assistance to Lord Abbett in fulfilling its overall responsibilities to its clients. Accordingly, research services received for a particular client's brokerage commissions may be useful to Lord Abbett in the management of that client's account, but may also be useful in Lord Abbett's management of other clients' accounts, including accounts that do not generate eligible Section 28(e) brokerage commissions or generate less than a proportionate share of such eligible commissions to pay for research services; similarly, the research received for the commissions of other client accounts may be useful in Lord Abbett's management of that client account. Thus, Lord Abbett uses brokerage and research services received from broker-dealers in servicing any or all of its accounts, and not all of such services will necessarily be used by Lord Abbett in connection with its management of every client account. Such products and services may disproportionately benefit certain clients relative to others based on the amount of brokerage commissions paid by the client account. For example, Lord Abbett uses research services obtained through soft-dollar arrangements, including Client Commission Arrangements, in its management of certain directed accounts, Managed Accounts, and accounts of clients who have restricted Lord Abbett's use of soft dollars regardless of the fact that brokerage commissions paid by such accounts are not used to obtain research services.

All accounts included in a batched transaction executed through a broker-dealer pursuant to a Client Commission Arrangement pay the same commission rate, regardless of whether one or more accounts within the batched order has prohibited Lord Abbett from receiving any credit toward such services from its commissions. Some broker-dealers who have negotiated an arrangement with Lord Abbett for the provision of brokerage and research services offer a lower commission rate for client accounts not participating in such arrangement. It is Lord Abbett's policy, however, to seek to include nonparticipating accounts in a batched trade, as Lord Abbett believes these nonparticipating accounts would receive overall better execution notwithstanding the fact that the nonparticipating account may be able to pay a lower commission rate if it were not included in the batched trade.

In some cases, Lord Abbett receives from a broker-dealer a product or service that has both a "research" and a "non-research"

use. When this occurs, Lord Abbett makes a good faith allocation between the research and non-research uses of the product or service. The percentage of the product or service Lord Abbett uses for research purposes generally will be paid for with client commissions, while Lord Abbett will use its own funds to pay for the percentage of the product or service that it uses for non-research purposes. In making this good faith allocation, Lord Abbett faces a potential conflict of interest, but Lord Abbett believes that its allocation procedures are reasonably designed to ensure that it appropriately allocates the anticipated use of such products or services to their research and non-research uses.

Lord Abbett periodically assesses the contributions of the brokerage and research services provided by broker-dealers and creates a ranking of broker-dealers reflecting these assessments, as determined by Lord Abbett's investment staff. Lord Abbett's investment personnel evaluate the research services they receive from broker-dealers and make judgments as to the value and quality of such services. These assessments are intended to affect the extent to which Lord Abbett trades with a broker-dealer, although the actual amount of transactions placed with a particular broker-dealer may not directly reflect its ranking in the voting process. Lord Abbett monitors the allocation of equity trading among broker-dealers through periodic reviews. Lord Abbett's arrangements for proprietary and third-party research services do not involve any commitment by Lord Abbett regarding the allocation of brokerage business to or among any particular broker-dealer. Rather, Lord Abbett executes portfolio transactions only when they are dictated by investment decisions to purchase or sell portfolio securities. Some electronic trading systems offering uniform pricing for trades effected over the system allow Lord Abbett to specify a broker-dealer of its choice as a counterparty. Consistent with its obligation to seek best execution, Lord Abbett sets internal targets for certain counterparties over such systems in order to receive research or to help satisfy client requests that Lord Abbett engage in trading with certain types of broker-dealers such as those that are owned by women, minorities or disabled veterans.

Lord Abbett periodically prepares a relative categorization and ranking of research providers that it considers to provide valuable research services as determined through evaluations and other feedback provided by Lord Abbett's investment staff. Lord Abbett uses the ranking as a guide for evaluating and determining payments to research providers for research services, including proprietary research services provided to Lord Abbett by executing broker-dealers. Lord Abbett at times uses commissions generated pursuant to a Client Commission Arrangement to pay a research provider, including an executing broker-dealer who provides proprietary research services to Lord Abbett. Alternatively, Lord Abbett makes cash payments from its own resources to pay research providers for research services. Lord Abbett uses commissions generated pursuant to Client Commission Arrangements to pay for a significant portion of the research services that it receives.

Client Commission Arrangements generally do not apply to fixed-income security transactions. The fixed-income securities



market is an over-the-counter (OTC) market where commissions typically are not paid and soft dollars are not accumulated on portfolio trades. The expenses that clients pay buying and selling fixed-income securities are a component of the net price paid in the trade. Even though Lord Abbett does not obtain soft dollar research for fixed-income trades, Lord Abbett's fixed-income investment personnel are permitted to make use of soft dollar research obtained by Lord Abbett's equity investment personnel. In addition, many Lord Abbett investment personnel receive investment research from various broker-dealers, including, in addition to broker-dealers that execute equity trades, broker-dealers through which fixed-income trades are executed in accordance with Lord Abbett's best execution obligations. The receipt of such research, however, is not contingent on specific trades. Furthermore, some fixed-income strategies employed by Lord Abbett also invest in equity securities. In those cases, in addition to making use of soft dollar research services obtained by Lord Abbett's equity investment personnel, the fixed-income investment team also will be permitted to obtain research services directly using soft dollars. Thus, the investment personnel managing fixed-income accounts will benefit from, or be "cross-subsidized" by, research services received without additional cost by Lord Abbett through soft dollars, even though some fixed-income accounts do not generate eligible Section 28(e) brokerage commissions or generate less than a proportionate share of such eligible commissions to pay for such research services.

## Directed Brokerage and Other Client Restrictions on Brokerage

Clients may direct Lord Abbett to place some or all of the transactions for their accounts with one or more broker-dealers they specify. Such clients do so for several reasons, including offsetting consulting and other fees or participating in a bundled services program, including but not limited to Managed Accounts under a dual contract program. A client that designates use of a particular broker-dealer should understand, however, that such an instruction might prevent Lord Abbett from freely negotiating commission rates or selecting brokers based on the most favorable price and execution for the transaction. Clients also may prohibit Lord Abbett from placing transactions for their accounts with certain broker-dealers. A client that prohibits Lord Abbett from selecting certain broker-dealers for the placement of transactions for its account should understand that such a prohibition prevents Lord Abbett from selecting a restricted broker-dealer even though such broker-dealer may offer a more favorable price and execution for the transaction. In addition, the client may lose the possible advantage that non-designating and unrestricted clients derive from batching orders into single larger transactions, utilizing alternative trading venues, or alternative trading techniques for the purchase or sale of a particular security. Finally, Lord Abbett normally will place transactions for directed accounts, restricted accounts, and Managed Accounts after those placed for non-directed accounts.

In order to comply with a client direction, Lord Abbett usually will seek to engage in "step-out" or "broker-of-credit" transactions. Such situations involve placing a transaction with a broker-dealer with the instruction that the broker-dealer execute the transaction and "step-out," or credit all or a portion of the commission to another broker-dealer that the client has designated. Lord Abbett believes that such arrangements afford the opportunity both to seek best execution with respect to the transaction and to comply with the client's direction.

Overall, any instruction that Lord Abbett use a certain broker-dealer or restrict trading with a particular broker-dealer may cause a client to pay higher commissions, receive less favorable net prices or investment results, or incur additional custodial or other external administrative charges than would be the case if Lord Abbett were authorized to choose the broker-dealers through which to execute transactions for the client's account.

## REVIEW OF ACCOUNTS

### Institutional Accounts

Each client account is managed by a Lord Abbett investment team, which is assigned primary responsibility for the day-to-day management and ongoing monitoring of the client account. The investment team's continuous review of a client account includes the review of the appropriateness of portfolio holdings and transactions in light of the client account's investment objective, guidelines, and restrictions and changes in market conditions. The number of accounts managed by each investment team varies depending on the nature and size of the accounts under management and may change over time.

In all cases, accounts are also subject to review by operations and compliance personnel, who monitor account trading on a daily basis with the aid of Lord Abbett's portfolio accounting system and separate equity and fixed-income trading systems that incorporate pretrade or post-trade compliance testing against many account restrictions.

On a quarterly basis, each investment team meets with Lord Abbett's managing partner and other members of senior management to review portfolio holdings, characteristics, strategies, and performance attribution analysis.

### Managed Accounts

Managed Account investment and operations teams ensure that each such account is subject to reviews similar to those described above. The number of such accounts assigned to each investment or operations team varies depending on the nature and size of the accounts under management, and typically is greater than the number of institutional accounts assigned for review. Lord Abbett monitors high cash positions on a continuous basis to determine if a client is comfortable with such cash holdings.

### Nature and Frequency of Reports

*Institutional Accounts:* The nature and frequency of reports to institutional account clients vary based on client needs and prefer-



ences. Typically, clients receive monthly or quarterly reports that may include portfolio transactions, holdings, characteristics, strategies, performance attribution analysis, and account performance versus portfolio benchmarks. Meetings with institutional clients are held as agreed upon with clients and generally occur annually.

*Managed Accounts and Model Portfolio Accounts:* Managed Account and Model Portfolio Sponsors typically receive market commentaries prepared by Lord Abbett and generally send such commentaries on to Managed Account or Model Portfolio clients. Sponsors also typically issue performance reports to clients on a quarterly basis. Upon request, Lord Abbett will provide supplemental reporting to these types of clients. In addition, Lord Abbett personnel who are knowledgeable about a Managed Account client's account will be reasonably available to the client for consultation.

## CLIENT REFERRALS AND OTHER COMPENSATION

Lord Abbett makes payments out of its past profits and other available sources to certain financial intermediaries for marketing/distribution support, investor/shareholder servicing, entertainment, training and education activities, and/or the purchase of products or services from such intermediaries. Lord Abbett and/or its affiliates also make payments for these purposes to financial intermediaries in connection with the Lord Abbett Funds and Lord Abbett Global Funds. The products or services purchased include analytical software and data. In addition, Lord Abbett sometimes pays for meals, entertainment and educational meetings with institutional client consultants that may recommend our services to their clients.

With the exception of purchases of products or services from the financial intermediaries, the amounts of Lord Abbett's payments are determined by Lord Abbett or its affiliates, as the case may be, and in some cases are substantial. The intermediaries receiving such payments include consulting firms and broker-dealers that may recommend that their clients consider or select Lord Abbett to provide them with investment advisory services, as well as to intermediaries that act as dealers for the Lord Abbett Funds, Lord Abbett Global Funds or as agents for their clients with respect to purchases of shares of the funds. In some circumstances, such payments may create an incentive for an intermediary or its employees or associated persons to recommend Lord Abbett's advisory services or funds or to sell shares of a fund to a client. Lord Abbett compensates its affiliates and non-affiliates for solicitation and/or other client-related services provided to Lord Abbett clients and prospective clients. Under the arrangements, generally, Lord Abbett pays a portion of its advisory fee to the solicitor or service provider. Where applicable, any such arrangements comply with Rule 206(4)-1 under the Investment Advisers Act of 1940.

## CUSTODY

Lord Abbett does not maintain physical possession of the funds or securities held in clients' accounts. Typically, clients deposit assets

with a qualified custodian selected by the client. Generally, under the terms of an investment management agreement between Lord Abbett and each client, Lord Abbett will periodically invoice the client and the client will direct its custodian to pay Lord Abbett. The assets of Managed Account clients are typically deposited with the Sponsor or a qualified custodian selected by the Sponsor or client. Lord Abbett is not involved in the selection or ongoing monitoring of client custodians for institutional and Managed Account clients.

## INVESTMENT DISCRETION

Generally, clients retain Lord Abbett on a discretionary basis to provide continuous investment advice pursuant to an investment management agreement that describes the investment services to be provided. Consistent with the client's investment objectives, Lord Abbett typically will have full investment decision-making authority over the type of investments and brokerage for the client's account. From time to time, a client may impose restrictions on certain investments from their account or direct that Lord Abbett use certain broker-dealers to execute transactions for the client's account.

For Managed Accounts investing in equity securities, Lord Abbett's brokerage discretion is generally limited by the applicable Sponsor or client. When investing in fixed-income securities for Managed Accounts, Lord Abbett brokerage selection may be limited by the applicable Sponsor or client, but for certain fixed-income strategies Lord Abbett consistently has the investment decision-making authority to place fixed-income transactions with or through firms other than the Sponsor or directed broker-dealer since such transactions ordinarily occur at net prices. Lord Abbett has neither investment nor brokerage discretion for those clients to whom it provides nondiscretionary investment advice or clients of certain Model Portfolios.

Lord Abbett generally makes investment decisions for each client account for which it has investment and brokerage discretion independently. As a result, due to different investment objectives, policies, or restrictions, if any, Lord Abbett may purchase a particular security for one or more accounts when one or more other accounts are selling the same security. Lord Abbett may also purchase or sell the same securities for a number of client accounts at or about the same time. Lord Abbett's ability to place and/or recommend transactions may be restricted by applicable regulatory requirements and/or Lord Abbett's internal policies designed to comply with such requirements. For example, Lord Abbett's ownership position on behalf of its client accounts may be restricted by regulation or by a company's corporate charter.

In most cases, a separate investment management team is responsible for portfolio management for all products using a particular investment discipline or style, including institutional accounts, Managed Accounts, mutual funds, and other commingled investment vehicles. Individual members of each such separate investment management team may have primary or exclusive responsibility for managing specific accounts or products invested according to that team's particular investment discipline or style.

As a general matter, each Lord Abbett investment team manages each strategy using a common style in substantially the same manner across all accounts investing in each such strategy. An investment



management team (and, in certain circumstances, individual members of that team) may implement its investment decisions in somewhat different ways for each product, however, to the extent that the team members responsible for a particular strategy determine that such differences are appropriate. The differences are typically attributable to the unique considerations relating to each type of product. For example, investment decisions for Managed Accounts may take into account tax considerations that would not be relevant for tax-exempt institutional accounts. As another example, account size, cash flow considerations, and/or redemption requests/withdrawals may cause Lord Abbett to invest differently for Managed Accounts as compared with other types of accounts. These kinds of considerations may cause one product to have a higher cash position than another product at a given time, to reflect implementation of Lord Abbett's investment strategies in different increments or on a different basis with respect to timing of purchases and sales of securities, or to maintain fewer holdings in the interest of avoiding nonstandard principal amounts of fixed-income securities.

In the event that an institutional or Managed Account client terminates Lord Abbett from managing its account, the client or Sponsor will notify Lord Abbett of the termination of Lord Abbett's investment discretion from the account and typically will instruct Lord Abbett as to the client's desire to maintain the securities held in the portfolio or to transition all or a part of the client's portfolio to cash. Unless more time is necessary to complete trading instructed by the client, any orders issued by Lord Abbett before the receipt of a termination notice will generally be executed on the day of receipt and discretion will be maintained until the end of such business day, after which Lord Abbett will not be responsible for any trading or investment decisions.

## VOTING CLIENT SECURITIES

Lord Abbett has adopted proxy voting policies and procedures that govern the voting of client securities. Lord Abbett votes proxies in the manner it believes is in the best interests of its clients, including the Lord Abbett Funds and their shareholders. Proxy voting decisions are made by the Investment Department, led by the Investment Stewardship team in accordance with Lord Abbett's proxy voting policies and procedures. Lord Abbett has retained a third-party service to analyze proxy issues and recommend how to vote on those issues, and to provide assistance in the administration of the proxy process, including maintaining complete proxy voting records.

## Securities Lending

Some clients may determine to include their assets under management by Lord Abbett in a securities lending program. In circumstances where shares are on loan, the voting rights of those shares are transferred to the borrower. In such circumstances, unless the client has arranged for such securities to be recalled prior to the meeting record date, Lord Abbett will be unable to vote with respect to such shares.

## Conflicts of Interest

Lord Abbett has adopted policies and procedures designed to ensure that conflicts of interests are identified and resolved in its clients' best interests rather than its own. Generally, when Lord Abbett identifies a potential conflict of interest, Lord Abbett adheres to its voting guidelines on the issue or, if the guidelines do not address the particular issue, Lord Abbett would follow the recommendation of the third-party service.

On occasion, a proxy vote will relate to securities of a company with which Lord Abbett has a significant business relationship, such as a company that is an institutional client of Lord Abbett or a company known by Lord Abbett to have a substantial investment in a Lord Abbett Fund. In such circumstances, Lord Abbett will request voting instructions from a committee consisting of members of the Board of Directors/Trustees of the Lord Abbett Funds who are not "interested persons" as defined in the Investment Company Act of 1940. In the absence of explicit instructions from an institutional account client to resolve proxy voting conflicts in a different manner, Lord Abbett will vote all shares on behalf of all clients that hold such a security in accordance with the voting instructions received from the committee of the Lord Abbett Funds' Board.

To serve the best interests of a client that holds a given voting security, Lord Abbett generally will vote proxies without regard to other clients' investments in different classes or types of securities or instruments of the same issuer that are not entitled to vote. Accordingly, when the voting security in one account is from an issuer whose other, non-voting securities or instruments are held in a second account in a different strategy, Lord Abbett will vote without input from members of the Investment Department that act on behalf of the second account. Lord Abbett employees may seek guidance from Lord Abbett's senior management with respect to any potential conflict of interest arising out of the holdings of multiple clients.

## Sustainable Investing & Proxy Voting Policy

A detailed description of how Lord Abbett votes on most matters can be found in Lord Abbett's Sustainable Investing & Proxy Voting Policy. Lord Abbett evaluates each proxy proposal based on the particular facts it believes are relevant to its overall goal of maximizing shareholder value. Lord Abbett reserves the flexibility to vote in a manner contrary to its general views on particular issues if it believes doing so is in the best interests of its clients. For institutional accounts managed on behalf of multi-employer pension or benefit plans, commonly referred to as Taft-Hartley plans, Lord Abbett will vote proxies in accordance with the Proxy Voting Guidelines issued by the AFL-CIO unless instructed otherwise by the client.

## Client Voting Instructions

A client may instruct Lord Abbett how to vote a particular proxy or how to vote all proxies for securities held in its Lord Abbett account.





## Obtaining Further Information

If a Lord Abbett institutional client would like a copy of Lord Abbett's complete proxy voting policies and procedures or information as to how Lord Abbett voted the securities in the client's account, the client should call their Lord Abbett client service representative or 201-827-2000. If a client of Lord Abbett's Managed Accounts would like the complete policies and procedures or voting information, that client should contact the Sponsor or the related consultant/financial adviser and request that the Sponsor or consultant/financial adviser call Lord Abbett's Service Center at 888-522-2388.

## FINANCIAL INFORMATION

Lord Abbett is not required to provide a balance sheet for its most recent fiscal year, as it does not require or solicit prepayment of more than \$1,200 in fees per client, six months or more in advance.

Lord Abbett is not aware of any financial condition that is reasonably likely to impair its ability to meet its contractual commitments to clients.



## APPENDIX 1

The following table provides the standard fee schedule for each of Lord Abbett's available institutional strategies:

Strategy	Standard Fee Schedule
Bank Loans	.47% on the first \$50 million in assets under management .43% on the next \$100 million in assets under management .38% on the next \$100 million in assets under management .36% on the next \$250 million in assets under management .34% on assets in excess of \$500 million
Climate Focused Bond	.38% on the first \$50 million .33% on the next \$50 million .29% on all assets in excess of \$100 million
Convertible Securities	.50% on the first \$50 million in assets under management .47% on the next \$100 million in assets under management .40% on all assets in excess of \$150 million
Core Fixed Income	.28% on the first \$50 million in assets under management .20% on the next \$100 million in assets under management .16% on the next \$350 million in assets under management .14% on all assets in excess of \$500 million
Core Plus Fixed Income	.30% on the first \$50 million in assets under management .23% on the next \$100 million in assets under management .20% on the next \$100 million in assets under management .19% on all assets in excess of \$250 million
Corporate Bond	.26% on the first \$50 million in assets under management .21% on the next \$100 million in assets under management .18% on the next \$100 million in assets under management .16% on all assets in excess of \$250 million
Corporate Credit	.26% on the first \$50 million in assets under management .21% on the next \$100 million in assets under management .18% on the next \$100 million in assets under management .16% on all assets in excess of \$250 million
Credit Opportunities	1.25% on the first \$50 million in assets under management 1.00% on all assets in excess of \$50 million
Dividend Growth	.60% on the first \$25 million in assets under management .45% on the next \$75 million in assets under management .42% on the next \$150 million in assets under management .39% on the next \$250 million in assets under management Negotiable on assets in excess of \$500 million
Durable Mid Cap Growth	.68% on the first \$25 million in assets under management .58% on the next \$75 million in assets under management .50% on the next \$150 million in assets under management .49% on the next \$250 million in assets under management Negotiable on all assets in excess of \$500 million
Emerging Markets Bond	.48% on the first \$50 million in assets under management .42% on the next \$100 million in assets under management .35% on all assets in excess of \$150 million
Emerging Markets Corporate Debt	.45% on the first \$150 million in assets under management .42% on the next \$250 million in assets under management .36% on all assets in excess of \$400 million
Global Bond	.38% on the first \$50 million in assets under management .33% on the next \$100 million in assets under management .29% on all assets in excess of \$150 million

Strategy	Standard Fee Schedule
Global Equity	.48% on the first \$50 million in assets under management .46% on the next \$50 million in assets under management .42% on the next \$150 million in assets under management .40% on the next \$250 million in assets under management .35% on all assets in excess of \$500 million
Global High Yield	.50% on the first \$50 million in assets under management .40% on the next \$100 million in assets under management .38% on the next \$100 million in assets under management .35% on all assets in excess of \$250 million
Large Cap Growth Equity	.55% on the first \$25 million in assets under management .45% on the next \$75 million in assets under management .38% on the next \$150 million in assets under management .35% on the next \$250 million in assets under management Negotiable on all assets in excess of \$500 million
High Yield	.50% on the first \$50 million in assets under management .40% on the next \$100 million in assets under management .38% on the next \$100 million in assets under management .35% on all assets in excess of \$250 million
Inflation Focused	.25% on the first \$100 million in assets under management .22% on the next \$400 million in assets under management .18% on all assets in excess of \$500 million
International Equity	.60% on the first \$25 million in assets under management .52% in the next \$75 million in assets under management .42% in the next \$150 million in assets under management .37% in the next \$250 million in assets under management Negotiable on assets in excess of \$500 million.
International Growth	.70% on the first \$25 million in assets under management .60% on the next \$25 million in assets under management .5% on the next \$200 million in assets under management .45% on the next \$250 million in assets under management Negotiable on all assets in excess of \$500 million
International Value	.71% on the first \$25 million in assets under management .51% on the next \$75 million in assets under management .41% on the next \$150 million in assets under management .37% on the next \$250 million in assets under management Negotiable on all assets in excess of \$500 million
International Small Cap	.80% on the first \$25 million in assets under management .73% on the next \$75 million in assets under management .65% on the next \$400 million in assets under management Negotiable on all assets in excess of \$500 million
Large Cap Value	.75% on the first \$10 million in assets under management .50% on the next \$40 million in assets under management .35% on the next \$50 million in assets under management .25% on the next \$100 million in assets under management .20% on all assets in excess of \$200 million
Long Duration Fixed Income	.27% on the first \$50 million in assets under management .21% on the next \$100 million in assets under management .16% on the next \$350 million in assets under management .14% on all assets in excess of \$500 million
Micro Cap Innovation Growth	1.25% on the first \$25 million in assets under management 1.00% on all assets in excess of \$25 million



## APPENDIX 1 (CONT.)

Strategy	Standard Fee Schedule
Mid Cap Value	.65% on the first \$25 million in assets under management .51% on the next \$75 million in assets under management .49% on the next \$150 million in assets under management .46% on the next \$250 million in assets under management Negotiable on all assets in excess of \$500 million
Multi-Sector	.40% on the first \$50 million in assets under management .31% on the next \$100 million in assets under management .29% on the next \$100 million in assets under management .26% on the next \$250 million in assets under management .25% on all assets in excess of \$500 million
Multi-Sector Full Discretion	.40% on the first \$50 million in assets under management .31% on the next \$100 million in assets under management .29% on the next \$100 million in assets under management .26% on the next \$250 million in assets under management .25% on all assets in excess of \$500 million
Municipals	.21% on the first \$50 million in assets under management .19% on the next \$100 million in assets under management .14% on the next \$100 million in assets under management .13% on all assets in excess of \$250 million
Short Duration Core	.20% on the first \$50 million in assets under management .15% on the next \$100 million in assets under management .13% on the next \$350 million in assets under management .11% on all assets in excess of \$500 million
Short Duration Credit	.20% on the first \$50 million in assets under management .17% on the next \$100 million in assets under management .15% on the next \$100 million assets under management .13% on all assets in excess of \$250 million
Short High-Yield	.32% on the first \$50 million .28% on the next \$100 million .26% on the next \$100 million .23% on all assets in excess of \$250 million
Small Cap Innovation Growth	1.00% on the first \$10 million in assets under management .75% on the next \$40 million in assets under management .625% on the next \$50 million in assets under management .50% on all assets in excess of \$100 million
Small Cap Value	1.00% on the first \$10 million in assets under management .75% on the next \$40 million in assets under management .65% on the next \$50 million in assets under management .60% on the next \$100 million in assets under management

The following table provides the typical range of fees payable to Lord Abbett for Managed Account programs:

Strategy	Standard Fee Range
Managed Accounts—Equities	0.34–0.50%
Managed Accounts—Fixed Income	0.14–0.36%
Managed Accounts—Laddered Tax-Exempt Fixed Income	0.10–0.15%
Model Portfolios—Equities	0.28–0.35%
Model Portfolios—Fixed Income	0.22–0.28%



## APPENDIX 2

The Appendix 2 provides a non-exhaustive list of certain investments that Lord Abbett might use followed by their associated risks. At the end, there is a list of general risks that might apply to all or some of the investments.

Investors investing in funds or investment vehicles managed by Lord Abbett should refer to any disclosures or risk factors contained in the offering materials or other disclosure statements provided to them in addition to the factors set forth in this Appendix 2. When used in this Appendix 2, an "Account" refers to any Lord Abbett client account, including funds or other investment vehicles, which can use the investments and techniques described below.

### ***Asset-Backed and Mortgage-Related Investments and Associated Risks***

**Asset-Backed Securities.** An Account, in accordance with its investment objectives and policies, may invest in asset-backed securities (unrelated to mortgage loans). Asset-backed securities are securities whose principal and interest payments are collateralized by pools of assets such as auto loans, credit card receivables, leases, installment contracts, and personal property. In addition to prepayment and extension risks, these securities present credit risks that are not inherent in mortgage-related securities because asset-backed securities generally do not have the benefit of a security interest in collateral that is comparable to mortgage assets. Credit card receivables generally are unsecured and the debtors on such receivables are entitled to the protection of a number of state and federal consumer credit laws, many of which give such debtors the right to set off certain amounts owed on the credit cards, thereby reducing the balance due.

Automobile receivables generally are secured, but by automobiles rather than residential real property. Most issuers of automobile receivables permit the loan servicers to retain possession of the underlying obligations. If the servicer were to sell these obligations to another party, there is a risk that the purchaser would acquire an interest superior to that of the holders of the asset-backed securities. In addition, because of the large number of vehicles involved in a typical issuance and technical requirements under state laws, the trustee for the holders of the automobile receivables may not have a proper security interest in the underlying automobiles. Therefore, if the issuer of an asset-backed security defaults on its payment obligations, there is the possibility that, in some cases, an Account will be unable to possess and sell the underlying collateral and that the Account's recoveries on repossessed collateral may not be available to support payments on these securities.

**Collateralized Mortgage Obligations and Real Estate Mortgage Investment Conduits ("CMOs").** A CMO is a hybrid between a mortgage-backed bond and a mortgage pass-through security. Similar to a bond, interest and prepaid principal is paid, in most cases, on a monthly basis. CMOs may be collateralized by whole mortgage loans, but are more often collateralized by portfolios

of mortgage pass-through securities and their income streams. Some CMOs are directly supported by other CMOs, which, in turn, are supported by mortgage pools.

CMOs are issued in multiple classes, often referred to as "tranches," with each tranche having a specific fixed or floating coupon rate and stated maturity or final distribution date. Payments of principal normally are applied to the CMO classes in the order of their respective stated maturities, so that no principal payments will be made on a CMO class until all other classes having an earlier stated maturity date are paid in full. Under the traditional CMO structure, the cash flows generated by the mortgages or mortgage pass-through securities in the collateral pool are used to first pay interest and then pay principal to the holders of the CMOs. Subject to the various provisions of individual CMO issues, the cash flow generated by the underlying collateral (to the extent it exceeds the amount required to pay the stated interest) is used to retire the bonds. The differing structures of CMO classes may create a wide variety of investment characteristics, such as yield, effective maturity, and interest rate sensitivity. As market conditions change, however, and particularly during periods of rapid or unanticipated changes in market interest rates, the attractiveness of the CMO classes and the ability of the structure to provide the anticipated investment characteristics may be significantly reduced. These changes can result in volatility in the market value, and, in some instances, reduced liquidity of the CMO class. A risk of CMOs is the uncertainty of the timing of cash flows that results from the rate of prepayments on the underlying mortgages serving as collateral and from the structure of the particular CMO transaction (that is, the priority of the individual tranches). An increase or decrease in prepayment rates (resulting from a decrease or increase in mortgage interest rates) may cause the CMOs to be retired substantially earlier than their stated maturities or final distribution dates and will affect the yield and price of CMOs. In addition, if the collateral securing CMOs or any third party guarantees are insufficient to make payments, an Account could sustain a loss.

Securities may be backed by mortgage insurance, letters of credit, or other credit enhancing features. Although payment of the principal of, and interest on, the underlying collateral securing privately issued CMOs may be guaranteed by the U.S. Government or its agencies and instrumentalities, these CMOs represent obligations solely of the private issuer and are not insured or guaranteed by the U.S. Government, or its agencies and instrumentalities.

CMO tranches have evolved and will likely continue to evolve. For example, CMOs may include floating rate CMOs, inverse floating rate CMOs, parallel pay CMOs, planned amortization classes, accrual bonds, and CMO residuals. These structures affect the amount and timing of principal and interest received by each tranche from the underlying collateral. Under certain of these structures, certain classes of CMOs have priority over others with respect to the receipt of prepayments on the mortgages. Therefore, depending on the type of CMOs in which an Account



## APPENDIX 2 (CONT.)

invests, the investment may be subject to a greater or lesser risk of prepayment than other types of MBS. CMOs may include real estate investment conduits, which are private entities formed for the purpose of holding a fixed pool of mortgages secured by an interest in real property.

**Commercial Mortgage-Backed Securities.** Commercial mortgage-backed securities include securities that reflect an interest in, and are secured by, mortgage loans on commercial real property. Many of the risks of investing in commercial mortgage-backed securities reflect the risks of investing in the real estate securing the underlying mortgage loans. These risks reflect the effects of local and other economic conditions on real estate markets, the ability of tenants to make loan payments, and the ability of a property to attract and retain tenants. Commercial mortgage-backed securities may be less liquid and exhibit greater price volatility than other types of mortgage or asset backed securities. They are typically not backed by any government or government agency or instrumentality.

**Mortgage Pass-Through Securities.** Interests in pools of mortgage related securities differ from other forms of debt securities, since debt securities normally provide for periodic payment of interest in fixed amounts with principal payments at maturity or specified call dates. Instead, mortgage-related securities provide a monthly payment that consists of both interest and principal payments. In effect, these payments are a “pass-through” of the monthly payments made by individual borrowers on their residential or commercial mortgage loans, net of any fees paid to the issuer or guarantor of such securities. Additional payments are caused by prepayments of principal resulting from the sale of the underlying property, refinancing, or foreclosure, net of fees or costs that may be incurred. These differences can result in significantly greater price and yield volatility than is the case with traditional fixed income or debt securities. The timing and level of prepayments is unpredictable. A predominant factor affecting the prepayment rate on a pool of mortgage loans is the difference between the interest rates on outstanding mortgage loans and prevailing mortgage loan interest rates. Generally, prepayments on mortgage loans will increase during a period of falling mortgage interest rates and decrease during a period of rising mortgage interest rates. Accordingly, the amounts of prepayments available for reinvestment by an Account are likely to be greater during a period of declining mortgage interest rates. When an Account reinvests the proceeds of a prepayment in these circumstances, it will likely receive a rate of interest that is lower than the rate on the security that was prepaid. To the extent that an Account purchases asset-backed securities at a premium, prepayments may result in a loss to the extent of the premium paid. If an Account buys such securities at a discount, both scheduled payments and unscheduled prepayments should increase current income and total returns and unscheduled prepayments will also accelerate the recognition of income. In a period of rising interest rates, prepayments of the underlying assets may occur

at a slower than expected rate, with the result that the average life of mortgage pass-through securities held by an Account may be lengthened (maturity extension risk). This particular risk may effectively change a security that was considered short or intermediate term at the time of purchase into a longer-term security. Since the value of longer-term securities generally fluctuates more widely in response to changes in interest rates than does the value of shorter term securities, maturity extension risk could increase the price and yield volatility of mortgage related securities held by an Account. In the past, in certain market environments, the value and liquidity of many mortgage pass-through securities declined sharply. There can be no assurance that such declines will not recur. Investments in mortgage-backed securities may be subject to a high degree of credit risk, valuation risk, and liquidity risk. These risks may be even higher with mortgage pass-through securities supported by subprime mortgages.

**Mortgage-Related and Asset-Backed Securities and Other Collateralized Obligations.** Mortgage-related securities are interests in pools of residential or commercial mortgage loans, including mortgage loans made by savings and loan institutions, mortgage bankers, commercial banks and others. Pools of mortgage loans are assembled as securities for sale to investors by various governmental, government related, and private organizations.

**Other Collateralized Obligations.** In addition to the collateralized obligations described elsewhere in this appendix, an Account may invest in collateralized loan obligations (“CLOs”), collateralized debt obligations (“CDOs”), and collateralized bond obligations (“CBOs”).

A CLO is a type of structured product that issues securities collateralized by a pool of loans, which may include, among others, domestic and foreign senior secured loans, senior unsecured loans, second lien loans, and subordinate corporate loans. The underlying loans may be rated below investment grade by a rating agency. A CLO is not merely a conduit to a portfolio of loans; it is a pooled investment vehicle that may be actively managed by the collateral manager. Therefore, an investment in a CLO can be viewed as investing in (or through) another investment adviser and is subject to the layering of fees associated with such an investment.

The cash flows from a CLO are divided into two or more classes called “tranches,” each having a different risk reward structure in terms of the right (or priority) to receive interest payments from the CLO. The risks of an investment in a CLO depend largely on the type of the collateral held in the CLO portfolio and the tranche of securities in which an Account invests. Generally, the risks of investing in a CLO can be summarized as a combination of economic risks of the underlying loans combined with the risks associated with the CLO structure governing the priority of payments. In addition to the general risks associated with fixed income securities and structured products discussed herein, CLOs carry additional risks including but not limited to the following:



## APPENDIX 2 (CONT.)

**Other Mortgage-Related Securities.** Other mortgage-related securities include securities other than those described above that directly or indirectly represent a participation in, or are secured by and payable from, mortgage loans on real property, including mortgage dollar rolls, or stripped mortgage-backed securities.

Mortgage dollar rolls are instruments in which an Account sells securities for delivery in the current month and simultaneously contracts with the same counterparty to repurchase similar (same type, coupon, and maturity) but not identical securities on a specified future date. During the roll period, an Account loses the right to receive principal (including prepayments of principal) and interest paid on the securities sold. However, an Account may benefit from the interest earned on the cash proceeds of the securities sold until the settlement date of the forward purchase.

An Account is generally subject to the risks associated with the purchased security, such as credit risk and interest rate risk. In addition, if the broker-dealer to whom an Account sells the security becomes insolvent, the Account's right to purchase or repurchase the mortgage related securities subject to the mortgage dollar roll may be restricted. Also, the instrument that an Account is required to repurchase may be worth less than an instrument that the Account originally held. Successful use of mortgage dollar rolls will depend upon Lord Abbett's ability to manage an Account's interest rate and mortgage prepayments exposure. For these reasons, there is no assurance that mortgage dollar rolls can be successfully employed. The use of this technique may diminish the investment performance of an Account compared with what such performance would have been without the use of mortgage dollar rolls.

**Stripped Mortgage-Backed Securities ("SMBS").** SMBS are derivative multi-class mortgage securities. SMBS may be issued by agencies or instrumentalities of the U.S. Government, or by private originators of, or investors in, mortgage loans, including savings and loan associations, mortgage banks, commercial banks, investment banks, and special purpose entities of the foregoing. SMBS are usually structured with two classes that receive different proportions of the interest and principal distributions on a pool of mortgage assets. A common type of SMBS will have one class receiving some of the interest and most of the principal from the mortgage assets, while the other class will receive most of the interest and the remainder of the principal. In the most extreme case, one class will receive all of the interest (the interest-only or "IO" class), while the other class will receive all of the principal (the principal-only or "PO" class).

The value of an IO class is extremely sensitive to the rate of principal payments (including prepayments) on the related underlying mortgage assets, and a rapid rate of principal payments may cause an Account to lose money. The value of a PO class generally increases as interest rates decline and prepayment rates rise. Some IOs and POs are structured to have special protections against the effects of prepayments. These structural protections, however, normally are effective only within certain ranges of

prepayment rates and, thus, will not protect investors in all circumstances. The price of these securities typically is more volatile than that of coupon-bearing bonds of the same maturity.

### **To Be Announced ("TBA") Sale or Purchase Commitments.**

An Account may enter into TBA sale commitments to sell mortgage backed securities that it owns under delayed delivery arrangements. Proceeds of TBA sale commitments are not received until the contractual settlement date. During the time a TBA sale commitment is outstanding, equivalent deliverable securities or an offsetting TBA purchase commitment deliverable on or before the sale commitment date are held as "cover" for the transaction. Recently finalized FINRA rules include mandatory margin requirements for the TBA market with limited exceptions. TBA trades historically have not been required to be collateralized. The collateralization of TBA trades is intended to mitigate counterparty credit risk between trade and settlement, but could increase the cost of TBA transactions and impose added operational complexity.

**Commercial Mortgage-Backed Securities Risk:** CMBS include securities that reflect an interest in, and are secured by, mortgage loans on commercial real property (such as office properties, retail properties, hospitality properties, industrial properties, healthcare-related properties or other types of income producing real property). Many of the risks of investing in CMBS reflect the risks of investing in the real estate securing the underlying mortgage loans, which include the risks associated with the effects of local and other economic conditions on real estate markets, the ability of tenants to make loan payments, increases in interest rates, real estate tax rates and other operating expenses, changes in governmental rules, regulations and fiscal policies, and the ability of a property to attract and retain tenants.

CMBS depend on cash flows generated by underlying commercial real estate loans, receivables, and other assets, and can be significantly affected by changes in market and economic conditions, the availability of information regarding the underlying assets and their structures, and the credit worthiness of the borrowers or tenants. CMBS may be less liquid and exhibit greater price volatility than other types of mortgage or asset-backed securities. CMBS issued by private issuers may offer higher yields than CMBS issued by government issuers, but also may be subject to greater volatility than CMBS issued by government issuers. In addition, the CMBS market in recent years has experienced substantially lower valuations and greatly reduced liquidity, and current economic and market conditions suggest that this trend for CMBS may continue. CMBS held by an Account may be subordinated to one or more other classes of securities of the same series for purposes of, among other things, establishing payment priorities and offsetting losses and other shortfalls with respect to the related underlying mortgage loans. There can be no assurance that the subordination will be sufficient on any date to offset all losses or expenses incurred by the underlying trust.



## APPENDIX 2 (CONT.)

**“Covenant-Lite” Obligations Risk:** The Account may invest in, or obtain exposure to, obligations that may be “covenant-lite,” which means such obligations lack certain financial maintenance covenants. While these loans may still contain other collateral protections, a covenant-lite loan is riskier because it does not require the borrower to provide affirmation that certain specific financial tests have been satisfied. Should a loan held by the Account begin to deteriorate in quality, the Account’s ability to negotiate with the borrower may be delayed under a covenant-lite loan compared to a loan with full maintenance covenants. This may in turn delay the Account’s ability to seek to recover its investment.

**Guarantors of Mortgage-Backed Securities.** The principal governmental guarantor of mortgage-related securities is Ginnie Mae. Ginnie Mae is authorized to guarantee, with the full faith and credit of the U.S. Government, the timely payment of principal and interest on securities issued by institutions approved by Ginnie Mae (such as savings and loan institutions, commercial banks and mortgage bankers) and backed by pools of mortgages insured by the Federal Housing Administration (the “FHA”), or guaranteed by the Department of Veterans Affairs (the “VA”).

Government-related guarantors of securities not backed by the full faith and credit of the U.S. Government include Fannie Mae and Freddie Mac. Both are government sponsored corporations owned entirely by private stockholders. In September 2008, the U.S. Treasury Department announced that the government would be taking over Fannie Mae and Freddie Mac and placing the companies into a conservatorship. In addition, the U.S. Treasury announced additional steps that it intended to take with respect to the debt and mortgage-backed securities issued by Fannie Mae and Freddie Mac in order to support the conservatorship. Fannie Mae and Freddie Mac are continuing to operate as going concerns while in conservatorship and each remains liable for all of its respective obligations, including its guaranty obligations, associated with its mortgage-backed securities. No assurance can be given that these arrangements will continue, and it is possible that these entities will not have the funds to meet their payment obligations in the future. From time to time, proposals have been introduced before Congress for the purpose of restricting or eliminating federal sponsorship of Fannie Mae and Freddie Mac. Lord Abbett cannot predict what legislation, if any, may be proposed in the future in Congress regarding such sponsorship or which proposals, if any, might be enacted. Such proposals, if enacted, might materially and adversely affect the availability of government guaranteed mortgage backed securities and the liquidity and value of an Account’s portfolio. Government-related guarantors may also issue Participation Certificates (“PCs”), which represent interests in conventional mortgages from Freddie Mac’s national portfolio. Freddie Mac guarantees the timely payment of interest and ultimate collection of principal, but PCs are not backed by the full faith and credit of the U.S. Government.

### **Other Risks of Mortgage-Backed and Asset-Backed Securities.**

Mortgage-backed, mortgage-related, and other asset-backed securities are subject to risks in addition to those described above. These securities are often extremely complex and their documentation may be unclear, ambiguous, or poorly understood, which could lead to a misunderstanding or incorrect application of the securities’ terms, and may also lead to disputes. More junior securities are often illiquid and hard to value, and even senior securities may become so during periods of market stress or if there are issues relating to the underlying collateral. Regulatory issues relating to the underlying collateral may have unforeseen effects on the value of the securities and may cause them to decrease in value. In addition, servicers or trustees may not always act in the best interests of the holders of securities or of certain tranches of securities.

**Private Mortgage-Backed Securities.** Commercial banks, savings and loan institutions, private mortgage insurance companies, mortgage bankers and other secondary market issuers also create pass-through pools of conventional residential mortgage loans. Such issuers may, in addition, be the originators and/or servicers of the underlying mortgage loans as well as the guarantors of the mortgage-related securities. Pools created by such non-governmental issuers generally offer a higher rate of interest than government and government related pools because they are not guaranteed by any government or agency. In addition, mortgage-related securities issued by these nongovernmental issuers may experience higher rates of default on the underlying mortgages since these mortgage loans often do not meet the underwriting standards of government and government-related issuers. However, timely payment of interest and principal of these pools may be supported by various forms of insurance or guarantees, including individual loan, title, pool and hazard insurance, and letters of credit, which may be issued by governmental entities, private insurers, or the mortgage poolers. Such insurance and guarantees, and the creditworthiness of the issuers thereof will be considered in determining whether a mortgage-related security meets an Account’s investment quality standards. Upon a breach of any representation or warranty that materially and adversely affects the interests of the related certificate holders in a mortgage loan, the seller or servicer generally will be obligated either to cure the breach in all material respects, to repurchase the mortgage loan or, if the related agreement so provides, to substitute in its place another qualifying mortgage loan. Such a repurchase or substitution obligation may constitute the sole remedy available for the material breach of any such representation or warranty by the seller or servicer. There can be no assurance that the private insurers or guarantors can meet their obligations under the insurance policies or guarantee arrangements. These securities may be illiquid.

In the case of privately issued mortgage-related securities whose underlying assets are neither U.S. Government securities nor U.S.



## APPENDIX 2 (CONT.)

Government insured mortgages, to the extent that real properties securing such assets may be located in the same geographical region, the security may be subject to a greater risk of default than other comparable securities in the event of adverse economic, political, or business developments that may affect such region and, ultimately, the ability of residential homeowners to make payments of principal and interest on the underlying mortgages.

**CLO, CDO, and CBOs – Subordination and Risk of Default:** Lower tranche CLOs provide subordination and enhancement to higher tranches, and, therefore, lower tranches are subject to a higher risk of defaults in the underlying collateral. Although supported by the lower tranches, defaults or losses above certain levels could reduce or eliminate all current cash flow to the highest tranche and entail loss of principal. Among other things, defaults, downgrades, and principal losses with respect to CLO collateral can trigger an event of default under the terms of the CLO structure, which could result in the liquidation of the collateral and accelerate the payments of an Account's investments in the CLO, which may be at a loss.

- **Transparency Risk:** Collateral managers of CLOs may actively manage the portfolio. Accordingly, the collateral and the accompanying risks underlying a CLO in which an Account invests will change, and will do so without transparency. Therefore, an Account's investment in a CLO will not benefit from detailed or ongoing due diligence on the underlying collateral.
- **Credit Risk:** CLO collateral is subject to credit and liquidity risks, as substantially all of the collateral held by CLOs will be rated below investment grade or be unrated. Because of the lack of transparency, the credit and liquidity risk of the underlying collateral can change without visibility to the CLO investors.
- **Lack of Liquidity:** CLOs typically are privately offered and sold, and, thus, are not registered under the federal securities laws and subject to transfer restrictions. As a result, investments in CLOs may be illiquid. Certain securities issued by a CLO (typically the highest tranche) may have an active dealer market and, if so, may be liquid.
- **Interest Rate Risk:** The CLO portfolio may have exposure to interest rate fluctuations as well as mismatches between the interest rate on the underlying bank loans and the CLO securities.
- **Prepayment Risk:** CLO securities may pay earlier than expected due to defaults (triggering liquidation) or prepayments on the underlying collateral, optional redemptions, or refinancing, or forced sale in certain circumstances.
- **Documentation Risk:** CLO documentation is highly complex and can contain inconsistencies or errors, creating potential risk and requiring significant interpretational expertise, disputes with issuers, or unintended investment results.

A CDO is a security backed by pools of corporate or sovereign bonds, bank loans to corporations, or a combination of bonds and loans, many of which may be unsecured. A CBO is an obligation of a trust or other special purpose vehicle backed by a pool of fixed income securities, which are often a diversified pool of securities that are high risk and below investment grade. These securities are collateralized by many different types of fixed income securities, including high-yield debt, trust preferred securities, and emerging market debt, which are subject to varying degrees of credit and counterparty risk. CDOs and CBOs are structured similarly to CLOs and carry additional risks that include, but are not limited to, the risks of investing in CLOs described above and the risks associated with the pool of underlying securities.

### **Commodities and Associated Risks**

**Commodity-Related Investments.** Commodity-related investments provide exposure to the investment returns of the commodities markets, without investing directly in physical commodities. Commodities include assets that have tangible properties, such as oil, metals, and agricultural products. Commodity-related investments include, for example, commodity index-linked notes, swap agreements, commodity options, futures, and options on futures. Commodity-related investments may subject an Account to greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-related investments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs, and international economic, political, and regulatory developments. Use of leveraged commodity-related investments creates the possibility for greater loss, and there can be no assurance that an Account's use of leverage will be successful. Tax considerations and position limits established by the commodities exchanges may limit an Account's ability to pursue investments in commodity-related investments.

### **Convertible Securities and Associated Risks**

**Convertible Securities.** Convertible securities are preferred stocks or debt obligations that may be converted into or exchanged for shares of common stock (or cash or other securities) of the same or a different issuer at a stated price or exchange ratio. Convertible securities generally rank senior to common stock in a corporation's capital structure but usually are subordinated to comparable non-convertible securities. A convertible security entitles the holder to receive a dividend or interest that generally is paid or accrued on the underlying security until the convertible security matures or is redeemed, converted, or exchanged. While convertible securities generally do not participate directly in any dividend increases or decreases of the underlying securities, market prices of convertible securities may be affected by such dividend changes or other changes in the underlying securities. In addition, if the market price of the common stock underly-





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ing a convertible security approaches or exceeds the conversion price of the convertible security, the convertible security tends to reflect the market price of the underlying common stock. Alternatively, a convertible security may lose much or all of its value if the value of the underlying common stock falls below the conversion price of the security.

Convertible securities have both equity and fixed income risk characteristics. A significant portion of convertible securities have below investment grade credit ratings and are subject to increased credit and liquidity risks. A convertible security may be subject to redemption at the option of the issuer at a price established in the convertible security's governing instrument. If a convertible security held by an Account is called for redemption, an Account will be required to convert it into the underlying common stock, sell it to a third party, or permit the issuer to redeem the security. Any of these actions could have an adverse effect on Lord Abbett's ability to achieve its investment objective, which, in turn, could result in losses to the Account.

**Contingent Convertible Securities ("CoCos").** CoCos are typically issued by non-U.S. issuers and are subordinated instruments that are designed to behave like bonds or preferred equity in times of economic health yet absorb losses when a pre-determined trigger event occurs. CoCos are either convertible into equity at a predetermined share price or written down in value based on the specific terms of the individual security if a prespecified trigger event occurs. Trigger events vary by instrument and are defined by the documents governing the contingent convertible security. Such trigger events may include a decline in the issuer's capital below a specified threshold level, an increase in the issuer's risk-weighted assets, the share price of the issuer falling to a particular level for a certain period of time and certain regulatory events. In addition, CoCos have no stated maturity and have fully discretionary coupons.

**Synthetic Convertible Securities.** Synthetic convertible securities are derivative instruments comprising two or more securities whose combined investment characteristics resemble those of a convertible security. A typical convertible security combines fixed income securities or preferred stock with an equity component, such as a warrant, which offers the potential to own the underlying equity security. The value of a synthetic convertible security may respond differently to market fluctuations than the value of a traditional convertible security in response to the same market fluctuations.

### **Debt Securities and Associated Risks**

**Debt Securities.** Debt securities are used by issuers to borrow money. The issuer usually pays a fixed, variable, or floating rate of interest and typically must repay the amount borrowed at the maturity of the instrument. Debt securities include, but are not limited to, bonds, debentures, government obligations, commercial paper, repurchase agreements, and pass-through

instruments. A debt security is typically considered "investment grade" if it is rated BBB/Baa or higher by a rating agency or if Lord Abbett determines the security to be of comparable quality. Prices of debt securities fluctuate and, in particular, are subject to several key risks including, but not limited to, interest rate risk, credit risk, prepayment risk, extension risk, and spread risk.

When interest rates rise or the issuer's or the counterparty's financial condition worsens or is perceived by the market to be at greater risk, the value of debt securities typically declines. Investments in debt securities may face a heightened level of interest rate risk. In recent years, the U.S. has experienced historically low interest rates, increasing the exposure of bond investors to the risks associated with rising interest rates. While fixed income securities with longer final maturities often have higher yields than those with shorter maturities due to their longer term and extended fixed payment schedule, their prices are usually more sensitive to changes in interest rates and other factors.

Changes in short-term market interest rates may affect the yield on investments in floating rate debt. If short-term market interest rates fall, the yield on such investments will also fall. Conversely, when short-term market interest rates rise, because of the lag between changes in such short-term rates and the re-setting of the floating rates on the floating rate debt, the impact of rising rates may be delayed. Substantial increases in interest rates may cause an increase in issuer defaults, as issuers may lack resources to meet high debt service requirements.

Credit risk, also known as default risk, represents the possibility that an issuer may be unable to meet scheduled interest and principal payment obligations. If the market perceives a deterioration in the creditworthiness of an issuer, the value and liquidity of debt securities issued by that issuer may decline. Spread risk is the potential for the value of an Account's debt security investments to fall due to the widening of spreads. Debt securities generally compensate for greater credit risk by paying interest at a higher rate. The difference (or "spread") between the yield of a security and the yield of a benchmark, such as a U.S. Treasury security with a comparable maturity, measures the additional interest paid for such greater credit risk. As the spread on a security widens (or increases), the price (or value) of the security falls. Spread widening may occur, among other reasons, as a result of market concerns over the stability of the market, excess supply, general credit concerns in other markets, security or market-specific credit concerns, or general reductions in risk tolerance.

Prepayment risk, also known as call risk, arises due to the issuer's ability to prepay all or most of the debt security before the stated final maturity date. Prepayments generally rise in response to a decline in interest rates as debtors take advantage of the opportunity to refinance their obligations. This risk often is associated with mortgage securities where the underlying mortgage loans can be refinanced, although it also can be present



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in corporate or other types of bonds with call provisions. When a prepayment occurs, an Account may be forced to reinvest in lower yielding debt securities. Extension risk is the chance that, during periods of rising interest rates, certain debt obligations will be paid off substantially more slowly than originally anticipated, and the value of those securities may fall. Extension risk generally is low for short-term bond strategies, moderate for intermediate term bond strategies, and high for long-term bond strategies.

Debt securities trade on an OTC basis in which parties buy and sell securities through bilateral transactions. While the total amount of assets invested in debt markets has grown in recent years, the capacity for traditional dealer counterparties to engage in debt trading has not kept pace and has decreased, in part due to regulations and capital requirements applicable to these entities. As a result, because market makers provide stability to a market through their intermediary services, a significant reduction in dealer inventories has decreased liquidity and potentially could increase volatility in the debt markets. Such issues may be exacerbated during periods of economic uncertainty or market volatility.

Economic, political, and other events also may affect the prices of broad debt markets, although the risks associated with such events are transmitted to the market via changes in the prevailing levels of interest rates, credit risk, prepayment risk, or spread risk.

Many debt securities use or may use a floating rate based on the London Interbank Offered Rate, or "LIBOR," which is the offered rate for short-term Eurodollar deposits between major international banks. On July 27, 2017, the head of the United Kingdom's ("UK") Financial Conduct Authority announced a desire to phase out the use of LIBOR by the end of 2021. On November 30, 2020, the administrator of LIBOR announced a delay in the phase out of a majority of the U.S. dollar LIBOR publications until June 30, 2023, although certain LIBOR rates ceased to be published or no longer are representative of the underlying market they seek to measure after December 31, 2021. Regulators and market participants are working together to identify or develop a replacement rate. For instance, the U.S. Federal Reserve, based on the recommendations of the New York Federal Reserve's Alternative Reference Rate Committee (comprised of major derivative market participants and their regulators), has begun publishing a Secured Overnight Funding Rate ("SOFR") that is intended to replace U.S. dollar LIBOR. There remains uncertainty regarding the future utilization of LIBOR and the nature of any replacement rate. As such, the potential effect of a transition away from LIBOR on an Account or the debt securities or other instruments in which an Account invests cannot yet be determined. The transition process might lead to increased volatility and illiquidity in markets that currently rely on LIBOR to determine interest rates. It could also lead to a reduction in the value of some

LIBOR-based investments and reduce the effectiveness of new hedges placed against existing LIBOR based instruments. Since the usefulness of LIBOR as a benchmark could deteriorate during the transition period, these effects could occur prior and/or subsequent to the extended transition period.

**Cash/Short-Term Instruments and Money Market Investments.** Cash/short-term instruments and money market investments include bank certificates of deposit, time deposits, bankers' acceptances, commercial paper, repurchase agreements, and other short-term corporate debt securities. The value of such securities may fluctuate based on changes in interest rates and the issuer's financial condition. When interest rates rise or the issuer's financial condition worsens or is perceived by the market to be at greater risk, the value of debt securities tends to decline.

**Defaulted Bonds and Distressed Debt.** Defaulted bonds are subject to greater risk of loss of income and principal than higher rated securities and are considered speculative. In the event of a default, an Account may incur additional expenses to seek recovery. The repayment of defaulted bonds is subject to significant uncertainties, and, in some cases, there may be no recovery of repayment. Further, defaulted bonds might be repaid only after lengthy workout or bankruptcy proceedings, during which the issuer might not make any interest or other payments. Workout or bankruptcy proceedings typically result in only partial recovery of cash payments or an exchange of the defaulted bond for other securities of the issuer or its affiliates. Often, the securities received are illiquid or speculative. Investments in securities following a workout or bankruptcy proceeding typically entail a higher degree of risk than investments in securities that have not recently undergone a reorganization or restructuring. Moreover, these securities can be subject to heavy selling or downward pricing pressure after the completion of a workout or bankruptcy proceeding. If an Account's evaluation of the anticipated outcome of an investment should prove inaccurate, the Account could experience a loss. Such securities obtained in exchange may include, but are not limited to, equity securities, warrants, rights, participation interests in sales of assets, and contingent interest obligations.

An Account may hold securities of issuers that are, or are about to be, involved in reorganizations, financial restructurings, or bankruptcy (also known as "distressed debt"). Defaulted bonds and distressed debt securities are speculative and involve substantial risks in addition to the risks of investing in junk bonds. To the extent that an Account holds distressed debt, that Account will be subject to the risk that it may lose a portion or all of its investment in the distressed debt and may incur higher expenses trying to protect its interests in distressed debt. The prices of distressed bonds are likely to be more sensitive to adverse economic changes or individual issuer developments than the prices of higher rated securities. During an economic downturn or substantial period of rising interest rates, distressed security issuers



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may experience financial stress that would adversely affect their ability to service their principal and interest payment obligations, to meet their projected business goals, or to obtain additional financing. An Account may invest in additional securities of a defaulted issuer to retain a controlling stake in any bankruptcy proceeding or workout. Even if an Account invests in tax-exempt bonds, it may receive taxable bonds in connection with the terms of a restructuring deal, which could result in taxable income to investors. In addition, any distressed securities or any securities received in exchange for such securities may be subject to restrictions on resale. In any reorganization or liquidation proceeding, an Account may lose its entire investment or may be required to accept cash or securities with a value less than its original investment. Moreover, it is unlikely that a liquid market will exist for an Account to sell its holdings in distressed debt securities.

**High-Yield or Lower-Rated Debt Securities.** Debt securities are typically considered “non-investment grade” (also referred to as “high yield debt securities,” “lower-rated debt securities,” or “junk bonds”) if they are rated BB/Ba or lower by a rating agency (or unrated by rating agencies but determined by Lord Abbett to be of comparable quality). Non-investment grade debt securities may pay a higher yield, but entail greater risks, than investment grade debt securities, and are considered speculative. When compared to investment grade debt securities, high-yield debt securities:

- have a higher risk of default and their prices can be much more volatile due to lower liquidity;
- tend to be less sensitive to interest rate changes;
- are susceptible to negative perceptions of the junk markets generally; and
- pose a greater risk that exercise of any of their redemption or call provisions in a declining market may result in their replacement by lower yielding bonds.

The risk of loss from default for the holders of high-yield debt securities is significantly greater than is the case for holders of other debt securities because such high-yield securities generally are unsecured, often are subordinated to the rights of other creditors of the issuers of such securities, and are issued by issuers with weaker financials.

An economic downturn could severely affect the ability of highly leveraged issuers of junk bond investments to service their debt obligations or to repay their obligations upon maturity. If an issuer of high-yield securities in which an Account is invested defaults, the Account may incur additional expenses to seek recovery. Investment by an Account in already defaulted securities poses an additional risk of loss should nonpayment of principal and interest continue for such securities. Even if such securities are held to maturity, the Account’s recovery of its initial investment and any anticipated income or appreciation is uncertain.

Because the risk of default is higher among high-yield debt securities, Lord Abbett’s research and analysis are important factors in the selection of such securities. Through portfolio diversification, good credit analysis, and attention to current developments and trends in interest rates and economic conditions, Lord Abbett seeks to reduce this risk. There can be no assurance, however, that this risk will, in fact, be reduced and that losses will not occur.

The secondary market for high-yield debt securities is not as liquid as, and is more volatile than, the secondary market for higher rated securities. In addition, market trading volume for lower-rated securities generally is lower and the secondary market for such securities could shrink or disappear suddenly and without warning as a result of adverse market or economic conditions, independent of any specific adverse changes in the condition of a particular issuer. Because of the lack of sufficient market liquidity, an Account may incur losses because it may be required to effect sales at a disadvantageous time and then only at a substantial drop in price. These factors may have an adverse effect on the market price and an Account’s ability to dispose of particular portfolio investments when needed to meet liquidity needs. A less liquid secondary market also may make it more difficult for an Account to obtain precise valuations of lower rated securities in its portfolio. Legislative and regulatory developments such as those discussed under “Debt Securities” have adversely affected the secondary market for high yield debt securities and the financial condition of issuers of these securities.

High-yield debt securities also present risks based on payment expectations. High-yield debt securities frequently contain “call” or buy-back features that permit the issuer to call or repurchase the security from its holder. If an issuer exercises such a “call option” and redeems the security, an Account may have to replace such security with a lower yielding security, resulting in a decreased return the Accounts.

**Inflation-Indexed Securities.** Inflation-indexed securities are fixed income securities whose principal value is periodically adjusted according to the rate of inflation. Two structures are common. The U.S. Treasury and some other issuers use a structure that accrues inflation into the principal value of the bond. Many other issuers pay out the CPI accruals as part of a semiannual coupon.

Inflation-indexed securities issued by the U.S. Treasury (“TIPS”) have maturities of five, ten, or thirty years, although it is possible that securities with other maturities will be issued in the future. TIPS pay interest on a semiannual basis, equal to a fixed percent-age of the inflation-adjusted principal amount. For example, if an Account purchased an inflation-indexed bond with a par value of \$1,000 and a 3% real rate of return coupon (payable 1.5% semiannually), and inflation over the first six months was 1%, the midyear par value of the bond would be \$1,010 and the first semiannual interest payment would be \$15.15 (\$1,010 times 1.5%). If inflation during the second half of the year resulted in



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the whole year's inflation equaling 3%, the end-of-year par value of the bond would be \$1,030 and the second semiannual interest payment would be \$15.45 (\$1,030 times 1.5%).

If the periodic adjustment rate measuring inflation falls, the principal value of the inflation-indexed bonds will be adjusted downward, and, consequently, the interest payable on these securities (calculated with respect to a smaller principal amount) will be reduced. At maturity, TIPS are redeemed at the greater of their inflation adjusted principal and the par amount at original issue. If an inflation-indexed bond does not provide a guarantee of principal at maturity, the adjusted principal amount of the bond repaid at maturity may be less than the original principal amount. Other types of inflation-indexed bonds may be adjusted in response to changes in the rate of inflation by different mechanisms (such as by changes in the rates of interest paid on their principal amounts).

The values of inflation-indexed bonds are expected to change in response to changes in real interest rates, which are tied to the relationship between nominal interest rates and the rate of inflation. For example, if inflation were to rise at a faster rate than nominal interest rates, real interest rates would likely decline, leading to an increase in value of inflation-indexed bonds. In contrast, if nominal interest rates increase at a faster rate than inflation, real interest rates would likely rise, leading to a decrease in value of inflation-indexed bonds.

While these securities, if held to maturity, are expected to be protected to some extent from long-term inflationary trends, short-term increases in inflation may lead to a decline in value. If nominal interest rates rise due to reasons other than inflation (for example, due to changes in currency exchange rates or an expansion of noninflationary economic activity), investors in these securities may not be protected to the extent that the increase is not reflected in the bond's inflation measure.

The periodic inflation adjustment of U.S. inflation-indexed bonds is tied to the Consumer Price Index for Urban Consumers ("CPI-U"), which is calculated monthly by the U.S. Bureau of Labor Statistics. The CPI-U is a measurement of price changes in the cost of living, made up of components such as housing, food, transportation, and energy. Inflation-indexed bonds issued by a foreign government generally are adjusted to reflect a comparable inflation index, calculated by that government. There can be no assurance that the CPI-U or any foreign inflation index will accurately measure the real rate of inflation in the prices of goods and services. Moreover, there can be no assurance that the rate of inflation in a foreign country will be correlated to the rate of inflation in the United States. Any increase in the principal amount of an inflation-indexed bond will be considered taxable ordinary income, even though investors do not receive their principal until maturity.

**Short Duration Risk:** Although any rise in interest rates is likely to cause the prices of debt obligations to fall, the comparatively

short duration of certain short duration bonds may mitigate some of this risk. Such short duration bonds generally will earn less income and, during periods of declining interest rates, will provide lower total returns to investors than funds with longer durations.

**Zero Coupon, Deferred Interest, Pay-In-Kind, and Capital Appreciation Bonds.** Zero coupon, deferred interest, and capital appreciation bonds are issued at a discount from their face value because interest payments typically are postponed until maturity. These securities also may take the form of debt securities that have been stripped of their unmatured interest coupons, the coupons themselves, or receipts or certificates representing interests in such stripped debt obligations or coupons. Pay-in-kind bonds allow the issuer, at its option, to make current interest payments on the bonds either in cash or in additional bonds. Similar to zero coupon bonds and deferred interest bonds, Pay-in-kind securities are designed to give an issuer flexibility in managing cash flow. Pay-in-kind securities that are debt securities can be either senior or subordinated debt.

As the buyer of these types of securities, an Account will recognize a rate of return determined by the gradual appreciation of the security, which is redeemed at face value on a specified maturity date. The discount varies depending on the time remaining until maturity, as well as market interest rates, liquidity of the security, and the issuer's perceived credit quality. The discount in the absence of financial difficulties of the issuer typically decreases as the final maturity date approaches. Moreover, unlike securities that periodically pay interest to maturity, zero coupon, deferred interest, capital appreciation, and Pay-in-kind securities involve the additional risk that an Account will realize no cash until a specified future payment date unless a portion of such securities are sold and, if the issuer of such securities defaults, the Account may obtain no return at all on its investment.

The values of zero-coupon and pay-in-kind bonds are more volatile in response to interest rate changes than debt obligations of comparable maturities that make regular distributions of interest.

### **Derivatives and Associated Risks**

**Derivatives.** An Account may invest in, or enter into, derivatives for a variety of reasons, including to hedge certain market or interest rate risks, to provide a substitute for purchasing or selling particular securities, or to increase potential returns. Generally, derivatives are financial contracts whose values depend upon, or are derived from, the value of an underlying asset, reference rate or index, and may relate to stocks, bonds, interest rates, currencies or currency exchange rates, commodities and other assets, and related indices. Examples of derivative instruments an Account may use include options contracts, futures contracts, options on futures contracts, forward contracts, forward currency contracts, structured notes, swap agreements, and credit derivatives. Derivatives may provide a cheaper, quicker, or more efficient or specifically focused way for an Account to invest or to



## APPENDIX 2 (CONT.)

hedge than “traditional” securities would. An Account’s portfolio management team, however, may decide not to employ some or all of these strategies. Similarly, suitable derivatives transactions may not be available or available on the terms desired, and derivatives transactions may not perform as intended. There is no assurance that any derivatives strategy used by Lord Abbett will succeed.

The use of derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments. Derivatives are subject to a number of risks, such as liquidity risk, correlation risk, market risk, credit risk, leveraging risk, counterparty risk, tax risk and management risk, as well as risks arising from changes in applicable requirements. Derivatives can be volatile and involve various types and degrees of risk, depending upon the characteristics of the particular derivative and the portfolio as a whole. Derivatives permit an Account to increase or decrease the level of risk, or change the character of the risk, to which its portfolio is exposed in much the same way as an Account can increase or decrease the level of risk, or change the character of the risk, of its portfolio by making investments in specific securities. However, derivatives may entail investment exposures that are greater than their cost or notional value would suggest, meaning that a small investment in derivatives could have a large potential impact on an Account’s performance. An Account’s notional derivatives exposure and/or the percentage of total investment exposure may be greater than the total value of its assets, which would have the result of leveraging the Account.

If Lord Abbett invests in derivatives at inopportune times or judges market conditions incorrectly, such investments may lower an Account’s return or result in a loss. An Account also could experience losses if its derivatives were poorly correlated with its other investments (or not correlated as expected), or if the Account were unable to liquidate its position because of an illiquid secondary market. The market for many derivatives is, or suddenly can become, illiquid. Changes in liquidity may result in significant, rapid, and unpredictable changes in the prices for derivatives.

Derivatives may be purchased on established exchanges or through privately negotiated transactions (referred to as “OTC derivatives”). OTC derivatives generally are less liquid than exchange-traded derivatives. Exchange-traded derivatives generally are guaranteed by the clearing agency that is the issuer or counterparty to such derivatives. In contrast, OTC derivatives are not guaranteed by a clearing agency and are therefore not subject to the same level of credit evaluation and regulatory oversight as are centrally cleared derivatives. Accordingly, Lord Abbett will consider the credit worthiness of counterparties to non-centrally cleared OTC derivatives in the same manner as it would review the credit quality of a security to be purchased by an Account.

The Account will be subject to credit risk with respect to the counterparties to derivative contracts. There can be no assurance

that a counterparty will be able or willing to meet its obligations. Events that affect the ability of the Account’s counterparties to comply with the terms of the derivative contracts may have an adverse effect on the Account. If the counterparty defaults, the Account will have contractual remedies, but there can be no assurance that the Account will succeed in enforcing those contractual remedies. Counterparty risk still exists even if a counterparty’s obligations are secured by collateral because the Account’s interest in collateral may not be perfected or additional collateral may not be promptly posted as required. Counterparty risk also may be more pronounced if a counterparty’s obligations exceed the amount of collateral held by the Account, if any, the Account is unable to exercise the interest in collateral upon default by the counterparty, or the termination value of the instrument varies significantly from the marked-to-market value of the instrument. If a counterparty becomes insolvent, the Account may experience significant delays in obtaining any recovery under the derivative contract in a bankruptcy or other reorganization proceeding or may obtain a limited or no recovery of amounts due under the derivative contract. In the event of a counterparty’s (or its affiliate’s) insolvency, an Account’s ability to exercise remedies, such as the termination of transactions, netting of obligations and realization of collateral, could be stayed or eliminated under new special resolution regimes adopted in the United States, the European Union and various other jurisdictions. Such regimes provide government authorities with broad authority to intervene when a financial institution is experiencing financial difficulty and may prohibit an Account from exercising termination rights based on the financial institution’s insolvency. In particular, with respect to counterparties who are subject to such proceedings in the European Union, the liabilities of such counterparties to an Account could be reduced, eliminated, or converted to equity in such counterparties (sometimes referred to as a “bail in”). Such resolution regimes as well as other legislative and regulatory oversight of derivatives may result in increased uncertainty about counterparty credit risk, and may limit the flexibility of the Account to protect its interests in the event of an insolvency of a derivatives counterparty.

Transactions in certain types of derivatives including futures and options on futures as well as some types of swaps are required to be centrally cleared. In a transaction involving such derivatives, the Account’s counterparty is a clearing house so the Account is subject to the credit risk of the clearing house and the member of the clearing house (the “clearing member”) through which it holds its position. Credit risk of market participants with respect to such derivatives is concentrated in a few clearing houses, and it is not clear how an insolvency proceeding of a clearing house would be conducted and what impact an insolvency of a clearing house would have on the financial system. A clearing member is generally obligated to segregate all funds received from customers with respect to cleared derivatives transactions from the clearing member’s proprietary assets. However, all funds and



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other property received by a clearing broker from its customers are generally held by the clearing member on a commingled basis in an omnibus account, and the clearing member may invest those funds in certain instruments permitted under the applicable regulations. The assets of the Account might not be fully protected in the event of the bankruptcy of the Account's clearing member, because the Account would be limited to recovering only a pro rata share of all available funds segregated on behalf of the clearing broker's customers for a relevant account class. In addition, if a clearing member does not comply with applicable regulations or its agreement with the Account, or in the event of fraud or misappropriation of customer assets by a clearing member, the Account could have only an unsecured creditor claim in an insolvency of the clearing member with respect to the margin held by the clearing member.

**Credit Derivatives.** An Account may engage in credit derivative transactions, such as those involving default price risk derivatives and market spread derivatives. Default price risk derivatives are linked to the price of reference securities or loans after a default by the issuer or borrower, respectively. Market spread derivatives are based on the risk that changes in certain market factors, such as credit spreads, can cause a decline in the value of a security, loan, or index. There are three basic transactional forms for credit derivatives: swaps, options, and structured instruments. The use of credit derivatives is a highly specialized activity that involves strategies and risks different from those associated with ordinary portfolio security transactions. If Lord Abbett is incorrect in its forecasts of default risks, market spreads, or other applicable factors, the investment performance of an Account would diminish compared with what it would have been if these techniques were not used. Moreover, even if Lord Abbett is correct in its forecasts, there is a risk that a credit derivative position may correlate imperfectly with the price of the asset or liability being hedged. An Account's risk of loss in a credit derivative transaction varies with the form of the transaction. For example, if an Account purchases a default option on a security, and, if no default occurs, with respect to the security, an Account's loss is limited to the premium it paid for the default option. In contrast, if there is a default by the grantor of a default option, an Account's loss will include both the premium it paid for the option and the decline in value of the underlying security that the default option hedged. If an Account "writes" (sells) protection, it may be liable for the entire value of the security underlying the derivative.

**Swap Agreements.** An Account may enter into interest rate, equity index, credit default, currency, Consumer Price Index ("CPI"), total return, municipal default, and other types of swap agreements. An Account may also enter into swaptions (options on swaps). A swap transaction involves an agreement between two parties to exchange different types of cash flows based on a specified or "notional" amount. The cash flows exchanged in a specific

transaction may be, among other things, payments that are the equivalent of interest on a principal amount, payments that would compensate the purchaser for losses on a defaulted security or basket of securities, or payments reflecting the performance of one or more specified securities, currencies, or indices. An Account may enter into OTC swap transactions and may also enter into swaps that are traded on exchanges and are subject to central clearing. OTC swaps are subject to the credit risk of the counterparty, as well as the risks associated with the swap itself.

**Regulatory and Market Considerations.** New U.S. and non-U.S. rules and regulations could, among other things, further restrict an Account's ability to engage in, or increase the cost to an Account of, derivatives transactions by, for example, making some types of derivatives no longer available to an Account or making them less liquid. The implementation of the clearing requirement has increased the costs of derivatives transactions for an Account, because an Account has to pay fees to its clearing members and is typically required to post more margin for cleared derivatives than it has historically posted for bilateral derivatives. The costs of derivatives transactions are expected to increase further as clearing members raise their fees to cover the costs of additional capital requirements and other regulatory changes applicable to the clearing members. These rules and regulations are new and evolving, so their potential impact on an Account and the financial system are not yet known. While the new rules and regulations and central clearing of some derivatives transactions are designed to reduce systemic risk (i.e., the risk that the interdependence of large derivatives dealers could cause them to suffer liquidity, solvency, or other challenges simultaneously), there is no assurance that they will achieve that result, and, in the meantime, central clearing and related requirements expose an Account to new kinds of costs and risks.

**Additional Risks Associated with Swaps.** The use of swaps is a highly specialized activity that involves investment techniques and risks that are different from those associated with ordinary portfolio securities transactions. If Lord Abbett is incorrect in its forecasts of the interest rates, currency exchange rates, or market values, or its assessments of the credit risks, the investment performance of an Account may be less favorable than it would have been if the Account had not entered into them. Because many of these arrangements are bilateral agreements between an Account and its counterparty, each party is exposed to the risk of default by the other. In addition, they may involve a small investment of cash compared to the risk assumed with the result that small changes may produce disproportionate and substantial gains or losses to an Account. An Account's obligations under swap agreements generally are collateralized by cash or government securities based on the amount by which the value of the payments that the Account is required to make exceeds the value of the payments that its counterparty is required to make. Conversely, the Account requires its counterparties to provide



## APPENDIX 2 (CONT.)

collateral on a comparable basis, except in those instances in which Lord Abbett is satisfied with the claims-paying ability of the counterparty without such collateral.

**Equity Securities and Associated Risks**

**Equity Securities.** Equity securities generally represent equity or ownership interests in an issuer. These include common stocks, preferred stocks, convertible preferred stocks, warrants, and similar instruments. The value of equity securities fluctuates based on changes in a company's financial condition, and on market, economic, and political conditions, as well as changes in inflation and consumer demand.

**Common Stocks.** Common stocks represent an ownership interest in a company. The prices of common stocks generally fluctuate more than the prices of other securities and reflect changes in, among other things, a company's financial condition and in overall market, economic, and political conditions, changes in inflation, and consumer demand. A company's common stock generally is a riskier investment than its fixed income securities, and it is possible that an Account may experience a substantial or complete loss on an individual equity investment.

**Initial Public Offering ("IPO").** An Account may purchase securities of companies that are offered pursuant to an IPO. IPOs are typically new issues of equity and fixed income securities. IPOs have many of the same risks as small company stocks and bonds. IPOs do not have trading history, and information about the company may be available only for recent periods. An Account's purchase of shares or bonds issued in IPOs also exposes it to the risks inherent in those sectors of the market where these new issuers operate. The market for IPO issuers has been volatile and share and bond prices of newly priced companies have fluctuated in significant amounts over short periods of time. An Account may be limited in the quantity of IPO and secondary offering shares and bonds that it may buy at the offering price, or an Account may be unable to buy any shares or bonds of an IPO or secondary offering at the offering price. An Account's investment return earned during a period of substantial investment in IPOs may not be sustained during other periods when an Account makes more limited, or no, investments in IPOs. As the size of an Account increases, the impact of IPOs on an Account's performance generally would decrease; conversely, as the size of an Account decreases, the impact of IPOs on an Account's performance generally would increase.

**Preferred Stocks.** Preferred stocks are securities that evidence ownership in a corporation and pay a fixed or variable stream of dividends. These stocks represent an ownership interest and provide the holder with claims on the issuer's earnings and assets, which generally come before common stockholders but after bond holders and other creditors. The obligations of an issuer of preferred stock, including dividend and other payment obligations, typically may not be accelerated by the holders of such preferred stock on the occurrence of an event of default or

other non-compliance by the issuer. Investments in preferred stock are also subject to market and liquidity risks. The value of a preferred stock may be highly sensitive to the economic condition of the issuer, and markets for preferred stock may be less liquid than the market for the issuer's common stock.

**Warrants and Rights.** Warrants and rights are types of securities that give a holder a right to purchase shares of common stock. Warrants are options to buy from the issuer a stated number of shares of common stock at a specified price, usually higher than the market price at the time of issuance, until a stated expiration date. Rights represent a privilege offered to holders of record of issued securities to subscribe (usually on a pro rata basis) for additional securities of the same class, of a different class or of a different issuer, usually at a price below the initial offering price of the common stock and before the common stock is offered to the general public. The holders of warrants and rights have no voting rights, receive no dividends and have no rights with respect to the assets of the issuer. Warrants and rights may be transferable. The value of a warrant or right may not necessarily change with the value of the underlying securities. The risk of investing in a warrant or a right is that the warrant or the right may expire before the market value of the common stock exceeds the price specified by the warrant or the right. If not exercised before their stated expiration date, warrants and rights cease to have value and may result in a total loss of the money invested. Investments in warrants and rights are considered speculative.

**Dividend Risk:** Depending on market conditions, securities of dividend paying companies that meet an Account's investment criteria may not be widely available. At times, the performance of dividend-paying companies may lag the performance of other companies or the broader market as a whole. In addition, the dividend payments of an Account's portfolio companies may vary over time, and there is no guarantee that a company will pay a dividend at all. The reduction or elimination of dividends in the stock market as a whole may limit an Account's ability to produce current income. If dividend-paying companies are highly concentrated in only a few market sectors, then an Account's portfolio may become less diversified, and the Account's return may become more volatile.

**Growth Investing Risk:** Growth stocks typically trade at higher multiples of current earnings as compared to other stocks, which may lead to inflated prices. Growth stocks often are more sensitive to market fluctuations than other securities because their market prices are highly sensitive to future earnings expectations. At times when it appears that these expectations may not be met, growth stocks' prices typically fall. Growth stocks are subject to potentially greater declines in value if, among other things, the stock is subject to significant investor speculation but fails to increase as anticipated. In addition, different investment styles may shift in and out of favor, depending on market and economic conditions as well as investor



## APPENDIX 2 (CONT.)

sentiment, which may cause an Account to underperform other funds that employ a different or more diversified style. During periods when growth investing is out of favor or when markets are unstable, selling growth stocks at a desired price may be more difficult. Growth stocks may be more volatile than securities of slower-growing issuers.

**Value Investing Risk:** The prices of value stocks may lag the stock market for long periods of time if the market fails to recognize the company's intrinsic worth. Value investing also is subject to the risk that a company judged to be undervalued may actually be appropriately priced or even overpriced. In addition, different investment styles may shift in and out of favor, depending on market and economic conditions as well as investor sentiment, which may cause an Account to underperform other funds that employ a different or more diversified style.

### **Foreign Currency and Associated Risks**

**Foreign Currency Transactions.** An Account may enter into foreign currency transactions for a variety of purposes, including: to fix in U.S. dollars, between trade and settlement date, the value of a security an Account has agreed to buy or sell; to hedge the U.S. dollar value of securities an Account already owns, particularly if it expects a decrease in the value of the currency in which the foreign security is denominated; or to gain or reduce exposure to the foreign currency for investment purposes.

An Account also may invest directly in foreign currencies or hold financial instruments that provide exposure to foreign currencies or may invest in securities that trade in, or receive revenues in, foreign currencies. To the extent an Account invests in such currencies, it will be subject to the risk that those currencies will decline in value relative to the U.S. dollar. Foreign currency exchange rates may fluctuate significantly over short periods of time. An Account's assets that are denominated in foreign currencies may be devalued against the U.S. dollar, resulting in a loss. A U.S. dollar investment in depositary receipts or shares of foreign issuers traded on U.S. exchanges may be impacted differently by currency fluctuations than would an investment made in a foreign currency on a foreign exchange in shares of the same issuer.

An Account may engage in "spot" (cash or currency) transactions and also may use forward contracts. A forward contract on foreign currencies, which is also known as a forward currency contract, involves obligations of one party to purchase, and another party to sell, a specific currency at a future date (which may be any fixed number of days from the date of the contract agreed upon by the parties), at a price set at the time the contract is entered into. These contracts typically are traded in the OTC derivatives market and entered into directly between financial institutions or other currency traders and their customers. The cost to an Account of engaging in forward currency contracts varies with factors such as the currencies involved, the length of the contract period, and the market conditions then prevailing, among others. The use of forward currency contracts does

not eliminate fluctuations in the prices of the underlying securities an Account owns or intends to acquire, but it does fix a rate of exchange in advance. In addition, although forward currency contracts limit the risk of loss due to a decline in the value of the hedged currencies, at the same time they limit any potential gain that might result should the value of the currencies increase.

An Account may enter into forward currency contracts with respect to specific transactions. For example, when an Account enters into a contract for the purchase or sale of a security denominated in a foreign currency, or when an Account anticipates the receipt in a foreign currency of dividend or interest payments on a security that it holds, the Account may desire to "lock in" the U.S. dollar price of the security or the U.S. dollar equivalent of the payment, by entering into a forward currency contract for the purchase or sale, for a fixed amount of U.S. dollars or foreign currency, of the amount of foreign currency involved in the underlying transaction. If the transaction went as planned, the Account would be able to protect itself against a possible loss resulting from an adverse change in the relationship between the currency exchange rates during the period between the date on which the security is purchased or sold, or on which the payment is declared, and the date on which such payments are made or received.

An Account also may use forward currency contracts in connection with existing portfolio positions to lock in the U.S. dollar value of those positions, to increase the Account's exposure to foreign currencies that Lord Abbett believes may rise in value relative to the U.S. dollar, or to shift the Account's exposure to foreign currency fluctuations from one country to another. For example, when Lord Abbett believes that the currency of a particular foreign country may suffer a substantial decline relative to the U.S. dollar or another currency, it may enter into a forward currency contract to sell the former foreign currency. This investment practice generally is referred to as "cross-hedging" if two non U.S. currencies are used. However, an Account's foreign currency transactions are not limited to transactions that involve a sale or purchase of a security.

An Account may also enter into forward currency contracts that are contractually required to, or may, settle in cash, including nondeliverable forward currency contracts ("NDFs"). Cash settled forward currency contracts, including NDFs, generally require the netting of the parties' liabilities. Under a cash-settled forward currency contract that requires netting, an Account or its counterparty to the contract is required only to deliver a cash payment in the amount of its net obligation in settlement of the contract. Forward currency contracts are marked-to-market on a daily basis, and an Account may be required to post collateral to a counterparty pursuant to the terms of a forward currency contract if the Account has a net obligation under the contract.

Likewise, an Account may be entitled to receive collateral under the terms of a forward contract if the counterparty has a net obligation under the contract. A forward contract generally requires





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the delivery of initial margin by an Account. Forward currency contracts, including NDFs, typically have maturities of approximately one to three months but may have maturities of up to six months or more.

The precise matching of the forward currency contract amounts and the value of the securities involved generally will not be possible because the future value of such securities in foreign currencies will change as a consequence of market movements in the value of those securities between the date the forward currency contract is entered into and the date it matures. Accordingly, it may be necessary for an Account to purchase additional foreign currency on the spot market (and bear the expense of such purchase) if the market value of the security is less than the amount of foreign currency an Account is obligated to deliver and if a decision is made to sell the security and make delivery of the foreign currency.

Conversely, it may be necessary to sell on the spot market some of the foreign currency received upon the sale of the portfolio security if its market value exceeds the amount of foreign currency an Account is obligated to deliver. The projection of short-term currency market movements is extremely difficult, and the successful execution of a short-term hedging strategy is highly uncertain. Forward currency contracts involve the risk that anticipated currency movements may not be accurately predicted, causing an Account to sustain losses on these contracts and transaction costs. At or before the maturity date of a forward currency contract that requires an Account to sell a currency, an Account may either sell a portfolio security and use the sale proceeds to make delivery of the currency or retain the security and offset its contractual obligation to deliver the currency by purchasing a second contract pursuant to which an Account will obtain, on the same maturity date, the same amount of the currency that it is obligated to deliver. Similarly, an Account may close out a forward currency contract requiring it to purchase a specified currency by entering into a second contract entitling it to sell the same amount of the same currency on the maturity date of the first contract. An Account would realize a gain or loss as a result of entering into such an offsetting forward currency contract under either circumstance to the extent the exchange rate between the currencies involved moved between the execution dates of the first and second contracts. On the delivery date, a forward currency contract can be settled by physical delivery.

There is no systematic reporting of last sale information for foreign currencies or any regulatory requirement that quotations be firm or revised on a timely basis. Quotation information generally is representative of very large transactions in the interbank market and may not reflect smaller transactions where rates may be less favorable.

### ***Foreign and Emerging Market Securities and Associated Risks***

**Foreign Securities.** Investment in foreign securities may involve special risks that typically are not associated with investments in U.S. securities. Foreign investment risks may be greater in developing and emerging markets than in developed markets. The risks associated with foreign securities include, among other things, the following:

- The prices of foreign securities may be adversely affected by changes in currency exchange rates, changes in foreign or U.S. laws or restrictions applicable to foreign securities, and changes in exchange control regulations (i.e., currency blockage). A decline in the exchange rate of the foreign currency in which a portfolio security is quoted or denominated relative to the U.S. dollar would reduce the U.S. dollar value of the portfolio security. Currency exchange rates may fluctuate significantly over short periods of time, for a number of reasons.
- Brokerage commissions, custodial services, and other costs relating to investment in foreign securities markets generally are more expensive than in the United States.
- Clearance and settlement procedures may be different in foreign countries and, in certain markets, such procedures may be unable to keep pace with the volume of securities transactions, thus making it difficult to conduct such transactions.
- Issuers of non-U.S. securities are subject to different, often less comprehensive, accounting, custody, reporting, and disclosure requirements than U.S. issuers, and Accounts investing in foreign securities may be affected by delayed settlements in some non-U.S. markets. Additionally, there may be less publicly available information about a foreign issuer than about a comparable U.S. issuer.
- There generally is less government regulation of foreign markets, companies, and securities dealers than in the United States. Consequently, the investor protections that are in place may be less stringent than in the United States.
- Foreign securities markets may have substantially less trading volume than U.S. securities markets, and securities of many foreign issuers are less liquid and more volatile than securities of comparable domestic issuers.
- With respect to certain foreign countries, there is a possibility of nationalization, expropriation or confiscatory taxation, imposition of withholding or other taxes on dividend or interest payments (or, in some cases, capital gains), limitations on the removal of funds or other assets of an Account, and political or social instability, diplomatic developments, or the imposition of economic sanctions, or other government restrictions that could adversely affect investments tied economically to those countries.



## APPENDIX 2 (CONT.)

Markets and economies throughout the world are becoming increasingly interconnected, and conditions or events in one market, country or region may adversely impact investments or issues in another market, country or region. Many countries throughout the world are dependent on a healthy U.S. economy and are adversely affected when the U.S. economy weakens or its markets decline. Additionally, many foreign country economies are heavily dependent on international trade and are adversely affected by protective trade barriers and economic conditions of their trading partners.

**Emerging Market Securities.** The risks described above apply to an even greater extent to investments in emerging markets, which may be considered speculative. Emerging markets may develop unevenly or may never fully develop and are more likely to experience hyperinflation and currency devaluations, which may be sudden and significant. In addition, the securities and currencies of many of emerging market countries may have far lower trading volumes and less liquidity than those of developed nations. If an Account's investments need to be liquidated quickly, the Account could sustain significant transaction costs.

Securities and issuers in emerging countries tend to be subject to less extensive and frequent accounting, financial, and other reporting requirements than securities and issuers in more developed countries. The Public Company Accounting Oversight Board, which regulates auditors of U.S. public companies, is unable to inspect audit work papers in certain foreign countries. Investors in foreign countries often have limited rights and few practical remedies to pursue shareholder claims, and the ability of the SEC, the U.S. Department of Justice and other authorities to bring and enforce actions against foreign issuers or foreign persons is limited. Government enforcement of existing securities regulations is limited, and any such enforcement may be arbitrary and the results may be difficult to predict. Further, investing in securities of issuers located in certain emerging market countries may present a greater risk of loss resulting from problems in security registration and custody.

Many emerging market countries have histories of political instability and abrupt changes in policies. As a result, their governments may be more likely to take actions that are hostile or detrimental to foreign investment than those of more developed countries, such as expropriation, confiscatory taxation, and nationalization of assets and securities. Certain emerging market countries also may face other significant internal or external risks, including a heightened risk of war, and ethnic, religious, and racial conflicts, and the imposition of economic sanctions or other measures by the United States or other governments. The economies of emerging countries may be predominantly based on only a few industries or dependent on revenues from particular commodities. In addition, governments in many emerging market countries participate to a significant degree in their economies and securities markets, which may impair investment

and economic growth, and which may, in turn, diminish the value of their currencies. If a company's economic fortunes are linked to emerging markets, then a security it issues generally will be subject to these risks even if the security is principally traded on a non-emerging market exchange.

**Depository Receipts.** An Account may invest in American Depositary Receipts ("ADRs"), Global Depositary Receipts ("GDRs"), and similar depository receipts. ADRs typically are trust receipts issued by a U.S. bank or trust company or other financial institution (a "depository") that evidence an indirect interest in underlying securities issued by a foreign entity and deposited with the depository. Prices of ADRs are quoted in U.S. dollars, and ADRs are listed and traded in the United States. GDRs typically are issued by non-U.S. banks or financial institutions (a "foreign depository") to evidence an interest in underlying securities issued by either a U.S. or a non-U.S. entity and deposited with the foreign depository. Ownership of ADRs and GDRs entails similar investment risks to direct ownership of foreign securities traded outside the United States, including increased market, liquidity, currency, political, information, and other risks. To the extent an Account acquires depository receipts through banks that do not have a contractual relationship to issue and service unsponsored depository receipts with the foreign issuer of the underlying security underlying the depository receipts, there is an increased possibility that Lord Abbett will not become aware of, and, thus, be able to respond to, corporate actions such as stock splits or rights offerings involving the issuer in a timely manner. In addition, the lack of information may affect the accuracy of the valuation of such instruments. The market value of depository receipts is dependent upon the market value of the underlying securities and fluctuations in the relative value of the currencies in which the depository receipts and the underlying securities are quoted. However, by investing in certain depository receipts, such as ADRs, which are quoted in U.S. dollars, an Account may avoid currency risks during the payment and delivery ("settlement") period for purchases and sales.

**Forward and Futures and Associated Risks**

**Forward Contracts.** A forward contract is a contract to buy or sell an underlying security or currency at a pre-determined price on a specific future date. The initial terms of the contract are set so that the contract has no value at the outset. Forward prices are obtained by taking the spot price of a security or currency and adding it to the cost of carry. No money is transferred upon entering into a forward contract and the trade is delayed until the specified date when the underlying security or currency is exchanged for cash. As the price of the underlying security or currency moves, the value of the contract also changes, generally in the same direction. A relatively small price movement in a forward contract may result in substantial losses to an Account, exceeding the amount of the margin paid. Forward contracts increase an Account's risk exposure to the underlying references



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and their attendant risks, including but not limited to, credit, market, foreign currency and interest rate risks, while also exposing an Account to correlation, counterparty, hedging, leverage, liquidity, pricing, and volatility risks.

Forward contracts generally involve the same characteristics and risks as futures contracts, except for several differences. Forward contracts are generally OTC contracts, meaning they are not market traded, and are not necessarily marked to market on a daily basis. They settle only at the pre-determined settlement date, which can result in deviations between forward prices and futures prices, especially in circumstances where interest rates and futures prices are positively correlated. In addition, in the absence of exchange trading and involvement of clearing houses, there are no standardized terms for forward contracts. As a result, the parties are free to establish such settlement times and underlying amounts of a security or currency as desirable, which may vary from the standardized terms available through any futures contract. Lastly, forward contracts, as two-party obligations for which there is no secondary market, involve additional counterparty credit risk that is not present with futures.

### **Futures Contracts and Options on Futures Contracts.**

An Account may buy and sell index futures contracts to manage cash. For example, an Account may gain exposure to an index or to a basket of securities by entering into futures contracts rather than buying securities in a rising market.

In addition to investing in futures for cash management purposes, an Account may enter into futures and options on futures transactions in accordance with its investment objective and policies, for example, to hedge risk or to efficiently gain desired investment exposure. Futures are standardized, exchange-traded contracts to buy or sell a specified quantity of an underlying reference instrument at a specified price at a specified future date. In most cases, the contractual obligation under a futures contract may be offset or "closed out" before the settlement date so that the parties do not have to make or take delivery. An Account usually closes out a futures contract by buying or selling, as the case may be, an identical, offsetting futures contract. This transaction, which is effected through an exchange, cancels the obligation to make or take delivery of the underlying reference instrument. An option on a futures contract gives the purchaser the right (and the writer of the option the obligation) to assume a position in a futures contract at a specified exercise price within a specified period of time. In the United States, a clearing organization associated with the exchange on which futures are traded assumes responsibility for closing out transactions and guarantees that, as between the clearing members of an exchange, the sale and purchase obligations will be performed with regard to all positions that remain open at the termination of the contract. Thus, each holder of such a futures contract bears the credit risk of the clearinghouse (and has the benefit of its financial strength) rather than that of a particular counterparty.

When an Account enters into a futures contract or writes an option, it generally must deposit collateral or "initial margin" equal to a percentage of the contract value. Each day thereafter until the futures contract or option is closed out, matures, or expires, an Account will pay or receive additional "variation margin" depending on, among other factors, changes in the price of the underlying reference instrument. When the futures contract is closed out, if an Account experiences a loss equal to or greater than the margin amount, the Account will pay the margin amount plus any amount in excess of the margin amount. If an Account experiences a loss of less than the margin amount, the Account receives the difference. Likewise, if an Account experiences a gain, the Account receives the margin amount and any gain in excess of the margin amount.

Although some futures contracts call for making or taking delivery of the underlying securities, commodities, or other assets, generally these obligations are closed out before delivery by offsetting purchases or sales of matching futures contracts (same exchange, delivery month, and underlying security, asset, or index). Certain futures contracts may permit cash settlement.

If an offsetting purchase price is less than the original sale price, an Account realizes a gain, or if it is more, an Account realizes a loss. Conversely, if an offsetting sale price is more than the original purchase price, an Account realizes a gain, or if it is less, an Account realizes a loss. An Account will also incur transaction costs.

An Account may enter into futures contracts in U.S. domestic markets or on exchanges located outside the United States. Foreign markets may offer advantages such as trading opportunities or arbitrage possibilities not available in the United States. Foreign markets, however, may have greater risk potential than domestic markets. For example, some foreign exchanges are principal markets so that no common clearing facility exists and an investor may look only to the broker for performance of the contract. In addition, adverse changes in the currency exchange rate could eliminate any profits that an Account might realize in trading and could cause the Account to incur losses.

Futures contracts and options on futures contracts present substantial risks, including the following:

- Unanticipated market movements may cause an Account to experience substantial losses.
- There may be an imperfect correlation between the change in the market value of the underlying reference instrument and the price of the futures contract.
- The loss that an Account may incur in entering into futures contracts and in writing call options on futures is potentially unlimited and may exceed the amount of the premium received.



## APPENDIX 2 (CONT.)

- Futures markets are highly volatile, and the use of futures may increase the volatility of an Account's portfolio value.
- Because of low initial margin requirements, futures and options on futures trading involve a high degree of leverage.
- As a result, a relatively small price movement in a contract can cause substantial losses to an Account.
- There may not be a liquid secondary trading market for a futures contract or related options, limiting an Account's ability to close out a contract when desired.
- The clearinghouse on which a futures contract or option on a futures contract is traded or the clearing member through which the Account maintains its future positions may fail to perform its obligations.

**Index and Interest Rate Futures Transactions.** An index future obligates an Account to pay or receive an amount of cash equal to a fixed dollar amount specified in the futures contract multiplied by the difference between the settlement price of the contract on the contract's last trading day and the value of the index based on the prices of the securities that comprise the index at the opening of trading in such securities on the next business day.

The market value of a stock index futures contract is based primarily on the value of the underlying index. Changes in the value of the index will cause roughly corresponding changes in the market price of the futures contract. If a stock index is established that is made up of securities whose market characteristics closely parallel the market characteristics of the securities in an Account's portfolio, then the market value of a futures contract on that index should fluctuate in a way closely resembling the market fluctuation of the portfolio. Thus, for example, if an Account sells futures contracts, a decline in the market value of the portfolio will be offset by an increase in the value of the short futures position to the extent of the hedge (i.e., the size of the futures position). However, if the market value of the portfolio were to increase, an Account would lose money on the futures contracts. Stock index futures contracts are subject to the same risks as other futures contracts.

An interest rate future generally obligates an Account to purchase or sell an amount of a specific debt security. Such purchase or sale will take place at a future date at a specific price established by the terms of the futures contract.

### **Government-Related Debt Investments and Associated Risks**

**Municipal Bonds.** In general, municipal bonds are debt obligations issued by or on behalf of states, territories, and possessions of the United States, the District of Columbia, Puerto Rico, Guam, and their political subdivisions, agencies, and instrumentalities. Municipal bonds are issued to obtain funds for various public purposes, including the construction of bridges, highways, housing, hospitals, mass transportation, schools, streets, and

water and sewer works. They may be used, for example, to refund outstanding obligations, to obtain funds for general operating expenses, or to obtain funds to lend to other public institutions and facilities and in anticipation of the receipt of revenue or the issuance of other obligations. In addition, the term "municipal bonds" may include certain types of "private activity" bonds, including industrial development bonds issued by public authorities to obtain funds to provide privately operated housing facilities, sports facilities, convention or trade show facilities, airport, mass transit, port or parking facilities, air or water pollution control facilities, and certain facilities for water supply, gas, electricity, or sewerage or solid waste disposal. Under the Tax Reform Act of 1986, substantial limitations were imposed on new issues of municipal bonds to finance privately operated facilities. From time to time, proposals have been introduced before Congress to restrict or eliminate the federal income tax exemption for interest on municipal bonds. Similar proposals maybe introduced in the future. If any such proposal were enacted, it might have a negative impact on the value of those bonds.

The two principal classifications of municipal bonds are "general obligation" and limited obligation or "revenue" bonds. General obligation bonds are secured by the pledge of the faith, credit, and taxing authority of the municipality for the payment of principal and interest. The taxes or special assessments that can be levied for the payment of debt service may be limited or unlimited as to rate or amount. Revenue bonds are not backed by the credit and taxing authority of the issuer, and are payable only from the revenues derived from a particular facility or class of facilities or, in some cases, from the proceeds of a special excise or other specific revenue source. Nevertheless, the obligations of the issuer of a revenue bond may be backed by a letter of credit, guarantee, or insurance. "Private activity" bonds are, in most cases, revenue bonds and generally do not constitute the pledge of the faith, credit, or taxing authority of the municipality. The credit quality of such municipal bonds usually is directly related to the credit standing of the user of the facilities. There are variations in the security of municipal bonds, both within a particular classification and between classifications, depending on numerous factors. General obligation and revenue bonds maybe issued in a variety of forms, including, for example, commercial paper, fixed, variable, and floating rate securities, tender option bonds, auction rate bonds, zero coupon bonds, deferred interest bonds, and capital appreciation bonds.

Other examples of municipal bonds include municipal leases, certificates of participation, and "moral obligation" bonds. A municipal lease is an obligation issued by a state or local government to acquire equipment or facilities. Certificates of participation represent interests in municipal leases or other instruments, such as installment purchase agreements. Moral obligation bonds are supported by a moral commitment but not a legal obligation of a state or local government. Municipal leases,



## APPENDIX 2 (CONT.)

certificates of participation, and moral obligation bonds frequently involve special risks not normally associated with general obligation or revenue bonds. In particular, these instruments permit governmental issuers to acquire property and equipment without meeting constitutional and statutory requirements for the issuance of debt. If, however, the governmental issuer does not periodically appropriate money to enable it to meet its payment obligations under these instruments, it cannot be legally compelled to do so. If a default occurs, the collateral securing the lease obligation may be difficult to dispose of and an Account may suffer significant losses.

**Non-U.S. Government and Supranational Debt Securities.** Debt securities of governmental (or supranational) issuers in all non-U.S. countries, including emerging market countries, may include, among others:

- fixed income securities issued or guaranteed by governments, governmental agencies or instrumentalities, and political subdivisions located in non-U.S. (including emerging market) countries;
- fixed income securities issued by government owned, controlled, or sponsored entities located in non-U.S. (including emerging market) countries;
- interests in entities organized and operated for the purpose of restructuring the investment characteristics of instruments issued by any of the above issuers;
- Brady Bonds (which are described below);
- participations in loans between non-U.S. (including emerging market) governments and financial institutions; and
- fixed income securities issued by supranational entities such as the World Bank or the European Economic Community. A supra national entity is a bank, commission, or company established or financially supported by the national governments of one or more countries to promote reconstruction or development.

Investment in the debt securities of foreign governments can involve a high degree of risk. The governmental entity that controls the repayment of debt may not be able or willing to repay the principal and/or interest when due in accordance with the terms of such debt. A governmental entity's willingness or ability to repay principal and interest due in a timely manner may be affected by many factors. A country whose exports are concentrated in a few commodities could be vulnerable to a decline in the international price of such commodities, and increased protectionism on the part of a country's trading partners, or political changes in those countries, could also adversely affect its exports. Such events could diminish the credit standing of a particular local government or agency.

Governmental entities may be dependent on expected disbursements from other foreign governments, multilateral agencies,

and others abroad to reduce principal and interest arrearages on their debt. The commitment on the part of these governments, agencies, and others to make such disbursements may be conditioned on the implementation of economic reforms and/or economic performance and the timely service of such governmental entity's obligations. Failure to adhere to any such requirements may result in the cancellation of such other parties' commitments to lend funds to the governmental entity, which may further impair such debtor's ability or willingness to timely service its debts, and, consequently, governmental entities may default on their debt. In addition, a holder of foreign government obligations (including an Account) may be requested to participate in the rescheduling of such debt and to extend further loans to governmental entities, and such holder's interests could be adversely affected in the course of those restructuring arrangements. Obligations arising from past restructuring agreements may affect the economic performance and political and social stability of certain issuers of sovereign debt. In the event of a default by a governmental entity, there may be few or no effective legal remedies for collecting on such debt. The sovereign debt of many non-U.S. governments, including their subdivisions and instrumentalities, is rated below investment grade. The risks associated with non-U.S. Government and supranational debt securities may be greater for debt securities issued or guaranteed by emerging and/or frontier countries.

Foreign investment in certain sovereign debt is restricted or controlled to varying degrees, which may at times limit or preclude foreign investment in such sovereign debt and increase an Account's costs and expenses. Certain countries in which an Account may invest (i) require governmental approval prior to investments by foreign persons; (ii) limit the amount of investment by foreign persons in a particular issuer; (iii) limit investment by foreign persons to only a specific class of securities of an issuer that may have less advantageous rights than the classes available for purchase by domiciliaries of the countries; or (iv) impose additional taxes on foreign investors. Further, certain issuers may require governmental approval for the repatriation of investment income, capital, or the proceeds of sales of securities by foreign investors, and a government could impose temporary restrictions on foreign capital remittances. An Account could be adversely affected by delays in, or a refusal to grant, any required governmental approval for repatriation of capital, as well as by the application to the Account of any restrictions on investments. Investing in local markets may require an Account to adopt special procedures, seek local government approvals, and/or take other actions, each of which may involve additional costs.

Sovereign debt securities include Brady Bonds, which are securities created through the exchange of existing commercial bank loans to public and private entities for new bonds in connection with a debt restructuring plan for emerging market countries announced by former U.S. Secretary of the Treasury Nicholas F. Brady. Brady Bonds arose from an effort in the 1980s to reduce



## APPENDIX 2 (CONT.)

the debt held by less developed countries that were frequently defaulting on loans. Brady Bonds may be collateralized or uncollateralized, are issued in various currencies (primarily the U.S. dollar), and are traded in the OTC secondary market. Certain Brady Bonds are collateralized in full as to principal due at maturity by zero coupon obligations issued or guaranteed by the U.S. Government or its agencies or instrumentalities having the same maturity. Brady Bonds are not, however, considered to be securities issued or guaranteed by the U.S. Government or its agencies or instrumentalities. Brady Bonds do not have a long payment history and are subject to, among other things, the risk of default. In light of the history of defaults by the issuers of Brady Bonds, investments in Brady Bonds may be viewed as speculative regardless of the current credit rating of the issuer. The valuation of Brady Bonds generally depends on the following components: the collateralized repayment of principal at final maturity; the collateralized interest payments; the uncollateralized interest payments; and any uncollateralized repayment of principal at maturity.

**Tender Option Bonds.** An Account may invest in trust certificates issued in tender option bond programs. Tender option bonds are trust investments that create leverage by borrowing from third party investors to invest in municipal bonds. In a tender option bond transaction, a tender option bond trust issues a floating rate certificate ("TOB Floater"), which is a short-term security, and a residual interest certificate ("TOB Residual"), which is a longer term security. Using the proceeds of such issuance, the tender option bond trust purchases a fixed rate municipal bond. The TOB Floater is generally issued to a third party investor (typically a money market fund) and the TOB Residual is generally issued to an Account that sold or identified the fixed rate municipal bond. An Account may invest in TOB Floaters and/or TOB Residuals.

The TOB Residual may be less liquid than other comparable municipal bonds. Generally, the TOB Residual holder bears the underlying fixed rate bond's investment risk. The holder also benefits from any appreciation in the value of the underlying fixed rate bond. Investments in a TOB Residual will typically involve greater risk than investments in fixed rate bonds.

An institution may not be obligated to accept tendered bonds in the event of certain defaults or a significant downgrading in the credit rating assigned to the issuer of the bond. The tender option will be taken into account in determining the maturity of the tender option bonds and the applicable Account's duration. There is a risk that an Account will not be considered the owner of a tender option bond for federal income tax purposes, and, thus, will not be entitled to treat such interest as exempt from federal income tax.

**Securities of Government Sponsored Enterprises.** An Account may invest in securities issued or guaranteed by agencies or instrumentalities of the U.S. Government, such as Ginnie Mae, Fannie Mae, Freddie Mac, Federal Home Loan Banks ("FHL

Banks"), Federal Farm Credit Bank, and Federal Agricultural Mortgage" Corporation ("Farmer Mac"). Ginnie Mae is authorized to guarantee, with the full faith and credit of the U.S. Government, the timely payment of principal and interest on securities issued by institutions approved by Ginnie Mae (such as savings and loan institutions, commercial banks, and mortgage bankers) and backed by pools of mortgages insured or guaranteed by the FHA, the VA, the Rural Housing Service, or the U.S. Department of Housing and Urban Development. Fannie Mae, Freddie Mac, Federal Farm Credit Bank, and Farmer Mac are federally chartered public corporations owned entirely by their shareholders; the FHL Banks are federally chartered corporations owned by their member financial institutions. Although U.S. Government sponsored enterprises may be chartered or sponsored by Congress, many such enterprises are not funded by Congressional appropriations, their securities are not issued by the U.S. Treasury, and their obligations are not supported by the full faith and credit of the U.S. Government, so investments in their securities or obligations issued by them involve greater risk than investments in other types of U.S. Government securities. For example, although Fannie Mae, Freddie Mac, Farmer Mac, Federal Farm Credit Bank, and the FHL Banks guarantee the timely payment of interest and ultimate collection of principal with respect to the securities they issue, their securities are not backed by the full faith and credit of the U.S. Government. The value of such securities therefore may vary with the changing prospects of future support from the U.S. Government, as reflected in anticipated legislative or political developments. In the absence of support from the U.S. Government, money market fixed income securities, including asset-backed securities that may have diminished collateral protection from underlying mortgages or other assets, are subject to the risk of default.

Although such securities commonly provide an Account with a higher yield than direct U.S. Treasury obligations, they are also subject to the risk that the Account will fail to recover additional amounts (i.e., premiums) paid for securities with higher interest rates, resulting in an unexpected capital loss upon their sale. Like most fixed income securities, the value of the money market instruments held by an Account generally will fall when interest rates rise. In the case of a security that is issued or guaranteed by a government sponsored enterprise and backed by mortgages or other instruments with prepayment or call features, rising interest rates may cause prepayments to occur at a slower-than-expected rate, reducing the security's value. In contrast, falling interest rates may cause prepayments to occur at a faster-than-expected rate, depriving an Account of income payments above market rates prevailing at the time of the prepayment.

**U.S. Government Securities.** U.S. Government securities are obligations of the U.S. Government and its agencies and instrumentalities, including Treasury bills, notes, bonds, and certificates of indebtedness that are issued or guaranteed as to principal or interest by the U.S. Treasury or U.S. Government sponsored



## APPENDIX 2 (CONT.)

enterprises. The U.S. Government is under no legal obligation, in general, to purchase the obligations of or provide financial support to its agencies, instrumentalities, or sponsored enterprises. No assurance can be given that the U.S. Government will purchase the obligations of or provide financial support to U.S. Government agencies, instrumentalities, or sponsored enterprises in the future, and the U.S. Government may be unable or unwilling to pay debts when due.

**Additional Risks of Municipal Bonds.** Municipal bonds and issuers of municipal bonds may be more susceptible to downgrade, default, and bankruptcy as a result of recent periods of economic stress. Factors contributing to the economic stress may include lower property tax collections as a result of lower home values, lower sales tax revenue as a result of reduced consumer spending, lower income tax revenue as a result of higher unemployment rates, and budgetary constraints of local, state, and federal governments upon which issuers of municipal securities may be relying for funding. In addition, as certain municipal bonds may be secured or guaranteed by banks and other institutions, the risk to an Account could increase if the banking, insurance, or other parts of the financial sector suffer an economic downturn and/or if the credit ratings of the institutions issuing the guarantee are downgraded or at risk of being downgraded by a national rating organization. Such a downgrade or risk of being downgraded may have an adverse effect on the market prices of bonds and, thus, the value of an Account's investment. Further, a state, municipality, public authority, or other issuers of municipal bonds may file for bankruptcy, which may significantly affect the value of the bonds issued by such issuers and, therefore, the value of an Account's investment. As a result of recent turmoil in the municipal bond market, several municipalities filed for bankruptcy protection or indicated that they may seek bankruptcy protection in the future. Municipal bonds may be illiquid or hard to value, especially in periods of economic stress.

Municipal bonds also are subject to the risk that the perceived increase in the likelihood of default or downgrade among municipal issuers as a result of recent market conditions could result in increased illiquidity, volatility, and credit risk. In addition, certain municipal issuers may be unable to access the market to sell bonds or, if able to access the market, may be forced to issue securities at much higher rates. Should these municipal issuers fail to sell bonds at the time intended and at the rates projected, these entities could experience significantly increased costs and a weakened overall cash position in the current fiscal year and beyond. These events also could result in decreased investment opportunities for an Account and lower investment performance.

The yields on municipal bonds depend on a variety of factors, including general market conditions, supply and demand, general conditions of the municipal bond market, size of a particular offering, the maturity of the obligation, and the rating of the issue. Municipal bonds with the same maturity, coupon, and rating may

have different yields when purchased in the open market, while municipal bonds of the same maturity and coupon with different ratings may have the same yield.

**Credit Enhancements.** Some municipal bonds feature credit enhancements, such as lines of credit, municipal bond insurance, and standby bond purchase agreements ("SBPAs"). There is no assurance that any of the municipal bonds purchased by an Account will have any credit enhancements. Lines of credit are issued by a third party, usually a bank, to ensure repayment of principal and any accrued interest if the underlying municipal bond should default. Municipal bond insurance, which usually is purchased by the bond issuer from a private, nongovernmental insurance company, guarantees that the insured bond's principal and interest will be paid when due. Neither insurance nor a line of credit guarantees the price of the bond. The credit rating of an insured bond reflects the credit rating of the insurer, based on its claims-paying ability. The obligation of a municipal bond insurance company to pay a claim extends over the life of each insured bond. There is no assurance that a municipal bond insurer or line of credit provider will pay a claim or meet the obligations. A higher than expected default rate could strain the insurer's loss reserves and adversely affect its ability to pay claims to bondholders. The number of municipal bond insurers is relatively small, and not all of them have the highest credit rating. An SBPA can include a liquidity facility that is provided to pay the purchase price of any bonds that cannot be remarketed. The obligation of the liquidity provider (usually a bank) is only to advance funds to purchase tendered bonds that cannot be remarketed and does not cover principal or interest under any other circumstances. The liquidity provider's obligations under the SBPA usually are subject to numerous conditions, including the continued creditworthiness of the underlying borrower, bond issuer, or bond insurer.

**Inverse Floaters Risk:** An Account may invest in inverse floaters. An inverse floater is a type of municipal bond derivative instrument with a floating or variable interest rate that moves in the opposite direction of the interest rate on another security, normally the floating rate note. The value and income of an inverse floater generally is more volatile than the value and income of a fixed rate municipal bond. The value and income of an inverse floater generally fall when interest rates rise. Inverse floaters tend to underperform the market for fixed rate municipal bonds in a rising long-term interest rate environment, but may outperform that market when long-term interest rates decline. Inverse floaters have varying degrees of liquidity, and the market for these securities is relatively volatile. An underlying fund's net cash investment in inverse floaters is significantly less than the value of the underlying municipal bonds. This creates leverage, which increases as the value of the inverse floaters becomes greater in proportion to the value of the underlying municipal bonds.



## APPENDIX 2 (CONT.)

### **Investment Vehicles and Associated Risks**

**Investment Companies.** An Account's investments in an investment company will be subject to the risks of the purchased investment company's portfolio securities. An Account's owner(s) must bear not only the Account fees, but also may bear indirectly the fees and expenses of the investment company.

**Exchange-Traded Funds ("ETFs").** ETFs are investment companies whose shares are listed on a securities exchange and trade like a stock throughout the day. Certain ETFs use a "passive" investment strategy and will not attempt to take defensive positions in volatile or declining markets. A "passive" investing strategy may have the potential to increase security price correlations and volatility. As "passive" strategies generally buy or sell securities based simply on inclusion and representation in an index, securities prices will have an increasing tendency to rise or fall based on whether money is flowing into or out of passive strategies rather than based on an analysis of the prospects and valuation of individual securities. This may result in increased market volatility if and to the extent more money is invested through passive strategies. Other ETFs are actively managed (i.e., they do not seek to replicate the performance of a particular index).

Investments in ETFs are subject to a variety of risks, including risks of a direct investment in the underlying securities that the ETF holds. For example, the general level of stock prices may decline, thereby adversely affecting the value of the underlying common stock investments of the ETF and, consequently, the value of the ETF. Moreover, the market value of the ETF may differ from the value of its portfolio holdings because the market for ETF shares and the market for underlying securities are not always identical. Also, ETFs that track particular indices typically will be unable to match the performance of the index exactly due to the ETF's operating expenses and transaction costs, among other things. Similar to investments in investment companies, an Account's owner(s) may bear not only the Account fees and expenses, but also may bear indirectly the fees and expenses of the ETF.

**Master Limited Partnerships ("MLPs").** Investments in MLPs involve risks different from those of investing in common stock including risks related to limited control and limited rights to vote on matters affecting the MLP, risks related to potential conflicts of interest between the MLP and the MLP's general partner, cash flow risks, dilution risks and risks related to the general partner's limited call right. MLPs are generally considered interest-rate sensitive investments. During periods of interest rate volatility, these investments may not provide attractive returns. Depending on the state of interest rates in general, the use of MLPs could enhance or harm the overall performance of an Account.

**Real Estate Investment Trusts ("REITs").** REITs are pooled investment vehicles that invest primarily in either real estate or

real estate-related loans. REITs generally derive their income from rents on the underlying properties or interest on the underlying loans, and the value of a REIT is affected by changes in the value of the properties owned by the REIT or securing mortgage loans held by the REIT or changes in interest rates affecting the underlying loans owned by the REIT. The affairs of REITs are managed by the REIT's sponsor or management and, as such, the performance of the REIT is dependent on the management skills of the REIT's sponsor or management. REITs are subject to heavy cash flow dependency, default by borrowers, self-liquidation, and the qualification of the REITs under applicable regulatory requirements for favorable income tax treatment. REITs also are subject to risks generally associated with investments in real estate including possible declines in the value of real estate, general and local economic conditions, environmental problems, changes in interest rates, decreases in market rates for rents, increases in competition, property taxes, capital expenditures or operating expenses, and other economic, political, or regulatory occurrences affecting the real estate industry. To the extent that assets underlying a REIT are concentrated geographically, by property type, or in certain other respects, these risks may be heightened. An Account will indirectly bear its proportionate share of any expenses, including management fees, paid by a REIT in which it invests.

**ETF Risk:** Investments in ETFs are subject to a variety of risks, including the risks associated with a direct investment in the underlying securities that the ETF holds. For example, the general level of stock prices may decline, thereby adversely affecting the value of the underlying investments of the ETF and, consequently, the value of the ETF. In addition, the market value of the ETF shares may differ from the value of the ETF's portfolio holdings because the supply and demand in the market for ETF shares at any point is not always identical to the supply and demand in the market for the underlying securities.

While shares of an ETF are listed on an exchange, there can be no assurance that active trading markets for an ETF's shares will develop or be maintained. Further, secondary markets may be subject to irregular trading activity, wide bid/ask spreads, and extended trade settlement periods in times of market stress because market makers and authorized participants may step away from making a market in an ETF's shares, which could cause a material decline in the ETF's NAV. At times of market stress, ETF shares may trade at a significant premium or discount to the ETF's NAV. If an Account purchases ETF shares at a time when the market price is at a significant premium to the ETF's NAV or sells ETF shares at a time when the market price is at a significant discount to the ETF's NAV, an Account will pay significantly more, or receive significantly less, respectively, than the ETF's NAV. This may reduce an Account's return or result in losses.

In addition, because certain of an ETF's underlying securities (e.g., foreign securities) trade on exchanges that are closed when





## APPENDIX 2 (CONT.)

the exchange that shares of the ETF trade on is open, and vice versa, there are likely to be deviations between the current pricing of an underlying security and the closing security's price (i.e., the last quote from its closed foreign market) resulting in premiums or discounts to the ETF's NAV that may be greater than those experienced by other ETFs. Also, ETFs that track particular indices typically will be unable to match the performance of the index exactly due to the ETF's operating expenses and transaction costs, among other things. ETFs typically incur fees that are separate from those fees incurred directly by an Account. Therefore, as a shareholder in an ETF (as with other investment companies), an Account would bear its ratable share of the ETF's expenses. At the same time, the Account would continue to pay its own investment management fees and other expenses. As a result, an Account and its shareholders, in effect, will absorb two levels of fees with respect to investments in ETFs.

**Other Risks.** An Account may invest in foreign countries through investment companies, including closed-end funds. Some emerging market countries have laws and regulations that currently preclude direct foreign investments in the securities of their companies. However, indirect foreign investment in the securities of such countries is permitted through investment companies that have been specifically authorized to make such foreign investments. These investments are subject to the risks of investing in foreign (including emerging market) securities.

Because closed-end funds do not issue redeemable securities and, thus, do not need to maintain liquidity to meet daily shareholder redemptions, such funds may invest in less liquid portfolio securities. Moreover, an Account's investment in a closed-end fund is exposed to the risk that a secondary market for such shares may cease to exist. Accordingly, an Account's investment in closed-end fund shares is subject to increased liquidity risk.

**Loans and Associated Risks**

**Assignments.** An investor in senior loans typically purchases "Assignments" from the Agent or other Loan Investors and, by doing so, typically becomes a Loan Investor under the loan agreement with the same rights and obligations as the assigning Loan Investor. Assignments may, however, be arranged through private negotiations between potential assignees and potential assignors, and the rights and obligations acquired by the purchaser of an Assignment may differ from, and be more limited than, those held by the assigning Loan Investor.

**Bank Loans.** An Account may invest in direct debt instruments, which are interests in amounts owed to lenders or lending syndicates, to suppliers of goods or services, or to other parties by a corporate, governmental, or other borrower. Accordingly, an Account may invest in senior loans and other bank loans and loan interests. Senior loans primarily include senior floating rate loans, first and second lien loans, and secondarily senior floating rate debt obligations (including those issued by an asset-backed pool), and interests therein. Loan interests may take the form of

direct interests acquired during a primary distribution and also may take the form of assignments of, novations of, or participations in, a bank loan acquired in secondary markets. The loans an Account generally invests in are originated, negotiated, and structured by a U.S. or foreign commercial bank, insurance company, finance company, or other financial institution (collectively, the "Agent") for a group of loan investors ("Loan Investors"). The Agent typically administers and enforces the loan on behalf of the other Loan Investors in the syndicate. In addition, an institution, typically but not always the Agent, holds any collateral on behalf of the Loan Investors.

Purchasers of forms of direct indebtedness, such as senior loans and other bank loans, depend primarily upon the creditworthiness of the corporate or other borrower for payment of principal and interest, and adverse changes in the creditworthiness of the borrower may affect its ability to pay principal and interest. Investment in the indebtedness of borrowers with low credit worthiness involves substantially greater risks, and may be highly speculative. In the event of non-payment of interest or principal, loans that are secured by collateral offer an Account more protection than comparable unsecured loans. However, no assurance can be given that the collateral for a secured loan can be liquidated or that the proceeds will satisfy the borrower's obligation.

Senior loans and interests in other bank loans may not be readily marketable and may be subject to restrictions on resale. Senior loans and other bank loans may not be considered "securities," and investors in these loans may not be entitled to rely on anti-fraud and other protections under the federal securities laws. In some cases, negotiations involved in disposing of indebtedness may require weeks to complete.

Consequently, some indebtedness may be difficult or impossible to dispose of readily at what Lord Abbett believes to be a fair price. In addition, valuation of illiquid indebtedness involves a greater degree of judgment in determining the investment's value than if that value were based on available market quotations, and could result in significant variations in the investment's value. At the same time, some loan interests are traded among certain financial institutions and accordingly may be deemed liquid. Further, the settlement period (the period between the execution of the trade and the delivery of cash to the purchaser) for some senior loans and other bank loans transactions may be significantly longer than the settlement period for other investments, and in some case may take longer than seven days. Requirements to obtain the consent of the borrower and/or Agent can delay or impede an Account's ability to sell loans and can adversely affect the price that can be obtained. As a result, it is possible an Account may not receive the proceeds from a sale of a loan for a significant period of time, which may affect an Account's ability to take advantage of new investment opportunities.

**Bridge Loans.** Bridge loans are short-term loan arrangements (typically 12 to 18 months) usually made by a Borrower in antici-



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pation of receipt of intermediate-term or long-term permanent financing. Most bridge loans are structured as floating-rate debt with “step-up” provisions under which the interest rate on the bridge loan rises (or “steps up”) the longer the loan remains outstanding. In addition, bridge loans commonly contain a conversion feature that allows the bridge Loan Investor to convert its interest to senior exchange notes if the loan has not been prepaid in full on or before its maturity date. Bridge loans may be subordinate to other debt and may be secured or under secured.

**Revolving Credit Facility Loans.** For some loans, such as revolving credit facility loans (“revolvers”), a Loan Investor may be obligated under the loan agreement to, among other things, make additional loans in certain circumstances. Delayed draw term loans are similar to revolvers, except that, once drawn upon by the borrower during the commitment period, they remain permanently drawn and become term loans. A prefunded letter of credit (L/C) term loan is a facility created by the borrower in conjunction with an Agent, with the loan backed by letters of credit. Each participant in a prefunded L/C term loan fully funds its commitment amount to the Agent for the facility.

**Participations.** “Participations” in a Loan Investor’s portion of a senior loan typically will result in the investing Account having a contractual relationship only with such Loan Investor, rather than with the borrower. As a result, an Account may have the right to receive payments of principal, interest, and any fees to which it is entitled only from the Loan Investor selling the Participation and only upon receipt by such Loan Investor of such payments from the borrower. In connection with purchasing Participations, an Account generally will have no right to enforce compliance by the borrower with the terms of the loan agreement and an Account may not directly benefit from the collateral supporting the senior loan in which it has purchased the Participation. As a result, an Account may assume the credit risk of both the borrower and the Loan Investor selling the Participation. If a Loan Investor selling a Participation becomes insolvent, an Account may be treated as a general creditor of such Loan Investor.

**Prepayment.** Senior loans may require or permit, in addition to scheduled payments of interest and principal, the prepayment of the senior loan from free cash flow. The degree to which borrowers prepay senior loans, whether as a contractual requirement or at their election, is unpredictable. Upon a prepayment, either in part or in full, the actual outstanding debt on which an Account derives interest income will be reduced, and the Account may decide to invest in lower yielding investments. However, an Account may receive both a prepayment penalty fee from the prepaying borrower and a facility fee upon the purchase of a new senior loan with the proceeds from the prepayment of the former. The effect of prepayments on an Account’s performance may be mitigated by the receipt of prepayment fees and an Account’s ability to reinvest prepayments in other senior loans that have similar or identical yields.

**Options and Associated Risks**

**Foreign Currency Options.** An Account may enter into options on foreign currencies. For example, if an Account were to enter into a contract to purchase securities denominated in a foreign currency, it effectively could fix the maximum U.S. dollar cost of the securities by purchasing call options on that foreign currency. Similarly, if an Account held securities denominated in a foreign currency and anticipated a decline in the value of that currency against the U.S. dollar, it could hedge against such a decline by purchasing a put option on the currency involved. An Account’s ability to establish and close out positions in such options is subject to the maintenance of a liquid secondary market. There can be no assurance that a liquid secondary market will exist for a particular option at any specific time. In addition, options on foreign currencies are affected by all of those factors that influence foreign exchange rates and investments generally. Option markets may be closed while non-U.S. securities markets or round the-clock interbank currency markets are open, and this can create price and rate discrepancies.

The value of a foreign currency option depends on, among other factors, the value of the underlying currency, relative to the U.S. dollar. Other factors affecting the value of an option are the time remaining until expiration, the relationship of the exercise price to market price, the historical price volatility of the underlying currency and general market conditions. As a result, changes in the value of an option may have no relationship to the investment merit of the foreign currency. Whether a profit or loss is realized on a closing transaction depends on the price movement of the underlying currency and the market value of the option.

There can be no assurance that an Account will be able to liquidate an option at a favorable price at any time before expiration. In the event of insolvency of the counterparty, an Account may be unable to liquidate a foreign currency option. Accordingly, it may not be possible to effect closing transactions with respect to certain options, with the result that an Account would have to exercise those options that it had purchased in order to realize any profit.

**Options Contracts on Securities and Securities Indices.** An Account may purchase call and put options and write covered call and put option contracts. A call option gives the purchaser of the option the right to buy, and obligates the writer to sell, the underlying security or securities at the exercise price at any time during the option period or at a specific date depending on the terms of the option. Conversely, a put option gives the purchaser of the option the right to sell, and obligates the writer to buy, the underlying security or securities at the exercise price at any time during the option period or at a specific date depending on the terms of the option. An Account also may enter into “closing purchase transactions” in order to terminate its obligation to deliver the underlying security. A closing purchase transaction is the purchase of a call option (at a cost that may be more or less



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than the premium received for writing the original call option) on the same security, with the same exercise price and call period as the option previously written. If an Account is unable to enter into a closing purchase transaction, it may be required to hold a security that it otherwise might have sold to protect against depreciation. "European-style" options only permit exercise on the exercise date. Options that are not exercised or closed out before their expiration date will expire worthless.

A "covered call option" written by an Account is a call option with respect to which an Account owns the underlying security. A put option written by an Account is covered when, among other things, an Account segregates permissible liquid assets having a value equal to or greater than the exercise price of the option to fulfill the obligation undertaken or otherwise covers the transaction. The principal reason for writing covered call and put options is to realize, through the receipt of premiums, a greater return than would be realized on the underlying securities alone. An Account receives a premium from writing covered call or put options, which it retains whether or not the option is exercised. However, an Account also may realize a loss on the transaction greater than the premium received.

There is no assurance that sufficient trading interest to create a liquid secondary market on a securities exchange will exist for any particular option or at any particular time, and, for some options, no such secondary market may exist. A liquid secondary market in an option may cease to exist for a variety of reasons. In the past, for example, higher than anticipated trading activity or order flow, or other unforeseen events, at times have rendered certain of the clearing facilities inadequate and resulted in the institution of special procedures, such as trading rotations, restrictions on certain types of orders, trading halts, or suspensions in one or more options. Similar events, or events that may otherwise interfere with the timely execution of customers' orders, may recur in the future. In such event, it might not be possible to effect closing transactions in particular options. If, as a covered call option writer, an Account is unable to effect a closing purchase transaction in a secondary market, it will not be able to sell the underlying security until the option expires or it delivers the underlying security upon exercise, or it otherwise covers its position.

The securities exchanges generally have established limits on the maximum number of options an investor or group of investors acting in concert may write. An Account, Lord Abbett, and other accounts advised by Lord Abbett may constitute such a group. These limits could restrict an Account's ability to purchase or write options on a particular security.

**OTC Options.** OTC options contracts ("OTC options") differ from exchange-traded options in several respects. OTC options are transacted directly with dealers and not with a clearing corporation and there is a risk of nonperformance by the dealer as a result of the insolvency of the dealer or otherwise, in which event an Account may experience material losses. Because there is no

exchange, pricing normally is done by reference to information from the counterparty or other market participants.

In the case of OTC options, there can be no assurance that a liquid secondary market will exist for any particular option at any given time. Consequently, an Account may be able to realize the value of an OTC option it has purchased only by exercising it or entering into a closing sale transaction with the dealer that issued it. Similarly, when an Account writes an OTC option, generally it can close out that option before its expiration only by entering into a closing purchase transaction with the dealer to which the Account originally wrote it. If a covered call option writer cannot effect a closing transaction, it cannot sell the underlying security until the option expires or the option is exercised. Therefore, a covered call option writer of an OTC option may not be able to sell an underlying security even though it otherwise might be advantageous to do so. Likewise, a put writer of an OTC option may be unable to sell the securities segregated to cover the put for other investment purposes while it is obligated as a put writer. Similarly, a purchaser of such put or call option also might find it difficult to terminate its position on a timely basis in the absence of a secondary market.

**Specific Options Transactions.** Examples of the types of options an Account may purchase and sell include call and put options in respect of specific securities (or groups or "baskets" of specific securities) such as U.S. Government securities, mortgage related securities, asset backed securities, foreign sovereign debt, corporate debt securities, equity securities (including convertible securities), and Eurodollar instruments that are traded on U.S. or foreign securities exchanges or in the OTC market, or securities indices, currencies, or futures.

An option on an index is similar to an option in respect of specific securities, except that settlement does not occur by delivery of the securities comprising the index. Instead, the option holder receives an amount of cash if the closing level of the index upon which the option is based is greater than in the case of a call, or less than in the case of a put, the exercise price of the option. Thus, the effectiveness of purchasing or writing index options will depend upon price movements in the level of the index rather than the price of a particular security.

An Account may purchase and sell call and put options on foreign currencies. These options convey the right to buy or sell the underlying currency at a price that is expected to be lower or higher than the spot price of the currency at the time the option is exercised or expires.

Successful use by an Account of options and options on futures will be subject to Lord Abbett's ability to predict correctly movements in the prices of individual securities, the relevant securities market generally, foreign currencies, or interest rates. To the extent Lord Abbett's predictions are incorrect, an Account may incur losses. The use of options also can increase an Account's transaction costs.



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**Yield Curve Options.** Options on the yield spread or differential between two securities are commonly referred to as “yield curve” options. In contrast to other types of options, a yield curve option is based on the difference between the yields of designated securities, rather than the prices of the individual securities, and is settled through cash payments. Accordingly, a yield curve option is profitable to the holder if this differential widens (in the case of a call) or narrows (in the case of a put), regardless of whether the yields of the underlying securities increase or decrease.

The trading of yield curve options is subject to all of the risks associated with the trading of other types of options. In addition, such options present a risk of loss even if the yield of one of the underlying securities remains constant, or if the spread moves in a direction or to an extent that was not anticipated.

### **Participation Notes and Associated Risks**

**Participation Notes.** Participation notes (“P-notes”), which are a type of structured note, are instruments that may be used by an Account to provide exposure to equity or debt securities, currencies, or markets. P-notes are typically used when a direct investment in the underlying security is either unpermitted or restricted due to country-specific regulations or other restrictions. Generally, local banks and broker dealers associated with non-U.S.-based brokerage firms buy securities listed on certain foreign exchanges and then issue P-notes which are designed to replicate the performance of certain issuers and markets. The performance results of P-notes will not replicate exactly the performance of the issuers or markets that the notes seek to replicate due to transaction costs and other expenses. P-notes are similar to depositary receipts except that: (1) broker-dealers, not U.S. banks, are depositories for the securities; and (2) note-holders may remain anonymous to market regulators.

The price, performance, and liquidity of the P-note are all linked directly to the underlying securities. If a P-note were held to maturity, the issuer would pay to, or receive from, the purchaser the difference between the nominal value of the underlying instrument at the time of purchase and that instrument’s value at maturity. The holder of a P-note that is linked to a particular underlying security or instrument may be entitled to receive any dividends paid in connection with that underlying security or instrument, but typically does not receive voting rights as it would if it directly owned the underlying security or instrument. P-notes involve transaction costs. Investments in P-notes involve the same risks associated with a direct investment in the underlying security or instrument that they seek to replicate. The foreign investments risk associated with P-notes is similar to those of investing in depositary receipts. However, unlike depositary receipts, P-notes are subject to counterparty risk based on the uncertainty of the counterparty’s (i.e., the broker’s) ability to meet its obligations.

In addition to providing access to otherwise closed or restricted markets, P-notes also can provide a less expensive option to di-

rect investment, where ownership by foreign investors is permitted, by reducing registration and transaction costs in acquiring and selling local registered shares. P-notes can offer greater liquidity in markets that restrict the ability of an Account to dispose of an investment by either restricting transactions by size or requiring registration and/or regulatory approvals. Additionally, while P-notes may be listed on an exchange, there is no guarantee that a liquid market will exist or that the counterparty or issuer of a P-note will be willing to repurchase such instrument when an Account wishes to sell it. Therefore, an Account may be exposed to the risks of mispricing or improper valuation.

### **Repurchase Agreements and Associated Risks**

**Repurchase Agreements.** A repurchase agreement is a transaction by which an Account acquires a security (or basket of securities) and simultaneously commits to resell that security to the seller (typically, a bank or securities dealer) at an agreed upon date on an agreed upon price, which represents the Account’s cost plus interest. The resale price reflects the purchase price plus an agreed upon market rate of interest that is unrelated to the coupon rate or date of maturity of the purchased security.

The use of repurchase agreements involves certain risks. For example, if the seller of the agreement defaults on its obligation to repurchase the underlying securities at a time when the value of these securities has declined, an Account may incur a loss upon disposition of them. In addition, if the seller should be involved in bankruptcy or insolvency proceedings, an Account may incur delay and costs in selling the underlying security or may suffer a loss of principal and interest if the Account is treated as an unsecured creditor and required to return the underlying collateral to the seller’s estate. Repurchase agreements may lack liquidity, especially if the issuer encounters financial difficulties. To reduce credit risk and counterparty risk, Lord Abbett intends to limit repurchase agreements to transactions with dealers and financial institutions believed by Lord Abbett to present minimal credit risks. Lord Abbett will monitor the creditworthiness of the repurchase agreement sellers on an ongoing basis.

**Reverse Repurchase Agreements.** In a reverse repurchase agreement, an Account sells a security to a securities dealer or bank for cash and also agrees to repurchase the same security at an agreed upon price on an agreed upon date. Reverse repurchase agreements expose an Account to credit risk (that is, the risk that the counterparty will fail to resell the security to the Account). Engaging in reverse repurchase agreements also may involve the use of leverage, in that an Account may reinvest the cash it receives in additional securities.

### **Structured Notes and Associated Risks**

**Structured Notes.** Structured notes are types of derivative securities whose value is determined by reference to changes in the value of specific securities, currencies, interest rates, commodities, indices, or other financial indicators (the “Reference



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Instrument”), or the relative change in two or more Reference Instruments. The interest rate or the principal amount payable upon maturity or redemption may be increased or decreased depending upon changes in the applicable Reference Instrument(s). Structured notes may be positively or negatively indexed, so the appreciation of the Reference Instrument may produce an increase or decrease in the interest rate or value of the security at maturity. The terms of the instrument may be “structured” by the purchaser and the borrower issuing the note. For example, the terms of a structured note may provide that, in certain circumstances, no principal is due at maturity and, therefore, may result in a loss of invested capital. Structured notes may present additional risks that are different from those associated with a direct investment in fixed income or equity securities because the investor bears the risk of the Reference Instrument(s). For example, structured notes may be more volatile, less liquid, and more difficult to price accurately and subject to additional credit risks. An Account that invests in structures notes could lose more than the principal amount invested. CLNs are a type of structured note.

**Credit-Linked Notes (“CLNs”).** An Account may invest in CLNs. CLNs are a type of structured note. CLNs are privately negotiated obligations whose returns are linked to the returns of one or more designated securities or other instruments that are referred to as “reference securities.” A CLN is generally issued by one party, typically a trust or a special purpose vehicle, with investment exposure or risk that is linked to a second party. The CLN’s price or coupon is linked to the performance of the reference security of the second party.

An Account has the right to receive periodic interest payments from the CLN issuer at an agreed upon interest rate and, if there has been no default or other applicable declines in credit quality, a return of principal at the maturity date. The cash flows are dependent on specified credit-related events. Should the second party default or declare bankruptcy, the CLN holder will generally receive an amount equivalent to the recovery rate. An Account also is exposed to the credit risk of the CLN issuer up to the full CLN purchase price, and CLNs are often not secured by the reference securities or other collateral. CLNs are also subject to the credit risk of the reference securities. If a reference security defaults or suffers certain other applicable declines in credit quality, an Account may, instead of receiving repayment of principal, receive the security that has defaulted.

As with most derivative investments, valuation of a CLN may be difficult due to the complexity of the security. The market for CLNs may suddenly become illiquid. The other parties to the transactions may be the only investors with sufficient understanding of the CLN to be interested in bidding for it. Changes in liquidity may result in significant, rapid, and unpredictable changes in CLN prices. In certain cases, a CLN’s market price may not be available or the market may not be active.

**Structured Notes and Other Hybrid Instruments.** An Account may invest in structured notes and other hybrid instruments to pursue a variety of investment strategies, including currency hedging, duration management, and increased total return.

Hybrid instruments include indexed or structured instruments, combining the elements of futures contracts or options with those of debt, preferred equity or a depositary instrument. A hybrid instrument may be a debt security, preferred stock, warrant, convertible security, certificate of deposit or other evidence of indebtedness on which a portion or all of its interest payments, and/or the principal or stated amount payable at maturity, redemption or retirement is determined by changes in the applicable Reference Instrument(s). As with other derivatives, the value of a hybrid instrument may be a multiple of a Reference Instrument and, as a result, may be leveraged and move (up or down) more steeply and rapidly than the Reference Instrument. These Reference Instruments may be sensitive to economic and political events, such as commodity shortages and currency devaluations, which cannot be readily foreseen by the purchaser of a hybrid. A hybrid instrument may not bear interest or pay dividends, and under certain conditions, the redemption value of a hybrid instrument could be zero. Thus, an investment in a hybrid instrument may entail significant market risks that are not associated with a similar investment in a traditional stock or bond. The purchase of hybrid instruments also exposes an Account to the credit risk of the issuer of the hybrid instruments. These risks may cause significant fluctuations in the value of an Account’s portfolio.

**Structured Securities Risk:** Investments in structured securities, which are a type of instrument designed to offer a return linked to particular underlying securities, currencies, or markets, involve the same risks associated with direct investments in the underlying securities or instruments they seek to replicate, as well as additional risks. For example, the Account is subject to the risk that the issuer or the counterparty of the structured security may be unable to perform under the terms of the instrument, or may disagree as to the meaning or application of such terms. In addition, there can be no assurance that the structured securities will trade at the same price or have the same value as the underlying securities or instruments. The secondary markets on which the structured securities are traded may be less liquid than the market for other securities, or may be completely illiquid. Therefore, the Account may be exposed to the risks of mispricing or improper valuation. Also, this may have the effect of increasing the Account’s illiquidity to the extent that the Account, at a particular point in time, may be unable to find qualified buyers for these securities.

### **General Risks**

**144A Securities.** An Account also may invest in illiquid securities that are governed by Rule 144A under the 1933 Act. These securities may be resold under certain circumstances to other insti-



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tutional buyers. Specifically, 144A Securities may be resold to a qualified institutional buyer (“QIB”) without registration and without regard to whether the seller originally purchased the security for investment. Investing in 144A Securities may decrease the liquidity of an Account’s portfolio to the extent that QIBs become, for a time, uninterested in purchasing these securities. 144A securities may be illiquid or hard to value.

**Blend Style Risk:** Growth stocks typically trade at higher multiples of current earnings as compared to other stocks, which may lead to inflated prices. Growth stocks often are more sensitive to market fluctuations than other securities because their market prices are highly sensitive to future earnings expectations. At times when it appears that these expectations may not be met, growth stocks’ prices typically fall. Growth stocks are subject to potentially greater declines in value if, among other things, the stock is subject to significant investor speculation but fails to increase as anticipated. The prices of value stocks may lag the stock market for long periods of time if the market fails to recognize the company’s intrinsic worth. Value investing also is subject to the risk that a company judged to be undervalued may actually be appropriately priced or even overpriced. A portfolio that combines growth and value styles may diversify these risks and lower its volatility, but there is no assurance this strategy will achieve that result. In addition, different investment styles may shift in and out of favor, depending on market and economic conditions as well as investor sentiment, which may cause an Account to underperform other funds that employ a different or more diversified style.

**Climate-Focused Investing Risk:** For certain Accounts that utilize a climate-focused investment strategy, which may select or exclude securities of certain issuers for reasons other than investment performance considerations, there is the risk that the Account may underperform accounts that do not utilize a climate-focused investment strategy. This investment strategy may affect the Account’s investment exposure to certain sectors or types of investments, which could negatively impact the Account’s performance depending on whether such investments are in or out of favor. The exclusion of investments in companies principally engaged in the fossil fuel and natural gas related product or distribution sectors, in particular, may adversely affect the Account’s relative performance at times when such investments are performing well. In addition, some climate-focused investments may be dependent on U.S. and foreign government policies, including tax incentives and subsidies, or on political support for certain environmental technologies and companies, all of which are subject to change. There may be a limited number of issuers in which the Account may invest given its climate focused investment strategy, and as a result, the markets in which the Account operates may have fewer investment options and limited liquidity. There can be no assurance that the operations of a given issuer in which the Account invests will in fact have a positive impact on the climate. In evaluating a company, Lord Abbett is

dependent upon information and data obtained through voluntary or third-party reporting that may be incomplete, inaccurate or unavailable, which could cause Lord Abbett to incorrectly assess a company’s business practices with respect to its climate related practices. Socially responsible norms differ by region, and a company’s climate-related practices or Lord Abbett’s assessment of a company’s climate-related practices may change over time. Successful application of the Account’s climate-focused investment strategy will depend on Lord Abbett’s skill in properly identifying and analyzing material climate-related issues and related business practices, and there can be no assurance that the strategy or techniques employed will be successful.

**Combined Transactions.** An Account may enter into multiple transactions, including multiple options transactions, multiple futures transactions, multiple currency transactions including forward currency contracts and multiple interest rate transactions, swaps, structured notes, and any combination of futures, options, swaps, currency, and interest rate transactions (“component transactions”), instead of a single transaction, as part of a single or combined strategy when, in the opinion of Lord Abbett, it is in the best interests of an Account to do so. A combined transaction will usually contain elements of risk that are present in each of its component transactions. Although combined transactions normally are entered into based on Lord Abbett’s judgment that the combined strategies will reduce risk or otherwise more effectively achieve the desired portfolio management goal, it is possible that the combination instead will increase such risks or hinder achievement of the portfolio management objective.

**Credit Rating Agencies.** Credit rating agencies are companies that assign credit ratings, which operate as a preliminary evaluation of the credit risk of a prospective debtor. Credit rating agencies include, but are not limited to, S&P, Moody’s, and Fitch. Credit ratings are provided by credit rating agencies that specialize in evaluating credit risk, but there is no guarantee that a highly rated debt instrument will not default or be downgraded. Credit ratings issued by these agencies are designed to evaluate the safety of principal and interest payments of rated securities. They do not evaluate the market risk and, therefore, may not fully reflect the true risks of an investment. In addition, credit rating agencies may not make timely changes in a rating to reflect changes in the economy or in the conditions of the issuer that affect the market value of the security. Consequently, credit ratings are used only by Lord Abbett as a preliminary indicator of investment quality. Lord Abbett may use any national recognized statistical rating organization when evaluating investment quality. Each agency applies its own methodology in measuring creditworthiness and uses a specific rating scale to publish its ratings opinions.

**Cybersecurity Risk:** As the use of technology has become more prevalent in the course of business, Lord Abbett has become more susceptible to operational and information security risks. Cyber incidents can result from deliberate attacks or unintentional events and include, but are not limited to, gaining unau-



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thorized access to electronic systems for purposes of misappropriating assets, personally identifiable information (“PII”) or proprietary information (e.g., trading models and algorithms), corrupting data, or causing operational disruption, for example, by compromising trading systems or accounting platforms. Other ways in which the business operations of Lord Abbett, other service providers, or issuers of securities in which Lord Abbett invests a client’s assets may be impacted include interference with a client’s ability to value its portfolio, the unauthorized release of PII or confidential information, and violations of applicable privacy, recordkeeping and other laws. A client and/or its Account could be negatively impacted as a result.

While Lord Abbett has established internal risk management security protocols designed to identify, protect against, detect, respond to and recover from cybersecurity incidents, there are inherent limitations in such protocols including the possibility that certain threats and vulnerabilities have not been identified or made public due to the evolving nature of cybersecurity threats. Furthermore, Lord Abbett cannot control the cybersecurity systems of third party service providers or issuers. There currently is no insurance policy available to cover all of the potential risks associated with cyber incidents. Unless specifically agreed by Lord Abbett separately or required by law, Lord Abbett is not a guarantor against, or obligor for, any damages resulting from a cybersecurity-related incident.

**Duration.** Duration is a measure of the expected life of a bond or other fixed income instrument on a present value basis. Duration incorporates the bond’s or other fixed income instrument’s yield, coupon interest payments, final maturity, and call features into one measure. Duration allows an investment adviser to make certain predictions as to the effect that changes in the level of interest rates will have on the value of an Account’s portfolio of bonds or other fixed income instruments. However, various factors, such as changes in anticipated prepayment rates, qualitative considerations, and market supply and demand, can cause particular securities to respond somewhat differently to changes in interest rates. Moreover, in the case of mortgage backed and other complex securities, duration calculations are estimates and are not precise. This is particularly true during periods of market volatility.

An Account’s portfolio will have a duration that is equal to the weighted average of the durations of the bonds or other fixed income instruments in its portfolio. The longer an Account’s portfolio’s duration, the more sensitive it is to interest rate risk. The shorter an Account’s portfolio’s duration, the less sensitive it is to interest rate risk. For example, the value of a portfolio with a duration of five years would be expected to fall approximately five percent if interest rates rose by one percentage point and the value of a portfolio with a duration of two years would be expected to fall approximately two percent if interest rates rose by one percentage point.

Some securities may have periodic interest rate adjustments based upon an index such as the 90-day Treasury Bill rate. This periodic interest rate adjustment tends to lessen the volatility of the security’s price. With respect to securities with an interest rate adjustment period of one year or less, an Account will, when determining average weighted duration, treat such a security’s maturity as the amount of time remaining until the next interest rate adjustment.

Instruments such as securities guaranteed by the Government National Mortgage Association (“Ginnie Mae”), the Federal National Mortgage Association (“Fannie Mae”), and the Federal Home Loan Mortgage Corporation (“Freddie Mac”) and similar securities backed by amortizing loans generally have shorter effective maturities than their stated maturities. This is due to changes in amortization caused by demographic and economic forces such as interest rate movements. These effective maturities are calculated based upon historical payment patterns and, therefore, have a shorter duration than would be implied by their stated final maturity. For purposes of determining an Account’s average maturity, the maturities of such securities will be calculated based upon the issuing agency’s payment factors using industry accepted valuation models.

**Focused Investing Risk:** To the extent that an Account invests its assets in the securities of a small number of issuers, an Account will be subject to greater volatility with respect to its investments than an account that invests in the securities of a larger number of issuers.

**Future Developments.** An Account may take advantage of opportunities in options, futures contracts, options on futures contracts, and any other derivatives, including derivatives that are not presently contemplated for use by the Account and derivatives that are not currently available but that may be developed, to the extent such opportunities are both consistent with the Account’s investment objective and legally permissible for the Account.

**Geographic Focus Risk:** To the extent an Account focuses its investments in a single country or only a few countries in a particular geographic region (and its political subdivisions, agencies, instrumentalities, and public authorities), economic, political, regulatory or other conditions affecting such region may have a greater impact on an Account’s portfolio performance.

**Governmental Risk:** Government actions, including U.S. federal government actions and actions by local, state, and regional governments, could have an adverse effect on municipal bond prices. In addition, an Account’s performance may be affected by local, state, and regional factors depending on the states or territories in which the Account’s investments are issued. These factors may, for example, include economic or political developments, erosion of the tax base, budget deficits and the possibility of credit problems.



## APPENDIX 2 (CONT.)

**Health Care Sector Risk:** To the extent that an Account invests its assets in health care sector securities, the Account is subject to the risks faced by companies in the health care sector, including companies in the health care equipment and services industry and the pharmaceuticals, biotechnology, and life sciences industry. Investments in companies in the health care sector are subject to the general risks associated with the health care sector, including new or anticipated legislative actions and changes in government regulations, restrictions, funding or subsidies, dependence on patents and intellectual property rights, expenses and losses from litigation based on product liability and similar claims, industry and pricing competition that may result in price discounting, long and costly processes for obtaining new product approval by the FDA, extensive research and development, marketing, and sales costs, thin capitalization, and limited product lines, markets, financial resources, or personnel, and rapid technological change and potential for product obsolescence. In addition to the general risks associated with an Account's investments in the broader health care sector, the Account is also subject to specific risks associated with its investments in companies in the health care equipment and services industry and the pharmaceuticals, biotechnology, and life science industry, which are discussed in more detail below.

- **Health Care Equipment and Services Industry Risk:** To the extent that an Account invests its assets in health care sector securities, the Account is subject to the risks faced by companies in the health care equipment and services industry. In addition to the risks associated with the health care sector overall, companies in this industry, including health care providers, may have difficulty obtaining staff to deliver services and may be subject to an increased emphasis on the delivery of health care through outpatient services. Further, competition is high among health care equipment companies and can be significantly affected by extensive government regulation or government reimbursement for medical expenses. Health care equipment also may be subject to extensive litigation based on malpractice claims, product liability claims, or other litigation.
- **Pharmaceuticals, Biotechnology and Life Sciences Industry Risk:** To the extent that an Account invests its assets in health care sector securities, the Account is subject to the risks faced by companies in the pharmaceuticals, biotechnology, and life sciences industry. In addition to the risks associated with the health care sector overall, companies in this industry face the risks of new technologies and competitive pressures and regulations and restrictions imposed by the FDA, the U.S. Environmental Protection Agency, state and local governments, and foreign regulatory authorities. Also, stock prices of biotechnology companies may be volatile, particularly when their products are up for regulatory approval or under regulatory scrutiny.

**High Portfolio Turnover Risk:** High portfolio turnover may result in increased transaction costs. These costs can reduce an Account's investment performance. If an Account realizes capital gains when it sells investments, it may result in higher taxes. Realized capital gains that are considered "short term" for tax purposes result in higher taxes than long term capital gains.

**Illiquid Securities.** The purchase price and subsequent valuation of restricted and illiquid securities normally reflect a discount, which may be significant, from the market price of comparable securities for which a liquid market exists. The amount of the discount from the prevailing market price varies depending upon the type of security, the character of the issuer, the party who will bear the expenses of registering the restricted securities (if needed), and prevailing supply and demand conditions.

An Account may not be able to readily liquidate its investment in illiquid securities and may have to sell other investments if necessary to raise cash. In this event, illiquid securities would become an increasingly larger percentage of an Account's portfolio. The lack of a liquid secondary market for illiquid securities may make it more difficult for an Account to assign a value to those securities for purposes of valuing its portfolio.

**Industry and Sector Risk:** If an Account invests a significant portion of its assets in a particular industry or sector, the Account is subject to the risk that companies in the same industry or sector are likely to react similarly to legislative or regulatory changes, adverse market conditions, increased competition, or other factors generally affecting that market segment. In such cases, the Account would be exposed to an increased risk that the value of its overall portfolio will decrease because of events that disproportionately affect certain industries and/or sectors. The industries and sectors in which an Account may be overweighted will vary. Furthermore, investments in particular industries or sectors may be more volatile than the broader market as a whole, and an Account's investments in these industries and sectors may be disproportionately susceptible to losses even if not overweighted.

**Investment Strategy Risk:** The strategies used and securities selected by an Account's portfolio management team may fail to produce the intended result and the Account may not achieve its objective. Through the integration of fundamental research and quantitative analysis, an Account expects that stock selection is likely to be a primary driver of an Account's performance relative to its benchmark index. In addition, there is no guarantee that an Account's use of quantitative analytic tools will be successful. Factors that affect a security's value can change over time and these changes may not be reflected in an Account's quantitative models. Investments selected using these models may perform differently than expected as a result of the factors used in the models, the weight placed on each factor, changes from the factors' historical trends, and technical issues in the construction and implementation of the models. In addition, an Account's





## APPENDIX 2 (CONT.)

performance will reflect, in part, an Account's portfolio management team's ability to make active qualitative decisions and timely adjust the quantitative models, including the models' underlying metrics and data. As a result of the risks associated with an Account's investment strategies, an Account may underperform its benchmark or other funds with the same investment objective and which invest in large and mid-sized companies, even in a favorable market. An Account's strategy of focusing on dividend-paying companies means an Account will be more exposed to risks associated with that particular market segment than a fund that invests more widely.

**Large Company Risk:** Larger, more established companies may be less able to respond quickly to certain market developments. In addition, larger companies may have slower rates of growth as compared to successful, but less well-established, smaller companies, especially during market cycles corresponding to periods of economic expansion. Large companies also may fall out of favor relative to smaller companies in certain market cycles, causing an Account to incur losses or underperform.

**Leverage.** Consistent with its investment objectives and guidelines, an Account may engage in transactions or purchase instruments that give rise to forms of leverage. Such transactions and instruments may include, among others, the use of reverse repurchase agreements, credit default swaps, when issued, delayed delivery and forward commitment transactions, dollar rolls, borrowings, such as through bank loans, loans of portfolio securities, and derivatives.

Leverage may cause the value of an Account to be more volatile than if the Account did not use leverage. Leverage increases an Account's losses when the value of its investments (including derivatives) declines. In addition, interest and other leverage related expenses are borne by the Account. The use of leverage may also cause an Account to liquidate portfolio positions when it would not be advantageous to do so in order to satisfy its related obligations, among other reasons.

**Liquidity/Redemption Risk:** An Account may lose money when selling securities at inopportune times to fulfill client liquidity requests. The risk of loss may increase depending on the size and frequency of liquidity requests, whether the requests occur in times of overall market turmoil or declining prices, and whether the securities an Account intends to sell have decreased in value or are illiquid. An Account may be less able to sell illiquid securities at its desired time or price. It may be more difficult for an Account to value its investments in illiquid securities than more liquid securities. Illiquidity can be caused by a variety of factors, including economic conditions, market events, events relating to the issuer of the securities, a drop in overall market trading volume, an inability to find a ready buyer, or legal restrictions on the securities' resale. Certain securities that are liquid when purchased may later become illiquid, particularly in times of overall economic distress. Liquidity risk may be magnified in a rising

interest rate environment or other circumstances where investor redemptions from the mutual funds may be higher than normal, causing increased supply in the market due to selling activity.

**Market Disruption and Geopolitical Risk:** Geopolitical and other events (e.g., wars, terrorism or natural disasters) may disrupt securities markets and adversely affect global economies and markets, thereby decreasing the value of an Account's investments. Sudden or significant changes in the supply or prices of commodities or other economic inputs (e.g., the marked decline in oil prices that began in late 2014) may have material and unexpected effects on both global securities markets and individual countries, regions, sectors, companies, or industries, which could significantly reduce the value of an Account's investments. Terrorist attacks, natural disasters, epidemics or pandemics could result in unplanned or significant securities market closures or declines. Securities markets also may be susceptible to market manipulation (e.g., the manipulation of the LIBOR or other fraudulent trading practices, which could disrupt the orderly functioning of markets, increase overall market volatility, or reduce the value of investments traded in them, including investments of an Account. Instances of fraud and other deceptive practices committed by senior management of certain companies in which an Account invests may undermine Lord Abbett's due diligence efforts with respect to such companies, and if such fraud is discovered, negatively affect the value of an Account's investments.

Financial fraud also may impact the rates or indices underlying an Account's investments. While the U.S. Government has always honored its credit obligations, a default by the U.S. Government (as has been threatened in recent years) would be highly disruptive to the U.S. and global securities markets and could significantly reduce the value of an Account's investments. Similarly, political events within the United States at times have resulted, and may in the future result, in a shutdown of government services, which could adversely affect the U.S. economy, decrease the value of many Account investments, and increase uncertainty in or impair the operation of the U.S. or other securities markets. Uncertainty surrounding the sovereign debt of several European Union ("EU") countries, as well as the continued existence of the EU itself, has disrupted and may continue to disrupt markets in the United States and around the world. If a country changes its currency or leaves the EU or if the EU dissolves, the world's securities markets likely will be significantly disrupted. In March 2017, the UK commenced the formal process of withdrawing from the EU (commonly known as "Brexit"). The European Parliament formally approved the withdrawal on January 30, 2020, and the withdrawal agreement between the UK and EU became effective January 31, 2020. At this time, the UK is no longer a member of the EU. An eleven-month transition period will take place, ending December 31, 2020, during which the UK will negotiate its future relationship with the EU. During this time, the UK will remain subject to the EU's rules, but will have no role in the EU's law-making process.



## APPENDIX 2 (CONT.)

Significant uncertainty remains in the market regarding the ramifications of the withdrawal of the UK from the EU, and the range and potential implications of possible political, regulatory, economic and market outcomes are difficult to predict. The world's securities markets may be significantly disrupted and adversely affected by the withdrawal. Substantial government interventions (e.g., currency controls) also could negatively impact an Account. War, terrorism, economic uncertainty, and related geopolitical events have led, and in the future may lead, to increased short-term market volatility and may have adverse long-term effects on U.S. and world economies and markets generally. Likewise, natural and environmental disasters, such as the earthquake and tsunami in Japan in early 2011, epidemics or pandemics, such as the COVID-19 outbreak which began in late 2019, and systemic market dislocations of the kind surrounding the insolvency of Lehman Brothers in 2008, have been highly disruptive to economies and markets, adversely affecting individual companies and industries, securities markets, interest rates, credit ratings, inflation, investor sentiment, and other factors affecting the value of an Account's investments. During such market disruptions, an Account's exposure to the risks described elsewhere in this Appendix 2 will likely increase. Market disruptions, including sudden government interventions, can also prevent an Account from implementing its investment strategies and achieving its investment objective. To the extent an Account has focused its investments in the stock index of a particular region, adverse geopolitical and other events in that region could have a disproportionate impact on the Account. The transmission of COVID-19 and efforts to contain its spread have resulted in, among other things, border closings and other significant travel restrictions and disruptions, significant disruptions to business operations, supply chains and customer activity, lower consumer demand for goods and services, event cancellations and restrictions, service cancellations, reductions and other changes, significant challenges in healthcare service preparation and delivery, and prolonged quarantines, as well as general concern and uncertainty. The impact of the COVID-19 outbreak could negatively affect the global economy, the economies of individual countries, and the financial performance of individual issuers, sectors, industries, asset classes, and markets in significant and unforeseen ways. The COVID-19 pandemic and its effects may be short term or may last for an extended period of time, and in either case could result in significant market volatility, exchange trading suspensions and closures, declines in global financial markets, higher default rates, and a substantial economic downturn or recession. The foregoing could disrupt the operations of an Account and its service providers, adversely affect the value and liquidity of an Account's investments, and negatively impact the Account's performance.

**Business Continuity Risk:** Lord Abbett has developed a Business Continuity Program (the "Program") that is designed to minimize the disruption of normal business operations in the event

of an adverse incident impacting Lord Abbett, its affiliates, or an Account. While Lord Abbett believes that the Program should enable it to reestablish normal business operations in a timely manner in the event of an adverse incident, there are inherent limitations in such programs (including the possibility that contingencies have not been anticipated and procedures do not work as intended) and, under some circumstances, Lord Abbett, its affiliates, and any vendors used by Lord Abbett, its affiliates, or an Account could be prevented or hindered from providing services to an Account for extended periods of time. These circumstances may include, without limitation, acts of God, acts of governments, any act of declared or undeclared war or of a public enemy (including acts of terrorism), power shortages or failures, utility or communication failure or delays, labor disputes, strikes, shortages, supply shortages, system failures or malfunctions. An Account's ability to recover any losses or expenses it incurs as a result of a disruption of business operations may be limited by the liability, standard of care, and related provisions in its contractual arrangements with Lord Abbett and other service providers.

**Market Risk:** The market values of securities will fluctuate, sometimes sharply and unpredictably, based on overall economic conditions, governmental actions or intervention, market disruptions caused by trade disputes or other factors, political developments, and other factors. Changes in the financial condition of a single issuer can impact a market as a whole. In addition, data imprecision, technology malfunctions, operational errors, and similar factors may adversely affect a single issuer, a group of issuers, an industry, or the market as a whole. Prices of equity securities tend to rise and fall more dramatically than those of debt securities. A slower-growth or recessionary economic environment could have an adverse effect on the prices of the various securities held by an Account. Economies and financial markets throughout the world are becoming increasingly interconnected, which raises the likelihood that events or conditions in one country or region will adversely affect markets or issuers in other countries or regions.

The increasing popularity of passive index-based investing may have the potential to increase security price correlations and volatility. As passive strategies generally buy or sell securities based on inclusion and representation in an index, securities prices may have an increasing tendency to rise or fall based on whether money is flowing into or out of passive strategies rather than based on an analysis of the prospects and valuation of individual securities.

**Micro-Cap, Small, and Mid-Sized Company Risk:** Investments in microcap, small, and mid-sized companies may involve greater risks than investments in larger, more established companies. As compared to larger companies, micro-cap, small, and mid-sized companies may have limited management experience or depth, limited ability to generate or borrow capital needed for growth, and limited products or services, or operate in less established



## APPENDIX 2 (CONT.)

markets. Accordingly, securities of micro-cap, small, and mid-sized companies tend to be more sensitive to changing economic, market, and industry conditions and tend to be more volatile and less liquid than equity securities of larger companies, especially over the short term. The securities of micro-cap, small, and mid-sized companies tend to trade less frequently than those of larger, more established companies, which can adversely affect the pricing of these securities and the ability to sell these securities in the future. Micro-cap, small, and midsized companies also may fall out of favor relative to larger companies in certain market cycles, causing an Account to incur losses or underperform.

**State and Territory Risk:** From time to time, an Account may be more exposed to risks affecting a particular state, territory (such as Puerto Rico), municipality, or region. As a result, adverse economic, political, and regulatory conditions affecting a single state, territory, municipality, or region (and their political subdivisions, agencies, instrumentalities, and public authorities) can disproportionately affect an Account's performance. For example, Puerto Rico has experienced difficult financial and economic conditions in recent years, which may negatively affect the value of an Account's holdings in Puerto Rico municipal securities. An Account that is more heavily invested in Puerto Rico municipal securities will have increased exposure to this risk. The values of municipal bonds fluctuate due to economic or political policy changes, tax base erosion, state constitutional limits on tax increases, budget deficits and other financial difficulties, changes in the credit ratings assigned to the state's municipal bond issuers, environmental events, and similar conditions and developments impacting the ability of municipal bond issuers to repay their obligations. Such conditions and developments can change rapidly.

**Taxability Risk:** There is a risk that a bond purchased by an Account that was issued as tax-exempt may be reclassified by the IRS as taxable (for example, if the bond was issued in a transaction deemed by the IRS to be abusive), creating taxable rather than tax-exempt income. Furthermore, future legislative, administrative, or court actions could adversely impact the qualification of income from tax-exempt securities as tax-free. Such reclassifications or actions could (i) subject you to increased tax liability, possibly retroactively, and/or (ii) cause the value of a security to decline. From time to time, proposals have been introduced before Congress for the purpose of restricting or eliminating the federal income tax exemption for interest on certain types of municipal bonds. Additionally, certain other proposals have been introduced that would have the effect of taxing a portion of exempt interest and/or reducing the tax benefits of receiving exempt interest. These legal uncertainties could affect the municipal bond market generally, certain specific segments of the market, or the relative credit quality of particular securities.

**When-Issued or Forward Transactions.** When-issued or forward transactions involve a commitment by an Account to purchase securities, with settlement to take place in the future. When issued purchases and forward transactions are negotiated directly with the other party, and such commitments are not traded on exchanges. The value of fixed income securities to be delivered in the future will fluctuate as interest rates vary. Securities purchased or sold on a when-issued or forward commitment basis involve a risk of loss if the value of the security to be purchased declines before the settlement date or if the value of the security to be sold increases before the settlement date.

An Account may purchase new issues of municipal bonds, which generally are offered on a when-issued basis, with delivery and payment normally taking place approximately one month after the purchase date. However, the payment obligation and the interest rate to be received by an Account are each fixed on the purchase date.















Name of Security	Security Type	Identifier	S & P Rating	Moody's Rating	Fitch Rating	Coupon Rate %	Maturity	Quantity	Price	Price Currency	Market Value	Original Cost of Investment \$	Unrealized Gain/Loss*	Accrued Income	Total Assets
Vista Point Securitization Trust 2020-2	CMO	92838TAA9	AAA	-	-	ADJ%	04/25/2065	34,106.12	90.91	USD	31,006.12	34,105.76	(3,099.64)	41.92	0.02%
Ginnie Mae	TBA	21H0606A4	-	-	-	6.00%	10/20/2052	3,029,000.00	100.24	USD	29,518.71	3,006,698.80	(2,977,180.09)	0.00	0.02%
BBCMS 2019-BWAY Mortgage Trust	CMBS	05492NAC7	-	-	AA-	ADJ%	11/15/2034	37,000.00	72.88	USD	26,964.43	36,759.30	(9,794.87)	117.67	0.02%
ReadyCap Commercial Mortgage Trust 2019-6	CMBS	75575QAA7	-	Aaa	-	2.83%	10/25/2052	27,162.07	94.10	USD	25,560.18	27,162.04	(1,601.86)	12.83	0.02%
Ellington Financial Mortgage Trust 2020-1	CMO	31574PAA3	AAA	-	-	ADJ%	05/25/2065	22,320.73	95.74	USD	21,370.70	22,320.43	(949.73)	37.31	0.02%
Ginnie Mae	TBA	21H0626A0	-	-	-	6.50%	11/20/2052	2,583,000.00	101.19	USD	15,401.92	2,598,372.07	(2,582,970.15)	0.00	0.01%
Verus Securitization Trust 2020-INV1	CMO	92537TAA3	AAA	-	-	ADJ%	03/25/2060	15,696.13	97.87	USD	15,362.52	15,696.10	(333.58)	25.86	0.01%
Fannie Mae or Freddie Mac	TBA	01F0606A8	-	-	-	6.00%	03/25/2053	2,323,000.00	100.22	USD	14,408.36	2,313,763.91	(2,299,355.55)	0.00	0.01%
Ginnie Mae	TBA	21H0426A2	-	-	-	4.50%	03/20/2053	899,000.00	95.32	USD	14,257.58	842,672.03	(828,414.45)	0.00	0.01%
Ginnie Mae	TBA	21H0306A7	-	-	-	3.00%	12/20/2051	1,887,000.00	88.02	USD	13,700.53	1,647,228.04	(1,633,527.51)	0.00	0.01%
Wells Fargo Commercial Mortgage Trust 2015-C29	CMBS	94989KAY9	-	NR	AAA	ADJ%	06/15/2048	1,552,805.73	0.84	USD	13,070.90	61,130.81	(48,059.91)	942.94	0.01%
Ginnie Mae	TBA	21H042695	-	-	-	4.50%	03/20/2053	787,000.00	95.30	USD	12,050.94	737,996.95	(725,946.01)	0.00	0.01%
Towd Point Asset Trust 2018-SL1	Asset-Backed	89174UAA4	-	Aaa	-	ADJ%	01/25/2046	10,838.27	99.67	USD	10,802.29	10,794.67	7.62	12.71	0.01%
Ginnie Mae	TBA	21H0406A6	-	-	-	4.00%	05/20/2052	891,000.00	93.28	USD	8,283.52	822,852.42	(814,568.90)	0.00	0.01%
Fannie Mae or Freddie Mac	TBA	01F0504A1	-	-	-	5.00%	06/25/2037	2,039,000.00	98.81	USD	7,582.14	2,007,172.50	(1,999,590.36)	0.00	0.01%
Ginnie Mae	TBA	21H060697	-	-	-	6.00%	10/20/2052	700,000.00	100.33	USD	7,288.35	695,035.86	(687,747.51)	0.00	0.01%
Fannie Mae or Freddie Mac	TBA	01F0526A5	-	-	-	5.50%	03/25/2053	1,619,000.00	98.71	USD	6,455.17	1,591,674.92	(1,585,219.75)	0.00	0.00%
Fannie Mae or Freddie Mac	TBA	01F0524A7	-	-	-	5.50%	06/25/2037	1,605,000.00	100.08	USD	5,119.59	1,601,108.94	(1,595,989.35)	0.00	0.00%
Ginnie Mae	TBA	21H062693	-	-	-	6.50%	11/20/2052	446,000.00	101.29	USD	1,743.51	449,988.28	(448,244.77)	0.00	0.00%
Ginnie Mae	TBA	21H040699	-	-	-	4.00%	05/20/2052	416,000.00	93.19	USD	1,040.00	386,620.00	(385,580.00)	0.00	0.00%
Ginnie Mae	TBA	21H0326A3	-	-	-	3.50%	03/20/2052	400,000.00	90.83	USD	874.99	362,453.13	(361,578.14)	0.00	0.00%
Fannie Mae or Freddie Mac	TBA	01F0626A4	-	-	-	6.50%	08/25/2052	945,000.00	101.51	USD	620.22	958,628.60	(958,008.38)	0.00	0.00%
COMM 2014-CCRE19 Mortgage Trust	CMBS	12592GBE2	-	NR	AAA	ADJ%	08/10/2047	117,886.25	0.49	USD	577.12	5,956.28	(5,379.16)	106.21	0.00%
US 10YR NOTE (CBT)Dec23	Futures	TYZ3	-	-	-	0.00%	12/29/2023	32.00	111.03	USD	0.00	0.00	31,038.08	0.00	0.00%
US 10yr Ultra Fut Dec23	Futures	UXYZ3	-	-	-	0.00%	12/29/2023	(37.00)	116.11	USD	0.00	0.00	(55,120.38)	0.00	0.00%
US 2YR NOTE (CBT) Dec23	Futures	TUZ3	-	-	-	0.00%	01/04/2024	41.00	101.90	USD	0.00	0.00	26,265.02	0.00	0.00%
US ULTRA BOND CBT Dec23	Futures	WNZ3	-	-	-	0.00%	12/29/2023	23.00	129.47	USD	0.00	0.00	70,543.20	0.00	0.00%
Fannie Mae or Freddie Mac	TBA	01F052698	-	-	-	5.50%	03/25/2053	481,000.00	98.74	USD	(508.29)	475,458.21	(475,966.50)	0.00	0.00%
Ginnie Mae	TBA	21H0506A5	-	-	-	5.00%	04/20/2053	576,000.00	97.28	USD	(708.74)	561,060.00	(561,768.74)	0.00	0.00%
Ginnie Mae	TBA	21H050698	-	-	-	5.00%	04/20/2053	2,459,000.00	97.31	USD	(14,496.43)	2,407,458.86	(2,421,955.29)	0.00	(0.01)%
Ginnie Mae	TBA	21H052694	-	-	-	5.50%	03/20/2053	3,219,000.00	98.99	USD	(15,709.29)	3,202,267.82	(3,217,977.11)	0.00	(0.01)%
<b>SECURITIES (EXCLUDING CASH EQUIVALENTS)</b>											\$130,474,689.82				97.00%
<b>CASH EQUIVALENTS</b>											\$2,673,933.15				1.99%
<b>ACCRUED INCOME</b>											\$894,365.34				0.66%
<b>CASH</b>											\$469,717.80				0.35%
<b>TOTAL</b>											\$134,512,706.11				100.00%

\*Does not include amortization of premium or accretion of discount.



**Firm:**

**Strategy/Product:**

**Client:**

**NEPC Manager Due Diligence Questionnaire - Update**

**Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

**Firm/Organization**

1. Have there been any changes in ownership or management in the past year?

**Charles P. Durkin III (Managing Director, Astor Place Holdings) became a Principal in 2023.**

**After 15 years at Select Equity, James Hagy retired as the Co-Director of Field Research and became a part-time Qualitative Field Analyst (QFA) in 2023. Jim was a Principal of the Firm.**

**Steve Holley, who served as Executive Vice President, left the Firm in December 2022.**

2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

**See below for Firm AUM and Net Flows, based on internal estimates:**

<b>Calendar Year</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023 through 6/30</b>
<b>AUM (millions)</b>	<b>\$21,295</b>	<b>\$28,531</b>	<b>\$38,844</b>	<b>\$50,528</b>	<b>\$38,883</b>	<b>\$39,824</b>



Net Flows (millions)	-\$990	+\$503	+\$3,790	+5,659	-\$873	-\$1,383
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**As a Firm we have over 6,000 accounts and we have not historically kept a record of the number of accounts gained and lost.**

3. Have there been any new or discontinued products in the past year?

**There were no discontinued strategies during the past year. We do not have any announcements to make at this time related to new strategies.**

4. Are any products capacity constrained?

**Capacity for any strategy is not static and is informed by a number of dynamic inputs including market volatility, liquidity, cash levels and the volume of actionable investment ideas. Capacity constraints are moving targets subject to periodic adjustments.**

**We hard-closed the Baxter Street strategy beginning in 2017, and we continue to offer capacity to replace outflows.**

**The Firm's US Core Long-Only strategy, SEG Blackwall, is soft-closed, only accepting capital from existing client relationships.**

**The Firm's US long/short strategy, SEG Partners, is soft-closed, only accepting capital from existing client relationships.**

5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.

**As a policy matter, we do not discuss communications or requests for information from regulators. Should we become subject to a formal investigation or proceeding by a regulatory authority that we reasonably believe could materially affect our ability to provide investment management services, we will notify clients of such event to the extent permitted by law and such authority.**

**The below language has been included in our Form ADV:**

**On May 10, 2021, the Swiss Federal Department of Finance ("FDF") opened an investigation against George Loening in his capacity as deemed controller of certain U.S. investment funds advised by Select Equity Group, L.P. ("Select Equity") for a suspected violation of the Swiss rules concerning the disclosure of**



significant shareholdings in listed companies. The matter refers to a disclosure notice filed by Select Equity on August 16, 2016, which indicated that Select Equity had crossed the 5% threshold in an issuer listed on the SIX Swiss Exchange. On January 27, 2017, Select Equity self-reported to SIX Swiss Exchange that the 5% disclosure contained an error and that the 5% threshold had never been reached or crossed. SIX Swiss Exchange reported the matter to the Swiss Financial Supervisory Authority (FINMA) in 2018, and the latter reported it to the FDF a few months thereafter. On May 19, 2021, the FDF notified Mr. Loening that it had determined that he had negligently breached the disclosure obligations referred to above between August 16, 2016 and January 27, 2017, and that the FDF is considering imposing a fine. Mr. Loening was named individually since Swiss law deems the person who ultimately controls the investment manager to be the beneficial owner of the disclosable interests.

On November 8, 2022, Mr. Loening admitted having erroneously filed a disclosure notification regarding crossing of the 5% voting rights of an issuer and upon determining that the harm caused has been righted and receiving the payment, the FDF has agreed to discontinue the proceedings.

Select Equity does not believe that this matter has any material impact on its business and has implemented a systematic solution to track foreign filing obligations to mitigate the risk of similar future issues.

6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.

We are committed to fostering diversity and inclusiveness. We strive to attract and develop employees who reflect not only the broader society in which we live and do business but who improve our workplace, make us smarter and enhance our performance by contributing variety in their experiences, ideas, and points of view.

The Firm strives to ensure that all of its employees are treated with respect, dignity and fairness.

Internally, we are accelerating our efforts toward becoming the Firm that we aspire to be. Externally, we continue to advocate for organizations that focus on increased equality and racial justice.

In keeping with our broader mission to provide our clients best in class service and extraordinary returns, our goal is to promote diversity and inclusion through thoughtful recruitment, robust engagement, inclusive leadership, and effective development.



**The Firm has established a Diversity & Inclusion Steering Committee charged with making recommendations to the Firm’s Management and Executive committees in order to further the Firm’s goals related to diversity and inclusion.**

**When making talent decisions, Principals, Portfolio Managers, Team Leaders and supervisors are generally focused on:**

- Broadening candidate slates to include talent from underrepresented groups**
- Creating interview teams that include employees from underrepresented groups**
- Promoting a culture of inclusion within committees, teams, departments and the Firm**

**The Firm also launched a “Women’s Initiative”. One of its programs is the Small Group Discussion Circles. The goal of these groups, which are made up of both women and men within the Firm, is to create more opportunities to talk to each other about issues that impact our lives both in and outside of the workplace.**

**In addition, we work with organizations that have missions to develop the careers of diverse populations. We interview and hire employees and interns who work with these organizations and others that focus on skill development and networking for individuals who are diverse based on a range of criteria such as gender, race/ ethnicity, returning parents, first-generation college students, immigrants and others. The Firm recently began sharing diversity information with leadership to further internal awareness and dialogue about team composition, hiring, retention and promotion.**

### **Portfolio Management Team**

1. Have there been any changes in the portfolio management team in the past year?

**There were no changes in the Baxter Street portfolio management team in the past year.**

2. Are there any expected changes to the team in the future (planned additions or departures)?

**We do not generally target specific staff levels for any particular area. Rather, we opportunistically hire talent as needed to meet our operational needs, and historically have added to our team during uncertain economic periods when quality professionals become available.**



### Process

1. Have there been significant changes in any of the areas below in the past year?
  - Identification of investment ideas
  - Process for exploring and vetting ideas
  - Portfolio trading practices including buy/sell rules
  - Approach to portfolio monitoring and risk management

**There have been no material changes to the philosophy or process during the past year.**

### Philosophy

1. Describe recent changes in investment philosophy, if any.

**Please see response above.**

### Portfolio

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

**Please refer to the Baxter Street presentation, attached separately.**

2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

Calendar Year	2018	2019	2020	2021	2022	2023 YTD (through 6/30/23)
AUM (millions)	\$6,654	\$8,624	\$11,024	\$10,793	\$7,978	\$8,294
Net Flows (millions)	+\$12	+\$20	+\$691	-\$572	-\$394	-\$523



**As a Firm we have over 6,000 accounts and we have not historically kept a record of the number of accounts gained and lost.**

3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

**As of June 30, 2023, the five largest client relationships accounted for approximately 59% of the Baxter Street strategy assets.**

**Please note that client concentration is estimated at the client relationship level, where a given relationship may encompass multiple underlying investors and/or accounts.**

### **Performance / Market Outlook**

1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

**Please refer to the Baxter Street presentation, attached separately.**

2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.

**For the six months ended June 30, 2023, the Baxter Street Fund returned +10.9% gross and +10.1% net, versus a return of +9.5% for the MSCI ACWI ex US Index. In the first six months of 2023, the invested portion of the Baxter Street portfolio delivered a gross IRR of +11.6% and approximately +210 bps of gross alpha.<sup>1</sup>**

**The portfolio reported good first quarter earnings results, and, outside of the life sciences sector, the operating outlook for the portfolio remained unchanged and encouraging. Some highlights included: UK aerospace and automotive group Melrose Industries being rewarded for consummating the planned spinout of its driveline and powder metallurgy unit (now named Dowlais Group, which we continue to hold); and strong share-price performance from several holdings (including eye-care company Alcon and enterprise resource planning, or ERP, software leader SAP). Our Chinese holdings generally exceeded our operating expectations, but their share prices struggled in the face of decelerating macro momentum. In addition, some of our life sciences holdings reported disappointing results, driven by a larger-than-expected post-pandemic industry inventory destocking. This headwind, while longer lasting than we expected a year ago, is less relevant to long-term compounding earnings power.**





Throughout the period, we trimmed positions that had performed well, including exposure to the travel and leisure and aerospace industries. We have found increasing opportunities to deploy capital into proven defensive earnings compounders in the Healthcare and Consumer Staples sectors for which market concerns over destocking and consumers trading down have left several Approved List businesses near decade-low valuations, despite their cyclical resilience and prospects for solid EBIT growth. As of June 30<sup>th</sup>, the portfolio's upside to our estimate of intrinsic value was in the mid-30% range.

Given our focus on quality growth businesses and our typical exposure range of 80%-100%, relative underperformance can occur during periods when equities are discounting strong cyclical recoveries (which, by definition, are led by low-quality, economically sensitive sectors). Conversely, our portfolios tend to outperform broader benchmark indices in periods of recession or pronounced equity market weakness.

*<sup>1</sup>The gross IRR is calculated by dividing the equity contribution by the average exposure. Gross alpha is the difference between the gross IRR and the MSCI ACWI ex US Index's return.*

3. Describe your market outlook and how strategy positioning is impacted by your views.

Several trends are coming into focus (some of them overlapping) that we believe will differentiate the decade that follows the pandemic from the one that preceded it.

Deglobalization with national security concerns driving a rise in nationalism, protectionism and industrial policy—Developed market governments are committing public sector capital on a previously unimaginable scale to build comparative advantages—or at least self-sufficiency—in strategically important industries. Having learned how fragile “just-in-time” supply chains can be to global pandemics or sudden shifts in host country governance, corporations are diversifying and duplicating production and moving it closer to end markets. Some companies find themselves deprived of access to growth markets, caught in the crossfire of a US/China economic arms race. As retrenchment, nearshoring and reshoring gather pace, many Western multinationals are experiencing higher costs and, in some cases, declining growth. Against this fluid backdrop, new winners are emerging. The Baxter Street portfolio has significant and growing exposure to companies we see as winners from this dynamic, including: infrastructure renaissance beneficiaries (CRH and Brookfield Corporation); strategic industry capex beneficiaries (Taiwan Semiconductor and ASML Holding); and supply-chain restructuring, nearshoring/onshoring enablers (Bureau Veritas and Keyence).



**A resurgence in technology-enabled productivity including, but not limited to, generative artificial intelligence (AI) and automation—The term “artificial intelligence” was first used in the 1950s to refer to early computing algorithms solving basic problems. Over the years, it has grown more powerful thanks to Moore’s Law in action (for which advances in storage, bandwidth and speed combine to drive exponential increases in processing power). This led to the invention of neural networks, which are integrated algorithms designed to recognize patterns in data using statistics, in 2012. As these became more sophisticated and were applied to larger pools of data, they “learned” to create original content, which is known as generative AI. OpenAI’s GPT-3, released in 2020, was the first of these to shift processing to the cloud, which made possible even faster processing of even more data. However, despite its name, OpenAI’s product was actually proprietary and expensive (although a basic free version of it was ultimately released to the public in November 2022 under the moniker ChatGPT). The proliferation over the last year of open-source (and much cheaper) versions of this are behind the recent and rather manic sudden obsession with all things AI. Whether or not the hype turns out to be justified, the converging forces that gave it life are proven and investible, and our portfolio is exposed to them. We have taken to heart a maxim coined by Select Equity’s Head of Data and Analytics: “In order to win at AI, you need proprietary data, proprietary algorithms or both.” Accordingly, our exposure to this trend breaks down into four categories: semiconductor suppliers (Taiwan Semiconductor and ASML); related hardware suppliers (Keyence); proprietary data owners (London Stock Exchange and Experian); and IT software and services providers (SAP and OBIC).**

**A new age of innovation in healthcare—COVID-19 turbocharged investment into life sciences. One notable example is the innovation in mRNA therapeutics (based on a protein molecule that contains “instructions” directing the body to produce its own antidote to a specific disorder) that will go far beyond vaccines and show great promise in combating the whole spectrum of cancers and infectious diseases. We have also seen meaningful developments in the previously unaddressed blockbuster therapeutic categories of Alzheimer’s and obesity. We have investments in four providers of diagnostic and life sciences consumables and equipment, whose products are essential to this pursuit (Revvity, Sartorius Stedim Biotech and DiaSorin, as well as Merck KGaA, which was added since quarter end). What they all have in common, in our view, is that both commercial and equity markets have underestimated the sustainability of demand, given that COVID-19 vaccines represented the tip of the iceberg in terms of the potential market size. Recent industry destocking is temporary on a three- to five-year investment horizon, and we have used the resulting share-price weakness to add to our holdings.**

**All this disruption creates new opportunities, in addition to those that remain from valuation anomalies that appeared during the pandemic and following**



**Russia's invasion of Ukraine. We believe our portfolio is sufficiently attractively valued to prosper under a soft landing, a recession or anything in between. We expect our median holding to deliver full-year 2023 revenue and EBITA growth of approximately 5% and 10%, respectively, rising to 7% and 15%, respectively, in 2024. This is a highly attractive profile given its forward 12-month EV/EBITA multiple in the mid-teens and free-cash-flow yield of greater than 4%. In addition, a majority of the portfolio is denominated in currencies that are themselves significantly undervalued based on purchasing power parity (most notably the EUR, JPY and GBP). The recent US sovereign credit rating downgrade, combined with political turmoil ahead of the 2024 presidential election, may prove to be catalysts for the US dollar to finally mean-revert towards purchasing power parity.**

**In stark contrast to the last few years, we are back to viewing the world company by company and look forward to a resumption of what we consider to be normality: equity performance driven by operating fundamentals, as opposed to exogenous shocks. Our focus rests firmly on identifying prospective compounding power and purchasing it at a discount to fair value.**

4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.

**Please refer to the Baxter Street presentation, attached separately.**

## Important Disclosures With Respect to The Attached Due Diligence Questionnaire

The responses to the attached questionnaire by Select Equity Group, L.P. ("SEG", sometimes referred to in this disclosure as the "Investment Managers"), with respect to the private funds it manages (the "Funds"), the investment strategies discussed and any other information provided to you with respect to the Investment Manager its affiliates, business or operations, are intended only for information and discussion purposes and are not intended as an offer or solicitation of an offer with respect to the purchase or sale of any security and should not be relied upon by you in evaluating the merits of investing in any securities. SEG is an investment advisor registered with the U.S. Securities and Exchange Commission. The information contained in these materials is expected to change over time, and the Investment Manager and its affiliates, are under no obligation to update these materials after such date.

Neither the domestic private funds (the "Domestic Funds") nor the offshore private fund (the "Offshore Funds") are registered as investment companies under the U.S. Investment Company Act of 1940, as amended (the "Company Act") in reliance upon the exemptions under either Section 3(c)(1) or Section 3(c)(7) thereunder and, accordingly, the provisions of the Company Act are not applicable to the Funds.

If you express an interest in investing in a private fund, you will be provided with an offering memorandum, limited partnership agreement (if a domestic fund) and subscription agreement for the applicable Fund (the "Fund Documents"). You must review the Fund Documents and risk factors disclosed in the Fund Documents prior to making a decision to invest. You should rely only on the information contained in the Fund Documents in making your decision to invest. If you are an existing investor in a Fund managed by an Investment Manager or a client in a separately managed account, the responses herein do not amend, supplement or override the terms of any Fund Document or separately managed account advisory agreement entered into between you and the Investment Manager or any of its affiliates, as applicable, and in the event of any conflict between the information in the responses and Fund Document or separately managed account advisory agreement, the Fund Document or separately managed account advisory agreement, as applicable, shall prevail. The Investment Manager also urges you to compare the responses contained herein to the applicable Fund Documents, separately managed account advisory agreement, and Parts 1 and 2 of the Form ADV for the Investment Manager.

Performance data and other information contained in these responses are also subject to the attached "Important Performance Disclosures."

An investment in a Domestic Fund or an Offshore Fund is suitable only for certain sophisticated investors who have no need for immediate liquidity in their investment. Such an investment provides limited liquidity because interests in the Funds are not freely transferable and may be withdrawn only under the limited circumstances set forth in the Fund Documents. There is no public or secondary market for interests in the Domestic Fund or the Offshore Fund, and it is not expected that a public or secondary market will develop.

Investing in financial markets involves a substantial degree of risk. There can be no assurance that the investment objectives described herein will be achieved. Investment losses may occur, and investors could lose some or all of their investment. Nothing herein is intended to imply that an investment in the Funds or the Funds' investment strategies may be considered "conservative," "safe," "risk free" or "risk averse." No regulatory authority has passed upon or endorsed the merits of an investment in the Funds.

Any discussions regarding potential future events and their impact on any Fund are based solely on historic information and Investment Manager's estimates and/or opinions are provided for illustrative purposes only, and are subject to further limitations as specified elsewhere in this material. No guarantee can be made of the occurrence of such events or the actual impact such events would have on any Fund's future performance.

Distribution of this information to any person other than the person to whom this information was originally delivered and to such person's advisors is unauthorized and any reproduction of these materials, in whole or in part, or the disclosure of any of the contents without the prior consent of the Investment Manager is prohibited. Notwithstanding anything to the contrary herein, each recipient of this questionnaire (and each employee, representative or agent of such recipient) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Funds and any of their transactions, and all materials of any kind (including opinions or other tax analyses) relating to such tax treatment and tax structure.

## **Important Performance Disclosures**

***You are urged to compare the information contained in this report to the account statements of your Administrator, which are the official books and records.***

The information contained in this report is provided for informational purposes only and is not intended as an offer or solicitation of an offer for the purchase or sale of any security and should not be relied upon by you in evaluating the merits of investing in any securities.

Select Equity Group, L.P. ("SEG" or "Manager") is a US-based investment management firm registered as an investment adviser with the Securities and Exchange Commission. Unless otherwise indicated, the performance and other data referred to in this letter/report represents the returns of Baxter Street Fund, L.P., which closely tracks Baxter Street Offshore Fund, Ltd. and Baxter Street Fund II, L.P., since their inception (collectively, the "Fund" or "Funds"). While the three Funds are managed in parallel, performance may differ among the entities due to the timing of fund flows and other factors. Each of the Funds is an unregistered pooled investment vehicle over which SEG maintains discretionary authority. Separate performance schedules are available for Baxter Street Offshore Fund, Ltd. and Baxter Street Fund II, L.P.

The performance data herein represents past performance, which is not indicative of future results. Performance is expressed in US dollars. Unless otherwise stated, performance results for the Fund reflect the performance earned by a Fund investor who had invested at the beginning of each year under a model fee structure of the highest fee structure in place for the respective fiscal years. From inception through September 2013, the Fund's performance is presented net of an annualized base management fee of 1.25% of net asset value charged monthly in arrears. From October 2013 onward, the performance is presented net of an annualized management fee of 1.50%. Separately managed accounts may be subject to different fee structures set forth in their investment management agreements.

Please note the returns presented in the attached for the Fund are inclusive of both the restricted and non-restricted interest/share classes. Performance between the restricted and non-restricted classes may differ due to allocations of new issues. Additional information regarding the allocation of specific IPOs, and their effect on the restricted and non-restricted interest/share class performance, is available upon request.

Fund performance is calculated monthly using the net asset value appreciation (net of all fees and expenses including a model fee structure described above) as a percentage of beginning-of-month net asset value (appropriately adjusted for any capital activity). Purchases and sales of securities are recorded on a trade date basis. Realized gains and losses from security transactions are generally determined using the specific identification method. Unrealized gains and losses from investment transactions are recognized as income. Dividend income is recorded on the ex-dividend date and interest income is recorded on an accrual basis. The Fund's annual returns are calculated by linking the monthly performance through compounded multiplication. Exposure to certain derivative instruments may not always be reflected in the data presented in this report (e.g., certain named securities may be owned via swap). The Fund's cumulative rate of return is calculated by linking the Fund's annual rates of return. Fund average annualized rates of return are equivalent to the annual rate of return which, if earned in each year of the indicated multi-year period, would produce the actual cumulative rate of return over the time period. Computations assume reinvestment of all dividends, interest and capital gains. Geographic exposure is determined by using the MSCI Global Investable Market Indices ("GIMI") Methodology for country classification. Sector exposure is derived from FactSet which uses GICS industry classification. Manager reserves the right to use a different or internal methodology for classification if a security is not classified by MSCI/GICS or if it does not agree with the assigned classification. Securities may currently be held in the portfolio where the manager used internal classification. Much of the data and other information contained in this letter/report is unaudited and is collected, in whole or in part, from a source believed by SEG to be reliable. SEG cannot guarantee the accuracy of the data/information and therefore shall not be held liable for inaccuracies. Assets are as of month end. The average exposure is calculated using daily exposures and such average exposures and the resulting internal return calculations are approximations. The cash position, if shown, is from our accounting system which assumes full payment of equity swaps. The actual cash held in the portfolio may differ significantly from this report.

Any discussions regarding potential future events and their impact on any Fund are based solely on historic information and SEG's estimates and/or opinions, are provided for illustrative purposes only, and are subject to further limitations as specified elsewhere in this material. No guarantee can be made of the occurrence of such events or the actual impact such events would have on any Fund's future performance.

This document may be issued in the United Kingdom by Select Equity Group, L.P. to, and/or directed at, only persons to or at whom it may lawfully be issued or directed under the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, including persons who are authorized under the Financial Services and Markets Act 2000 ("FSMA"), certain persons having professional experience in matters relating to investments, high net worth companies, high net worth unincorporated associations or partnerships, trustees of high value trusts or persons who qualify as certified sophisticated investors. Interests in the Fund are only available to such persons in the United Kingdom and this document must not be relied or acted upon by any other persons in the United Kingdom. In order to qualify as a certified sophisticated investor a person must: (a) have a certificate in writing or other legible form signed by an authorized person to the effect that he is sufficiently knowledgeable to understand the risks associated with a particular type of investment; and (b) have signed, within the last 12 months, a statement in a prescribed form declaring, amongst other things, that he qualifies as a sophisticated investor in relation to such investments. This document is exempt from the general restriction in Section 21 of FSMA on the communication of invitations or inducements to engage in investment activity on the grounds that it is being issued to and/or directed at only the types of person referred to above. The content of this document has not been approved by an authorized person and such approval is, save where this document is directed at or issued to the types of person referred to above, required by Section 21 of FSMA. An investment in the Fund may expose an investor to a significant risk of losing all of the amount invested. The Fund is a Limited Partnership (while offshore funds are Limited Companies) and any person who acquires interests in the Fund will not thereby be exposed to any significant risk of incurring additional liability. Any person who is in any doubt about investing in the Fund should consult an authorized person specializing in advising on such investments.

At various points in this letter/report, the returns of the Fund may be compared to the MSCI ACWI (All Country World Index) ex USA or the S&P 500. The MSCI ACWI ex USA Investable Market Index (IMI) captures large, mid and small cap representation across 22 of 23 Developed Markets (DM) countries (excluding the United States) and 21 Emerging Markets (EM) countries (lists available upon request). The S&P 500, which is a market capitalization-weighted index, contains the 500 most widely held companies chosen with respect to market size, liquidity and industry. The volatility of this index may be materially different from that of the Fund. Neither S&P nor its third party information providers shall be liable with respect to the data and information contained in this report or the context from which it is drawn. "S&P," "S&P 500" and "S&P 400" are registered trademarks of Standard & Poor's. Neither MSCI nor any other party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI/S&P data is permitted without MSCI's/S&P's express written consent.

Any investor who subscribes, or proposes to subscribe, for an investment in an unregistered pooled investment fund must be able to bear the risks involved and must meet an unregistered pooled investment fund's suitability requirements. Some or all alternative investment programs may not be suitable for certain investors. No assurance can be given that an unregistered pooled investment fund's investment objectives will be achieved. Such investments are typically speculative and involve a substantial degree of risk. An investor must realize that he or she could lose all or a substantial amount of his or her investment in an unregistered pooled investment fund. The investment manager has total trading authority over the unregistered pooled investment fund, and the fund is dependent upon the services of the investment manager. The use of a single adviser could mean lack of diversification and, consequently, higher risk. Unregistered pooled investment funds are generally highly illiquid. There is no secondary market for an investor's interest in an unregistered pooled investment fund and none should be expected to develop. There are restrictions on transferring interests in an unregistered pooled investment fund. The instruments in which an unregistered pooled investment fund invests may involve complex tax structures and there may be delays in distributing important tax information. Certain of the trades executed for an unregistered pooled investment fund may take place on foreign markets, which inherently involves a greater degree of risk. For a complete list of the risk factors and conflicts of interest with respect to an unregistered pooled investment fund in which you propose to invest or currently invest, please refer to the unregistered pooled investment fund's offering memorandum.

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A COPY OF PART 2 OF SEG'S FORM ADV IS AVAILABLE UPON REQUEST



# SELECT EQUITY

Rigorous Research, Disciplined Investing

## BAXTER STREET

International Long-Only

Massachusetts Water Resources Authority (“MWRA”)  
Employees’ Retirement System

October 5, 2023

Select Equity Group, L.P.  
380 Lafayette Street  
New York, New York 10003  
212.601.9675



# Executive Summary

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Select Equity Group (“SEG” or the “Firm”) was founded in 1990 on the premise that **RIGOROUS RESEARCH** and **DISCIPLINED INVESTING** will generate superior returns for our clients.

The Firm is **EMPLOYEE OWNED** and manages over \$39 billion across long/short and long-only equity strategies that invest in companies across geographies and market capitalizations.

Our Research Team of 75 professionals identifies what we believe to be the **HIGHEST-QUALITY BUSINESSES** that exhibit sustainable competitive advantages. We have no interest in owning the vast majority of public companies at any price.

We consider our research process to be **FIERCELY INDEPENDENT**, which we believe results in highly differentiated portfolios. We make almost no use of Wall Street research in our analysis on the long side, and we do not actively share our ideas with other managers. Our location at 380 Lafayette Street in NoHo is far from most peers.

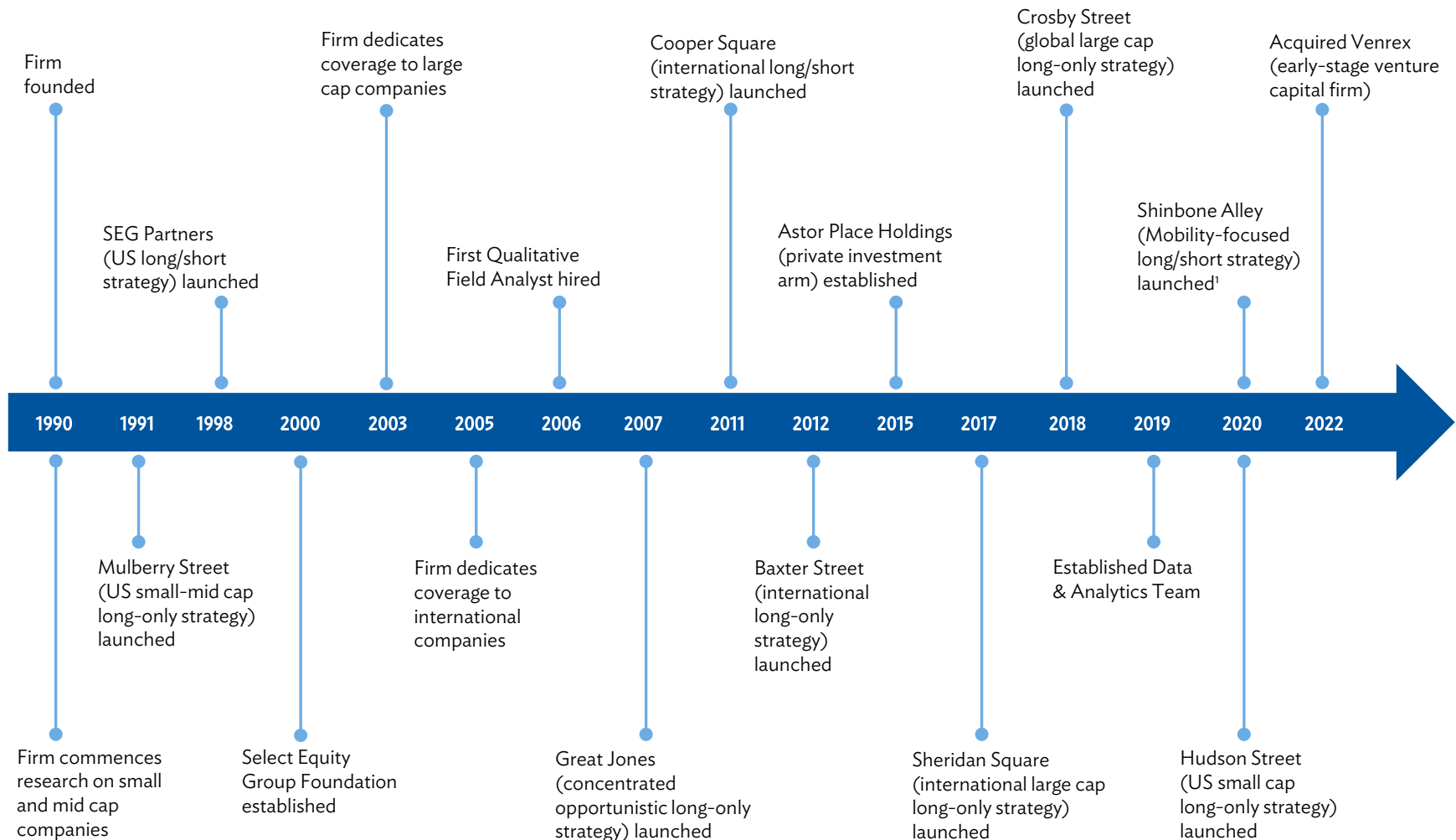
**FIELD RESEARCH** is a critical component of what we do. SEG employs a team of 16 former financial journalists and sourcing specialists that conducts deep-dive studies on companies, value chains and management teams.

Our dedicated Data & Analytics Team of nine professionals applies alternative **DATA ANALYTICS** to complement and add valuable context to our fundamental research and qualitative field research.

We are **LONG-TERM INVESTORS**. We seek to understand competitive dynamics that will play out over three to five years, rather than predict quarterly earnings.

We share a common cultural imperative for excellence embodied in the **CORE PRINCIPLES** (see Appendix) that shape our identity as a Firm and inform our actions.

# History



<sup>1</sup>Shinbone Alley began in 2003 as Delafield Hambrecht Partners Fund, L.P. Select Equity took over management of Delafield Hambrecht Partners Fund and renamed it Shinbone Alley in July 2020.

# Baxter Street Overview

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## Strategy

Launched in 2012, Baxter Street is the Firm's international equity long-only strategy with \$8.3 billion in assets.

## Portfolio Management

Chad Clark has been Portfolio Manager since inception, and Matthew Pickering additionally assumed the role of Portfolio Manager in 2017. Chad and Matthew have worked together since inception. Joseph Buser has served as Associate Portfolio Manager since January 2022.

## Process

We employ a disciplined fundamental research process to identify high-quality businesses.

## Exposures

Typical exposure is 80%-100%. Baxter Street is a high-conviction strategy with the top 15 positions often comprising nearly half of the Fund's assets.

## Differentiation

We are geographically agnostic, which we believe is a competitive advantage vs. peers. We seek to take advantage of the inherent volatility of international markets and deploy capital wherever discounts to intrinsic values have widened and the opportunity is greatest.

# Baxter Street Performance Summary

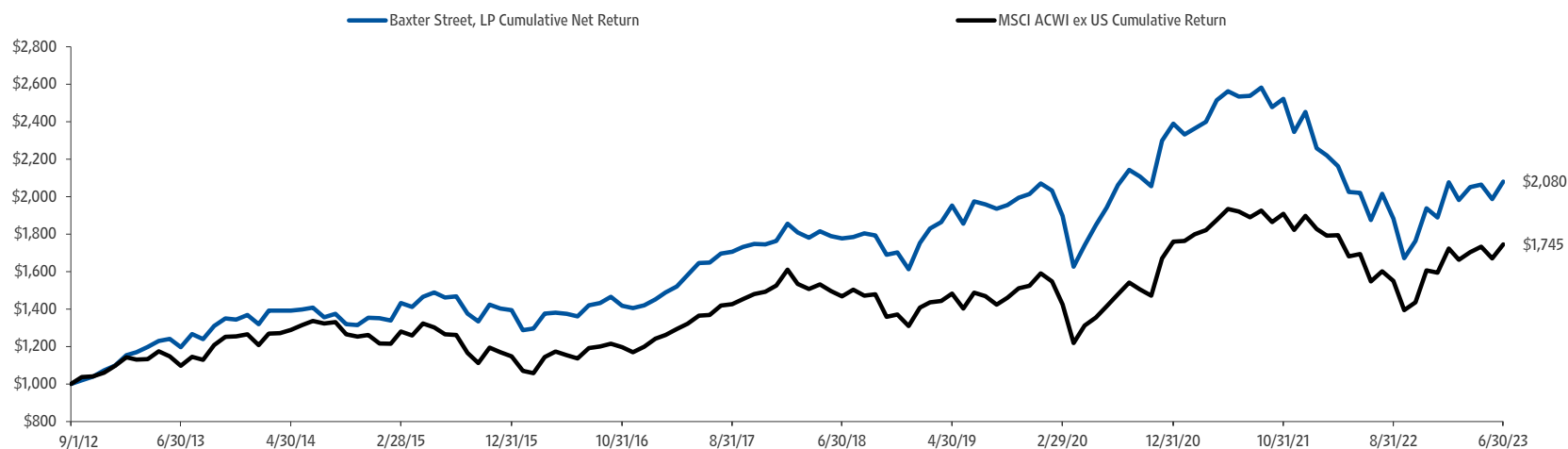


Since the strategy's inception, Baxter Street has outperformed the MSCI ACWI ex US by +1.7% annually on a net basis.

## Since Inception Net Performance Statistics

	Baxter Street, LP Net	MSCI ACWI ex US
Net Return (Annualized)	7.0%	5.3%
Volatility	14.5%	14.4%
Active Share	91%	
Upside Capture	0.98	
Downside Capture	0.87	

## Growth of \$1,000



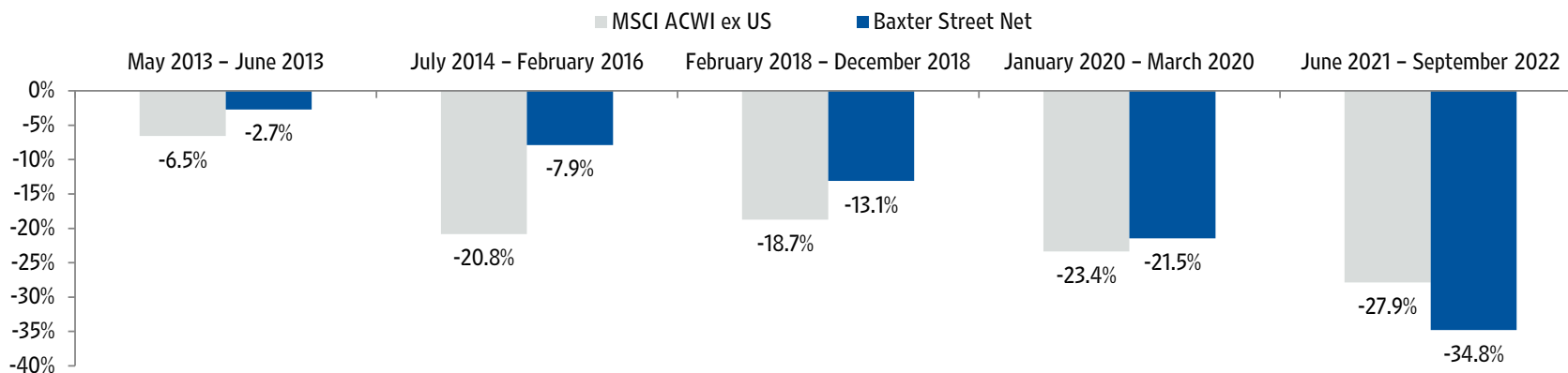
As of June 30, 2023. The most current month-end performance numbers are estimated. Past performance is not indicative of future results, which may vary. The returns presented include both the restricted and non-restricted share classes. Comparisons to financial indices are provided for illustrative purposes only. It is not possible to invest directly in an index. See important performance and other disclosures included at the back of this presentation. Volatility is calculated using the standard deviation, or variance between monthly return streams. Active Share measures the percentage of the most current quarter-end portfolio (based on position weights) that differs from the MSCI ACWI ex US. Upside/Downside Capture is calculated versus the MSCI ACWI ex US.



# Baxter Street Drawdown Analysis

During periods in which the MSCI ACWI ex US Index has experienced large drawdowns, Baxter Street generally outperformed the market.

## MSCI ACWI ex US Index Five Largest Drawdowns Since Baxter Street's Inception



- Global equity “taper tantrum” triggered by discussion of scaling back quantitative easing.
- US economic strength prompts markets to discount rising interest rates, driving a +20% gain in the trade-weighted USD and pressuring foreign USD debtors and emerging countries with high twin deficits.
- Collapse in oil and commodity prices.
- Equities slump in EMs most impacted by rising USD and falling oil. China, initially considered a beneficiary, sees equities surge ~150% but then collapse amid CNY devaluation and growing fears of a China-induced global slowdown.
- Mounting concerns over monetary tightening, post-QE normalization and potential global trade war, combined with softening developed-world economic growth (outside the US) and rising political risk in Europe.
- COVID-19 spreads from regional epidemic to the worst global pandemic since Spanish flu in 1918, causing governments throughout the world to voluntarily bring economic activity to a halt by ordering citizens to shelter at home.
- Despite rising earnings risk, quality stocks underperformed a general equity market drawdown due to rising interest rates causing multiple contraction.
- Overall risk aversion and aggressive US monetary policy meant all currencies other than the USD weakened during 2022—some materially so. This acted as a headwind to USD-based performance.
- Market performance was led by sectors, such as Energy, Financials (mostly banks), Utilities and Materials, in which Select Equity typically doesn't allocate capital.

	MSCI ACWI ex US	Baxter Street Net
Average Performance During Top 5 Drawdowns	-19.5%	-16.0%
Months to Recover from Largest Drawdown <sup>1</sup>	8 months	5 months

<sup>1</sup> Months to Recover references the drawdown from January 2020 – March 2020, as the recovery for the 2021–2022 drawdown is not complete as of the writing of this presentation.

As of June 30, 2023. The most current month-end performance numbers are estimated. Past performance is not indicative of future results, which may vary. Comparisons to financial indices are provided for illustrative purposes only. It is not possible to invest directly in an index. Drawdown analysis calculations are based on month-end data. Source: MSCI. The time periods represent the five largest peak-to-trough drawdowns in the MSCI ACWI ex US Index since inception of the Baxter Street Fund. See important performance and other disclosures included at the back of this presentation.

# Baxter Street Portfolio Construction

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Typical Exposure	80%-100%
Typical Position Count	30-60
Typical Position Size	1%-10%
Median Market Capitalization	\$28.6 billion
Typical Top 10 Concentration	~40%
Average Holding Period	> 2 years
Typical Regional Maximum	70%
Typical Country Maximum	30%
Typical Industry Maximum	25%

# Investment Philosophy

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Our investment philosophy is grounded in three elemental tenets.

## Great Businesses

We are focused on owning only what we believe are the world's best businesses.

## Rigorous Research

We are committed to understanding our businesses better than our peers through independent, granular and continuous research. We generate investment ideas internally and vet them thoroughly with the assistance of our dedicated Qualitative Field Research and Data & Analytics Teams.

## Disciplined Investing

We wait patiently for the market to present opportunities to deploy capital at attractive discounts to intrinsic values.



# How We Define Great Businesses

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We are focused on owning businesses that share the following characteristics:

## PREDICTABLE GROWTH

Predictable and growing streams of cash earnings with annual earnings growth typically in excess of 10%.

## HIGH ROICs

High or rapidly improving returns on invested capital.

## EXPANDING BARRIERS TO COMPETITION

Consistent share gainers that increase their franchise values and distance themselves meaningfully from competitors.

## CLEAN BALANCE SHEETS

Businesses with little debt or the clear ability to reduce debt rapidly.

## OUTSTANDING CULTURES

Companies with excellent cultures that wow their customers.

## STRONG LEADERSHIP

Management teams that we believe to be ethical, outstanding operators and good stewards of capital.

We seek companies exhibiting the 5Ps:

The industry **PIE** is growing

Company's **PIECE OF THE PIE** (market share) is growing

Company has **PRICING POWER**

Business has a high level of **PREDICTABILITY**

Company is managed by **PEOPLE** who have created a culture of excellence





## Businesses We Generally Avoid

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We are not interested in owning roughly two-thirds of public companies regardless of price.

We typically have less exposure to the following types of businesses given a lack of predictability or an inability to defend their competitive moats:

COMMODITY-LINKED BUSINESSES

HIGHLY REGULATED BUSINESSES

CAPITAL-INTENSIVE BUSINESSES WITH  
UNDIFFERENTIATED PRODUCTS

BUSINESSES WITH UNPREDICTABLE PRODUCT  
LIFECYCLES



# Our Universe: The “SEG International 250”

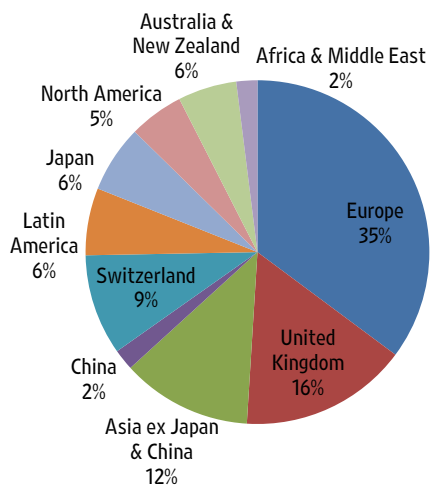
In more than 20 years of investment research, we have identified roughly 250 businesses and multiple value chains—narrow slivers/subsets of the economy—that meet our criteria out of approximately 10,000 international public companies.

Our team covers these businesses whether we own them or not and maintains intrinsic value estimates for each.

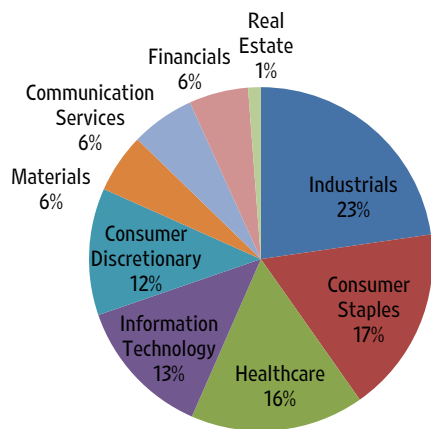
The Approved List changes by 5%-10% annually as companies are added (IPOs, spin-offs, business transformations) and removed (M&A, shifts in competitive landscape).

## SEG International 250 Breakdown

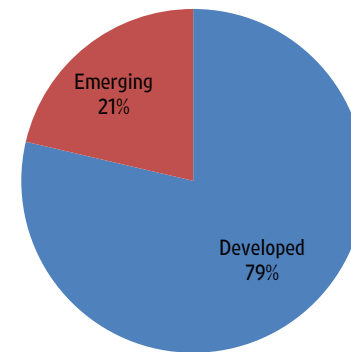
### Geography



### Industry



### Developed Market/Emerging Market



## Examples of SEG Value Chains



# Our Coverage Universe



		Chad Clark International Team CIO							Jonathan Allen Chief International Strategist
		Matthew Pickering	Brian Vollmer	Loren Lewallen	Joseph Buser	Alex Apanovitch	Michael Archer	Pawel Kaczmarek	
Geographies	Industries	Flavors & Fragrances Food Services & QSR Hearing Aids	Freight Forwarders Online Services	Factory Automation Life Sciences Value-Added Distributors	Aerospace Diagnostic Equipment FMCG	Asia Life Insurance Optical Retail & Mfg.	Business & Info Svcs. Payments Processing Semiconductors	Testing & Inspection Spirits & Beer	
	EMEA	Spain United Kingdom		France South Africa	Switzerland	Benelux Germany	Italy	Emerging EU Scandinavia	
	Asia	Malaysia Singapore	Hong Kong/China	Japan	Australia/ New Zealand	India South Korea	Taiwan Thailand	Indonesia Philippines	
Americas				Brazil		Canada Mexico			

# Qualitative Field Research



## What is Qualitative Field Research?

Performing in-depth due diligence and delivery of proprietary investment insights to the Analyst team, resulting in a better understanding of the long-term dynamics of industries and value chains. We are not seeking to predict short-term outcomes, such as next quarter's earnings.

## Why is it important?

Qualitative field research is in our DNA: Select Equity was founded as a research firm, and we made our first hire of a former *Wall Street Journal* reporter in 2006. We believe field research provides insights that help us make better investment decisions.

## Who is on the team?

- **Eight Qualitative Field Analysts:** former investigative and business journalists with over 45 years of combined experience in investment management and approximately 100 years in journalism. The team covers the globe with individuals based in four US cities and London and includes professionals fluent in Spanish, French, German, Mandarin and Portuguese.
- **Eight Sourcing Analysts:** specialists in identifying and contacting industry experts, former employees and customers, among others.

## Results

In the first six months of 2023, our Research Team conducted interviews with approximately 1,000 industry contacts and authored over 130 field research reports.

# Data & Analytics

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In June 2019, we established a dedicated Data & Analytics Team (the “Data Team”) to apply alternative data analytics to our research process.

The Data Team sources and analyzes data to develop independent views on the long-term drivers for individual companies and value chains as well as macroeconomic trends. Our analysis is not focused on predicting short-term trading opportunities.

We aim to minimize confirmation bias by answering targeted questions, rather than corroborating specific investment theses.

We use data analytics to complement and add valuable context to our fundamental research and qualitative field research.

We believe our Data Team of nine professionals is uniquely qualified to lead these efforts with experience in data science, consulting and fundamental research, in addition to educational backgrounds in engineering, mathematics and information sciences.

IN THE FIRST SIX MONTHS OF 2023, THE DATA TEAM COMPLETED APPROXIMATELY 175 PROJECTS ON COMPANIES AND VARIOUS TOPICS SPANNING MULTIPLE VALUE CHAINS AND GEOGRAPHIES.

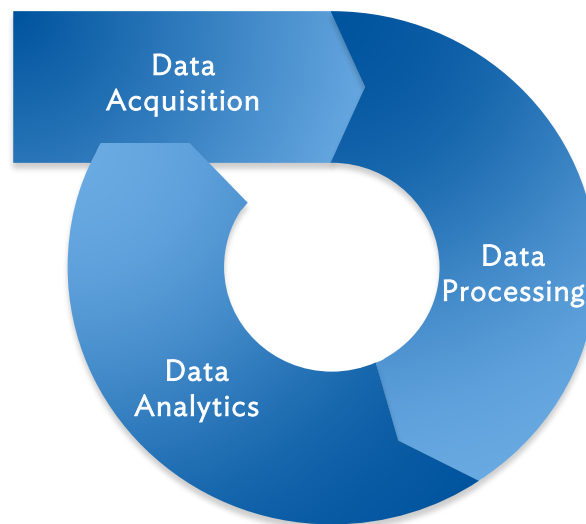


# Data & Analytics Process

Our vertically integrated approach to acquiring, processing and analyzing data is designed to enable our team to reach independent, unique conclusions.

## Acquisition

- Our differentiated approach begins with data acquisition—we focus on gathering data to understand the long-term competitive advantages of companies and value chains.
- We conduct due diligence on potential data vendors and have selected more than 35 diverse datasets, including those generated by consumer credit card transactions, app and web usage and airline schedules. We met with over 10 new potential data vendors in Q2 2023.
- In addition, we generate proprietary data internally through custom surveys. For example, we have conducted an ongoing dental survey to assess trends in practice consolidation and its impact on industry pricing.



## Processing

- We have developed machine learning tools, which include Natural Language Processing models, to help us enrich and process data. These models will enable deeper analyses, ranging from the ability to assess the sentiment and authenticity of employee reviews to matching products across websites at scale.
- We have built a scalable cloud infrastructure to ingest and quickly analyze our considerable amount of data (over 90 terabytes).

## Analytics

- We collaborate with investment Analysts and the Qualitative Field Research Team to triangulate information from multiple sources and inform investment decisions. Examples include analyzing customer churn in online streaming services using US consumer transaction data, as well as surveying over 100 US veterinarians to understand various aspects of the value chain including shifting market share dynamics and the impact of COVID-19.
- We create custom dashboards that enable Analysts to directly access data for specific projects or macro analysis. For example, the team analyzed US consumer transactions to monitor the spending behaviors of recipients of stimulus checks, unemployment insurance and child tax credits, which helped us identify companies projected to benefit from heightened government stimulus efforts.
- In the first six months of 2023, we completed projects on approximately 40% of the top 10 positions across the Firm's strategies.

# Investment Process



## Idea Generation

- Our process is driven by internally generated and researched ideas.
- The Firm makes almost no use of Wall Street research for our long process, and we do not actively share our insights with other managers.
- While all Analysts are generalists, they often focus on specific value chains—studying suppliers, manufacturers, distributors and customers within a specialized area of the economy across market capitalizations.
- The team additionally generates new ideas through its on-the-ground worldwide travel.
- Analysts share timely ideas with the entire investment team on our daily 8:30am conference call. These ideas are later reviewed in detail during weekly group meetings.

## Fundamental Research

- In addition to detailed analysis of a company’s SEC filings and call transcripts, we often visit key facilities and meet with the top executives.
- Analysts incorporate financially material ESG considerations in their comprehensive assessment of a business.
- We often approach the final vetting of potential new investments as a team that includes one or more Portfolio Managers, dedicated Qualitative Field Analysts and our Data & Analytics Team.



## Qualitative Field Research & Data Analytics

- Our due diligence process often includes fieldwork such as interviews with a company’s former employees, competitors, suppliers, distributors and customers.
- In addition, our dedicated Data & Analytics Team sources and analyzes data to develop views on the long-term drivers for individual companies and value chains as well as macroeconomic trends.
- We leverage our in-depth fieldwork and data analytics in our analysis of material ESG topics.
- Based on fundamental analysis, in-house fieldwork and data analytics, we formulate proprietary, actionable investment theses.
- Every step of the process adheres to rigid compliance guidelines in order to prevent exposure to material nonpublic information.

## Portfolio Management

- The “SEG International 250”: We actively monitor approximately 250 international companies that have been fully vetted through our research process and formally approved by our Investment Committee.
- Analysts synthesize their ESG insights and share findings with Portfolio Managers.
- Once we approve a business that meets our investment criteria, we wait for an opportunity to buy it at a compelling discount to its intrinsic value.
- We consistently update and maintain intrinsic value estimates for all Approved List businesses, whether we own the company or not.
- Individual position weightings vary based on several factors including quality of business, discount to intrinsic value and liquidity.
- We will often establish a new position at a small weighting and build the position opportunistically.
- Portfolio Managers hold sole discretion over all investment decisions.
- Associate Portfolio Managers’ primary responsibilities include playing devil’s advocate on the portfolio.



## TOP DOWN

Portfolio Managers have primary responsibility to oversee and manage risk, including liquidity, within clear portfolio-specific guidelines.

We typically will not own more than 10% of an underlying company.

We monitor regional, country and industry exposures and ensure we do not breach maximum allocations.

Approximately 98% of the portfolio can be liquidated in 30 days.<sup>1</sup>

While our primary focus continues to be fundamental, bottom-up analysis, we utilize portfolio analytics to enhance our process by providing situational awareness around potential portfolio risks, including unintended factor tilts and macroeconomic exposures.

Our Analyst team reviews positions for the impact of macroeconomic circumstances.

Baxter Street employs FX hedging when the strategy has a large exposure to a given currency that is overvalued relative to long-term purchasing power parity, and it is cost effective to hedge.

## BOTTOM UP

The Firm's Investment Committee, consisting of all Portfolio Managers, meets quarterly to conduct portfolio reviews including analysis of business quality, investment theses, exposures, ESG considerations, counterparties and liquidity.

Members of our team present opposing arguments and play devil's advocate for each investment.

Our most valuable risk management tool is the deep understanding we have of our businesses. We typically study a business for over two years before establishing a core position.

We believe our investment strategy is relatively defensive, as we seek to own the highest-quality, predictable businesses with sustainable barriers to competition.

We weigh downside risk more heavily than upside reward, and our focus is on protecting against a permanent loss of capital.

Position sizing is determined by our estimates of upside to intrinsic value and downside risk, which are derived from cash flow analysis.

<sup>1</sup> As of June 30, 2023. The above liquidity analysis is based on gross exposure and derived using information from Bloomberg, assuming a six-month look back for average daily volume (ADV) and limiting our participation rate to 20% of ADV. The liquidity analysis excludes listed indices, custom basket swaps and options. The manager reserves the right to exclude any other securities, which either do not show volume on Bloomberg or, in the manager's opinion, show inaccurate volume. See additional disclosures at the end of this document. Nothing herein is intended to imply that an investment in the Funds or the Funds' investment strategies may be considered conservative. Investment losses may occur, and there can be no assurance that any investment objectives will be achieved.





# Environmental, Social and Governance (ESG) Policy

The consideration of ESG factors is one of the key components of our investment process and assessment of a company's quality. ESG factors inform, but do not necessarily dictate, our research and portfolio management decisions.

## ESG PHILOSOPHY

Select Equity takes an ESG integration approach to sustainable investing. Under this approach, we analyze how ESG factors impact the financial risk and return of a company by examining dynamics that we believe will materially affect a company's future earnings power and market position. We believe this approach is aligned with our fiduciary duty and our goal to maximize financial returns for our clients.

## OVERSIGHT

Our ESG Committee, chaired by our Director of Sustainable Investing, provides oversight of our ESG integration framework within our research process. The Committee includes senior members from the Portfolio Management, Research and Client Development Teams.

## RESEARCH

Analysts are responsible for understanding and integrating financially material ESG considerations as part of the research process. Our Qualitative Field Research and Data & Analytics Teams play an integral role in this effort. We believe our long history of proprietary, rigorous research complements areas for which third-party ESG data may be lacking.

## ENGAGEMENT

We communicate regularly with management teams and convey our concerns and questions regarding any issues, including material ESG risks, that we identify during our research process. We generally take a holistic view toward voting client proxies in an effort to increase shareholder value.

## Examples of ESG Factors:

### ENVIRONMENTAL

Climate change, pollution and waste, use of natural resources, sustainable sourcing and investments in energy efficiency and clean technology.

### SOCIAL

Workforce development, equal employment opportunity, fair compensation, health and safety, product liability (product quality and safety, privacy and data security), human rights and corporate culture.

### GOVERNANCE

Board quality, ethics of management team, shareholder voting power, policies around management compensation and equity ownership and inter-company agreements.

SELECT EQUITY IS A SIGNATORY OF THE UNPRI AND A MEMBER OF ORGANIZATIONS THAT SUPPORT SUSTAINABLE INVESTING, INCLUDING THE CDP AND THE IFRS SUSTAINABILITY ALLIANCE.<sup>1</sup>

<sup>1</sup>The UNPRI references the UN-Supported Principles for Responsible Investment, CDP references the Carbon Disclosure Project and IFRS references the International Financial Reporting Standards.



## Baxter Street Investment Team

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### *Chad M. Clark, Portfolio Manager, Analyst, Principal*

Mr. Clark joined Select Equity in August 2010. He has been responsible for the portfolio management of the Cooper Square strategy (the Firm's international long/short strategy) since its inception in January 2011 and of the Baxter Street strategy (the Firm's international long-only strategy) since its inception in September 2012. He is a member of the Firm's Management Committee. Prior to joining Select Equity, he spent 14 years at Harris Associates, where he was a Partner and co-managed the Oakmark International Small Cap Fund and Harris International Value L.P. Prior to Harris Associates, he was an Analyst in Corporate Finance at William Blair & Company. Mr. Clark is a CFA® charterholder. Mr. Clark received a B.S. from Carnegie Mellon University (summa cum laude).

### *Matthew C. Pickering, Portfolio Manager, Analyst, Principal*

Mr. Pickering joined Select Equity in December 2010. He is the Portfolio Manager of the Cooper Square strategy and the Baxter Street strategy and is a member of the Firm's Management Committee. Prior to joining Select Equity, he was an Analyst with Harris Associates for four years. Prior to Harris Associates, he worked for six years as an Analyst and Associate Portfolio Manager with Institutional Capital. Mr. Pickering is a CFA® charterholder. Mr. Pickering received a B.S. from Miami University (magna cum laude).

### *Brian M. Vollmer, Crosby Street Portfolio Manager, Analyst, Principal*

Mr. Vollmer began at Select Equity as an intern in 2005 and joined the Firm full time in August 2006. He has been responsible for the portfolio management of the Crosby Street strategy (the Firm's global large cap long-only strategy) since its inception in January 2018 and is responsible for the day-to-day management of the Sheridan Square strategy (the Firm's international large cap long-only strategy). He is a member of the Firm's Management Committee. Prior to joining Select Equity, he worked as a private equity Investment Analyst for Hicks, Muse, Tate & Furst. Prior to Hicks, Muse, Tate & Furst, he worked in the Investment Banking Division at Goldman Sachs. Mr. Vollmer received a B.S. from the University of Virginia (with distinction) and an M.B.A. from the Stanford Graduate School of Business, where he graduated as an Arjay Miller Scholar.

### *Loren S. Lewallen, Cooper Square Associate Portfolio Manager, Analyst, Principal*

Mr. Lewallen began at Select Equity as an intern in 2006 and joined the Firm full time in September 2007. He is an Associate Portfolio Manager of the Cooper Square strategy and is a member of the Firm's Management Committee. Mr. Lewallen is a CFA® charterholder. Mr. Lewallen received a B.A. from Columbia University (magna cum laude).

### *Joseph E. Buser, Associate Portfolio Manager, Analyst*

Mr. Buser joined Select Equity in August 2016. He is an Associate Portfolio Manager of the Baxter Street strategy. Prior to joining Select Equity, he was an Associate in the Americas Private Equity Group at KKR. Prior to KKR, he worked in the Investment Banking Division at UBS. Mr. Buser received a B.S. and a B.A. from Indiana University (with highest distinction).

### *Jonathan D. Allen, Chief International Strategist, Senior Analyst*

Mr. Allen joined Select Equity in April 2010. Prior to joining Select Equity, he was a Principal, Portfolio Manager and Analyst with Clay Finlay for 16 years. Mr. Allen is a CFA® charterholder. Mr. Allen received a B.A. from the University of Pennsylvania.



## Baxter Street Investment Team

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### *Alex Apanovitch, Analyst*

Mr. Apanovitch joined Select Equity in March 2018. Prior to joining Select Equity, he was a Research Analyst at King Street Capital Management. Prior to King Street, he worked in the Investment Banking Division at Goldman Sachs. Mr. Apanovitch received a B.A. and B.Sc. from Western University in London, Ontario (with distinction).

### *Michael T. Archer, Analyst*

Mr. Archer joined Select Equity in August 2015. Prior to joining Select Equity, he was an Analyst in the Restructuring Group at Lazard. Mr. Archer received a B.S. from the University of Virginia (with distinction).

### *Pawel Kaczmarek, Analyst*

Mr. Kaczmarek joined Select Equity in September 2016. Prior to joining Select Equity, he was a multi-industry Research Associate on the Domestic team at Harris Associates. Prior to Harris Associates, he worked as an Associate Analyst at Advisory Research, an institutional investment manager in Chicago. He also worked as a sell-side Research Associate covering Industrial Distribution at William Blair & Co. Mr. Kaczmarek is a CFA® charterholder. Mr. Kaczmarek received a B.S. from Indiana University (with distinction and with honors in business).

### *Vedran Milosevic, Analyst*

Mr. Milosevic joined Select Equity in September 2021. Prior to joining Select Equity, he was an Analyst at Surveyor Capital. Prior to Surveyor Capital, he was a Senior Analyst at Glenview Capital Management. Prior to Glenview Capital, he worked in the M&A Group at Credit Suisse. Mr. Milosevic received an H.B.A. from Western University in London, Ontario (with distinction).

INTEGRATED WITH THE ENTIRE SELECT EQUITY GROUP RESEARCH TEAM OF 75.



# Terms and Service Providers

Minimum Subscription

\$1,000,000

Fiscal Year

Calendar

Reporting

Monthly performance and attribution, quarterly commentaries and annual audited financials

Management Fee

Net Asset Value	Management Fee Rate
\$0-\$24,999,999	1.50% per annum (0.125% per month)
\$25,000,000-\$99,999,999	1.25% (0.1041% per month)
\$100,000,000 or greater	1.00% (0.0833% per month)

Lockup

None

Liquidity

Monthly

Notice Period

30 days written notice

Administrator

SS&C Technologies, Inc.

Prime Broker

Morgan Stanley & Co.

Auditor

PricewaterhouseCoopers LLP

Legal Counsel

Willkie Farr & Gallagher LLP



# APPENDIX



# Select Equity Investment Strategies

	LONG-ONLY STRATEGIES						LONG/SHORT STRATEGIES		
	Mulberry Street	Great Jones	Baxter Street	Sheridan Square <sup>1</sup>	Crosby Street	Hudson Street	SEG Partners	Shinbone Alley	Cooper Square
<b>Strategy Focus</b>	<i>US Small-Mid Cap Long-Only</i>	<i>Concentrated Opportunistic Long-Only</i>	<i>International Long-Only</i>	<i>International Large Cap Long-Only</i>	<i>Global Large Cap Long-Only</i>	<i>US Small Cap Long-Only</i>	<i>US Long/Short</i>	<i>Mobility-Focused Long/Short</i>	<i>International Long/Short</i>
<b>Status</b>	Open	Open	Hard-Closed	Open	Open	Open	Soft-Closed	Open	Open
<b>Portfolio Managers</b>	George Loening Laura McKenna	Abigail Schumer	Chad Clark Matthew Pickering	Brian Vollmer	Brian Vollmer	Nancy Walker	George Loening	J.D. Delafield	Chad Clark Matthew Pickering
<b>Inception</b>	1991	2007	2012	2017	2018	2020	1998	2003	2011
<b>Assets (in millions)<sup>2</sup></b>	\$5,867	\$1,623	\$8,296	\$4,648	\$3,263	\$113	\$9,030	\$293	\$1,435
<b>Positions &amp; Portfolio Weightings<sup>3</sup></b>									
Long Positions	25 - 40	10 - 20	30 - 60	40 - 60	40 - 60	35 - 65	50 - 80	10 - 25	40 - 60
Long Weightings	0.5% - 10%	1% - 25%	1% - 10%	0.75% - 6%	0.5% - 6%	1% - 8%	0.25% - 7.5%	2% - 15%	1% - 10%
Short Positions	-	-	-	-	-	-	80 - 110	0 - 25	30 - 60
Short Weightings	-	-	-	-	-	-	0.25% - 4%	1% - 3%	0% - 5%
Gross Exposure	80% - 100%	80% - 100%	80% - 100%	80% - 100%	80% - 100%	80% - 100%	160% - 200%	90% - 100%	140% - 180%
<b>Geographic Exposure</b>	US	Flexible	Non-US	Non-US	Global	US	Flexible	Flexible	Non-US
<b>Typical International Exposure<sup>3</sup></b>	5%	<30%	100%	100%	50%	10%	<20%	<20%	100%

As of June 30, 2023. The most current month-end AUM numbers are estimated. Portfolio characteristics are subject to change. The above assets include separately managed accounts and/or private funds. See important performance and other disclosures included at the back of this presentation.

<sup>1</sup> Brian Vollmer has primary responsibility for the day-to-day portfolio management and trading of Sheridan Square.

<sup>2</sup> In addition to the above listed strategies, SEG manages a variety of customized strategies representing approximately \$5,249 million as of June 30, 2023.

<sup>3</sup> The ranges provided are indicative of typical portfolio exposures. Please refer to the Private Placement Memorandum for investment guidelines.



## Baxter Street Performance Summary

	Baxter Street, LP Gross Return	Baxter Street, LP Net Return	MSCI ACWI ex US
<b>Since Inception</b>	8.6%	7.0%	5.3%
<b>Last 12 Months</b>	12.5%	10.9%	12.7%
<b>Last 3 Years</b>	3.9%	2.3%	7.2%
<b>Last 5 Years</b>	4.8%	3.2%	3.5%
<b>Last 10 Years</b>	7.3%	5.7%	4.7%
<b>Years</b>			
<b>YTD 2023</b>	10.9%	10.1%	9.5%
2022	-21.8%	-23.0%	-16.0%
2021	4.2%	2.6%	7.8%
2020	17.1%	15.4%	10.7%
2019	30.3%	28.4%	21.5%
2018	-7.2%	-8.6%	-14.2%
2017	26.0%	24.2%	27.2%
2016	3.5%	1.9%	4.5%
2015	4.7%	3.2%	-5.7%
2014	0.2%	-1.2%	-3.9%
2013	26.2%	24.6%	15.3%
2012 <sup>1</sup>	10.3%	9.8%	9.8%

<sup>1</sup> 2012 performance represents performance for the year beginning September 1, 2012, the inception of the Fund.

As of June 30, 2023. The most current month-end and YTD performance numbers are estimated. Past performance is not indicative of future results, which may vary. The returns presented include both the restricted and non-restricted share classes. Comparisons to financial indices are provided for illustrative purposes only. It is not possible to invest directly in an index. See important performance and other disclosures included at the back of this presentation.



# MWRA Performance Summary

Account	Inception Date	Fund Name	Reporting Date
MWRA Employees' Retirement System	May 2016	Baxter Street Offshore Fund, Ltd.	8/31/2023

## Year-End Assets & Performance

Year	Ending Value	Net Capital Flows	Account Gross	Account Net	MSCI ACWI ex US	Net Excess
2016	\$28,103,461	\$27,500,000	3.9%	3.2%	2.2%	1.0%
2017	\$28,789,288	(\$6,000,000)	25.8%	24.6%	27.2%	-2.6%
2018	\$26,476,414	-	-7.1%	-8.0%	-14.2%	6.2%
2019	\$34,180,021	-	30.4%	29.1%	21.5%	7.6%
2020	\$40,962,049	\$1,000,000	17.4%	16.2%	10.7%	5.6%
2021	\$36,180,242	(\$6,000,000)	4.0%	3.0%	7.8%	-4.9%
2022	\$28,091,632	-	-21.6%	-22.4%	-16.0%	-6.4%
YTD 2023	\$29,714,780	-	6.5%	5.7%	8.8%	-3.1%

Returns	Account Gross	Account Net	MSCI ACWI ex US	Net Excess
QTD	-4.3%	-4.5%	-0.6%	-3.9%
YTD	6.5%	5.7%	8.8%	-3.1%
Last 12 Months	7.6%	6.5%	11.9%	-5.4%
Last 3 Years (Annualized)	-0.9%	-1.9%	4.0%	-5.9%
Last 5 Years (Annualized)	3.7%	2.6%	3.3%	-0.7%
Since Inception (Annualized)	6.8%	5.7%	5.5%	0.2%





## Baxter Street Exposure Summary

Geographic Exposure <sup>1</sup>	Baxter Street	MSCI ACWI ex US
Australia & New Zealand	3%	5%
Japan	3%	14%
China	4%	8%
Asia ex Japan & China	7%	16%
Europe	49%	27%
Switzerland	6%	7%
United Kingdom	11%	10%
Latin America	0%	3%
North America	13%	8%
Africa & Middle East	0%	3%
Multi-Country	0%	0%
<b>Total</b>	<b>95%</b>	<b>100%</b>

Sector Exposure <sup>2</sup>	Baxter Street	MSCI ACWI ex US
Energy	0%	5%
Materials	7%	8%
Industrials	23%	13%
Consumer Discretionary	10%	12%
Consumer Staples	5%	9%
Healthcare	15%	10%
Financials	20%	21%
Information Technology	12%	12%
Communication Services	3%	6%
Utilities	0%	3%
Real Estate	0%	2%
Multi-Sector	0%	0%
<b>Total</b>	<b>95%</b>	<b>100%</b>

Market Cap Exposure <sup>3</sup>	Baxter Street	MSCI ACWI ex US
\$50B+	39%	47%
\$20-\$50B	23%	24%
\$10-\$20B	17%	15%
<\$10B	16%	14%
<b>Total</b>	<b>95%</b>	<b>100%</b>

Developed/Emerging Markets Exposure <sup>1</sup>	Baxter Street	MSCI ACWI ex US
Developed Markets	85%	72%
Emerging Markets	11%	28%
<b>Total</b>	<b>95%</b>	<b>100%</b>

<sup>1</sup> Geographic exposure is determined by using the MSCI Global Investable Market Indices (GIMI) Methodology for country classification.

<sup>2</sup> Source: FactSet using GICS sector classification.

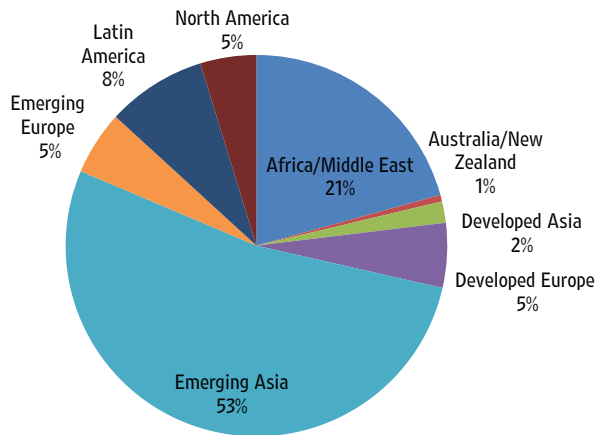
<sup>3</sup> Market Cap Exposures do not include any non-equity-based positions and portfolio insurance investments.

June 30, 2023 exposure is internal and subject to change. Numbers may not foot due to rounding. See important performance and other disclosures included at the back of this presentation. Baxter Street, LP exposure figures do not include FX hedge positions.

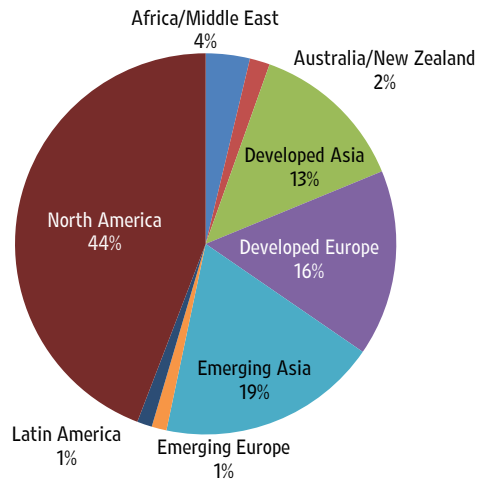


# Different Ways to View the World

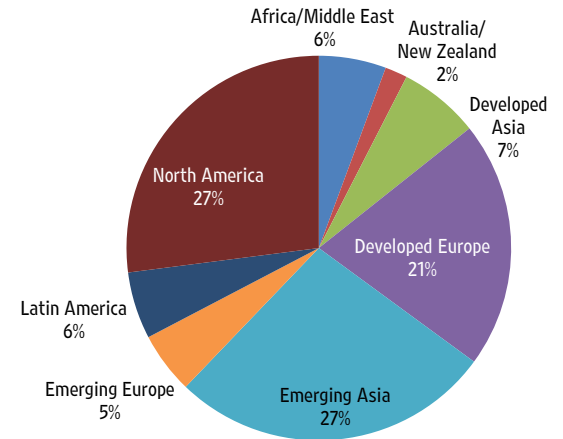
Population



Market Capitalization



GDP





## Baxter Street: Top 15 Equity Holdings

Equity Holdings by Market Value	Mkt Cap (\$B)	Tr Op Mgn	Tr ROE	3-5-Yr Avg EPS $\Delta$ Est	12-Mth Fwd P/E	3-Yr FCF/NI	Company Descriptions
Edenred	\$17	36%	NMF	17%	25.2	176%	Global B2B provider of employee benefits, fuel & fleet cards and payment services
Safran	\$67	13%	6%	31%	24.3	195%	Manufacturer of engines, equipment and systems for the aerospace and defense industry
Alcon	\$41	18%	6%	14%	32.5	44%	Global maker of surgical equipment and consumables for the eye care industry
CRH	\$40	12%	13%	12%	13.5	99%	Global building materials manufacturer
SAP	\$168	26%	15%	17%	19.6	100%	Global developer of business enterprise resource planning software
AIA Group	\$117	12%	14%	11%	16.3	60%	Emerging Asia's oldest life insurer with leading positions in 17 growth markets
Sensata Technologies	\$7	20%	18%	9%	11.5	80%	Manufacturer of sensors and controls, primarily in the auto and off-road vehicle markets
Revvity <sup>1</sup>	\$15	29%	8%	14%	22.2	90%	Provider of consumables, services and equipment for human diagnostics and life sciences research
Schneider Electric	\$104	18%	16%	9%	21.7	89%	Global specialist in energy management and digital automation with an offering spanning products, software and services
London Stock Exchange	\$59	35%	7%	7%	25.2	119%	Capital markets data provider and exchange
Treasury Wine Estates	\$5	22%	7%	17%	21.2	135%	Global premium wine producer
Brookfield Corporation	\$55	NMF	13%	10%	15.8	NMF	Global asset manager in the infrastructure, real estate and renewable power sectors
Melrose Industries	\$9	6%	4%	41%	29.8	NMF	Hybrid private equity/industrial turnaround specialist
DSM-Firmenich	\$29	12%	7%	12%	22.4	65%	Dutch manufacturer of nutrition, health and beauty products
JD.com	\$53	2%	16%	20%	10.0	70%	E-commerce company in China

	Mkt Cap	Op Mgn	ROE	EPS $\Delta$	Fwd P/E	FCF/NI
Median	\$41	18%	10%	14%	21.7	90%

<sup>1</sup>Tr Op Mgn, Tr ROE and 3-Yr FCF/NI are estimates based on 2023 projections, as historical numbers are not reflective of current operations due to divestments, acquisitions and COVID-19 testing-related revenue.

Op Mgn is operating margin or earnings before interest and tax as a percent of sales. Trailing operating margin has been adjusted to exclude non-cash amortization when we view it as material and not reflective of ongoing capital requirements. The operating margin and return on equity ratios are trailing based on company financials. Average EPS  $\Delta$  is our estimate of normalized three- to five-year EPS growth. Average EPS growth and 12-Mth forward P/E are based on our internal estimates. Fwd P/E multiples are based on 6/30/23 equity prices. FCF/NI is all operating cash flow from the last three years, minus all cap ex, compared to adjusted net income over that time.



# Representative Investment

## AIA Group (1299 HK) Emerging Asia's oldest life insurer with leading positions in 18 growth markets

### BACKGROUND

AIA Group is a life insurance provider across 18 countries in emerging Asia, serving over 40 million individual policyholders and more than 17 million corporate plan participants. The Company serves its customers with a strong focus on agency sales, which account for more than 80% of its value of new business (VONB). China (including Hong Kong) is the Company's largest, most profitable and fastest-growing market, accounting for more than 50% of revenue and VONB. In 2021, AIA paid out more than \$16 billion in benefits and claims, and its total sum assured exceeded \$2 trillion.

Life insurance in emerging Asia remains in its infancy. In 2021, annual premiums per capita in mainland China of \$253 amounted to less than 12% of the G7 average. AIA sits in the sweet spot of multiple powerful structural tailwinds: aging populations, rising dependency ratios, middle class wealth formation, urbanization, increasing prevalence of lifestyle-related diseases, high savings rates and minimal societal safety nets (public spend per capita is less than 20% of the G7 average).

### INVESTMENT ATTRIBUTES

**Competitive Moat:** AIA's network of over 200,000 agents makes it one of the world's most powerful and secure distribution franchises. With strong productivity and recruitment, AIA's agency force is able to sell more valuable policies, more frequently, to the most desirable clients. The Company's "in-force" business—consisting of policies written in prior years with a remaining average term exceeding 20 years—provides excellent free-cash-flow (FCF) stability and visibility. Over the next 10 years, it is expected to generate \$47 billion in cash profits, equivalent to almost half the current market cap and more than enough to fund growth in new business and dividends with enough to spare for M&A and buybacks.

**Growth:** Over the five years through 2019, AIA delivered annualized new premiums and VONB CAGRs of 12% and 18%, respectively. Pandemic-induced lockdowns suppressed VONB growth, but, thanks to its in-force business, AIA was still able to grow revenue 3% in 2020 and 4% in 2021.

**Returns:** Underlying new business IRRs (including the full loading of central costs) exceed 20% (locked in for 20 to 30 years) and have been stable to rising every year since the 2010 IPO. Despite the \$1.5 billion funding strain that this entails, AIA still generates over \$3 billion in FCF per year.

### 5PS ANALYSIS

**Pie Growth:** The overall market for life and health insurance in emerging Asia is growing low double digits per year (with mainland China in the mid-teens), driven by a lack of social safety nets and rising affluence.

**Piece of the Pie:** AIA continues to gain share in most markets, including Hong Kong and China. This is due to a general focus on agency, as well as a differentiated foreign brand that consumers trust.

**Pricing Power:** There appears to be little price competition in Asia today, driven by the fact that companies are more focused on finding the incremental buyer than on stealing away clients.

**Predictability:** Insurance sales have generally been predictable in Asia given the secular growth tailwinds, but savings products are likely to be more cyclical going forward as penetration continues to rise.

**People:** AIA is led by CEO Lee Yuan Siong, who received strong marks leading Ping An Insurance as its co-CEO in China. He is also a former executive of Prudential plc where he worked under Mark Tucker (who went on to become AIA's CEO from 2010 to 2017).

### CURRENT VALUATION

AIA trades at roughly 1.6x its current embedded value (equivalent to an implied 9.9x 2023 VONB) and 13x 2023 earnings with a 2.4% dividend yield. From 2023, we expect VONB growth to rebound to 30%, followed by a return to double-digit annual VONB and revenue growth with rising margins for the foreseeable future. Near-term EPS growth will also be supported by a three-year \$10 billion buyback program (equivalent to roughly 10% of current market cap).

Source: SEG research as of November 2022.

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# Representative Investment

## Edenred (EDEN FP) Global provider of prepaid corporate services

### BACKGROUND

Edenred is a provider of prepaid corporate services with 61% of operating revenue from Employee Benefits (meal, food and childcare vouchers), 26% from Fleet & Mobility (solutions for corporate vehicle and fuel expense management) and 13% from Complementary Solutions. These services help to retain employees and improve efficiency for about 900,000 corporate clients, increase the purchasing power of corporate clients' more than 50 million employees, drive business to over two million merchant affiliates and promote economic formalization and job creation (and, thus, government revenues) across 46 countries. Geographic EBITA is split between Europe (65%), Latin America (32%) and the rest of the world (3%).

The employee benefits total addressable market (TAM) is worth €200 billion per year and is growing 5%-7% annually but is only 22% penetrated. As the eligible population expands to include civil servants, the self-employed and finally the informal workforce, the potential TAM could more than double, even as penetration grows. Edenred is the largest global provider of employee benefits with 46% share of the €44 billion addressed market.

Corporations spend over €1 trillion per year globally on fuel and fleet management. Edenred's two key markets are Europe and Latin America with total spend of €300 billion and €100 billion, respectively, but only 29% of this is outsourced for both markets. Helped by gradually rising penetration, Edenred's addressed market is, thus, growing by 5%-10% annually. Edenred is the largest in Brazil and Mexico and the second largest in Europe.

Edenred collects 4%-5% of the issue volume (the face value of vouchers issued) as revenue, split roughly 1% from corporate clients, approximately 3% from the merchant affiliates who redeem them, 0.5% from lost or unused vouchers and 0.5% from interest income on the float, which drops straight to EBITA.

### INVESTMENT ATTRIBUTES

#### Competitive Moat:

1. Scale and Network Economics—Fees per employee are very small, requiring large volumes to recover commercial and fixed costs. Corporate clients want access to the most affiliates, and affiliates want access to the most beneficiaries. Scale across all stakeholders maximizes negotiating power with each. Geographic scale allows Edenred to leverage innovation, trialing new solutions in one country and then rolling out the successful ones globally.
2. Trust and Reputation—Edenred invented the meal voucher 50 years ago. HR departments want a partner that's trustworthy and dependable and affiliates want to know they'll be paid. Edenred's net promoter scores are far ahead of rivals.
3. Digitization—Edenred's investment in paperless digital vouchers dwarfs all competitors. Digitization makes new products and services possible, allows smaller corporations to be addressed efficiently and leads to greater stickiness through integration with corporate customers' IT platforms.

**Growth:** Over the last five years, Edenred has delivered revenue, EBITA and EPS CAGRs of 7%, 8% and 14%, respectively, but these were all depressed by Latin American FX depreciation. On a constant currency basis over the same period, operating revenue growth has accelerated from 8% to 14% and operating EBITA (excluding financial income) from 17% to 22%.

**Returns** are excellent: 33% EBITA margin and infinite ROCE and ROE, as the entire business is funded by corporate prepayments. FCF is over 180% of net income. From a net debt-to-EBITDA position of 1.3x in 2021, Edenred should turn net cash positive in 2023.

### 5PS ANALYSIS

**Pie Growth:** The benefits and fuel & fleet markets both grow at 5%-7% annually, driven by increasing penetration.

**Piece of the Pie:** Edenred grows at 1.5x to 2.0x the market, as it continues to reap the rewards of years of investment into innovation and digitization.

**Pricing Power:** The key pricing metric for Edenred is "take rate," the percentage of issue volume that it converts into revenue. This is stable to improving on a like-for-like basis.

**Predictability** is high: Business volume is linked to employment and fleet fuel consumption, but rising penetration offsets cyclical. Like-for-like growth troughed at 3% in 2009.

**People:** CEO Bertrand Dumazy, who joined the Company in 2015, has delivered accelerating growth and margins by better targeting the underpenetrated small- and medium-sized business segment, innovating new solutions, sharing best practices/benchmarking between the various country operations and rolling out a standardized global IT infrastructure. Dumazy's hiring has also ensured that Edenred's bench is broad and deep.

### CURRENT VALUATION

Edenred trades at 2023 multiples of 17x EBITA and 24x earnings. We expect sustained annual revenue growth of 9%-12% (supported by the return of net interest income thanks to surging policy rates and inflation-driven increases in voucher face values) with EBITA margin expansion of 300 bps to surpass 40% in 2026.

Source: SEG research as of November 2022.

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## Qualitative Field Research Case Study

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### Objective

To understand how political tensions between Seoul and Beijing were impacting the market for Korean cosmetics in China.

### Background

In retaliation for South Korea's deployment of the THAAD missile defense system, the Chinese government has been tightening its customs enforcement, making it more difficult for Korean companies to reach Chinese customers. For Korean cosmetics companies, this has affected sales in Chinese department stores, and also, potentially, through the movement of goods through the grey market ("parallel traders" or "daigou" in Chinese). Our goal was to determine the impact on cosmetic sales.

### Process

Agents operating in the grey market in China are not enthusiastic about sharing the details of their businesses, so we turned to the wholesale markets that sell to parallel traders in Seoul, one rung higher on the supply chain. In an outer suburb, we interviewed eight store managers. As an indication of how much these wholesalers depend on the "daigou" business, they nearly all spoke Chinese and none spoke English.

### Result

A clear picture emerged—the grey market was suffering heavily from heightened customs enforcement at China's borders. The Chinese "daigou" were buying far less than previously, as they could no longer get the products into China. While additional fieldwork indicated that political tensions were unlikely to dampen long-term demand for Korean cosmetics in China, the trip to Seoul helped us understand the impact of Beijing's actions.



## Data & Analytics Case Study

We surveyed US optometrists to better understand the competitive positioning of Alcon, a contact lens manufacturer, and evaluate feedback on the Company's new product launch.

### Background

We launched a custom survey for US optometrists to answer the following questions:

- What is the current level of enthusiasm among optometrists for Alcon's new disposable contact lens?
- Do optometrists plan on increasing their use of this new product?
- What brands do optometrists use for daily and reusable contact lenses?
- How often do optometrists switch contact lenses within categories, and what drives these changes?

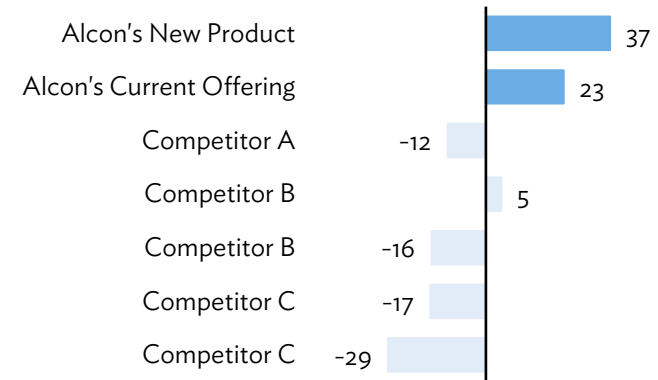
### Key Findings

- Approximately 25% of practices that currently stock Alcon's new lens reported great reviews, and roughly 50% of optometrists plan on increasing their use of the newly launched lens.
- Alcon's two most recent lens launches scored favorably relative to competitors.
- Alcon's primary strengths are its high product quality and technical innovation, while its leading competitor is stronger in patient satisfaction and lens supply availability.
- While Alcon has invested in several new contact lines to address capacity concerns, it has not acknowledged the need for increased levels of customer support and is generally considered weaker on customer service relative to other brands.
- Optometrists believe the use of daily disposable contacts will increase, suggesting that daily lenses will continue to take share from reusable lenses.

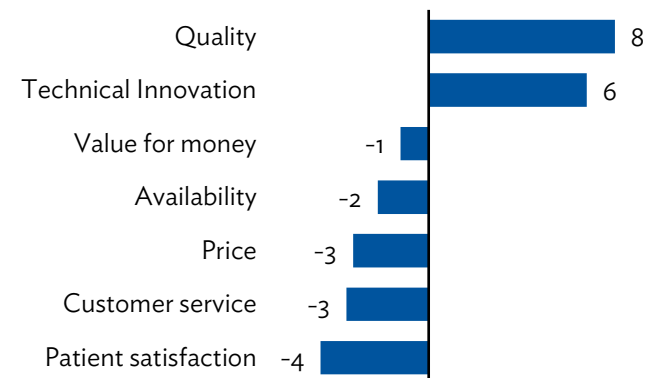
### Investment Implications

- The feedback from the survey was generally positive for our investment thesis, and we maintained our position.
- We were encouraged that optometrists plan on increasing their use of Alcon's new lens, and that the Company's two most recent product launches scored favorably relative to peers.
- A negative finding for our thesis was that optometrists commonly complained about Alcon's poor customer service and low inventory availability, highlighting topics for our future follow-up discussions with management.

### Alcon's Net Promoter Score vs. Competitors



### Alcon's Relative Strengths vs. Peers



Source: SEG research as of May 2021.

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## Culture

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We strive to be recognized as a Firm of excellence, not individuals of excellence.

### Client Focus

We serve our clients first, the Firm second, our teams third and our individual selves last. Our culture is defined by our Core Principles (outlined on the following page) that reflect who we are and inform our actions and goals.

### People

We attract, develop and empower extraordinary talent. We seek to hire smart, motivated individuals of differing backgrounds, experiences and perspectives. We believe that fostering a diverse and inclusive work environment benefits our clients and the Firm.

### Select Equity Group Foundation

Established in 2000, the mission of the Select Equity Group Foundation is to make a positive impact by actively engaging all employees in identifying, supporting and participating in charitable organizations of excellence. To date, over \$45 million in grants have been awarded to local, national and international not-for-profit organizations.





## Core Principles

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### ORIGINALITY

We generate our own ideas and never deploy common practice without skepticism. We strive to avoid the herd.

### INNATE CURIOSITY

There are no dumb questions. We challenge universally accepted beliefs and seek new angles of understanding.

### CHARITY

We recognize our good fortune and give back to society in meaningful and thoughtful ways.

### CONTINUOUS IMPROVEMENT

We always strive to improve our performance and measure ourselves absolutely, not relatively.

### HUMILITY

We seek no acclaim individually or as a Firm other than earning the gratitude of our clients.

### TEAMWORK

We trust our colleagues and communicate with transparency and respect. Ours is a culture of giving credit, not seeking credit.



# Select Equity Principals

## INVESTMENT MANAGEMENT & RESEARCH

### PORTFOLIO MANAGEMENT

George S. Loening, *Chairman, Portfolio Manager, Analyst, Principal*

Mr. Loening founded Select Equity in January 1990. He has been responsible for the portfolio management of the Mulberry Street strategy (the Firm's US small-mid cap long-only strategy) since its inception in January 1991, of SEG Partners (the Firm's US long/short strategy) since its inception in April 1998 and of the SEG Blackwall strategy (the Firm's US core long-only strategy) since its inception in January 2008. He is a member of the Firm's Management Committee. Mr. Loening received a B.A. from Columbia University.

Chad M. Clark, *Portfolio Manager, Analyst, Principal*

Mr. Clark joined Select Equity in August 2010. He has been responsible for the portfolio management of the Cooper Square strategy (the Firm's international long/short strategy) since its inception in January 2011 and of the Baxter Street strategy (the Firm's international long-only strategy) since its inception in September 2012. He is a member of the Firm's Management Committee. Prior to joining Select Equity, he spent 14 years at Harris Associates, where he was a Partner and co-managed the Oakmark International Small Cap Fund and Harris International Value L.P. Prior to Harris Associates, he was an Analyst in Corporate Finance at William Blair & Company. Mr. Clark is a CFA® charterholder. Mr. Clark received a B.S. from Carnegie Mellon University (summa cum laude).

Laura S. McKenna, *Portfolio Manager, Analyst, Principal*

Ms. McKenna began at Select Equity as an intern in 1993 and later joined the Firm full time in September 2001. She is the Portfolio Manager of the Mulberry Street strategy and is a member of the Firm's Management Committee. She served as Director of Research from 2010 to 2013. Prior to joining Select Equity, she was a Senior Analyst and Managing Director at Wanger Asset Management. Ms. McKenna is a CFA® charterholder. Ms. McKenna received a B.A. from the University of Virginia and an M.B.A. from the University of Michigan (with high distinction).

Matthew C. Pickering, *Portfolio Manager, Analyst, Principal*

Mr. Pickering joined Select Equity in December 2010. He is the Portfolio Manager of the Cooper Square strategy and the Baxter Street strategy and is a member of the Firm's Management Committee. Prior to joining Select Equity, he was an Analyst with Harris Associates for four years. Prior to Harris Associates, he worked for six years as an Analyst and Associate Portfolio Manager with Institutional Capital. Mr. Pickering is a CFA® charterholder. Mr. Pickering received a B.S. from Miami University (magna cum laude).

Abigail E. Schumer, *Portfolio Manager, Analyst, Principal*

Ms. Schumer joined Select Equity in September 2005. She is the Portfolio Manager of the Great Jones strategy (the Firm's concentrated opportunistic long-only strategy) and is a member of the Firm's Management Committee. She served as Co-Director of Research from 2019 to 2022. Ms. Schumer received a B.A. from Yale College (cum laude).

Brian M. Vollmer, *Portfolio Manager, Analyst, Principal*

Mr. Vollmer began at Select Equity as an intern in 2005 and joined the Firm full time in August 2006. He has been responsible for the portfolio management of the Crosby Street strategy (the Firm's global large cap long-only strategy) since its inception in January 2018 and is responsible for the day-to-day management of the Sheridan Square strategy (the Firm's international large cap long-only strategy). He is a member of the Firm's Management Committee. Prior to joining Select Equity, he worked as a private equity Investment Analyst for Hicks, Muse, Tate & Furst. Prior to Hicks, Muse, Tate & Furst, he worked in the Investment Banking Division at Goldman Sachs. Mr. Vollmer received a B.S. from the University of Virginia (with distinction) and an M.B.A. from the Stanford Graduate School of Business, where he graduated as an Arjay Miller Scholar.



## Select Equity Principals

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Nancy D. Walker, *Portfolio Manager, Analyst, Principal*

Ms. Walker joined Select Equity in July 2002. She has been responsible for the portfolio management of the Hudson Street strategy (the Firm's US small cap long-only strategy) since its inception in April 2020 and is a member of the Firm's Management Committee. She served as Director of Research from 2014 to 2016. Prior to joining Select Equity, she was an Associate at Goldman Sachs Asset Management and worked in the Investment Banking Division at Goldman Sachs. Ms. Walker received a B.A. from the University of Chicago (with honors).

### RESEARCH

Evan C. Guillemain, *Director of Research, Associate Portfolio Manager, Analyst, Principal*

Mr. Guillemain joined Select Equity in April 2004 as the Firm's Chief Financial Officer. He is an Associate Portfolio Manager of the Crosby Street strategy and is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, he was Chief Financial Officer and then Chief Operating Officer of Delia's Inc., a publicly traded retailing company. He also served as Director of Acquisitions at Primedia. Mr. Guillemain received a B.A. from Yale College and an M.B.A. from Harvard Business School (with distinction).

Loren S. Lewallen, *Associate Portfolio Manager, Analyst, Principal*

Mr. Lewallen began at Select Equity as an intern in 2006 and joined the Firm full time in September 2007. He is an Associate Portfolio Manager of the Cooper Square strategy and is a member of the Firm's Management Committee. Mr. Lewallen is a CFA® charterholder. Mr. Lewallen received a B.A. from Columbia University (magna cum laude).

### ASTOR PLACE HOLDINGS

Charles P. Durkin III, *Astor Place Holdings, Principal*

Mr. Durkin joined Astor Place Holdings, the private investment arm of Select Equity, in June 2015. He is a member of the Firm's Management Committee. Prior to joining Astor Place Holdings, he was an Analyst on the Research Team at Select Equity since 2009 and was an intern in 2001. Prior to Select Equity, he worked for five years in the US Senate and as the Personal Aide to the Vice President of the United States. Mr. Durkin received an A.B. from Princeton University.

## CLIENT DEVELOPMENT

Henry P. Davis, *Chief Client Officer, Principal*

Mr. Davis joined Select Equity in April 2016. He is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, he was President of Arden Asset Management LLC until its acquisition by Aberdeen Asset Management PLC in December 2015. He previously was a Managing Director responsible for supervising Arden's research activities. Mr. Davis received an A.B. from Cornell University (summa cum laude, Phi Beta Kappa) and a J.D. from Yale Law School.

## OPERATIONS

### FINANCE

David D. Conover, *Chief Financial Officer, Principal*

Mr. Conover joined Select Equity in July 2007. He is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, he spent seven years working in the PricewaterhouseCoopers Hedge Fund Group. Mr. Conover received a B.S. from Penn State University.



## Select Equity Principals

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### TRADING & PORTFOLIO ADMINISTRATION

Jonathan M. Bearman, *Head of Global Trading, Principal*

Mr. Bearman joined Select Equity in August 2003. He is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, he was a Trader at Merrill Lynch. Mr. Bearman received a B.A. from the University of Vermont.

Maria V. Santos, *Director of Portfolio Administration, Principal*

Ms. Santos joined Select Equity in May 2005. She is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, she was Vice President of Investment Administration at J.&W. Seligman & Co. Prior to J.&W. Seligman & Co, she was Director of Fixed Income Compliance and Technology at INVESCO (formerly Chancellor LGT) and Head of Portfolio Administration at Fiduciary Trust Company International. Ms. Santos received a B.A. from New York University.

### LEGAL & COMPLIANCE

Jennifer A. Vinsonhaler, *Chief Compliance Officer, Principal*

Ms. Vinsonhaler joined Select Equity in February 2000 and served as a senior member of the Trading Team before becoming Director of Operations in 2006 and the Chief Compliance Officer in 2010. She is a member of the Firm's Management and Executive Committees. Prior to joining Select Equity, she managed Trading and Operations for private New York-based asset managers Arbor Partners and Aynsworth Financial Partners. She also served as an Assistant Vice President at Merrill Lynch and PaineWebber, specializing in proprietary trading of NASDAQ-listed issues. Ms. Vinsonhaler received a B.A. from Hobart and William Smith Colleges.



# Disclosures

## IMPORTANT DISCLOSURES

*You are urged to compare the information contained in this report to the account statements of your Administrator, which are the official books and records.*

The information contained in this report is provided for informational purposes only and is not intended as an offer or solicitation of an offer for the purchase or sale of any security and should not be relied upon by you in evaluating the merits of investing in any securities.

Select Equity Group, L.P. (“SEG” or “Manager”) is a US-based investment management firm registered as an investment adviser with the Securities and Exchange Commission. Unless otherwise indicated, the performance and other data referred to in this letter/report represents the returns of Baxter Street Fund, L.P., which closely tracks other Funds in the Baxter Street Strategy since their inceptions (collectively, the “Fund” or “Funds”). While the Funds are managed in parallel, performance may differ among the entities due to the timing of fund flows and other factors. Each of the Funds is an unregistered pooled investment vehicle over which SEG maintains discretionary authority.

The performance data herein represents past performance, which is not indicative of future results. Performance is expressed in US dollars. Unless otherwise stated, performance results for the Fund reflect the performance earned by a Fund investor who had invested at the beginning of each year under a model fee structure of the highest fee structure in place for the respective fiscal years. From inception through September 2013, the Fund’s performance is presented net of an annualized base management fee of 1.25% of net asset value charged monthly in arrears. From October 2013 onward, the performance is presented net of an annualized management fee of 1.50%. Separately managed accounts may be subject to different fee structures set forth in their investment management agreements.

Please note the returns presented in the attached for the Fund are inclusive of both the restricted and non-restricted interest/share classes. Performance between the restricted and non-restricted classes may differ due to allocations of new issues. Additional information regarding the allocation of specific IPOs, and their effect on the restricted and non-restricted interest/share class performance, is available upon request.

Fund performance is calculated monthly using the net asset value appreciation (net of all fees and expenses including a model fee structure described above) as a percentage of beginning-of-month net asset value (appropriately adjusted for any capital activity). Purchases and sales of securities are recorded on a trade date basis. Realized gains and losses from security transactions are generally determined using the specific identification method. Unrealized gains and losses from investment transactions are recognized as income. Dividend income is recorded on the ex-dividend date and interest income is recorded on an accrual basis. The Fund’s annual returns are calculated by linking the monthly performance through compounded multiplication. Exposure to certain derivative instruments may not always be reflected in the data presented in this report (e.g., certain named securities may be owned via swap). The Fund’s cumulative rate of return is calculated by linking the Fund’s annual rates of return. Fund average annualized rates of return are equivalent to the annual rate of return which, if earned in each year of the indicated multi-year period, would produce the actual cumulative rate of return over the time period. Computations assume reinvestment of all dividends, interest and capital gains. Geographic exposure is determined by using the MSCI Global Investable Market Indices (“GIMI”) Methodology for country classification. Sector exposure is derived from FactSet which uses GICS industry classification. Manager reserves the right to use a different or internal methodology for classification if a security is not classified by MSCI/GICS or if it does not agree with the assigned classification. Securities may currently be held in the portfolio where the manager used internal classification. Much of the data and other information contained in this letter/report is unaudited and is collected, in whole or in part, from a source believed by SEG to be reliable. SEG cannot guarantee the accuracy of the data/information and therefore shall not be held liable for inaccuracies. Assets are as of month end. The average exposure is calculated using daily exposures and such average exposures and the resulting internal return calculations are approximations. The cash position, if shown, is from our accounting system which assumes full payment of equity swaps. The actual cash held in the portfolio may differ significantly from this report.

Any discussions regarding potential future events and their impact on any Fund are based solely on historic information and SEG’s estimates and/or opinions, are provided for illustrative purposes only, and are subject to further limitations as specified elsewhere in this material. No guarantee can be made of the occurrence of such events or the actual impact such events would have on any Fund’s future performance.



## Disclosures

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A COPY OF PART 2 OF SEG’S FORM ADV IS AVAILABLE UPON REQUEST

# Baxter Street

International Long-Only

STRATEGY INCEPTION | SEPTEMBER 2012



AUGUST 2023

Strategy Assets (in millions)<sup>1</sup> \$7,644

Monthly Performance (Net)	JAN-23	FEB-23	MAR-23	APR-23	MAY-23	JUN-23	JUL-23	AUG-23	SEP-23	OCT-23	NOV-23	DEC-23	YTD
Baxter Street, LP	10.0%	-4.6%	3.5%	0.6%	-3.7%	4.7%	3.2%	-7.3%					5.3%
Baxter Street II, LP	10.0%	-4.7%	3.5%	0.6%	-3.7%	4.7%	3.1%	-7.4%					5.1%
Baxter Street Offshore	10.1%	-4.6%	3.6%	0.7%	-3.7%	4.7%	3.2%	-7.5%					5.4%
MSCI ACWI ex US	8.1%	-3.5%	2.4%	1.7%	-3.6%	4.5%	4.1%	-4.5%					8.8%

<sup>1</sup> Includes assets held in separately managed accounts.

The performance data herein represents past performance, which is not indicative of future results. The returns presented include both the restricted and non-restricted share classes. Comparisons to financial indices are provided for illustrative purposes only. It is not possible to invest directly in an index.

## HISTORICAL PERFORMANCE (Net, Annualized)

	Baxter Street, LP	MSCI ACWI ex US
Last 12 Months	5.6%	11.9%
Last 3 Years	-2.5%	4.0%
Last 5 Years	2.0%	3.3%
Last 10 Years	4.8%	4.4%
Since Inception	6.4%	5.1%
Volatility	14.6%	14.4%

Volatility is calculated using the standard deviation, or variance between monthly return streams since inception.

## EXPOSURES

### GEOGRAPHIC EXPOSURE

	Baxter Street	MSCI ACWI ex US
Australia & New Zealand	3%	5%
Japan	5%	15%
China	3%	8%
Asia ex Japan & China	7%	16%
Europe	48%	27%
Switzerland	6%	7%
United Kingdom	13%	9%
Latin America	0%	3%
North America	10%	8%
Africa & Middle East	0%	3%
Multi-Country	0%	0%

### MARKET CAP EXPOSURE

\$50B+	43%
\$20-\$50B	19%
\$10-\$20B	17%
<\$10B	16%

### DEVELOPED/EMERGING MARKETS EXPOSURE

	Baxter Street	MSCI ACWI ex US
Developed Markets	85%	72%
Emerging Markets	10%	28%

Geographic Exposure is determined by using the MSCI Global Investable Market Indices (GIMI) Methodology. Market Cap Exposures do not include any non-equity-based positions and portfolio insurance investments. See additional disclosures at the end.

## SECTOR EXPOSURE & ATTRIBUTION

### EXPOSURE

	Baxter Street	MSCI ACWI ex US
Energy	0%	6%
Materials	8%	8%
Industrials	20%	13%
Consumer Discretionary	10%	12%
Consumer Staples	8%	9%
Healthcare	17%	10%
Financials	17%	21%
Information Technology	12%	12%
Communication Services	3%	5%
Utilities	0%	3%
Real Estate	0%	2%
Multi-Sector	0%	0%
<b>Total</b>	<b>95%</b>	<b>100%</b>

### MONTHLY ATTRIBUTION

	Baxter Street	MSCI ACWI ex US
Energy	0.0%	0.0%
Materials	-0.7%	-0.5%
Industrials	-1.7%	-0.6%
Consumer Discretionary	-1.2%	-0.8%
Consumer Staples	0.0%	-0.3%
Healthcare	-0.9%	-0.2%
Financials	-2.1%	-1.1%
Information Technology	-0.3%	-0.5%
Communication Services	-0.2%	-0.4%
Utilities	0.0%	-0.2%
Real Estate	0.0%	-0.1%
Multi-Sector	0.0%	0.0%
Fees/Expenses	-0.1%	
<b>Total</b>	<b>-7.3%</b>	<b>-4.5%</b>

Source: FactSet using GICS sector classification. Multi-Sector includes portfolio insurance investments. Portfolio insurance may include exchange traded notes (ETNs) and/or put spread options intended to protect capital in the event of a market sell-off. Attribution figures do not include approximately 0.0% of contribution from the FX hedge positions. See additional disclosures at the end.

## PORTFOLIO SNAPSHOT

### TOP 10 EQUITY HOLDINGS

Edenred
Safran
CRH
SAP
Alcon
AIA Group
Revvity
Sensata Technologies
Schneider Electric
London Stock Exchange

### POSITIONS & PORTFOLIO WEIGHTINGS

Equity Holdings	42
Top Holding	4.8%
Top 5 Holdings	22.4%
Top 10 Holdings	40.2%
Portfolio Insurance <sup>2</sup>	0.0%
Cash	5.0%

<sup>2</sup>Portfolio insurance may include ETNs and/or put spread options intended to protect capital in the event of a market sell-off. The information above represents the 10 largest equity holdings by market value (equity swap positions are reflected as fully paid) in Baxter Street, LP as of the most current month end. Each month, Select Equity Group, L.P. uses the same objective, non-performance-based criteria to select the 10 largest long equity holdings. The securities listed above do not represent all of the securities purchased or sold for SEG's clients, and the reader should not assume that investments in the securities identified were or would be profitable.

Numbers may not foot due to rounding. The most current month-end and YTD performance, weightings and AUM numbers are estimated. Exposure figures do not include FX hedge positions. With respect to net performance calculations, see disclosures at the end.

**Select Equity Group, L.P.** manages over \$38 billion across long-only and long/short equity strategies. The Firm was founded on the premise that rigorous, independent research and disciplined, long-term investing will generate superior returns for our clients. **Baxter Street** is an international long-only equity strategy that invests primarily in non-US-domiciled companies across the market cap spectrum. The portfolio generally has 30-60 positions with weightings that range from 1%-10%.

The ranges provided are indicative of typical portfolio exposures. Please refer to the Private Placement Memorandum for investment guidelines.

## SELECT EQUITY GROUP, L.P.

380 Lafayette Street  
New York, New York 10003  
212.601.9675

cs@selectequity.com

### HISTORICAL PERFORMANCE

	Baxter Street, LP Gross Return	Baxter Street, LP Net Return	MSCI ACWI ex US
<b>Since Inception</b>	<b>8.0%</b>	<b>6.4%</b>	<b>5.1%</b>
<b>Year</b>			
<b>8/31/2023 YTD</b>	<b>6.3%</b>	<b>5.3%</b>	<b>8.8%</b>
2022	-21.8%	-23.0%	-16.0%
2021	4.2%	2.6%	7.8%
2020	17.1%	15.4%	10.7%
2019	30.3%	28.4%	21.5%
2018	-7.2%	-8.6%	-14.2%
2017	26.0%	24.2%	27.2%
2016	3.5%	1.9%	4.5%
2015	4.7%	3.2%	-5.7%
2014	0.2%	-1.2%	-3.9%
2013	26.2%	24.6%	15.3%
2012	10.3%	9.8%	9.8%

### PORTFOLIO MANAGEMENT

**Chad M. Clark**, Portfolio Manager  
**Matthew C. Pickering**, Portfolio Manager  
**Joseph E. Buser**, Associate Portfolio Manager

### TERMS<sup>3</sup>

**Management Fee:** 1.50%  
**Incentive Fee:** N/A  
**Lockup:** None  
**Liquidity:** Monthly  
**Notice Period:** 30 days written notice

**Administrator:** SS&C Technologies, Inc.  
**Prime Broker:** Morgan Stanley & Co.  
**Auditor:** PricewaterhouseCoopers LLP  
**Legal Counsel:** Willkie Farr & Gallagher LLP

<sup>3</sup>The highest fee on offer is shown above. A fee schedule is available upon request.

### IMPORTANT PERFORMANCE DISCLOSURES

You are urged to compare the information contained in this report to the account statements of your Administrator, which are the official books and records.

The information contained in this report is provided for informational purposes only and is not intended as an offer or solicitation of an offer for the purchase or sale of any security and should not be relied upon by you in evaluating the merits of investing in any securities.

Select Equity Group, L.P. ("SEG" or "Manager") is a US-based investment management firm registered as an investment adviser with the Securities and Exchange Commission. Unless otherwise indicated, the performance and other data referred to in this letter/report represents the returns of Baxter Street Fund, L.P., which closely tracks Baxter Street Offshore Fund, Ltd. and Baxter Street Fund II, L.P., since their inceptions (collectively, the "Fund" or "Funds"). While the three Funds are managed in parallel, performance may differ among the entities due to the timing of fund flows and other factors. Each of the Funds is an unregistered pooled investment vehicle over which SEG maintains discretionary authority. Separate performance schedules are available for Baxter Street Offshore Fund, Ltd. and Baxter Street Fund II, L.P.

The performance data herein represents past performance, which is not indicative of future results. Performance is expressed in US dollars. Unless otherwise stated, performance results for the Fund reflect the performance earned by a Fund investor who had invested at the beginning of each year under a model fee structure of the highest fee structure in place for the respective fiscal years. From inception through September 2013, the Fund's performance is presented net of an annualized base management fee of 1.25% of net asset value charged monthly in arrears. From October 2013 onward, the performance is presented net of an annualized management fee of 1.50%. Separately managed accounts may be subject to different fee structures set forth in their investment management agreements.

Please note the returns presented in the attached for the Fund are inclusive of both the restricted and non-restricted interest/share classes. Performance between the restricted and non-restricted classes may differ due to allocations of new issues. Additional information regarding the allocation of specific IPOs, and their effect on the restricted and non-restricted interest/share class performance, is available upon request.

Fund performance is calculated monthly using the net asset value appreciation (net of all fees and expenses including a model fee structure described above) as a percentage of beginning-of-month net asset value (appropriately adjusted for any capital activity). Purchases and sales of securities are recorded on a trade date basis. Realized gains and losses from security transactions are generally determined using the specific identification method. Unrealized gains and losses from investment transactions are recognized as income. Dividend income is recorded on the ex-dividend date and interest income is recorded on an accrual basis. The Fund's annual returns are calculated by linking the monthly performance through compounded multiplication. Exposure to certain derivative instruments may not always be reflected in the data presented in this report (e.g., certain named securities may be owned via swap). The Fund's cumulative rate of return is calculated by linking the Fund's annual rates of return. Fund average annualized rates of return are equivalent to the annual rate of return which, if earned in each year of the indicated multi-year period, would produce the actual cumulative rate of return over the time period. Computations assume reinvestment of all dividends, interest and capital gains. Geographic exposure is determined by using the MSCI Global Investable Market Indices ("GIMI") Methodology for country classification. Sector exposure is derived from FactSet which uses GICS industry classification. Manager reserves the right to use a different or internal methodology for classification if a security is not classified by MSCI/GICS or if it does not agree with the assigned classification. Securities may currently be held in the portfolio where the manager used internal classification. Much of the data and other information contained in this letter/report is unaudited and is collected, in whole or in part, from a source believed by SEG to be reliable. SEG cannot guarantee the accuracy of the data/information and therefore shall not be held liable for inaccuracies. Assets are as of month end. The average exposure is calculated using daily exposures and such average exposures and the resulting internal return calculations are approximations. The cash position, if shown, is from our accounting system which assumes full payment of equity swaps. The actual cash held in the portfolio may differ significantly from this report.

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investors. Interests in the Fund are only available to such persons in the United Kingdom and this document must not be relied on or acted upon by any other persons in the United Kingdom. In order to qualify as a certified sophisticated investor a person must: (a) have a certificate in writing or other legible form signed by an authorized person to the effect that he is sufficiently knowledgeable to understand the risks associated with a particular type of investment; and (b) have signed, within the last 12 months, a statement in a prescribed form declaring, amongst other things, that he qualifies as a sophisticated investor in relation to such investments. This document is exempt from the general restriction in Section 21 of FSMA on the communication of invitations or inducements to engage in investment activity on the grounds that it is being issued to and/or directed at only the types of person referred to above. The content of this document has not been approved by an authorized person and such approval is, save where this document is directed at or issued to the types of person referred to above, required by Section 21 of FSMA. An investment in the Fund may expose an investor to a significant risk of losing all of the amount invested. The Fund is a Limited Partnership (while offshore funds are Limited Companies) and any person who acquires interests in the Fund will not thereby be exposed to any significant risk of incurring additional liability. Any person who is in any doubt about investing in the Fund should consult an authorized person specializing in advising on such investments.

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**Firm:** Corbin Capital Partners, L.P.

**Strategy/Product:** Pinehurst Partners, L.P. / Pinehurst Institutional, Ltd.

**Client:** MWRA Employees' Retirement System

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

**1. Have there been any changes in ownership or management in the past year?**

No changes in the past year.

**2. List firm AUM, net flows and accounts gained/lost for the past 5 years.**

<b>Year</b>	<b>AUM (\$MM)</b>	<b>Net Flows \$(MM)</b>	<b>Accounts Gained</b>	<b>Accounts Lost</b>
2018	\$6,636	\$1,390	121	56
2019	\$7,698	\$555	146	66
2020	\$7,910	(\$823)	56	88
2021	\$9,131	\$347	98	86
2022	\$8,213	(\$238)	113	73

**3. Have there been any new or discontinued products in the past year?**

- We launched the Corbin Private Credit Manager Fund II ("PCM II") in Q1 2022, a continuation of the strategy of PCM I, which is a closed-end fund offering



investors the chance to participate in off-the-run private credit managers on favorable terms. PCM II had its first close in April 2022, second close in October 2022, third close in July 2023, and held its final close in Q3 2023.

- We launched the Corbin ESG Acceleration Fund (“CEAF”) in Q2 2023, which is a global multi-strategy ESG alternatives fund.
- In Q2 2023, we launched a closed-end custom portfolio focused on opportunistic credit for a family office.
- During Q2 2022, Corbin elected to unwind the Corbin Multi-Strategy Fund largely due to small size and inability to scale. The liquidation was completed in Q1 2023.

**4. Are any products capacity constrained?**

No.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

N/A

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

Corbin is proactively taking steps to strengthen diversity and inclusion at our firm. In early 2021, Corbin partnered with Diversio, a diversity and inclusion consultant which harnesses data analytics to drive insights and recommendations for creating more durably diverse and inclusive organizations, in order to strengthen diversity and inclusion at Corbin. As part of this process, Diversio collected extensive, anonymized survey data from our employees based on its proprietary Inclusion Framework, developed from leading academic research. Diversio compared the results against its global dataset and utilized AI tools, such as natural language processing, to identify key areas for improvement as well as best practices for each. Through this process, we found that Corbin scored well above average relative to comparable companies in our industry that have completed the assessment. The analysis also highlighted certain areas of improvement which we are committed to addressing, including improving diversity in recruiting. On the majority of our searches, we have implemented a minimum requirement of at least 40% women candidates and 30% Black, Indigenous, or People of Color (BIPOC) applicants for recruiting.



Looking ahead, we will consider initiatives for strengthening mentorship and access to leadership on an inclusive basis. We expect our internal Racial and Social Justice Task Force (RSJTF), among other firmwide and cross-functional initiatives, to be a key component of our broader diversity and inclusion efforts.

### **Portfolio Management Team**

**1. Have there been any changes in the portfolio management team in the past year?**

There have been no changes in the portfolio management team in the past year

**2. Are there any expected changes to the team in the future (planned additions or departures)?**

We are always keeping our eyes out for opportunistic hires on the investment team, but do not have any immediate plans to add to the team. We do not anticipate any departures.

### **Process**

**1. Have there been significant changes in any of the areas below in the past year?**

- **Identification of investment ideas**
  - ❖ No.
- **Process for exploring and vetting ideas**
  - ❖ No.
- **Portfolio trading practices including buy/sell rules**
  - ❖ No.
- **Approach to portfolio monitoring and risk management**
  - ❖ No.

### **Philosophy**

**1. Describe recent changes in investment philosophy, if any.**

N/A

### **Portfolio**

**1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).**



The requested information is included in the accompanying presentation.

**2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.**

Year	AUM (\$MM)	Net Flows \$(MM)	Accounts Gained	Accounts Lost
2018	\$2,035	\$91	50	46
2019	\$2,432	\$207	53	45
2020	\$2,558	(\$198)	35	43
2021	\$2,799	(\$2)	48	32
2022	\$2,238	(\$260)	52	31

**3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.**

Pinehurst Client by Type as of 6.30.23	
Sub-Type	Pinehurst AUM (%)
Endowment/Foundation	34.91%
UNHW	19.21%
Pension Plan	25.43%
Platform	13.73%
Insurance	0.70%
Sovereign Wealth	3.76%
Corporation	2.03%
Other	0.24%
Top 5 Clients as of 6.30.23	
Client	Pinehurst AUM (%)
Endowment/Foundation	5.54%
Endowment/Foundation	5.24%
Platform	4.30%
Pension Plan	4.11%
Pension Plan	3.96%



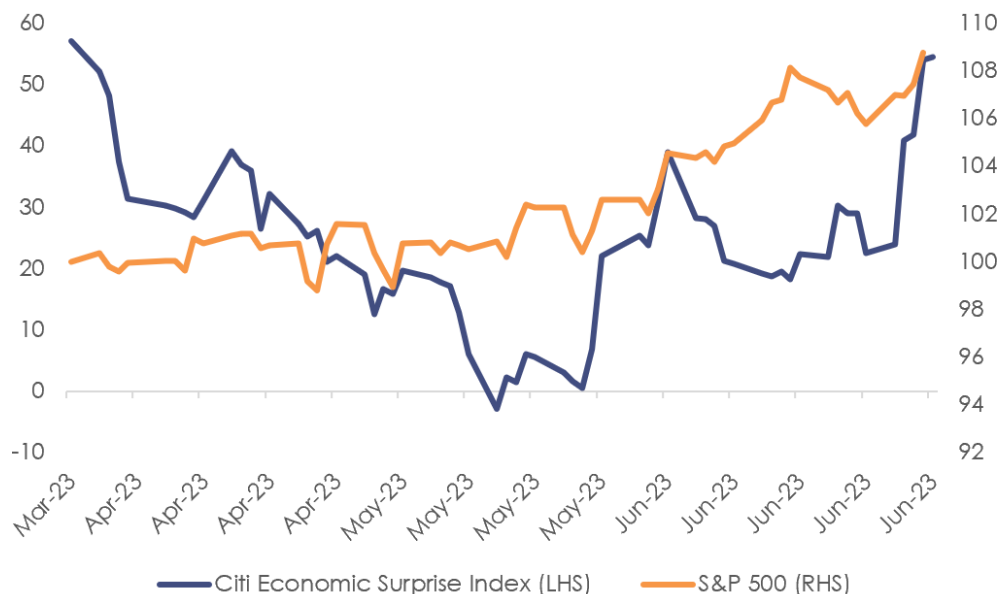
## Performance / Market Outlook

1. **If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

The requested information is included in the accompanying presentation.

2. **Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

With the extreme inversion of the yield curve and the markets now pricing higher rates for slightly longer, we would not have expected equity multiples to be above their 10-year average, a period during which rates were zero for most of the time. Neither would we have expected high yield spreads to be well below their 10-year average. On the other hand, the economy has weathered the rate hike cycle better than expected, increasing the likelihood of some form of soft landing. Risk asset performance has closely mirrored that of the Citi Economic Surprise Index, which has turned strongly positive as economic data has exceeded expectations (see chart below).



Pinehurst's net equity exposure has decreased meaningfully from a year ago, from both repositioning by some of our underlying managers and portfolio changes we

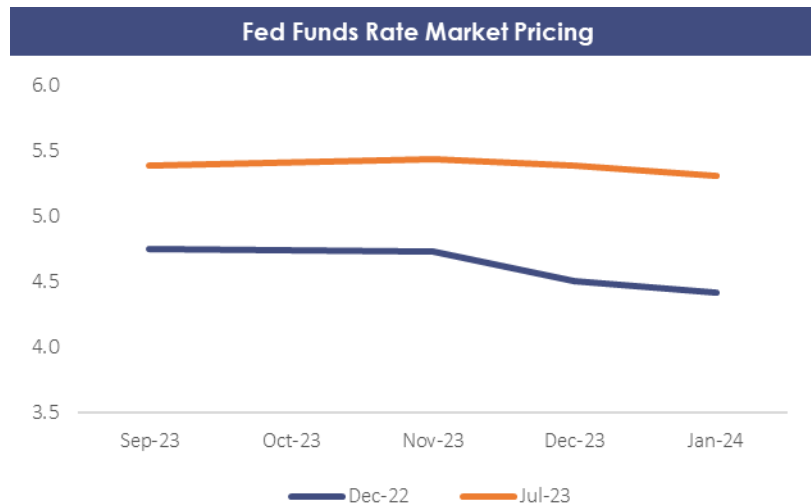


have made, and our beta is now running close to 0.2. We have reduced exposure to some of the pockets of the market that hurt us last year and are unlikely to rebound, like SPACs, and we are continuing to consolidate the portfolio in our highest conviction ideas. We like the portfolio's current positioning -- well-balanced for the possibility of that soft landing, but not too far out on the risk curve to expose us too much if we find ourselves in a mild recession. We are cognizant that we need to start generating alpha more in line with our long-term results in order to produce the returns that you expect, and we feel confident that the portfolio as it stands now is well positioned to achieve that.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

Please refer to our answer for #2 above. In addition, please see below regarding market outlook.

- The Fed is not expected to begin cutting rates until 2024



- Mega-cap tech stocks drove S&P returns through Q2; however, market breadth has begun to improve with positive performance extending to other sectors
- Corporate earnings were mixed in Q2 with 79% of S&P 500 companies beating expectations, and a -4% YoY decline in earnings for the index

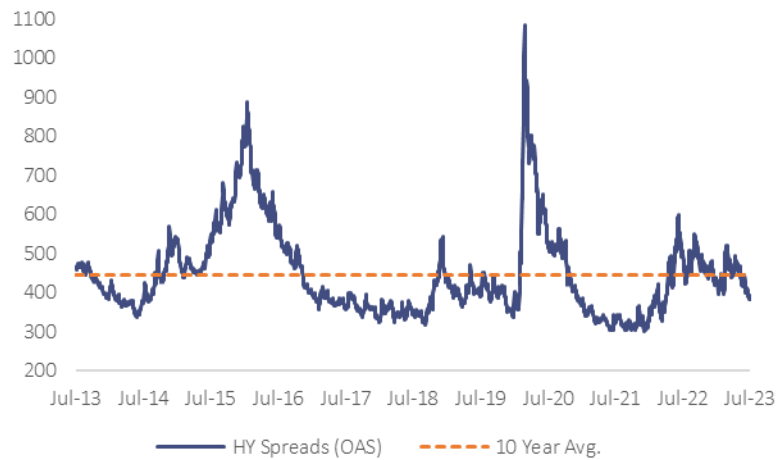


### S&P Forward 12-Month P/E Ratio: 10 Year



- In credit, while spreads remain tight, we see opportunities for yield in both senior debt and idiosyncratic opportunities in stressed debt

### High Yield Spreads





- 4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

The requested information is included in the accompanying presentation.





**C O R B I N**

C A P I T A L P A R T N E R S

**Presentation to MWRA Employees' Retirement System**

**October 5, 2023**

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*Signatory of:*



## Corbin at a Glance

<b>Decades of Demonstrated Results</b>	Established and experienced
<b>\$8.6 billion / 57 AUM / employees</b>	<ul style="list-style-type: none"><li>▪ Combination of big firm insights and smaller firm agility/responsiveness</li><li>▪ Awarded <i>Pensions &amp; Investments'</i> 2022 Best Places to Work in Money Management</li><li>▪ ESG: UN Principles for Responsible Investing ("PRI") signatory committed to engaging managers on ESG integration</li></ul>
<b>Private, owner-operated Firm</b>	Means clients succeed or we fail
<b>Client Solutions</b>	<ul style="list-style-type: none"><li>▪ Multi-manager, multi-strategy commingled (\$2.3 billion*)</li><li>▪ Custom solutions (\$3.8 billion*)</li><li>▪ Opportunistic credit (\$2.6 billion*)</li><li>▪ Multi-PM equity hedge fund (\$166.9 million*)</li></ul>

### Alternative investment manager with strong results investing in hedge funds and related strategies

\*Includes inter-fund investing. AUM information is as of August 1, 2023; staff information is as of September 2023. 100 firms across different size categories were recognized by Pensions & Investments as part of its 2022 Best Places to Work in Money Management Program, which is based on a two-part assessment process that gathers details about each participating company's policies, practices, benefits, demographics, and employee satisfaction; Corbin was recognized as a winner in the 50-99 Employees category. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

# Corbin's Team

<b>Tracy Stuart, CFA</b> <b>Managing Partner, Chief Executive Officer (IC)</b>						
<b>Portfolio Management and Research</b>	<b>Craig Bergstrom, CFA</b> Managing Partner Chief Investment Officer (IC)	<b>Robert Zellner</b> Senior Partner Deputy Chief Investment Officer (IC)	<b>John Hartwell Cocke, CFA</b> Partner, Deputy Chief Investment Officer – Credit (IC)	<b>Adriana Clancy</b> Partner, Research and Portfolio Management (IC)	<b>Matthew Glasofer</b> Partner, Director of Research (IC)	<b>Cesar Bello</b> Partner, Research and Portfolio Management (IC)
	<b>Himesh Lad, CFA</b> Principal, Research and Portfolio Management (IC)	<b>Courtney Birnbaum</b> Director of Sustainability (IC)	<b>Michael Faherty, Jr.</b> Director of Asset Management (IC)	<b>Zachary Bader</b> Senior Credit Analyst	<b>Bill Reube</b> Senior Trader / Research Analyst	
	<b>Margaret Wellborn</b> Research Analyst	<b>Karam Katriya</b> Research Analyst	<b>Caroline McGeoch</b> Research Analyst			
<b>Risk Management</b>	<b>Alan Chuang</b> Partner Director of Portfolio Solutions and Risk Management (IC)	<b>Yatao Liu, CFA</b> Director of Quantitative Analysis	<b>Stephanie Sun, CFA, CAIA</b> Senior Quantitative Risk Analyst	<b>Shryan Appalaraju</b> Senior Quantitative Investment Analyst		
<b>Accounting</b>	<b>Steven Carlino, CPA (NY)</b> Partner Chief Financial Officer (IC)	<b>Thomas LaMaina, CPA (NY)</b> Controller	<b>Levi Lazarus, CPA (NY)</b> Controller - Special Investments	<b>Timothy Hammond, CPA (NJ)</b> Controller	<b>Lindsey Barbino</b> Senior Financial Analyst, Management Company	<b>Brittany Ostrowsky</b> Financial Analyst
<b>Operations</b>		<b>Justin Kurlanzik</b> Director of Operations	<b>Katelyn Gonzalez</b> Senior Operations Analyst	<b>Terence Brady, CPA (NH), FCA</b> Director of Operational Due Diligence (IC)	<b>Connor Ailer, CFA</b> Deputy Director of Operational Due Diligence	
<b>Technology</b>	<b>Michael Lawson</b> Partner, Chief Information Officer	<b>Justin Michael</b> Chief Technology Officer Development & Special Projects	<b>Stephen Mancino</b> Senior Data and Integration Developer	<b>Dominick Milillo</b> Senior Technology Analyst		
<b>Human Capital</b>	<b>Christina Neilson</b> Partner Chief Administrative Officer	<b>Neil Mandal</b> Director of Strategic Initiatives	<b>Nicole Disla</b> Director of Human Capital	<b>Admin Team (6)</b>		
<b>Legal</b>	<b>Daniel Friedman, Esq.</b> Senior Partner General Counsel (IC)	<b>John Maguire</b> Chief Compliance Officer	<b>Jordan Browdy, Esq.</b> Senior Legal Counsel	<b>Arielle Mack, Esq.</b> Legal Counsel		
<b>Marketing</b>	<b>Gwen Gold</b> Partner Director of Marketing and Client Relations	<b>Paul Fox</b> Director – Private Wealth	<b>Ralph Vasami</b> Director – Institutional Sales	<b>Don Holmberg</b> Director – Institutional Sales	<b>Carrie Napoletano</b> Sales Associate	
<b>Client Relations</b>		<b>Alison Darrar, CFA</b> Director of Client Relations	<b>Elizabeth Yusupova, CFA</b> Senior Client Relations Associate	<b>Thomas Foley</b> Senior Client Relations Analyst	<b>Lawrence Coleman</b> Senior Client Relations Analyst	<b>Kareem Williams</b> Client Relations Analyst
		<b>John Walker-Turner</b> Client Relations Analyst				

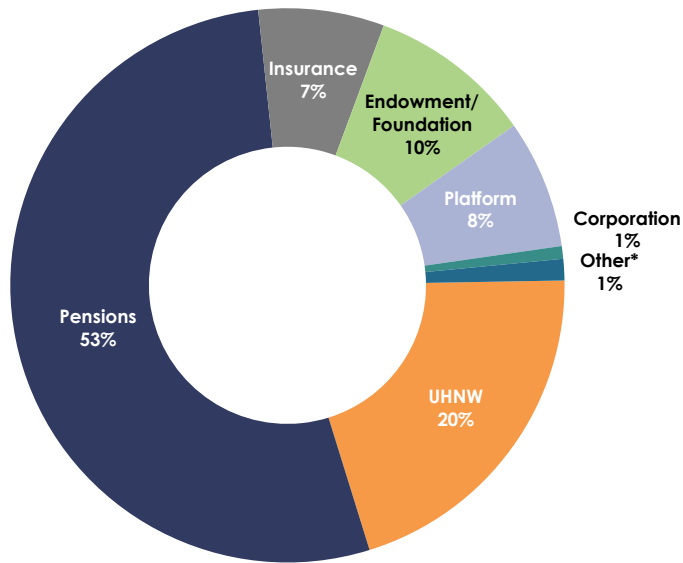
Partners

Information as of September 2023. IC represents members of Corbin's Multi-Strategy Investment Committee and/or Credit Investment Committee. Please see Corbin endnotes and risk disclosures for important information.

# Client Base

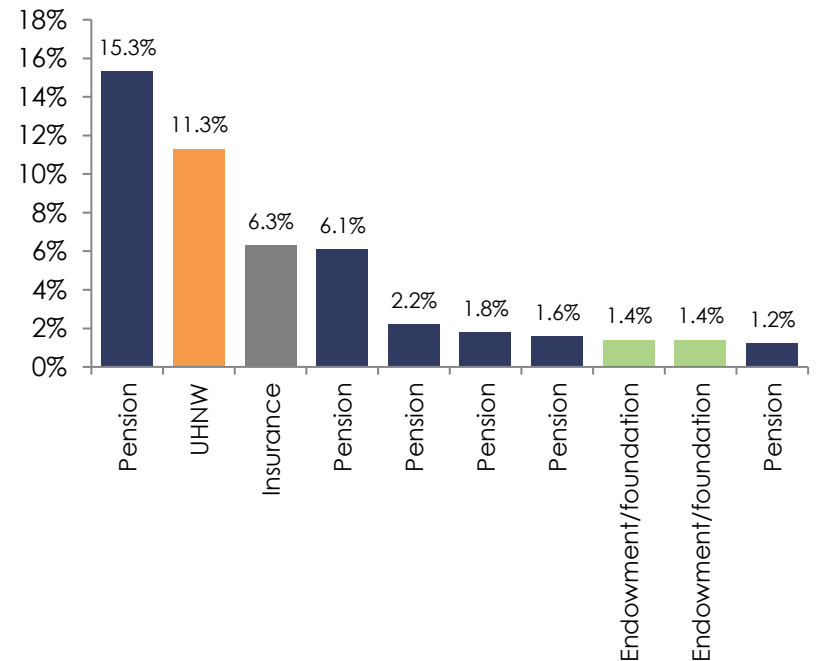
- Diversified client base, with long-standing partnerships
- Growth driven by replacement searches, existing clients and global consultants

**Firm-wide Asset Breakdown by Client Type**



\* Other includes: Sovereign Wealth and Internal, Friends, and Family

**Top 10 Corbin Clients**



**We believe our diversified, growing institutional client base makes us a stable partner**



**Pinehurst Partners, L.P. (“Pinehurst” or the “Fund”)**

# Account Overview: MWRA Employees' Retirement System

Fund Profile	
<b>Fund Name</b>	Pinehurst Institutional, Ltd. (Class C)
<b>Strategy</b>	Global Multi-Strategy
<b>Portfolio Characteristics</b>	<ul style="list-style-type: none"> <li>▪ Concentrated portfolio</li> <li>▪ Access to limited capacity funds</li> <li>▪ Opportunistic allocations</li> <li>▪ Investments in day 1/early stage managers</li> </ul>
<b>Investor Inception and Amount Funded</b>	November 1, 2018, \$4,500,000
<b>Additional Subscriptions</b>	February 1, 2019, \$2,000,000 December 1, 2019, \$2,500,000 March 1, 2020, \$1,000,000 September 1, 2021, \$1,000,000
<b>Investor AUM (final as of 7/31/2023)</b>	\$13,379,615.85

	Annualized since Inception (November 2018 – July 2023)					
	2023 YTD Return (%)	Return (%)	Volatility (%)	Sharpe Ratio	Beta to Pinehurst Inst. C	Correlation to Pinehurst Inst. C
<b>MWRA Employees' Retirement System</b>	6.26	5.04	8.25	0.44	-	-
<b>HFRI FOF</b>	3.36	4.33	6.16	0.45	1.26	0.94
<b>HFRI HF</b>	5.23	6.23	7.80	0.60	0.96	0.91
<b>S&amp;P 500</b>	20.65	13.67	18.89	0.69	0.31	0.72
<b>MSCI EAFE</b>	15.77	7.42	17.82	0.40	0.34	0.73
<b>BarCap Agg</b>	2.02	0.96	5.59	(0.10)	0.32	0.22

The performance figures set forth above for Pinehurst Institutional, Ltd are net of a 0.85% per annum management fee and a 5% per annum performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Performance is presented net of expenses and includes the reinvestment of dividends, gains and other earnings. Figures as presented may include slight rounding errors. All figures above which take into account the current month's performance information are estimated and monthly figures are not audited. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**



# Pinehurst Characteristics

## Overview

Flagship actively managed global multi-strategy portfolio

### Highlights<sup>1</sup>

- Targeted, specialized manager talent with concentration at the position level
- Traffic in strategies with potential for organic returns – not leverage dependent
- Established and early stage managers
  - Early stage investors in 17 of 24 core external funds
  - 24.4% allocation to small funds
- Opportunistic investments represent 16.8%
- Weighted Average Management Fee: 1.47%
- Weighted Average Incentive Fee: 16.98%

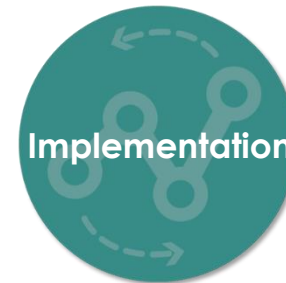
## Active Management



- Distinct philosophical preferences
- Broad tool kit to capture compelling interim opportunities and drive portfolio tilts



- Alpha from selective manager roster: many seen, few chosen
- Preference for fundamentally-driven strategies



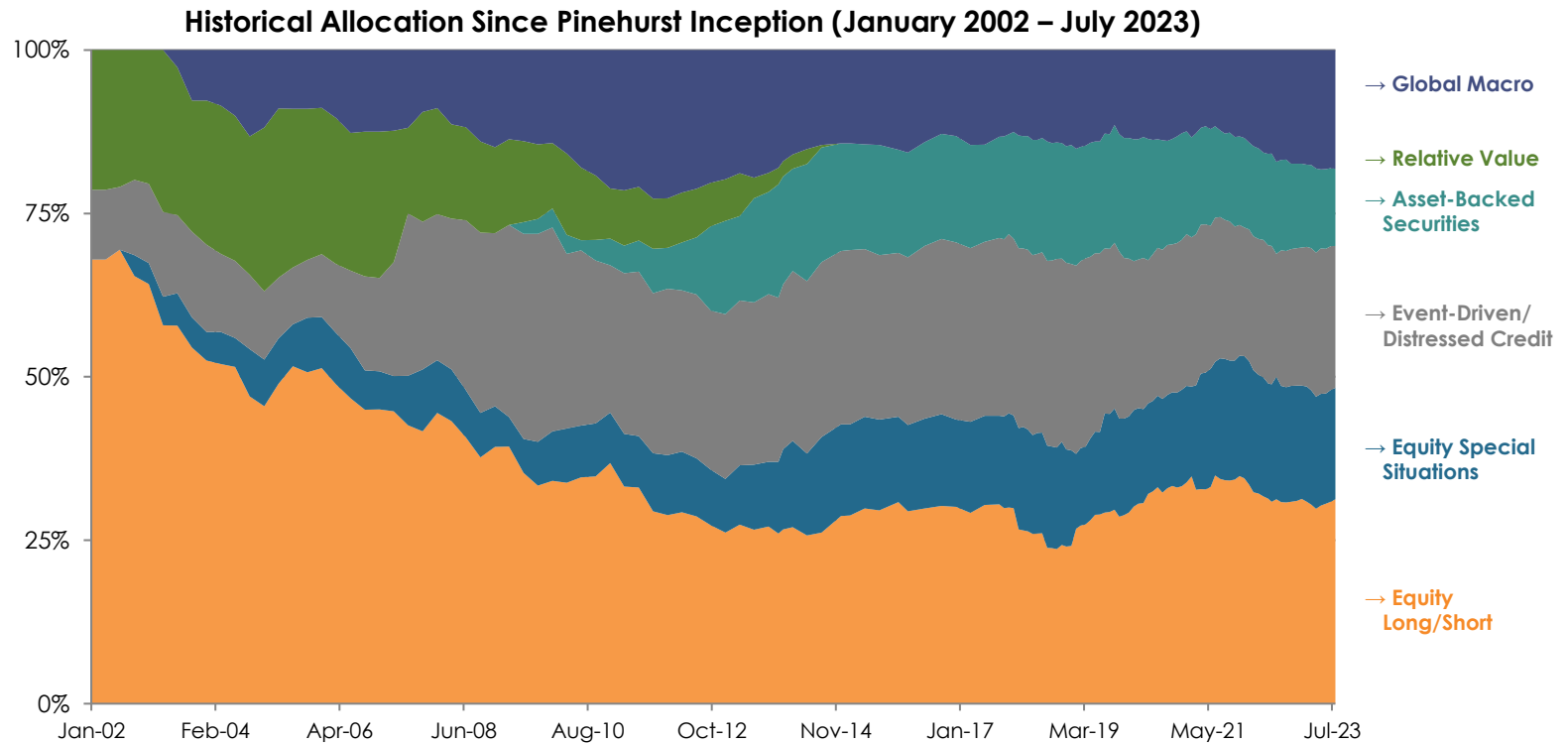
- Structured to capitalize on market opportunities
- Early movers in partnering with managers on co-investments and investing directly

**Capital markets orientation informs strategic views with dynamic implementation for strong alpha generation**

<sup>1</sup>Highlights (as of 7/31/2023): small funds at times include funds managed by managers with significant assets under management; number of core funds above refers to core managers only (those with allocations greater than 1%); Opportunistic investments include 13.0% in Corbin-managed vehicles and investments implemented directly by Pinehurst; early stage investors (within 12 months of inception) exclude Corbin-managed vehicles that Pinehurst invests in. Figures presented are estimated and subject to change. Please see Weighted Average Management Fee and Weighted Average Incentive fee disclosure for important information. Please see Corbin endnotes for important information. **PAST PERFORMANCE AND TARGET RETURNS ARE NOT NECESSARILY INDICATIVE OF, NOR DO THEY GUARANTEE FUTURE RESULTS.**

# Strategic Asset Allocation

**Semi-annual asset allocation meeting results in forward looking strategy preferences and continual assessment of sub-sector opportunities**



**Our evolution and flexibility has allowed us to monetize investment opportunities**





# Demonstrated Value-Add In Manager Selection

## Pinehurst's sub-strategies have outperformed their corresponding HFRI indices since inception

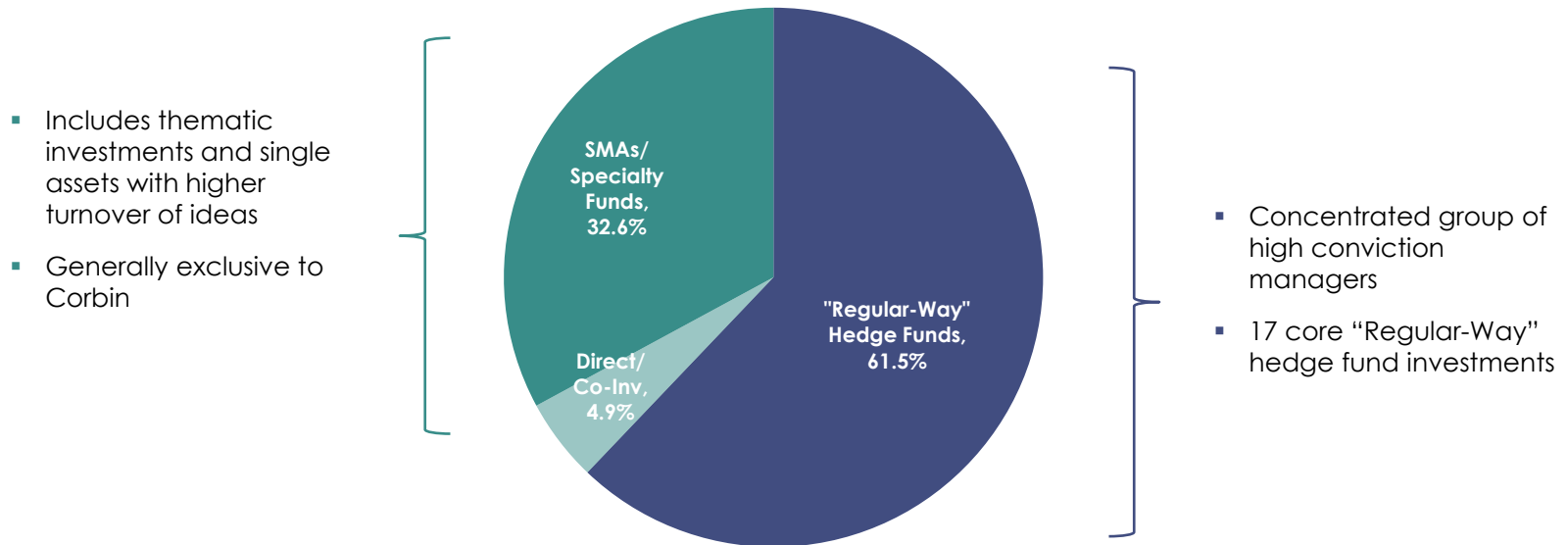
		Annualized Returns				Cumulative 10-Year Return
		3-Year	5-Year	10-Year	Since Inception	
Long/Short Equity	Pinehurst Long/Short Equity Book	7.45%	9.62%	8.50%	7.84%	126.12%
	HFRI Equity Hedge Index	8.42%	5.87%	5.67%	5.41%	73.59%
	Pinehurst Book Outperformance / (Underperformance)	<b>(0.98%)</b>	<b>3.75%</b>	<b>2.83%</b>	<b>2.43%</b>	<b>52.54%</b>
Equity Special Situations	Pinehurst Equity Special Situations Book	4.34%	3.72%	6.18%	-	82.23%
	HFRI ED: Special Situations Index	10.05%	4.79%	5.23%	-	66.57%
	Pinehurst Book Outperformance / (Underperformance)	<b>(5.72%)</b>	<b>(1.07%)</b>	<b>0.95%</b>	-	<b>15.67%</b>
Event-Driven / Distressed Credit	Pinehurst Event-Driven/Distressed Credit Book	24.01%	14.25%	11.09%	11.62%	186.20%
	HFRI ED: Distressed/Restructuring Index	9.38%	4.42%	4.21%	6.71%	51.10%
	Pinehurst Book Outperformance / (Underperformance)	<b>14.63%</b>	<b>9.83%</b>	<b>6.87%</b>	<b>4.92%</b>	<b>135.09%</b>
Asset-Backed Securities	Pinehurst Asset-Backed Securities Book	7.09%	4.63%	5.84%	-	76.39%
	HFRI RV: Fixed Income-Asset Backed Index	5.94%	3.30%	4.83%	-	60.29%
	Pinehurst Book Outperformance / (Underperformance)	<b>1.15%</b>	<b>1.33%</b>	<b>1.01%</b>	-	<b>16.10%</b>
Global Macro	Pinehurst Global Macro Book	9.27%	7.59%	6.45%	-	86.86%
	HFRI Macro (Total) Index	6.56%	5.17%	3.16%	-	36.55%
	Pinehurst Book Outperformance / (Underperformance)	<b>2.70%</b>	<b>2.42%</b>	<b>3.29%</b>	-	<b>50.32%</b>
Pinehurst Net Return		<b>5.31%</b>	<b>4.74%</b>	<b>5.05%</b>	<b>6.33%</b>	<b>63.74%</b>

Information estimated as of July 31, 2023. Pinehurst book-level returns are gross of the Fund's fees and expenses but are net of the underlying manager fees and expenses. Pinehurst net return is presented net of a 1% per annum management fee and a 5% performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

# Differentiated Implementation to Extract Value

## Leverage broad toolkit in an effort to maximize risk-adjusted returns

- ~38% in direct/co-investments, specialty funds, and separately managed accounts (“SMAs”)



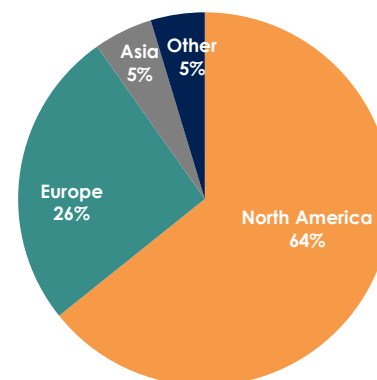
As of July 31, 2023. Core holdings are those with allocations of 1% or greater. Categorization by implementation type is solely at the discretion of Corbin and is subject to change. Core SMAs/Specialty Funds and Direct/Co-Investments include investments made by the Fund in additional Corbin managed vehicles. Direct/Co-Investments may include investments made by the Fund within fund wrappers. Generally exclusive to Corbin refers to the waiving of fees by these additional Corbin managed vehicles, as well as funds of one or SMAs with third party managers set up exclusively for Pinehurst. Please see Corbin endnotes and risk disclosures for important information.

# Pinehurst Core Allocations

	Geography	Sector/Style	Alloc (%)
<b>Long/Short Equity</b>			
Viking	Global	Generalist	11.4%
Corbin Hedged Equity Fund	Global	Multi-PM	4.6%
Cadian	Global	Generalist	4.1%
SRS	Global	Generalist (TMT, Consumer)	3.9%
Park Presidio	Global	TMT Focus	3.5%
D1	Global	Generalist	2.8%
TAL China Focus Fund	Asia	Generalist	2.4%
Steamboat	Global	Generalist	1.6%
Prelude Structured	Global	Generalist	1.5%
Think Investments	Global / Emerging Markets	Generalist	1.1%
<b>Sub-total</b>			<b>37.5%</b>
<b>Equity Special Situations</b>			
Caption	Global	Relative Value	5.6%
Opportunistic equity investments	Global	Opportunistic Equity	4.0%
683 Capital	Global	Generalist	3.8%
Antara	Global	Generalist	3.1%
Nantahala	North America	Generalist	2.5%
<b>Sub-total</b>			<b>20.5%</b>
<b>Event-Driven/Distressed Credit</b>			
Corbin Opportunity Fund	Global	Opportunistic Credit	9.1%
Redwood	Global	Distressed, HY	6.2%
Diameter	Global	Distressed, Performing	4.9%
Opportunistic credit investments	Global	Opportunistic Credit	3.7%
<b>Sub-total</b>			<b>26.0%</b>

	Geography	Sector/Style	Alloc (%)
<b>Asset-Backed Securities</b>			
SPF	Global	RMBS, ABS, Structured Credit	4.1%
Angel Oak	North America	Non-qualifying mortgages	3.4%
Victory Park	Global	Marketplace Lending	3.2%
ICG	Global	Structured Credit, CLOs, Esoteric ABS	1.7%
Orthogon	Global	ABS, NPLs	1.0%
<b>Sub-total</b>			<b>14.1%</b>
<b>Global Macro</b>			
D.E. Shaw Oculus	Global	Discretionary, Systematic	8.0%
Crake	Global	Discretionary, Macro	5.8%
Capula Tactical Macro	Global	Discretionary, Macro	4.5%
Quantix	Global	Commodities	2.0%
PinnBrook	Global	Discretionary, Maacro	1.0%
<b>Sub-total</b>			<b>21.8%</b>

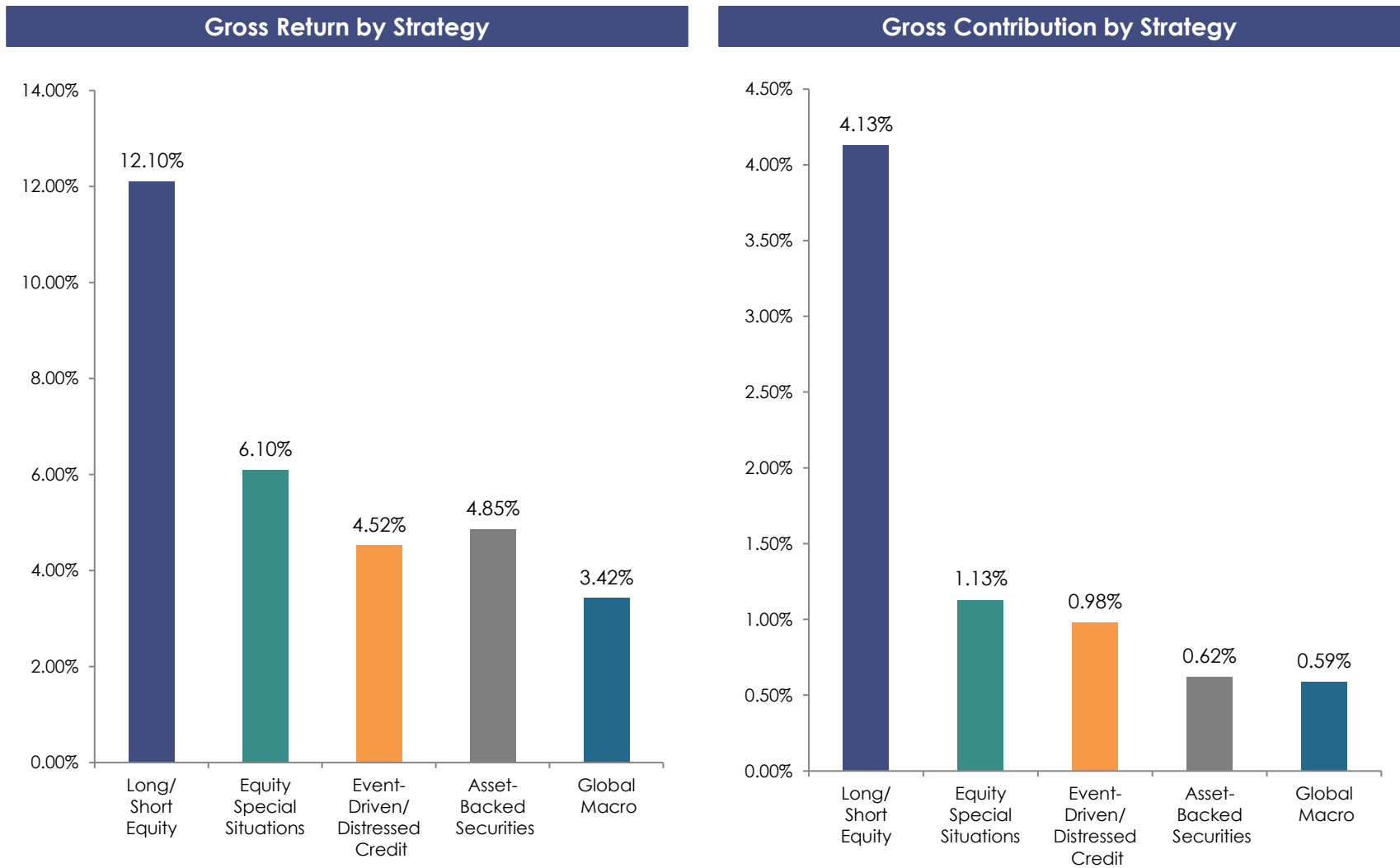
## Gross Exposure by Geography



Core allocations as of July 31, 2023. Includes core managers, which are those with allocations of 1% or greater. Investment allocations and sector classifications are at the sole discretion of Corbin and subject to change at any time. Current allocations and sector classifications are calculated on an estimated basis of current month-end returns and include invested capital only. Gross exposure by Geography as of June 2023; "Other" includes various emerging markets. Please see Corbin endnotes and risk disclosures for important information.

# 2023 YTD Performance Review

**Pinehurst 2023 YTD net return: 6.44%**



Strategy-level return and performance contribution figures shown above are for Pinehurst and are presented as of July 31, 2023, reflect the period from January 1, 2023 through July 31, 2023, are estimated and unaudited and include the reinvestment of dividends, gains and other earnings. Figures as presented may include slight rounding error. Strategy-level return and contribution figures for the various sectors are gross of the Fund's fees and expenses but are net of the underlying manager fees and expenses. Sector classifications and investment allocations are at the sole discretion of Corbin and subject to change at any time. Pinehurst 2023 YTD net return shown above is net of a 1% per annum management fee and a 5% performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**



## 2023 YTD Top Fund Contributors and Detractors

**Pinehurst 2023 YTD net return: 6.44%**

Holding	Strategy	Average Allocation	Return	Contribution	Performance Drivers
<b>Top Contributors</b>					
<b>Viking</b>	Long/Short Equity	10.48%	17.23%	1.71%	<ul style="list-style-type: none"> <li>Gains in healthcare, consumer discretionary, and technology longs</li> </ul>
<b>Cadian</b>	Long/Short Equity	3.51%	36.06%	1.07%	<ul style="list-style-type: none"> <li>Gains in technology longs</li> </ul>
<b>683 Capital</b>	Equity Special Situations	3.33%	28.53%	0.87%	<ul style="list-style-type: none"> <li>Gains in financials, metals, and consumer discretionary longs</li> </ul>
<b>Crake</b>	Global Macro	5.32%	15.77%	0.76%	<ul style="list-style-type: none"> <li>Gains in information technology longs</li> </ul>
<b>Park Presidio</b>	Long/Short Equity	3.23%	16.62%	0.49%	<ul style="list-style-type: none"> <li>Gains in communications and consumer discretionary longs</li> </ul>
<b>Top Detractors</b>					
<b>Antara</b>	Equity Special Situations	3.20%	-7.11%	-0.27%	<ul style="list-style-type: none"> <li>Losses in special situations equity and write-downs on illiquid positions</li> </ul>
<b>Orthogon</b>	Asset-Backed Securities	1.11%	-18.27%	-0.22%	<ul style="list-style-type: none"> <li>Losses on the remaining assets as the portfolio continues to liquidate. Markdowns were exacerbated by underperforming assets and lower expected value on platform interests</li> </ul>
<b>Capula Tactical Macro</b>	Global Macro	4.35%	-2.53%	-0.15%	<ul style="list-style-type: none"> <li>Losses in USD rates</li> </ul>
<b>D.E. Shaw Oculus</b>	Global Macro	7.66%	-0.30%	-0.07%	<ul style="list-style-type: none"> <li>Losses in systematic futures, macro, and equity stat arb strategies</li> </ul>
<b>Prelude Structured</b>	Long/Short Equity	2.54%	0.36%	-0.02%	<ul style="list-style-type: none"> <li>Losses in Asian/China property credit.</li> </ul>

Contributor and detractor figures reflect the period from January 1, 2023 through July 31, 2023 and are estimated, unaudited and presented gross of Pinehurst's fees and expenses, but are net of underlying manager fees and expenses. Investment allocations are at the sole discretion of Corbin and subject to change at any time. It should not be assumed that investments identified herein or in the future will be profitable or will equal performance in this list. Analysis refers to core holdings, which are those with allocations greater than or equal to 1% in 2023. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

# Economic and Market Outlook

**While the inversion of the yield curve steepened during the first half of the year, economists do not expect a major slowdown in 2023 due to resilient housing data, tight labor markets, and strong consumption**

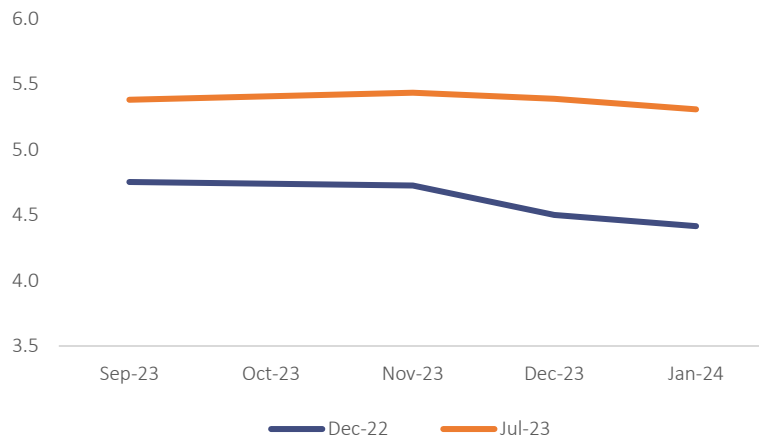
## Commentary

- The Fed is not expected to begin cutting rates until 2024<sup>1</sup>
- Mega-cap tech stocks drove S&P returns through Q2; however, market breadth has begun to improve with positive performance extending to other sectors
- Corporate earnings were mixed in Q2 with 79% of S&P 500 companies beating expectations, and a -4% YoY decline in earnings for the index
- In credit, while spreads remain tight, we see opportunities for yield in both senior debt and idiosyncratic opportunities in stressed debt

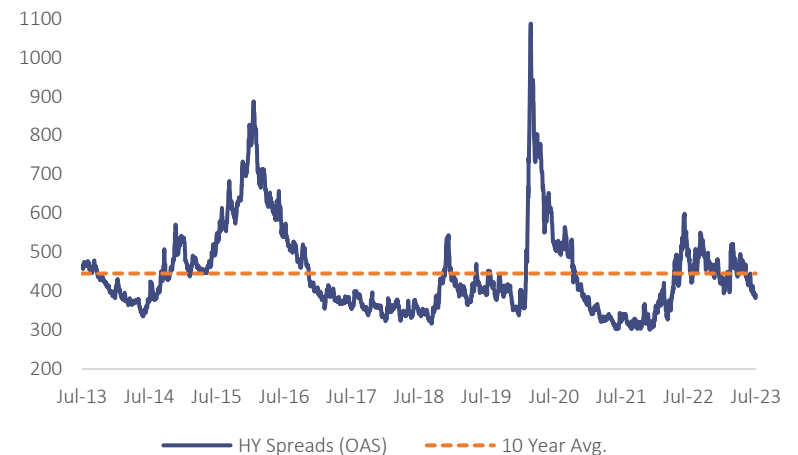
## S&P Forward 12-Month P/E Ratio: 10 Year



## Fed Funds Rate Market Pricing



## High Yield Spreads

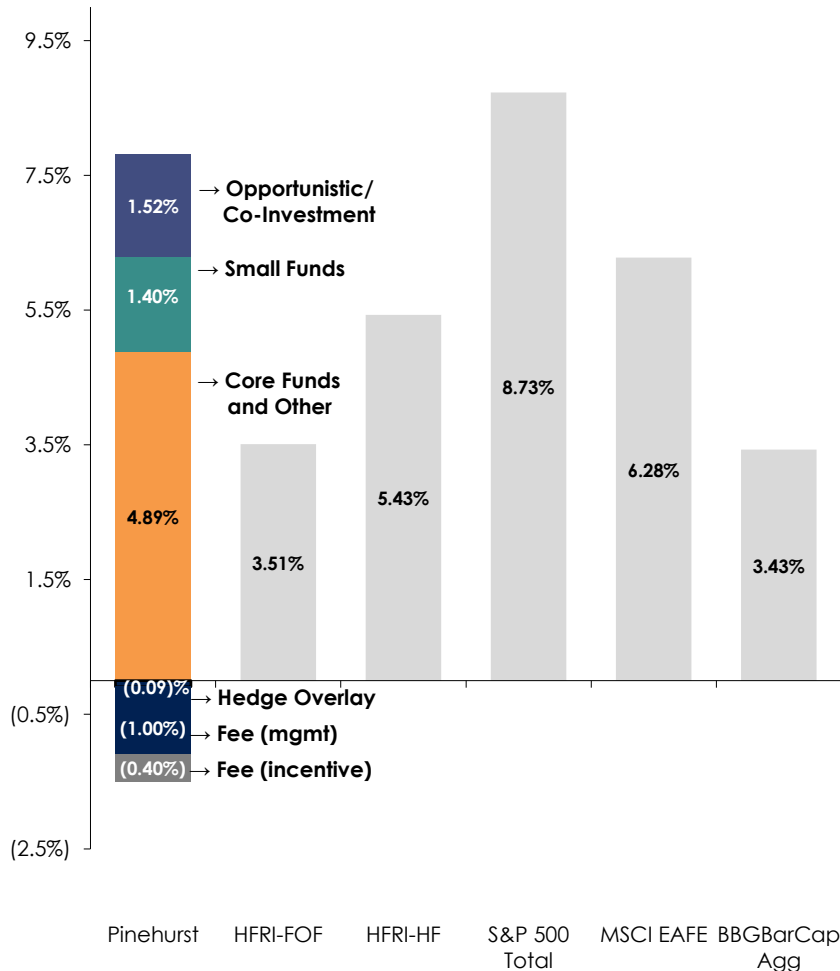


# Results from Corbin's Differentiated Approach to Active Management

## Annualized Net Return Contribution

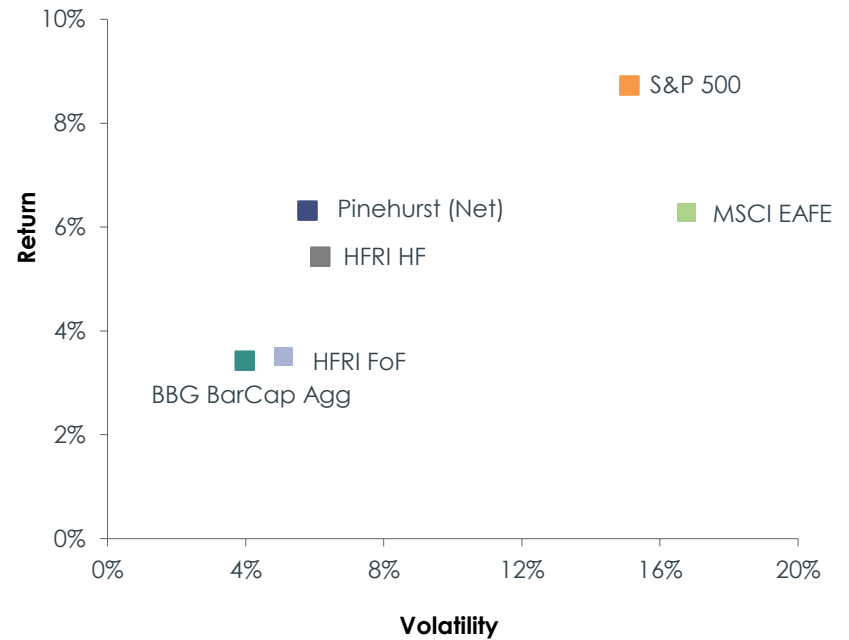
Since Inception: January 2002 – July 2023

Pinehurst: +7.72% (gross); +6.32% (net)



## Annualized Net Performance vs. Risk

Since Inception: January 2002 – July 2023



Pinehurst performance is presented net of a 1% per annum management fee and a 5% performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Pinehurst's performance vis a vis the other indices shown here will differ over other time periods. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## Appendix



# Diversity in Leadership

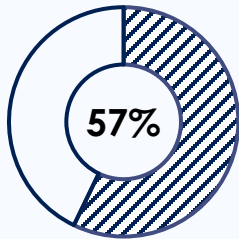


- Corbin's leadership team is comprised of a diverse team of experienced, long-tenured professionals
- 46% of Corbin Partners are women or members of a minority group

Corbin's investment activities and strategic initiatives are supported by three main committees:

### ❖ Operating Committee

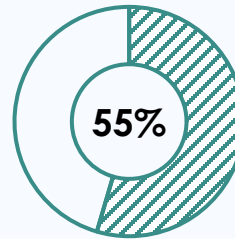
Of its 7 members,



are women or members of a minority group

### ❖ Multi-Strategy Investment Committee

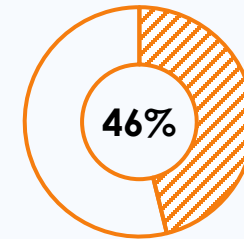
Of its 11 members,



are women or members of a minority group

### ❖ Credit Investment Committee

Of its 13 members,



are women or members of a minority group

Supporting Internal Committees include Valuation Committee, Brokerage and Counterparty Risk Committee, Compliance and Risk Assessment Committee, Sustainability Committee



Diversity in leadership inspires diversity across the firm, women and members of minority groups make up:

**60% of all Corbin employees**

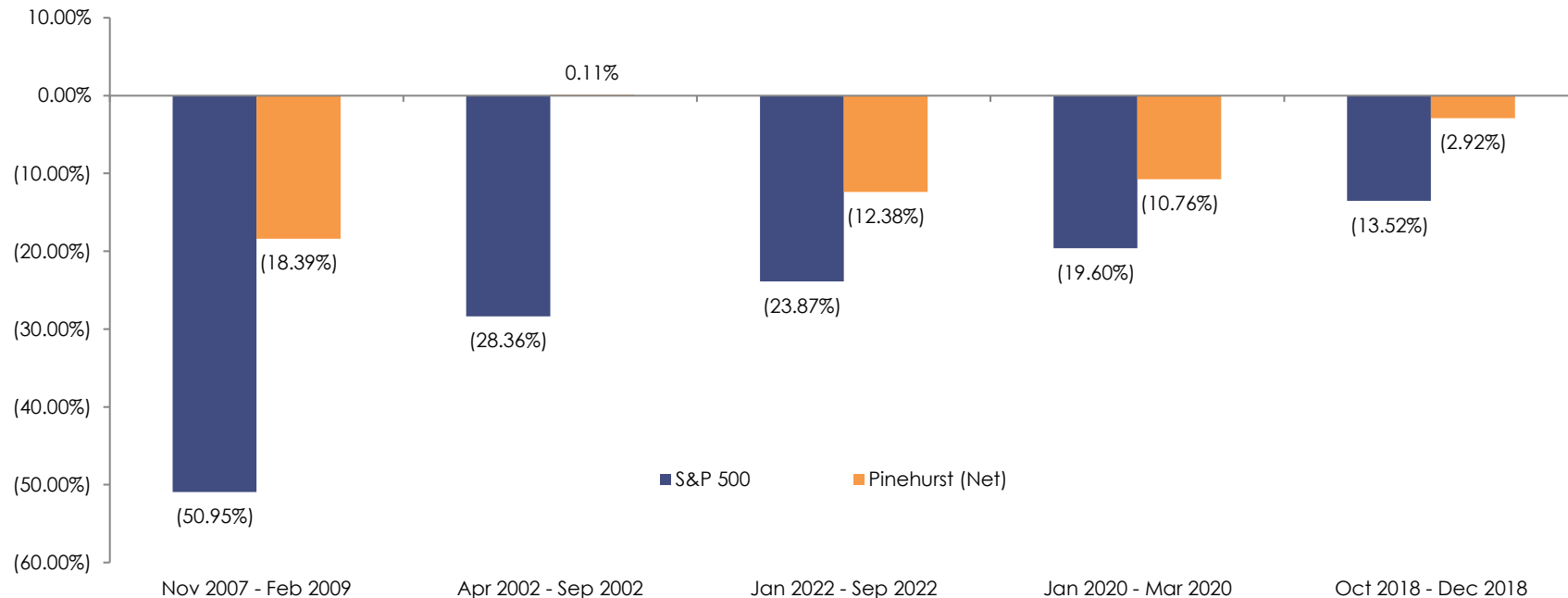
Corbin employees: 57

**61% of Corbin's investment professionals**

Investment team: 18

# Downside Protection During Challenging Markets

## Five Largest S&P 500 Drawdowns Since Pinehurst Inception



**Pinehurst has provided significant downside protection during periods of market stress**

Estimated as of July 31, 2023. Pinehurst inception was January 1, 2002. Pinehurst performance is presented net of a 1% per annum management fee and a 5% performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Please note that Pinehurst has underperformed the S&P 500 over different time periods than those shown above. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**



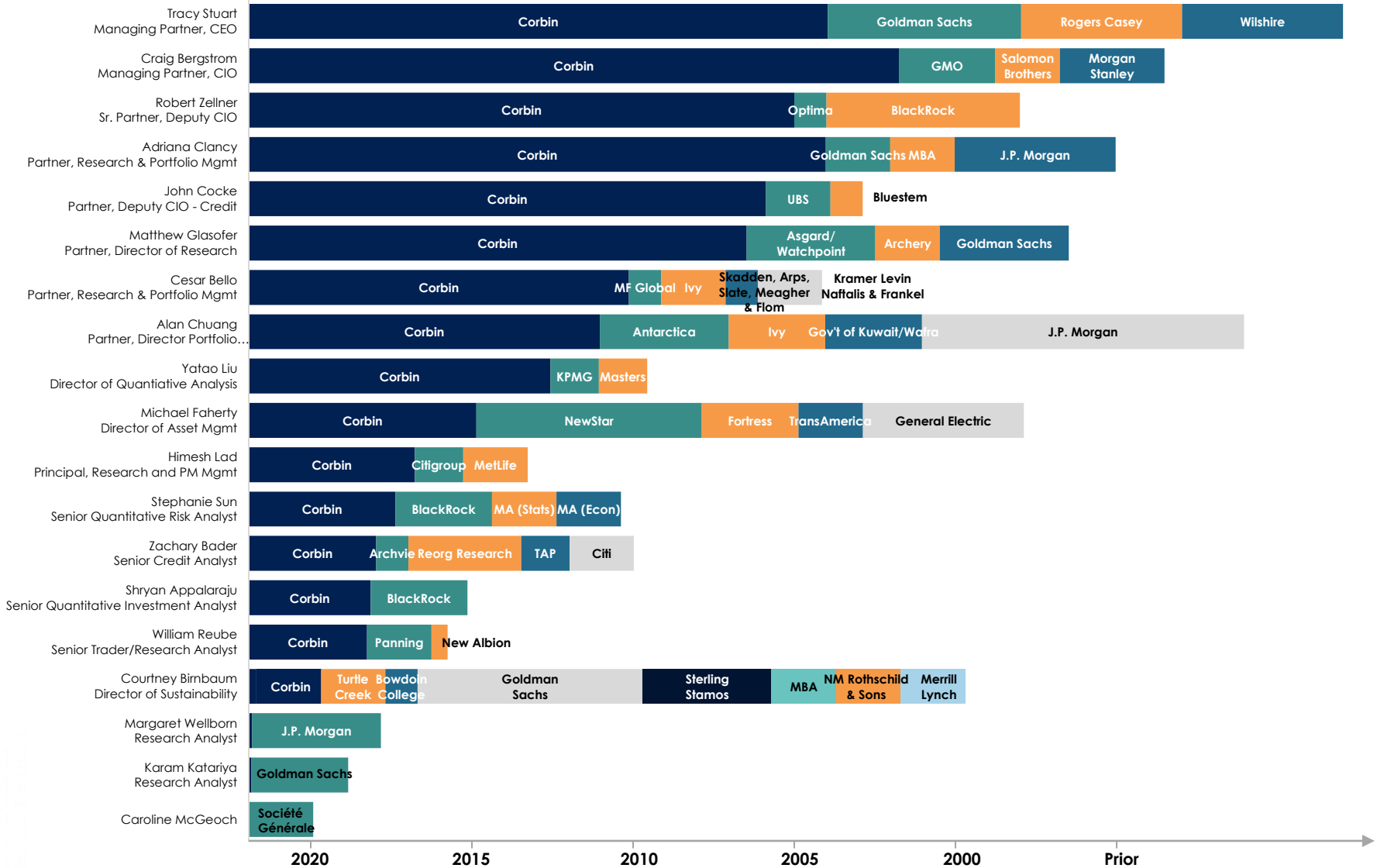
# Pinehurst Partners Historical Net Performance

	Since Inception (January 2002 – July 2023)												
	2023 YTD	3 Year	5 Year	10 Year	Return (%)	Vol (%)	Sharpe Ratio	Correl	Beta				
<b>Pinehurst (Net)</b>	6.44	5.26	4.71	5.04	6.32	5.79	0.86	-	-				
<b>HFRI FoF Composite</b>	3.35	4.63	3.50	3.40	3.51	5.09	0.44	0.92	1.04				
<b>HFRI HF Composite</b>	5.23	7.72	5.24	4.75	5.43	6.16	0.67	0.86	0.81				
<b>S&amp;P 500</b>	20.65	13.72	12.20	12.66	8.73	15.11	0.54	0.62	0.24				
<b>MSCI EAFE</b>	15.77	9.79	5.06	5.70	6.28	16.77	0.37	0.67	0.23				
<b>BBGBarc Agg</b>	2.02	(4.46)	0.75	1.50	3.43	3.97	0.53	0.10	0.15				
Returns (%)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YE/YTD
<b>2023</b>	2.53	0.86	(0.78)	(0.02)	0.91	0.86	1.93 est.						<b>6.44 est.</b>
<b>2022</b>	(3.01)	(1.00)	0.24	(2.27)	(2.75)	(4.56)	1.79	0.82	(2.22)	0.83	0.02	0.88	<b>(10.85)</b>
<b>2021</b>	(0.92)	3.08	0.00	2.62	1.52	0.40	0.22	0.60	1.98	2.88	(1.73)	(1.38)	<b>9.52</b>
<b>2020</b>	0.58	(1.35)	(10.06)	3.91	4.56	2.46	2.42	2.41	0.35	(0.29)	4.68	4.62	<b>14.17</b>
<b>2019</b>	2.85	1.28	0.21	1.49	(0.66)	2.07	0.43	(1.87)	(0.36)	0.73	0.86	1.82	<b>9.12</b>
<b>2018</b>	1.76	(0.47)	0.17	0.99	0.63	0.33	1.00	(0.20)	0.34	(0.75)	(0.83)	(1.37)	<b>1.58</b>
<b>2017</b>	1.55	0.76	0.65	0.96	0.27	0.34	1.33	1.11	0.54	(0.17)	(0.49)	0.78	<b>7.89</b>
<b>2016</b>	(4.03)	(2.23)	1.48	1.36	1.43	(0.32)	2.18	1.31	0.47	0.58	0.25	0.75	<b>3.11</b>
<b>2015</b>	(0.53)	2.25	(0.04)	0.67	1.49	(1.03)	0.80	(1.34)	(2.42)	0.81	0.26	(0.32)	<b>0.52</b>
<b>2014</b>	0.26	2.58	(0.13)	(0.02)	1.67	0.54	(0.31)	0.69	(0.01)	(0.14)	1.27	(0.06)	<b>6.48</b>
<b>2013</b>	2.04	0.75	0.96	0.58	1.26	(1.19)	1.26	(0.44)	1.71	1.36	0.74	0.96	<b>10.42</b>
<b>2012</b>	1.49	1.32	0.73	0.41	(0.30)	(0.16)	0.82	0.84	1.12	0.27	0.61	1.57	<b>9.06</b>
<b>2011</b>	0.12	0.73	0.25	1.17	0.35	(0.20)	0.41	(1.27)	(1.49)	1.04	0.16	(0.08)	<b>1.16</b>
<b>2010</b>	1.10	0.34	1.36	1.39	(1.03)	0.08	(0.27)	0.92	1.24	1.08	0.63	1.32	<b>8.43</b>
<b>2009</b>	2.38	1.20	(0.11)	1.29	3.84	1.57	1.79	1.50	2.62	0.85	1.17	1.65	<b>21.57</b>
<b>2008</b>	(1.95)	1.41	(2.36)	0.69	1.39	(1.07)	(2.48)	(1.11)	(7.49)	(6.27)	(2.67)	(1.48)	<b>(21.38)</b>
<b>2007</b>	1.56	0.71	1.81	1.50	2.57	0.78	0.80	(1.93)	1.94	3.16	(0.35)	0.53	<b>13.77</b>
<b>2006</b>	3.01	0.17	1.59	1.58	(1.67)	(0.53)	0.05	0.52	0.43	1.73	2.46	1.54	<b>11.35</b>
<b>2005</b>	0.63	1.87	(0.11)	(1.30)	1.28	1.91	2.53	1.24	2.58	(1.65)	2.30	2.54	<b>14.58</b>
<b>2004</b>	2.32	1.90	0.61	(0.20)	(0.83)	0.41	(0.72)	(0.10)	1.29	0.74	2.59	1.73	<b>10.09</b>
<b>2003</b>	(0.02)	0.47	0.76	2.74	1.14	1.14	0.12	0.97	1.28	2.63	1.00	1.50	<b>14.58</b>
<b>2002</b>	0.58	0.39	(0.04)	0.92	1.24	(2.17)	(1.32)	0.81	0.68	0.37	1.13	1.03	<b>3.64</b>



All information above is estimated as of July 31, 2023. Pinehurst performance is presented net of a 1% per annum management fee and a 5% performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. Please note that returns from January 2002-May 2005 are net of the current fee structure, which no actual investors received. Results shown above will differ for other time periods. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. Please see Corbin endnotes and risk disclosures for important information. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

# Depth and Experience of Investment Team



**Direct investment experience, prior affiliations, and continuity of the team allow us to provide differentiated value to clients**

Please see Corbin endnotes and risk disclosures for important information.

# Corbin Endnotes

## 1. PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

2. Corbin in its sole discretion has selected broad categories for client classification purposes and has assigned each client to a category. In the interest of administrative ease, Corbin limited the number of client categories. As a result not all clients neatly fit into a particular category. Corbin exercised its judgment in assigning clients to certain categories. For example, "corporation" may include operating businesses that take a different corporate form, pension plans of operating businesses, charitable organizations, associations, as well as other types of clients. "Public" may include non-private pension plans as well as other types of public funds such as insurance pools. Client categories and assignments are subject to change at any times. More detailed information is available upon request.
3. All Sharpe Ratios are calculated using the 3-month U.S. Treasury Bill for the risk-free rate.
4. Indices referenced herein are passive, and do not reflect any fees or expenses unless otherwise stated. While the performance of the Corbin funds discussed herein have been compared here with the performance of well-known and widely recognized indices, the various indices may not represent an appropriate benchmark for the Corbin funds. The holdings of the Corbin funds discussed herein may differ significantly from the securities that comprise the various indices. Also, the performance and volatility of the indices may be materially different from that of the Corbin funds. Investors cannot invest directly in an index (although one can invest in an index fund designed to closely track such index). Index returns represent general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. Unlike most asset class indices, HFR Index returns reflect deduction for fees and expenses. Because the HFR indices are calculated based on information that is voluntarily provided actual returns may be higher or lower than those reported.
5. The S&P 500 Index consists of 500 stocks chosen for market size, liquidity and industry group representation. It is a market-value weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value. This Index does not reflect any fees or expenses.
6. The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada.
7. The Bloomberg Barclays US Aggregate Bond Index represents securities that are US domestic, taxable and dollar denominated. The index covers the US investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. This Index does not reflect any fees or expenses.
8. The HFRI Monthly Indices ("HFRI") are provided by Hedge Fund Research, Inc. ("HFR"). HFRI Indices are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. Due to mutual agreements with the hedge fund managers listed in the HFR Database, HFR is not at liberty to disclose the particular funds behind any index to non-database subscribers. HFRI Indices are updated by HFR at various points during each month. HFRI data included in this letter may not be the most current data issued by HFR. Additionally, HFR reserves the right to modify previously issued data. Please visit <https://www.hedgefundresearch.com/hfr-hedge-fund-strategy-classification-system> for more information regarding HFRI Indices contained herein.
9. Information on Corbin Internal Committees related to the investment process and respective involvement: Multi-Strategy Investment Committee: Reviews portfolio recommendations and supports the investment and decision-making process. Credit Investment Committee: Reviews portfolio recommendations and supports the investment and decision-making process for credit portfolios, including private lending investment activities. Valuation Committee: Establishes and reviews the valuation policies and procedures, and makes valuation determinations when otherwise not precluded by law.
10. The FTSE 3 Month US T Bill + 4% Index is intended to track the daily performance of 3 month US Treasury bills, plus an annual equivalent rate of 4.00%. The index is designed to operate as a reference rate for a series of funds.
11. Pinehurst Partners, L.P. (the "Fund") launched on January 1, 2002 with a 1.5% management fee and a 5% performance fee (subject to a 5% hurdle). The performance figures set forth above are net of a 1% per annum management fee and a 5% per annum performance fee (subject to a 5% hurdle). The performance fee is charged on all net profits once the hurdle is reached. This lower fee structure has been available since June 1, 2005. The actual net returns of the Fund from inception until the first investor invested in the 1% fee class were based on the higher management fees then in place and thus were lower than the figures shown throughout. Performance figures presented net of these higher management fees are shown below. Performance is presented net of expenses and includes new issue income, the reinvestment of dividends, gains and other earnings. Figures as presented may include slight rounding errors. All figures above which take into account the current month's performance information are estimated and monthly figures are not audited. Each investor's rate of return may vary from this performance due to the timing of capital transactions as well as their new issues status. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

Returns (%)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YE/YTD
<b>2005</b>	0.58	1.84	-0.15	-1.32	1.23								<b>2.17</b>
<b>2004</b>	2.27	1.86	0.58	-0.26	-0.87	0.37	-0.76	-0.14	1.25	0.72	2.56	1.70	<b>9.60</b>
<b>2003</b>	-0.07	0.44	0.72	2.69	1.36	1.16	0.09	0.63	1.24	2.60	0.98	1.47	<b>14.11</b>
<b>2002</b>	0.54	0.36	-0.08	0.88	1.20	-2.21	-1.36	0.77	0.64	0.33	1.09	0.99	<b>3.12</b>



12. If requested, Corbin will provide appropriate net returns for any pooled vehicle it has managed or currently manages.
13. Pinehurst: The Weighted Average Management Fee and Weighted Average Incentive Fee (collectively the "Fees") do not include fees payable to Corbin or its affiliates from any affiliated vehicle or account in which Pinehurst Partners, L.P. (the "Fund") invests; these fees are waived to avoid double charging. However, third-party fees incurred by these affiliated vehicles or accounts are included; please see applicable disclosures in the endnotes. Some of these affiliated vehicles or accounts implement primarily through managed accounts, co-investments and other investment structures. The fees incurred with respect to these implementations are highly negotiated, and such fees are generally lower than those incurred with respect to traditional collective investment vehicles. If at the time of calculation the Fund has direct exposure to CLOs, fees paid to collateral managers of CLOs are ignored; hurdles and high water marks related to incentive fees payable in underlying pooled vehicles or directly held managed accounts or co-investments are ignored; and security values/weightings (i.e., basis for fees) in directly held managed accounts/co-investments are generally the market value of the securities less any associated accruals. Fees effectively incurred by the Fund through investments in publicly traded closed-end investment companies that invest all of their capital into shares of an underlying hedge fund are ignored for calculation purposes. If these fees were considered, the Fees above would be higher. Due to these assumptions/judgments or others not described above, the Fees are a best estimate. The Fees may in the future materially vary from those disclosed in this presentation.
14. COF: The Weighted Average Management Fee and Weighted Average Incentive Fee (collectively the "Fees") do not include fees payable to Corbin or its affiliates from any affiliated vehicle or account in which Corbin Opportunity Fund, L.P. (the "Fund") invests; these fees are waived to avoid double charging. However, third-party fees incurred by these affiliated vehicles or accounts are included; please see applicable disclosures in the endnotes. COF and some of these affiliated vehicles or accounts implement primarily through managed accounts, co-investments and other investment structures. The fees incurred with respect to these implementations are highly negotiated, and such fees are generally lower than those incurred with respect to traditional collective investment vehicles. Corbin makes a number of assumptions/judgments in calculating the Fees, including but not limited to, the Fees do not include fees paid to collateral managers of CLOs; hurdles and high water marks related to incentive fees are ignored; and security values/weightings (e.g., basis for fees) used are the market value of the security less any associated accruals. Due to these assumptions/judgments or others not described above, the Fees are a best estimate. The Fees may in the future materially vary from those disclosed in this presentation.
15. Corbin Private Credit Opportunity Fund II, L.P.: For purposes of calculating the Weighted Average Management Fee and Weighted Average Incentive Fee (collectively the "Fees") to which Corbin Private Credit Opportunity Fund II, L.P. (the "Fund") is subject, high water marks and hurdles related to incentive fees are ignored; and security values/weightings (e.g., basis for fees) used are the market value of the securities less any associated accruals. Due to these assumptions/judgments or others not described above the Fees are a best estimate. The Fees may in the future materially vary from those disclosed in this presentation.
16. Corbin Hedged Equity Fund, L.P.: For purposes of calculating the Weighted Average Management Fee and Weighted Average Incentive Fee (collectively the "Fees") to which Corbin Hedged Equity Fund, L.P. (the "Fund") is subject, high water marks and hurdles related to incentive fees are ignored; for tiered incentive fees Corbin in its discretion chooses the most likely fee to be incurred based on the applicable target return; and due to the different security values/weightings and application of investable amount concept (basis for fees) Corbin uses to calculate fees for different implementations the actual denominator of the Fund for calculation purposes is not the Fund's NAV but is in effect the sum of all investments. Due to these assumptions/judgments or others not described above the Fees are a best estimate. The Fees may in the future materially vary from those disclosed in this presentation.
17. Results from Corbin's Approach to Active Management (Pinehurst). The following definitions/disclosure items apply to the components of performance slide illustrated earlier in this presentation: Core Funds & Other: The performance for this sub-category is comprised mainly of larger underlying hedge funds in which Pinehurst Partners, L.P. (the "Fund") invests or has invested. For purposes of this slide, Corbin has defined "larger" hedge funds as hedge funds that had \$500,000,000 or more in assets under management ("AUM") as of January 1st of 2002, 2003, 2004 and/or 2005, and hedge funds that had \$1,000,000,000 or more in AUM as of January 1st of 2006 and/or January 1st of any year thereafter. To clarify, if an underlying hedge fund met the criteria above on January 1st of one year but its AUM decreased below the aforementioned thresholds as of the beginning of a subsequent year, its contribution to the Fund for such subsequent year would be reflected in the "Small Funds" sub-category described below. Additionally, this sub-category also takes into account contributions to Fund performance stemming from the investment of available cash in the Fund and other balance sheet items. The performance in this sub-category is presented net of all Fund expenses (excluding the management fee and any applicable incentive fees). Small Funds: The performance for this sub-category is comprised of smaller underlying hedge funds in which the Fund invests or has invested. For purposes of this slide, Corbin has defined "smaller" hedge funds as hedge funds that had less than \$500,000,000 in AUM as of January 1st of 2002, 2003, 2004 and/or 2005, and hedge funds that had less than \$1,000,000,000 in AUM as of January 1st of 2006 and/or January 1st of any year thereafter. To clarify, if an underlying hedge fund met the criteria above on January 1st of one year but its AUM increased above the aforementioned thresholds as of the beginning of a subsequent year, its contribution to the Fund for such subsequent year would be reflected in the "Core Funds" sub-category. Opportunistic/Co-investment: The performance for this sub-category is comprised of certain targeted opportunistic/co-investment opportunities in which the Fund participates. The investments in this sub-category have been implemented through (A) certain Corbin-managed dedicated equity and credit vehicles (Corbin Equity Fund, L.P. and Corbin Opportunity Fund, L.P., respectively), (B) separately managed accounts the Fund has created to enable underlying managers to implement a particular investment strategy or sub-strategy directly for the Fund, and (C) other "non-standard" means (i.e., listed hedge fund positions, longer duration hedge fund investments, CLOs, investments in vehicles with more esoteric investment strategies such as reinsurance and foreign real estate, etc.). Hedge Overlay: The performance for this sub-category refers to the Fund's portfolio level hedge overlay program. This program commenced in May of 2007.
18. Target returns are not predictions or projections of future investment performance and may not necessarily be achieved. Actual net returns will vary by share class. Please refer to the 'Risk Disclosures' for information around risks associated with the Pinehurst Partners, L.P., any of which might prevent achieving the stated targets.
19. Corbin Capital Partners, L.P. (the "Adviser"), its affiliate and certain investment funds managed and/or sponsored by them (each, a "Fund") have arrangements whereby certain unaffiliated entities receive compensation from the Adviser or its affiliate in consideration for raising capital for such Funds. In these cases, prospective investors are provided disclosure regarding such arrangements and the resulting conflicts of interest. Other unaffiliated entities do not receive compensation from the Adviser or its affiliate but may nonetheless recommend or advise their clients to invest in a Fund. If you receive this document from such an uncompensated entity, please note, in the event that any information contained herein is an "endorsement" (as defined in Rule 206(4)-1 of the Investment Advisers Act of 1940), such entity is not a current client of, or investor in, a Fund and there are no material conflicts of interest resulting from the Adviser's or its affiliate's relationship with such entity.

## ADDITIONAL INFORMATION FOR QUALIFIED INVESTORS IN SWITZERLAND

Pinehurst Institutional, Ltd. ("PHI") is an exempted company incorporated in the Cayman Islands and is compliant with Swiss law for distribution to qualified investors in Switzerland. The Swiss representative is Carnegie Fund Services S.A., 11, rue du Général-Dufour, 1204 Geneva. The Swiss paying agent is Banque Cantonale de Genève, 17, quai de l'Île, 1204 Geneva, Switzerland. Investors in Switzerland can obtain the documents of PHI, such as the Confidential Memorandum for Switzerland, the Memorandum of Association and the financial reports free of charge from the Swiss representative. This document may only be issued, circulated or distributed so as not to constitute an offering to the general public in Switzerland. Recipients of the document in Switzerland should not pass it on to anyone without first consulting their legal or other appropriate professional adviser, or the Swiss representative. Past performance is no indication of current or future performance, and since PHI currently does not charge commissions or costs upon the issue or redemption of shares, the performance does not take those into account.



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Forward-looking statements, including without limitation any statement or prediction about a future event contained in this presentation, are based on a variety of estimates and assumptions by Corbin, including, among others, estimates of future operating results, the value of assets and market conditions. These estimates and assumptions are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive and financial risks that are outside of Corbin's control. There can be no assurance that the assumptions made in connection with any forward-looking statement will prove accurate, and actual results may differ materially. The inclusion of any forward-looking statement herein should not be regarded as an indication that Corbin or any of its affiliates considers forward-looking statements to be a reliable prediction of future events.

Strategy classifications by Corbin used throughout this presentation are subjective and may change at any time without notice. The strategy classification information provided may not accurately correspond to your definition of certain investment strategies and in fact your definition may materially differ from ours.

With respect to the investment vehicles advised by Corbin and their underlying funds:

Funds are speculative and involve a high degree of risk; the funds may be leveraged; the funds' performance can be volatile; an investor could lose all or a substantial amount of his or her investment; the fund managers have total trading authority over the funds; the use of a single advisor applying generally similar trading programs could mean lack of diversification and, consequently, higher risk; there is no secondary market for an investor's interest in the funds and none is expected to develop; there may be restrictions on transferring interests in the funds; the funds' high fees and expenses may offset the funds' trading profits.

The underlying funds trade a myriad of instruments. Changes in exchange rates may cause the value of an investment to increase or decrease. Some investments may be restricted or illiquid, there may be no readily available market and there may be difficulty in obtaining reliable information about their value and the extent of the risks to which such investments are exposed. Certain investments, including warrants and similar securities, often involve a high degree of gearing or leverage so that a relatively small movement in price of the underlying security or benchmark may result in a disproportionately large movement, unfavorable as well as favorable, in the price of the warrant or similar security. In addition, certain investments, including futures, swaps, forwards, certain options and derivatives, whether on or off exchange, may involve contingent liability resulting in a need for the investor to pay more than the amount originally invested and may possibly result in further loss exceeding the amount invested. Transactions in over-the-counter derivatives involve additional risks as there is no market on which to close out an open position; it may be impossible to liquidate an existing position, to assess the value of a position or to assess the exposure to risk. Investors should carefully consider whether such investments are suitable for them in light of their experience, circumstances and financial resources.

This communication contains proprietary information for purposes of Section 101(k) of the United States Employee Retirement Income Security Act of 1974, as amended.

No information or communication provided herein or otherwise is intended to be, or should be construed as, a recommendation within the meaning of the U.S. Department of Labor's final regulation defining "investment advice." Further, it is not intended for any such information or communication to be, and should not be construed as, providing impartial investment advice.

There is no guarantee that the investment objectives of any investment vehicle managed by Corbin will be met. Past performance is not necessarily indicative of future results, and the value of investments and the income they might generate can fluctuate.

Corbin's ESG integration process involves an attempt to influence and monitor the ESG practices of managers it works with. Corbin's engagement approach may vary based on the specific engagement plan for each manager and may include in-person meetings with management and investment personnel, conference calls and questionnaires.

Corbin seeks to incorporate ESG analysis into its manager evaluation process to ensure that all portfolios benefit from a detailed review of significant non-financial factors and risks that have the potential to impact long-term manager and investment performance. The objective is that this analysis will help inform Corbin and have a positive impact on its manager selection and engagement activities. Looking ahead, Corbin will continue to engage with managers to encourage ongoing improvements in their sustainability and social impact analysis and to encourage managers to improve the quality and scope of their ESG programs. ESG integration across managers will vary and Corbin will rely heavily on information provided by such managers to assess any progress, which information may not be verifiable.

Signatories to the PRI pay an annual fee. They are required to report annually on their responsible investment activities and they receive ratings based on their reported data. Corbin signed on as a signatory in April 2021 and has not yet received ratings. Full details of PRI reporting and assessment methodology are available at [www.unpri.org/signatories/signatory-accountability/about-pri-reporting](http://www.unpri.org/signatories/signatory-accountability/about-pri-reporting). Principles for Responsible Investment (PRI) is the world's leading advocate for responsible investment. The PRI encourages adopting environmental, social and governance (ESG) factors into investment and ownership decisions, and creating a sustainable financial system. The PRI is an independent organisation, funded and managed by its signatories, and backed by the United Nations Environment Programme Finance Initiative and United Nations Global Compact. For further information please visit: <https://www.unpri.org/>.



## Contact Information

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### **Client Relations**

If you have any questions, please contact us at our client services  
email: [clientservices@corbincapital.com](mailto:clientservices@corbincapital.com)







# MASSACHUSETTS WATER RESOURCES AUTHORITY RETIREMENT BOARD

PRESENTED BY

Francesco Daniele, Director of Client Services

OCTOBER 5, 2023

**Deborah B. Goldberg**, Treasurer and Receiver General, Chair

**Michael G. Trotsky**, CFA, Executive Director and Chief Investment Officer

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A photograph of a city skyline at dusk, with buildings illuminated against a dark blue sky. In the foreground, there is a waterfront promenade with a cobblestone path and a low stone wall. The water reflects the city lights.

# PRIM BOARD & PRIT FUND OVERVIEW



AS OF JUNE 30, 2023

# PRIT Fund Snapshot

As of June 30, 2023

## PRIT FUND FACTS

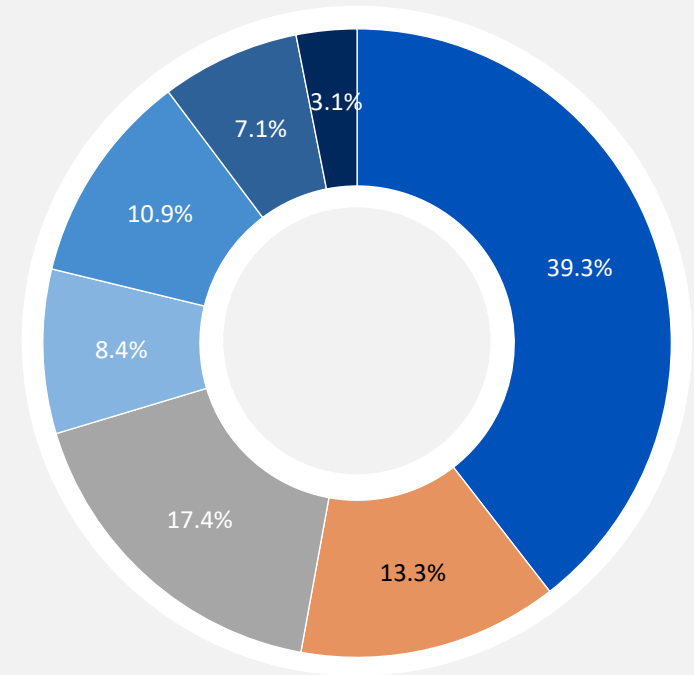
- \$96.6 billion AUM
- 63 public markets portfolios
- 16 real estate, timber and REIT portfolios
- 100+ private equity managers;  
350+ partnerships
- 35 portfolio completion strategies managers

## OVERSIGHT AND STAFFING

- 9 appointed and elected trustees
- 5 advisory committees, consisting of 42 industry professionals and Board members
- Staff of over 50 professionals
  - 30 Masters
  - 13 CFAs
  - 6 CPAs
  - 3 CAIAs
  - 3 JDs
  - 1 FRM
  - 1 CRE
  - 8 CFA Investment Foundations Program Certificate Holders

## ASSET ALLOCATION

(as of 6/30/23)



## TARGET RANGES

(approved 2/16/23)

- Global Equities 32% - 42%
- Core Fixed Income 12% - 18%
- Private Equity 13% - 19%
- Portfolio Completion Strategies 7% - 13%
- Real Estate 7% - 13%
- Value-Added Fixed Income 5% - 11%
- Timberland 1% - 7%

# About PRIM



**\$96.6 billion investment fund that invests public employee pension benefits**

- PRIM has a professional, experienced and focused investment staff.
- PRIM does not administer benefits.

**PRIM's mission is to relieve the pension funding burden on the taxpayer**

- Self-funded agency which generates asset returns for the Massachusetts pension system.
- PRIM's Project SAVE initiative is achieving over \$275 million annualized value enhancing activities for the fund annually.

**PRIM is independent and governed by a nine-member Board of Trustees**

- Massachusetts State Treasurer is the Chair of the PRIM Board.
- A robust committee structure lends investment and operational expertise to the decision-making process.



## PRIM Core Beliefs

We believe that any investment must be evaluated on three equally important parameters: return, risk and cost.

We don't make tactical asset allocation decisions or investment decisions based on market or economic predictions. Instead, we engineer a strategic, long-term asset allocation strategy that we hope will stand the test of a long-time horizon.

We value a basis point of cost reduction more than a basis point of return. Because we can count on cost savings every year, but nobody ever really knows what the markets will deliver.

# PRIM Top 10 Accomplishments

1

Stable organization: Exceptional staff with low turnover supported by a strong, stable Board and Committee structure

2

National recognition for PRIM and its staff

3

Strong relative and absolute investment performance

4

Sophisticated risk management platform and framework

5

Methodical asset allocation decisions

6

Project SAVE

7

Re-engineered Hedge Fund program – Portfolio Completion Strategies

- Direct hedge funds
- Hedge fund replication
- Emerging manager direct hedge fund
- Hedge fund and other credit fund co-investment

8

Enhanced manager search and selection process

9

Private Equity co-investment

10

Direct Real Estate Program

# PRIM Board



**Chair**  
**DEBORAH B. GOLDBERG**  
State Treasurer and  
Receiver General,  
Commonwealth of Massachusetts



**Ruth Ellen  
Fitch**

Appointee of  
the State  
Treasurer



**Catherine  
D'Amato**

Designee  
of the  
Governor,  
Ex Officio  
Member



**Peter  
Monaco**

Appointee  
of the  
Governor,  
Non-State  
Employee or  
Official



**Carly Rose**

Appointee  
of the  
Governor,  
Public Safety



**Theresa F.  
McGoldrick,  
Esquire**

State  
Retirement  
Board  
Member  
(SRB)



**Dennis J.  
Naughton**

Teachers'  
Retirement  
Board  
Member  
(TRB)



**Robert L.  
Brousseau**

Elected  
Representative  
State Teachers'  
Retirement  
System



**Paul E.  
Shanley,  
Esquire**

Elected  
Representative  
State  
Employees  
Retirement  
System





# PRIM Advisory Committees

## Investment Committee

The Committee advises the Board with respect to the asset allocation policy of PRIM and related investment policies and assist the Board in overseeing the investment program. The mandate of the Investment Committee does not include real estate and timber. Members include:

1. **Deborah B. Goldberg**, Chair, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
2. **Joseph C. Bonfiglio**, Massachusetts & Northern New England Laborers' District Council
3. **C. LaRoy Brantley**, Investment Consultant
4. **Catherine D'Amato**, President and CEO, The Greater Boston Food Bank
5. **Michael Even**, Former President and CEO, Numeric Investors
6. **Constance M. Everson**, CFA, Managing Director, Capital Markets Outlook Group
7. **Ruth Ellen Fitch**, Esq., Board Member, Former President and CEO, the Dimock Center
8. **James B. G. Hearty**, Board Member, Former Partner, Clough Capital (Ex Officio)
9. **Peter Monaco**, Board Member, Managing Director, Raptor Group
10. **Phillip H. Perelmuter**, Former Managing Partner, Wellington Management
11. **Philip Rotner**, Chief Investment Officer, Boston Children's Hospital
12. **Paul E. Shanley**, Esq., Board Member, Director of Professional Liability, Amity Insurance
13. **Glenn P. Strehle**, CFA, Treasurer Emeritus, MIT
14. **Timothy L. Vaill**, Former Chairman and CEO, Boston Private Holdings



# PRIM Advisory Committees

## Real Estate Committee

The Committee advises the Board in setting investment policy within the real estate and timber portfolios and assist the Board in overseeing these portfolios. Members include:

1. **Jill S. Hatton**, CRE, Chair, Real Estate Investment Professional
2. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
3. **Lydia Chesnick**, Esq., Partner, Bernkopf Goodman LLP
4. **Robert Gifford**, RGA Corp.
5. **Jack Lutz**, PhD., Forest Research Group
6. **William F. (Bill) McCall, Jr.**, CRE, McCall & Almy, Inc.
7. **Garlan Morse, Jr.**, CRE, Morris and Morse Company, Inc.
8. **Peter F. O'Connell**, Marina Bay Company
9. **Carly Rose**, Board Member, Public Safety Union Member

## Administration and Audit Committee

The Committee assists the Board in overseeing all issues related to the governance, administration, and audit functions of PRIM, and to provide recommendations for the Board's consideration. Members include:

1. **Robert L. Brousseau**, Chair, Board Member, Retired Teacher, Town of Wareham School System
2. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
3. **Patrick E. Brock**, Chairman, Hampshire County Retirement Board
4. **Catherine D'Amato**, President and CEO, The Greater Boston Food Bank
5. **James B. G. Hearty**, Board Member, Former Partner, Clough Capital (Ex Officio)
6. **Theresa F. McGoldrick**, Esq., Board Member, National Executive Vice President, National Association of Government Employees (NAGE)
7. **Dennis J. Naughton**, Board Member, Retired Educator, Millis Public Schools



# PRIM Advisory Committees

## ESG Committee

The Committee assists the Board in overseeing all issues related to the development and ongoing implementation of an ESG framework and related engagement activities, and to provide recommendations for the Board's approval. Members include:

1. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
2. **Ruth Ellen Fitch**, Esq., Board Member, Former President and CEO, the Dimock Center
3. **Theresa F. McGoldrick**, Esq., Board Member, National Executive Vice President, National Association of Government Employees (NAGE)
4. **Dennis J. Naughton**, Board Member, Retired Educator, Millis Public Schools
5. **Michael Even**, Former President and CEO, Numeric Investors
6. **Poonam Patidar**, Member, Mintz
7. **Mary Cerulli**, Founder, Climate Finance Action
8. **Marcella Pinilla**, Director of Sustainable Investing, Zevin Asset Management

## Compensation Committee

The Committee assists the Board in overseeing staff compensation and benefit policies. The Administration and Audit Committee is responsible for assisting the Board on other human resource matters. Members include:

1. **Deborah B. Goldberg**, Chair, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
2. **Robert L. Brousseau**, Board Member, Retired Teacher, Town of Wareham School System
3. **Patrick E. Brock**, Chairman, Hampshire County Retirement Board
4. **Catherine D'Amato**, President and CEO, The Greater Boston Food Bank

# Recent Recognition

## **Northeast Women in Public Finance Freda Johnson Lifetime Achievement Award**

Treasurer Deborah B. Goldberg received the Northeast Women in Public Finance Freda Johnson Lifetime Achievement Award. “The award recognizes a woman serving or who has served in a position for a public or non-profit issuer who exemplifies the qualities that Freda Johnson brought to our industry as a trailblazer, leader, innovator, and mentor.” (December 2022)

## **PRIM Future Initiative Awarded Commonwealth Equity in Governance Award**

PRIM received the Commonwealth’s ‘Equity in Governance Award’ for the FUTURE Initiative. The award recognizes “an employee or group of employees who have demonstrated commitment to and attainment of the principles of equity” for activity that “promotes the participation of minority business enterprises and women business enterprises,” among other things. (December 2022)

## **PRIM’s Private Equity Portfolio Ranked #3 by the American Investment Council**

PRIM’s Private Equity Portfolio was ranked #3 among 176 U.S. public pension funds based on 10-year performance by the American Investment Council’s Public Pension Study. PRIM is the only fund that has been in the top five every year the study has been conducted, including #1 rankings in 2019, 2018, 2015, and 2013. (June 2022)

## **Private Equity Women Investor Network Limited Partner of the Year**

Private Equity Women Investment Network (PE-WIN), which is the preeminent organization for senior-level women investment professionals in private equity, recognized PRIM as “Limited Partner of the Year” for “empowering women in private equity.” The award reflected both PRIM’s work on investing with women and diverse managers via the FUTURE Initiative and the strong leadership presence of women on PRIM’s Private Equity team. (July 2023)

## **Institutional Investor’s Alpha Edge Award**

PRIM’s Private Equity team won Alpha Edge recognition for Alpha Generation from Institutional Investor, which cited PRIM’s strong leadership culture, collaboration, and thesis-driven approach to manager selection as well as PRIM’s annual commitment modeling process and strong long-term performance in the asset class. (July 2023)

## **PRIM Ranked #8 For Assets Managed by Diverse Managers by Pensions & Investments**

PRIM was ranked seventh among the largest 200 funds in the U.S. for assets managed by diverse managers. This is an indication that PRIM’s ongoing efforts over the years, combined with the new FUTURE initiative are putting PRIM at the top of the rankings in terms of progress. (February 2023)

## **Institutional Investor’s Partnership of the Year Award**

PRIM’s role with the Aggregate Confusion Project was awarded “Partnership of the Year” at the fifth annual Allocators’ Choice Awards. PRIM is a founding partner with MIT Sloan School of Management in this project to “reduce the level of noise in ESG management” by improving data available to managers and allocators. (September 2022)

## **Certificate of Achievement for Excellence in Financial Reporting – Government Finance Officer Association**

PRIM was awarded the Government Finance Officer Association’s Certificate of Achievement for Excellence in Financial Reporting for the 18<sup>th</sup> consecutive year. (June 2023)

## **GIPS® Compliance**

For the 6th consecutive year, PRIM has completed the CFA Institute’s Global Investment Performance Standards (GIPS®) of integrity and transparency.\* PRIM is one of only a handful of large public pension plans to comply with the GIPS® standards. Additionally, Matt Liposky, PRIM’s Chief Investment Operations Officer, was appointed by the CFA Institute to chair the GIPS® Standards Asset Owner Subcommittee. (August 2023)

12 \*PRIM claims compliance with the Global Investment Performance Standards (GIPS®). GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. You may obtain GIPS® compliant performance information by emailing [clientservice@mapension.com](mailto:clientservice@mapension.com)



# PRIM'S FUTURE INITIATIVE



# PRIM's FUTURE Initiative

PRIM believes that diversity of thought and investment equity is critical to the FUTURE success of PRIM and the asset management industry. To successfully implement and accomplish these goals, PRIM must plan for the FUTURE:

F U T U R E

## Firmwide Commitment

Continuation of PRIM's firmwide commitment to diversity and inclusion and diversity of thought.

## Unbiased

PRIM will remain unbiased when evaluating and selecting investment managers or other vendors.

## Transparent

PRIM will be fully transparent as to the progress toward our goals, as well as our successes and challenges.

## Utilize Technology

PRIM will utilize technology to successfully track and manage the amount of data this initiative requires.

## Resources

PRIM will employ additional internal and external resources as required to accomplish our goals.

## Expand

PRIM will expand the conversation about diversity and inclusion in the asset management industry by being at the forefront of meaningful change.

# FUTURE Initiative

PRIM's FUTURE Initiative is our strategic plan to achieve the goals set forth by the Investment Equity Legislation as well as position PRIM to be a leader on improving diversity in the asset management industry.



## PRIM continues to make progress on the keys to FUTURE Initiative:

1. Continue to Allocate Capital to Diverse Managers
2. Enhance Diversity, Equity & Inclusion (DEI) Reporting
3. Reduce Barriers
4. Improve Sourcing

A photograph of a city skyline at dusk, with buildings illuminated against a dark blue sky. In the foreground, there is a waterfront promenade with a cobblestone path and a low stone wall. The water reflects the city lights.

# ECONOMIC BACKDROP

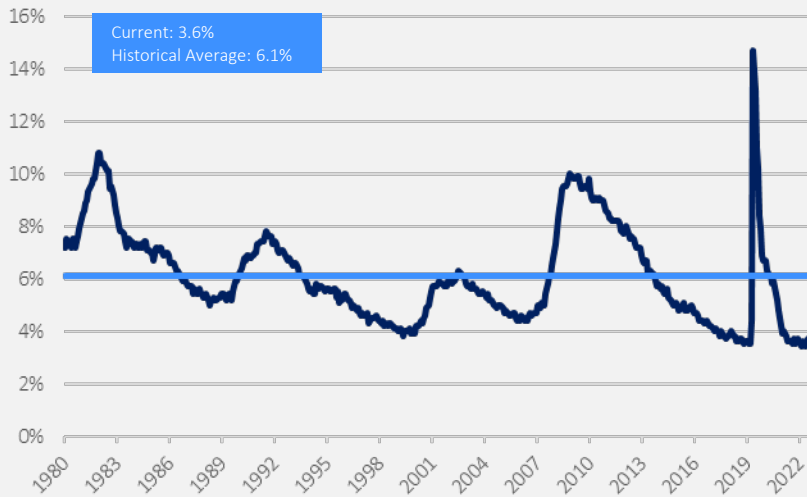
The logo for Mass PRIM, featuring the word "Mass" in a sans-serif font above the word "PRIM" in a larger, bold, sans-serif font. To the left of the text are three vertical bars of increasing height, resembling a bar chart.

AS OF JUNE 30, 2023

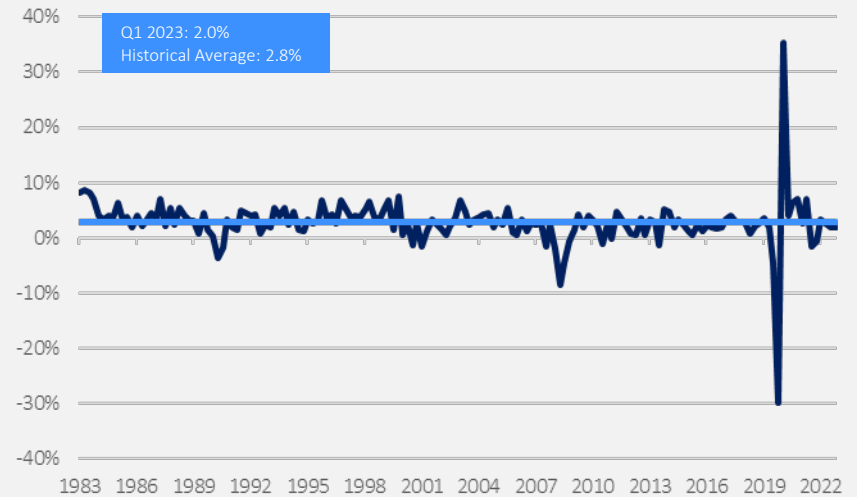


# U.S. Economic Data

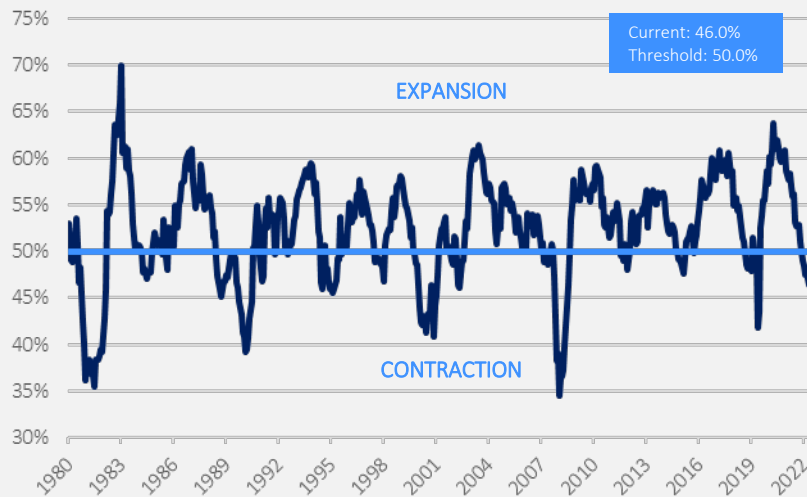
## UNEMPLOYMENT RATE



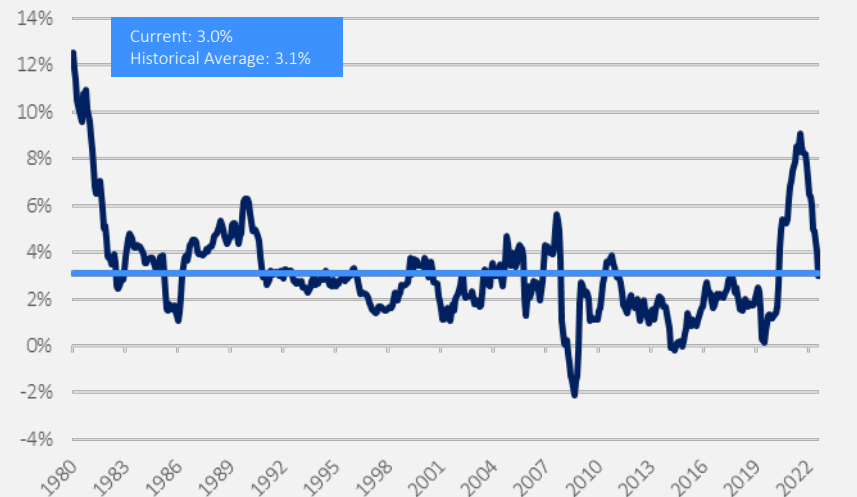
## GDP GROWTH RATE



## MANUFACTURING PMI



## CONSUMER PRICE INDEX

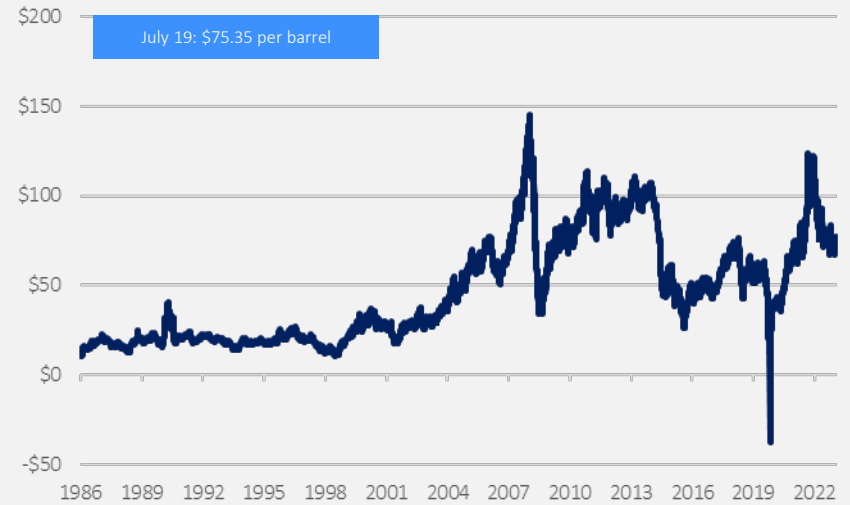


# U.S. Economic Data

## WEEKLY INITIAL JOBLESS CLAIMS (IN MILLIONS)



## WTI CRUDE OIL (\$/BBL)



## CBOE MARKET VOLATILITY INDEX (VIX)



A blue-tinted photograph of a city skyline, likely Boston, featuring several skyscrapers and a prominent cable-stayed bridge. The image is overlaid with a semi-transparent blue filter. The text 'PRIT FUND ASSET ALLOCATION TARGETS' is centered in white, bold, sans-serif font. Below the main title, the 'Mass PRIM' logo is displayed, consisting of three vertical bars of increasing height followed by the text 'Mass' and 'PRIM' stacked vertically.

# PRIT FUND ASSET ALLOCATION TARGETS

Mass  
PRIM

# Changes to Target Ranges – PRIT Fund Asset Allocation

Approved February 16, 2023

## Increase in Allocation Range

**Private Equity:**  
Target Band moves up 1%

## Same Allocation Range

**Core Fixed Income:**  
Target Band stays the same

**Value-Added Fixed Income:**  
Target Band stays the same

**Real Estate:**  
Target Band stays the same

**Timberland:**  
Target Band stays the same

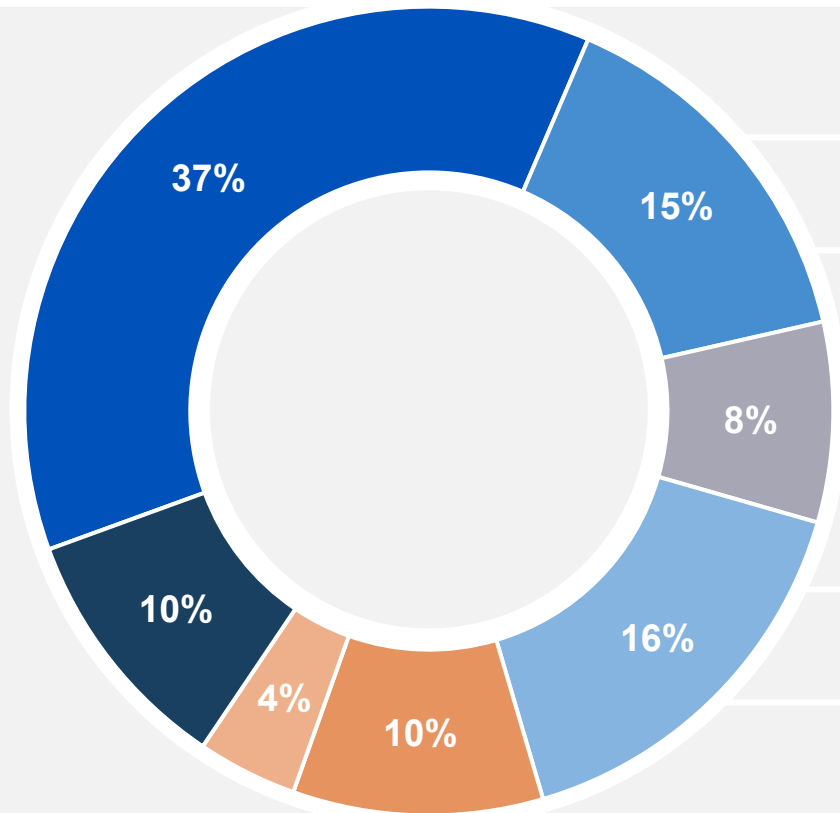
**Portfolio Completion Strategies:**  
Target Band stays the same

## Decrease in Allocation Range

**Global Equity:**  
Target Band moves down 1%

# PRIT Asset Allocation

Approved February 16, 2023



	AA 2022 Approved Range	AA 2023 Approved Range
<b>Global Equity</b> (including Hedged US Equity)	33% - 43%	32% - 42%
<b>Core Fixed Income</b>	12% - 18%	No Change
<b>Value-Added Fixed Income</b>	5% - 11%	No Change
<b>Private Equity</b>	12% - 18%	13% - 19%
<b>Real Estate</b>	7% - 13%	No Change
<b>Timberland</b>	1% - 7%	No Change
<b>Portfolio Completion Strategies</b>	7% - 13%	No Change

The ranges in the PRIM asset allocation reflect the long-standing use of bands around a midpoint. Managing the asset allocation to a particular midpoint in the range is not always possible, practical or advisable.

# PRIM 2023 Asset Allocation Recommendations

## NEPC Capital Market Assumptions with PE and Global Equity Changes

		12/31/22 Asset Class Assumptions	
Asset Classes	Target Range	10 Yr. Expected Return	30 Yr. Expected Return
US Equity <sup>1</sup>		5.6%	7.1%
International Equities <sup>2</sup>		5.9%	6.9%
Emerging International Equities <sup>3</sup>		9.6%	9.6%
<b>Global Equity</b>	<b>32% - 42%</b>		
Core Bonds		4.8%	4.7%
Short-Term Fixed Income <sup>4</sup>		4.2%	3.8%
20+ Yr. Treasury STRIPS		3.9%	4.3%
TIPS/ILBs		4.0%	4.1%
<b>Core Fixed Income</b>	<b>12% - 18%</b>		
Value-Added Fixed Income <sup>5</sup>	5% - 11%	8.0%	7.8%
Private Equity	13% - 19%	9.4%	10.2%
Real Estate <sup>6</sup>	7% - 13%	4.6%	5.7%
Timberland <sup>7</sup>	1% - 7%	6.6%	7.0%
Portfolio Completion (PCS) <sup>8</sup>	7% - 13%	6.5%	6.5%
<b>Total Fund Expected Return<sup>9</sup></b>		<b>7.0%</b>	<b>7.7%</b>

1. Blended allocation to large-cap equity, small-cap equity, micro-cap equity
2. Blended allocation to large-cap equity and small-cap equity
3. Blended allocation to large-cap equity and small-cap equity
4. Modeled as Short-Term Treasury
5. Blended allocation to high yield, bank loans, EMD, private debt

6. Blended allocation to Private Real Estate and REITs
7. Timberland is modeled as Private Real Assets Infrastructure/Land
8. Modeled as equal weighted blend of Hedge Fund Equity, Credit, and Macro
9. Asset classes modeled at the midpoint of the asset allocation range

A photograph of a city skyline at dusk, with buildings illuminated against a dark blue sky. In the foreground, there is a waterfront promenade with a cobblestone path, a low stone wall, and some greenery. The water reflects the city lights.

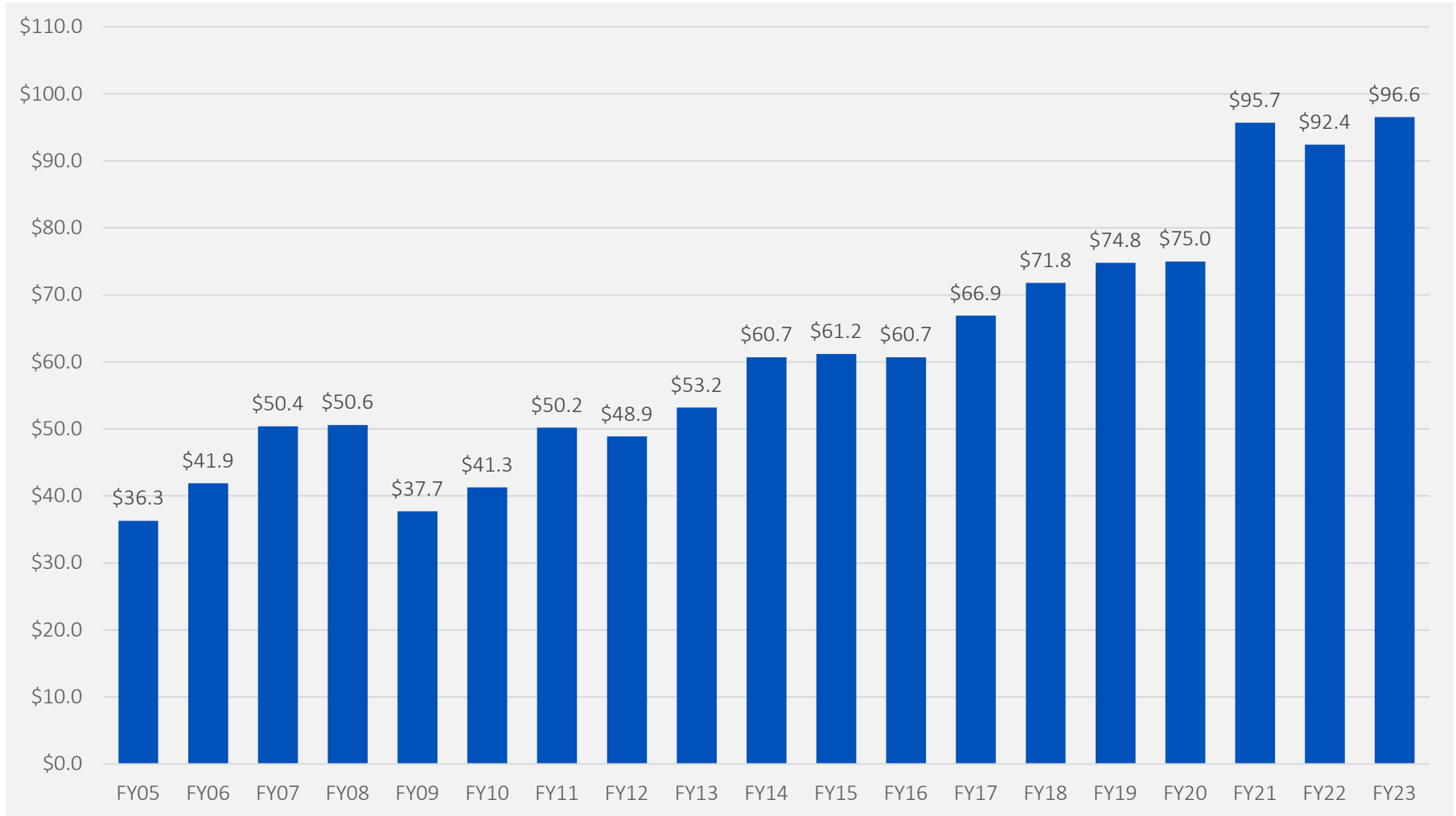
# PRIT FUND PERFORMANCE

The logo for Mass PRIM, featuring the word "Mass" in a sans-serif font above the word "PRIM" in a larger, bold, sans-serif font. To the left of the text are three vertical bars of increasing height, resembling a bar chart.

AS OF JUNE 30, 2023

# Total PRIT Fund Fiscal Year Market Value

Value (\$Billions)

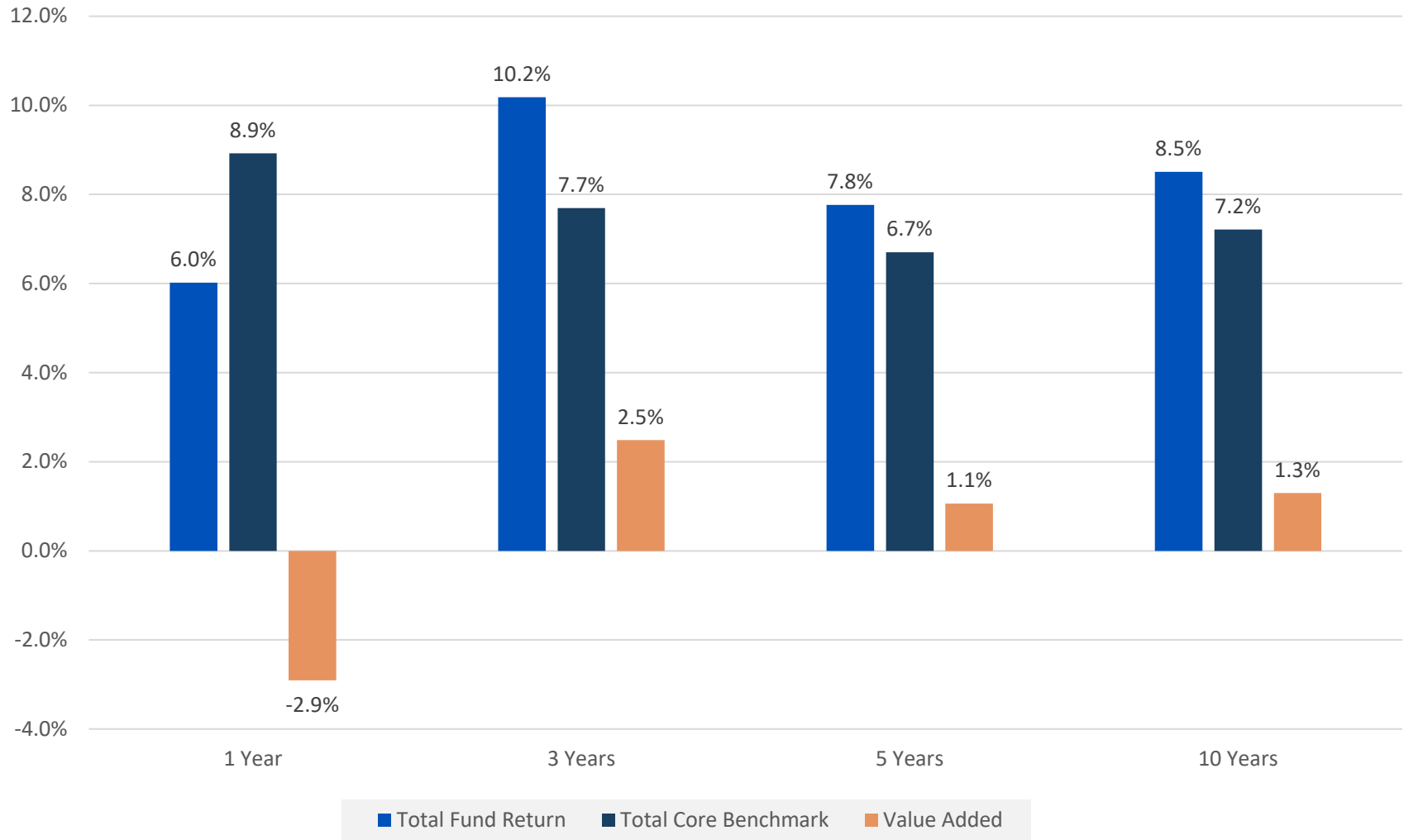


Source: BNY Mellon. As of June 30, 2023.



# PRIT Fund Total Returns

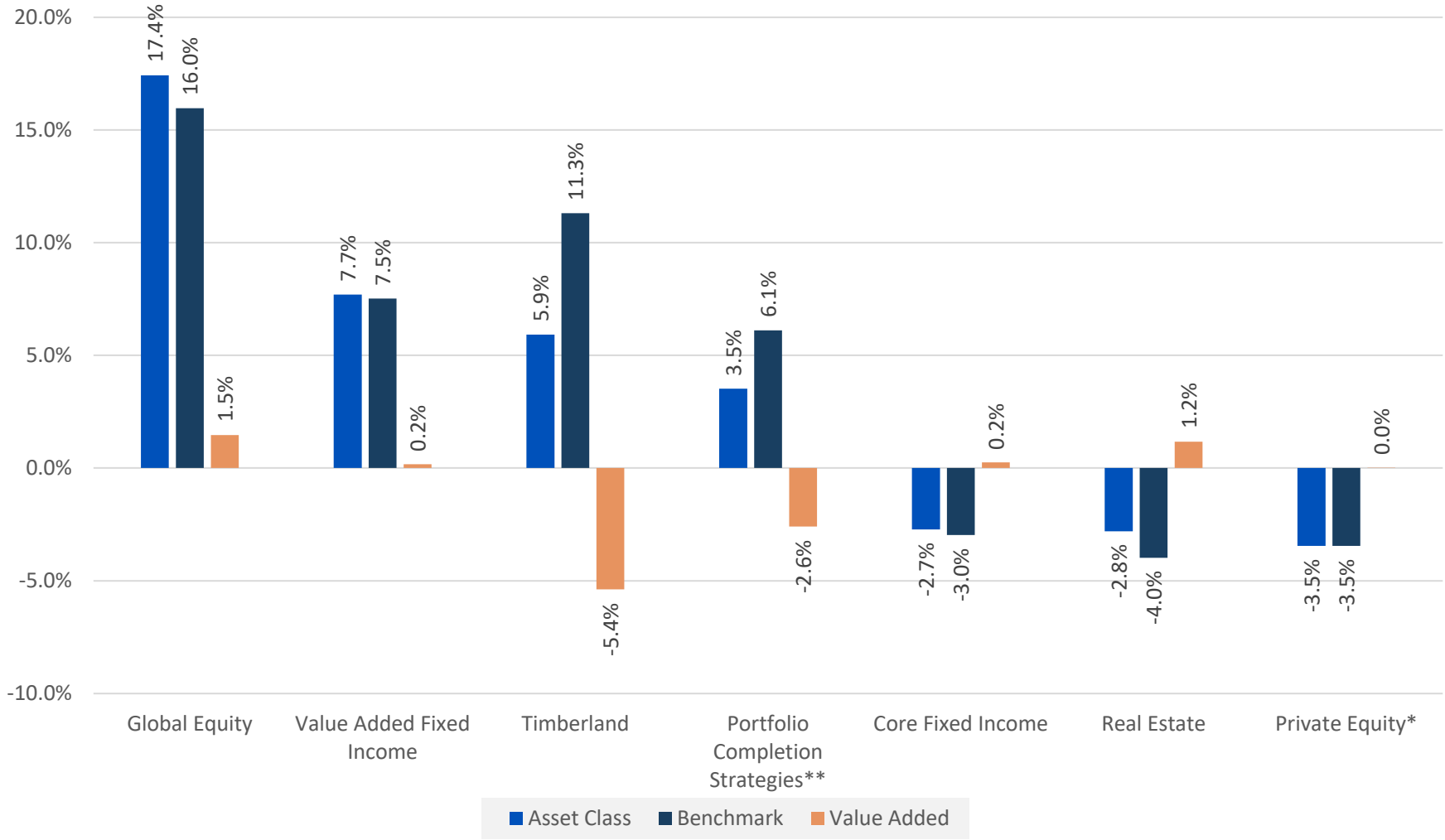
Annualized Returns as of June 30, 2023 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. Total Core Benchmark includes private equity benchmark.

# PRIT Asset Class Performance Summary

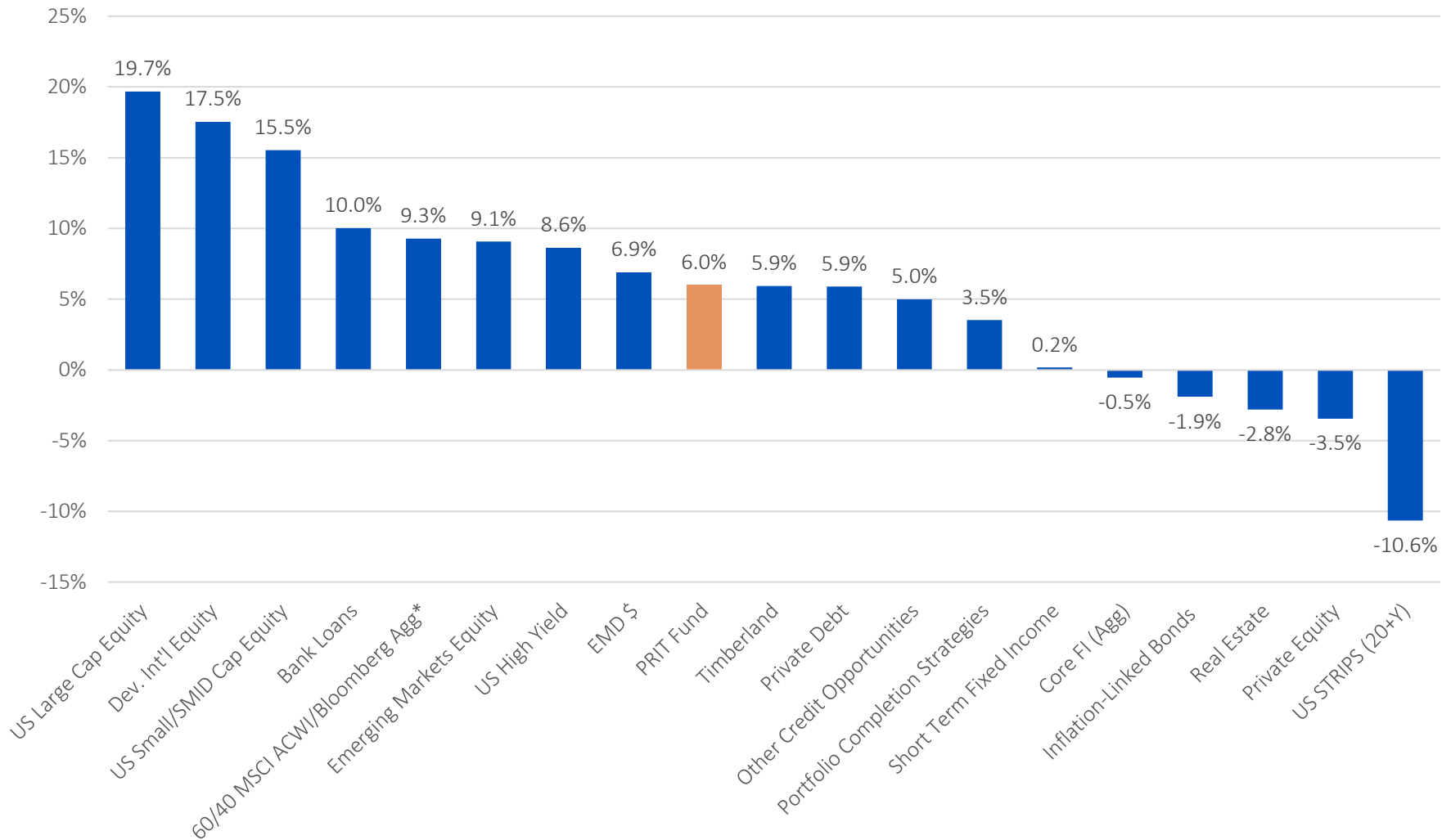
One-Year Ended June 30, 2023 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. \*Benchmark is actual performance. \*\*Hedge Fund returns are net of fees.

# PRIT Performance By Strategy – One-Year

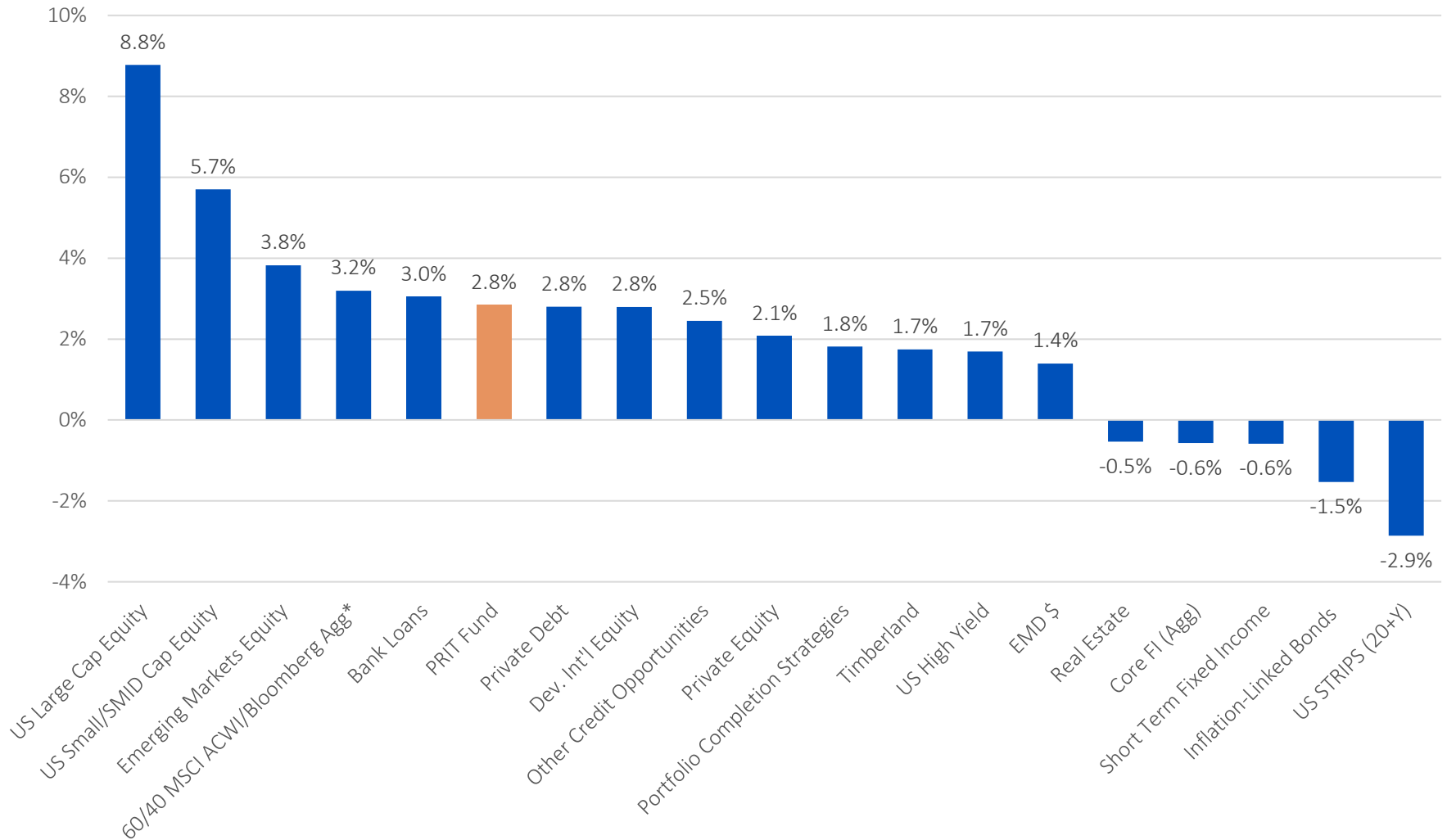
One-Year Ended June 30, 2023 (Gross of Fees)



Source: BNY Mellon, FactSet. All performance figures reflected are PRIT Fund Asset Class returns. \*MSCI ACWI/Bloomberg Aggregate is derived from a 60/40 combination of index returns.

# PRIT Performance By Strategy – Second Quarter 2023

Quarter Ended June 30, 2023 (Gross of Fees)



Source: BNY Mellon, FactSet. All performance figures reflected are PRIT Fund Asset Class returns. \*MSCI ACWI/Bloomberg Aggregate is derived from a 60/40 combination of index returns.

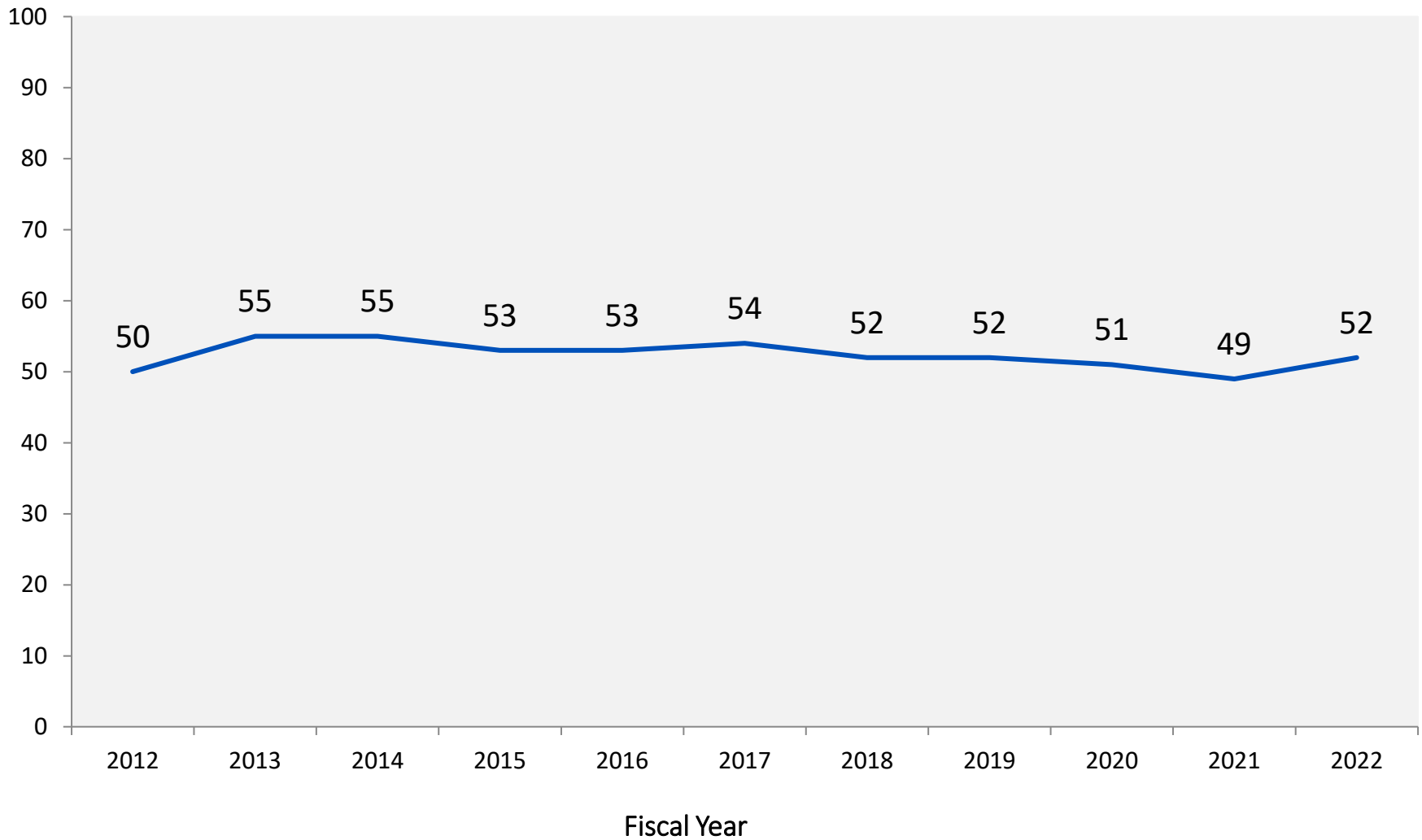
# PRIT Fund Annualized Returns By Asset Class

As of June 30, 2023 (Gross of Fees)

1 Year	3 Year	5 Year	10 Year
GLOBAL EQUITY 17.4%	PRIVATE EQUITY 28.5%	PRIVATE EQUITY 21.3%	PRIVATE EQUITY 20.3%
VALUE-ADDED FIXED INCOME 7.7%	REAL ESTATE 12.6%	REAL ESTATE 8.9%	REAL ESTATE 9.8%
TIMBER 5.9%	GLOBAL EQUITY 11.9%	GLOBAL EQUITY 8.0%	GLOBAL EQUITY 9.0%
PORTFOLIO COMPLETION STRATEGIES 3.5%	TIMBER 8.4%	VALUE-ADDED FIXED INCOME 5.0%	TIMBER 6.3%
CORE FIXED INCOME (2.7%)	VALUE-ADDED FIXED INCOME 7.3%	TIMBER 5.0%	VALUE-ADDED FIXED INCOME 4.7%
REAL ESTATE (2.8%)	PORTFOLIO COMPLETION STRATEGIES 5.9%	PORTFOLIO COMPLETION STRATEGIES 2.8%	PORTFOLIO COMPLETION STRATEGIES 3.8%
PRIVATE EQUITY (3.5%)	CORE FIXED INCOME (5.1%)	CORE FIXED INCOME 1.1%	CORE FIXED INCOME 2.6%

Source: BNY Mellon.

# Total PRIT Fund - Ratio of Expenses in Basis Points



# MWRA Employees' Retirement System

Net of Fees Returns as of June 30, 2023

	MKT \$	%	Month	QTR	FY '23	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Inception
<b>MASSACHUSETTS WATER RESOURCES</b>											
<b>AUTHORITY EMPLOYEES' RETIREMENT SYSTEM</b>	<b>35,395,544</b>	<b>100%</b>	<b>1.07</b>	<b>1.82</b>	<b>1.15</b>	<b>3.59</b>	<b>1.15</b>	<b>12.69</b>	<b>8.17</b>	<b>8.56</b>	<b>8.53</b>
CAPITAL FUND	5,180,105	15%	2.57	2.76	5.73	6.56	5.73	9.62	7.26	8.03	
HEDGE FUNDS	13,494,948	38%	1.25	1.85	4.39	3.55	4.39	6.52	3.26	3.98	
PRIVATE EQUITY 2008	874,648	2%	0.63	5.69	9.15	15.03	9.15	27.56	15.51	18.92	
PRIVATE EQUITY 2009	63,552	0%	0.00	0.61	-24.61	-8.47	-24.61	36.56	26.76	24.19	
PRIVATE EQUITY 2010	410,054	1%	-0.18	-12.61	-24.50	-8.88	-24.50	18.77	12.90	16.64	
PRIVATE EQUITY 2011	779,750	2%	-1.37	2.90	-6.36	0.86	-6.36	33.10	22.75	22.11	
PRIVATE EQUITY 2012	470,703	1%	0.76	2.76	-12.75	2.15	-12.75	14.07	12.26	13.82	
PRIVATE EQUITY 2014	2,101,432	6%	0.07	0.93	-3.23	0.79	-3.23	26.02	21.16		
PRIVATE EQUITY 2017	2,586,598	7%	0.79	1.96	1.58	3.90	1.58	30.19	18.40		
PRIVATE EQUITY 2020	4,103,595	12%	0.79	1.45	-3.92	1.02	-3.92	18.63			
PRIVATE EQUITY 2021	3,548,280	10%	0.65	1.83	-5.24	4.10	-5.24				
PRIVATE EQUITY 2022	1,569,831	4%	0.34	2.18	0.08	3.19	0.08				
PRIVATE EQUITY 2023	212,049	1%	-0.14	-0.56							
<b>IMPLEMENTATION BENCHMARK (using short term private equity benchmark)</b>											
			2.57	2.39	5.55	5.75	5.55	9.21	7.44	7.90	
<b>TOTAL CORE BENCHMARK (using long term private equity benchmark)</b>											
			2.39	2.66	8.92	6.64	8.92	7.70	6.70	7.21	
<b>TOTAL HEDGE FUNDS BENCHMARK</b>											
			1.30	2.32	5.67	5.41	5.67	6.98	3.74	3.60	

Inception date: February 1, 1988

A nighttime photograph of the Boston waterfront, showing a cobblestone promenade in the foreground, a body of water with wooden pilings, and a city skyline with illuminated buildings in the background under a dark blue sky.

# APPENDIX PRIT FUND ASSET CLASS DETAIL

The logo for Mass PRIM, featuring the word "Mass" in a serif font above the word "PRIM" in a bold, sans-serif font. To the left of the text are three vertical bars of increasing height, resembling a bar chart.

AS OF JUNE 30, 2023



A blue-tinted photograph of a city skyline, likely New York City, with several tall skyscrapers. In the foreground, a body of water is filled with numerous sailboats. The sky is filled with white clouds. The overall scene is bright and clear.

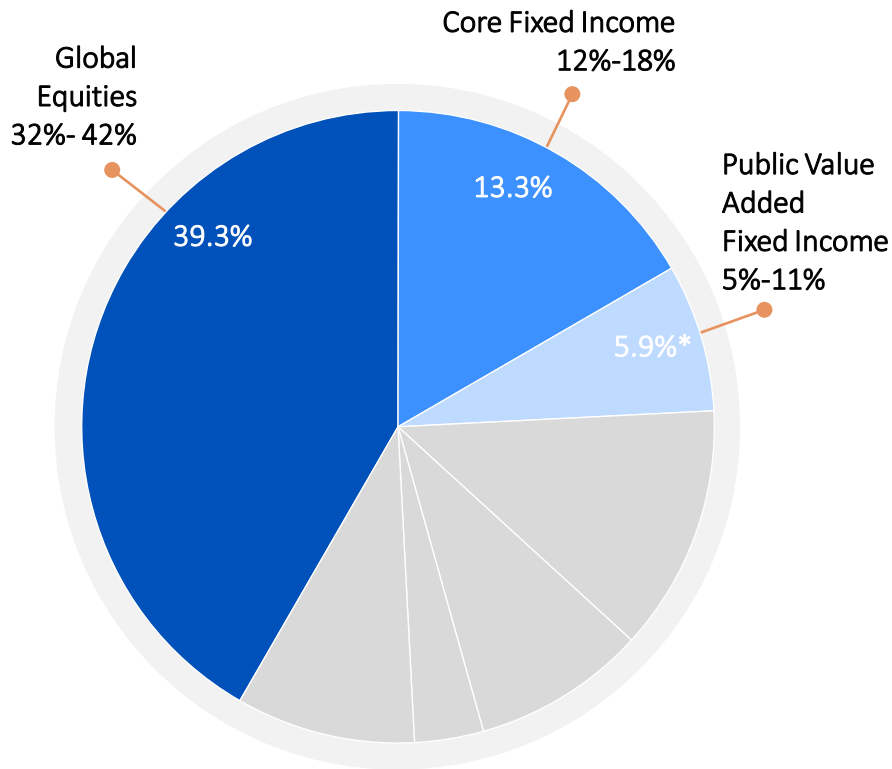
# PUBLIC MARKETS PORTFOLIOS

Mass  
PRIM

# Public Market Portfolios

## PRIT FUND TARGET ASSET ALLOCATION

Actual Allocation as of June 30, 2023



Source: BNY Mellon and PRIM Staff.  
\*Excludes Private Debt allocation.

**\$56.5 billion 58.5% of PRIT Fund**

- Global Equities: \$37.9 billion, 39.3% of PRIT Fund
- Public Fixed Income: \$18.6 billion, 19.2% of PRIT Fund\*

**46% Active / 54% Passive**

- Global Equities: 39% Active / 61% Passive
- Public Fixed Income: 61% Active / 39% Passive

**63 Portfolios**

- 32 equity portfolios
- 31 fixed income portfolios

**15 Asset Classes**

- U.S. Large Cap Equity
- U.S. Small/SMID Cap Equity
- Developed International Equity
- Developed International Small Cap Equity
- Emerging Markets Equity
- Emerging Markets Small Cap Equity
- Core Bonds
- 20+ Year STRIPS
- Short Term Fixed Income
- U.S. TIPS
- Global Inflation-Linked Bonds
- High Yield Bonds
- Bank Loans
- EMD \$
- Other Credit Opportunities

**3 Team Members**

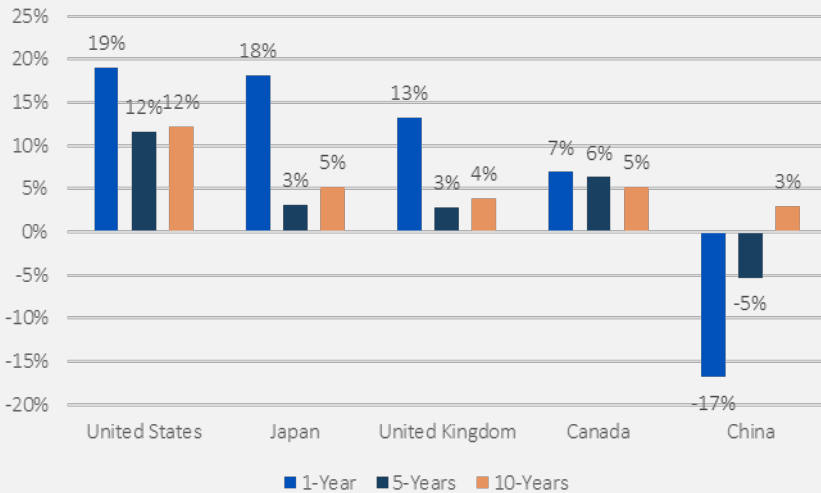


## Public Markets – Key Initiatives

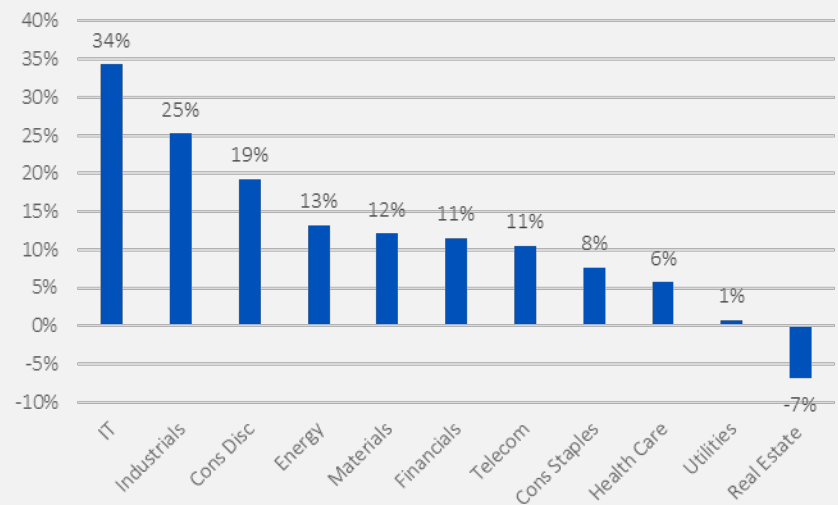
- Continue to source and allocate to diverse investment managers.
- Continue to implement PRIM’s Emerging-Diverse Manager Program for Global Equities and Fixed Income.
- Research and identify complimentary active U.S. equity managers to increase active/passive allocation.
- Research and identify complimentary growth managers in Developed International allocation.
- Continue to identify Other Credit Opportunities investments, including co-investment opportunities.
- Evaluate role of specialized (sector or county specific) equity managers within PRIT Fund structure.
- Collaborate with PRIM Risk Team on continued enhancements to equity and fixed income risk analytic tools.
- Support the newly established ESG Committee to develop an ESG framework and related activities.

# Public Equity Review

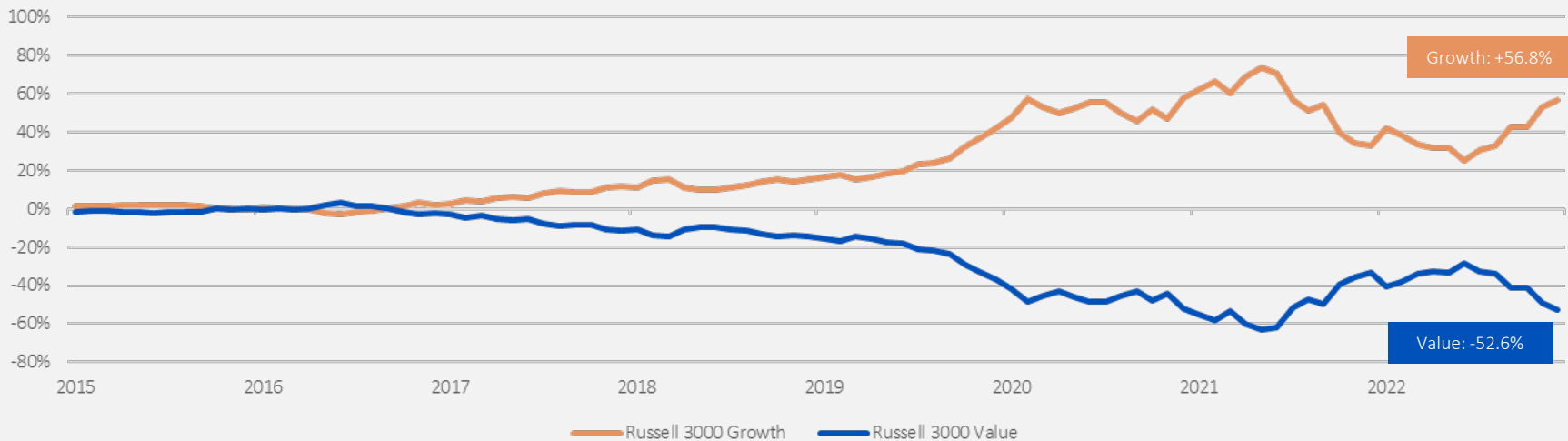
## MAJOR COUNTRY RETURNS (MSCI ACWI)



## GLOBAL ONE-YEAR RETURN BY SECTOR (MSCI ACWI)

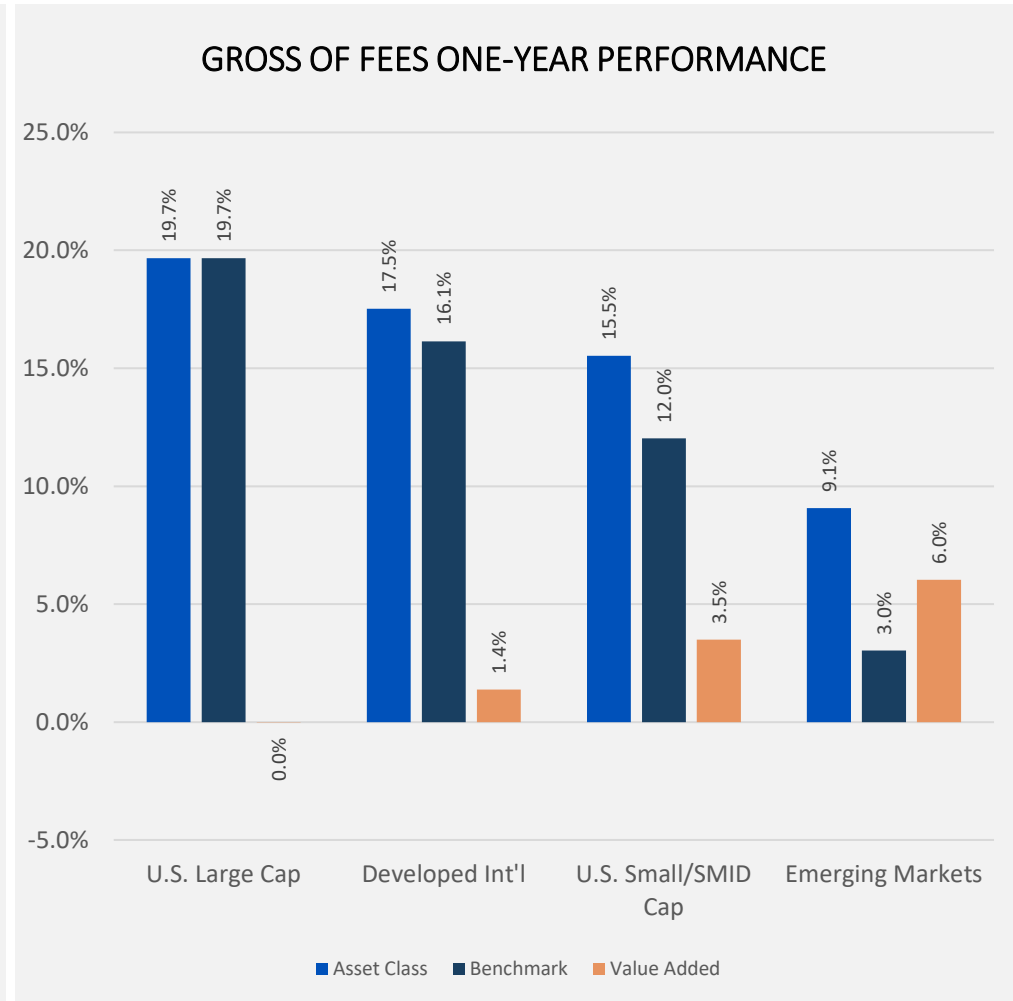
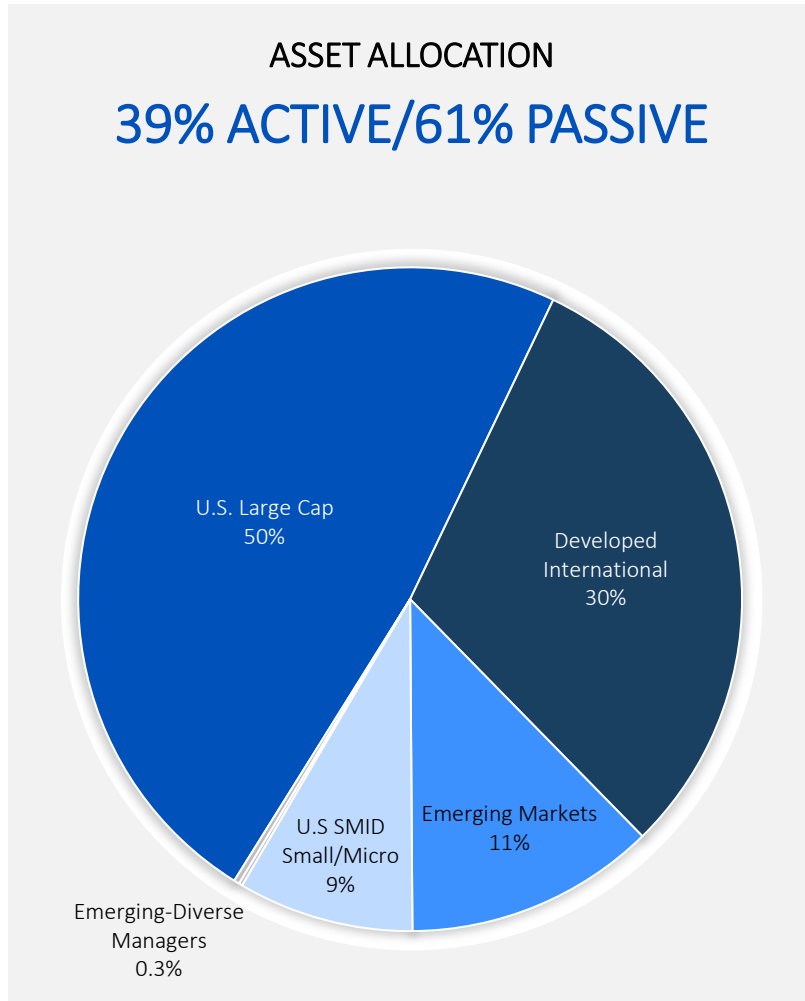


## VALUE VS. GROWTH: RELATIVE RETURNS VS. RUSSELL 3000 (CUMULATIVE)



# Global Equity

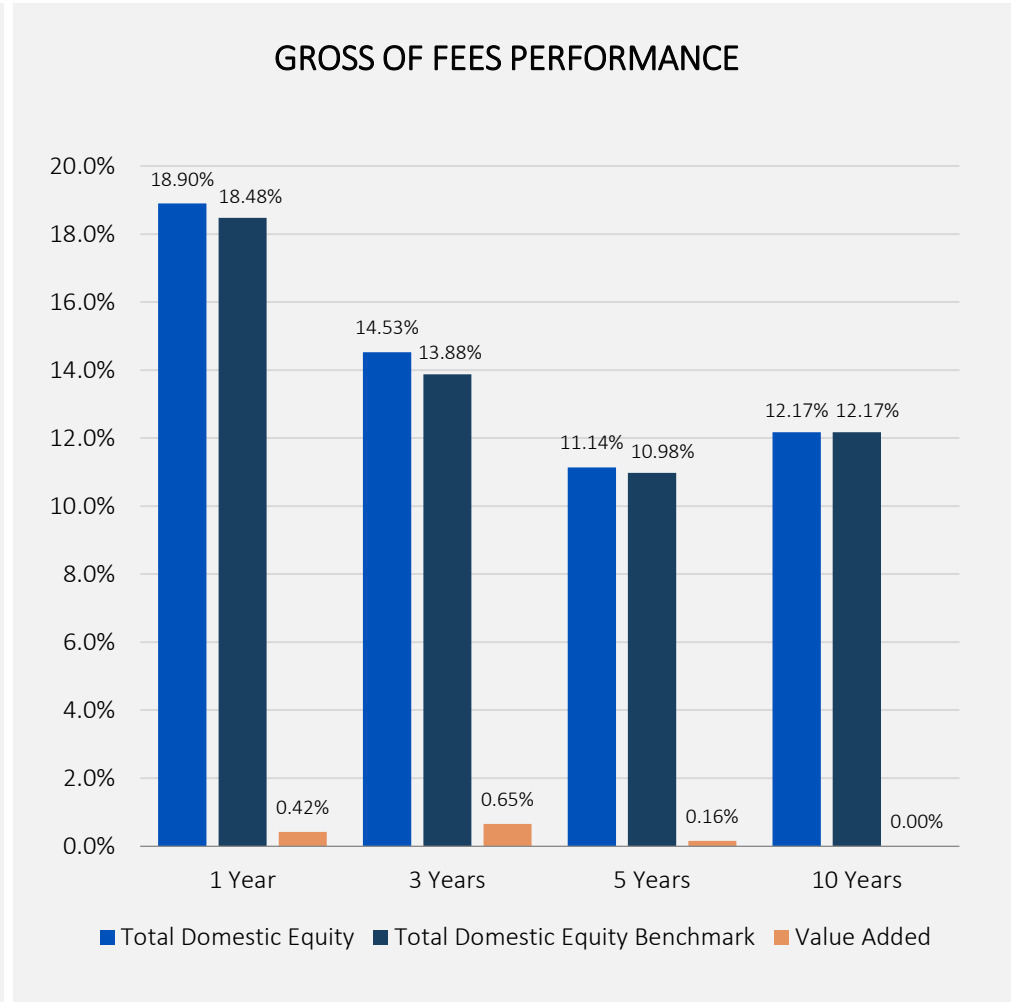
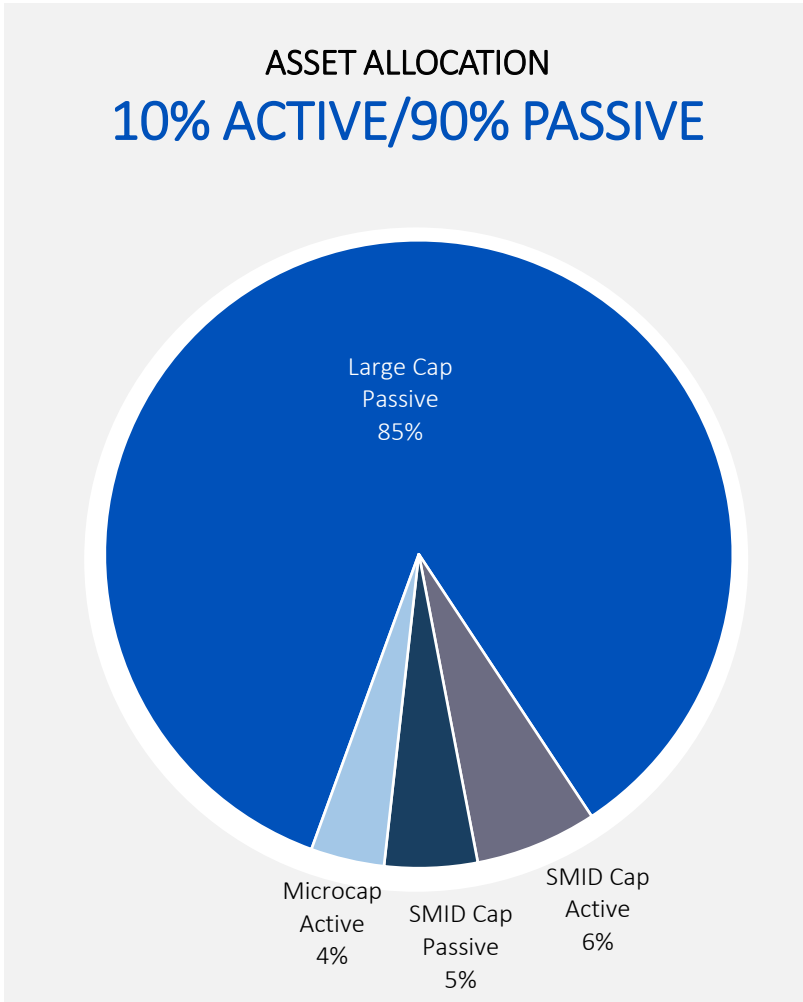
As of June 30, 2023, \$37.9 Billion – 39.3% of PRIT FUND (Target 32%-42%)



Source: BNY Mellon, PRIM Staff. As of June 30, 2023.

# Domestic Equity

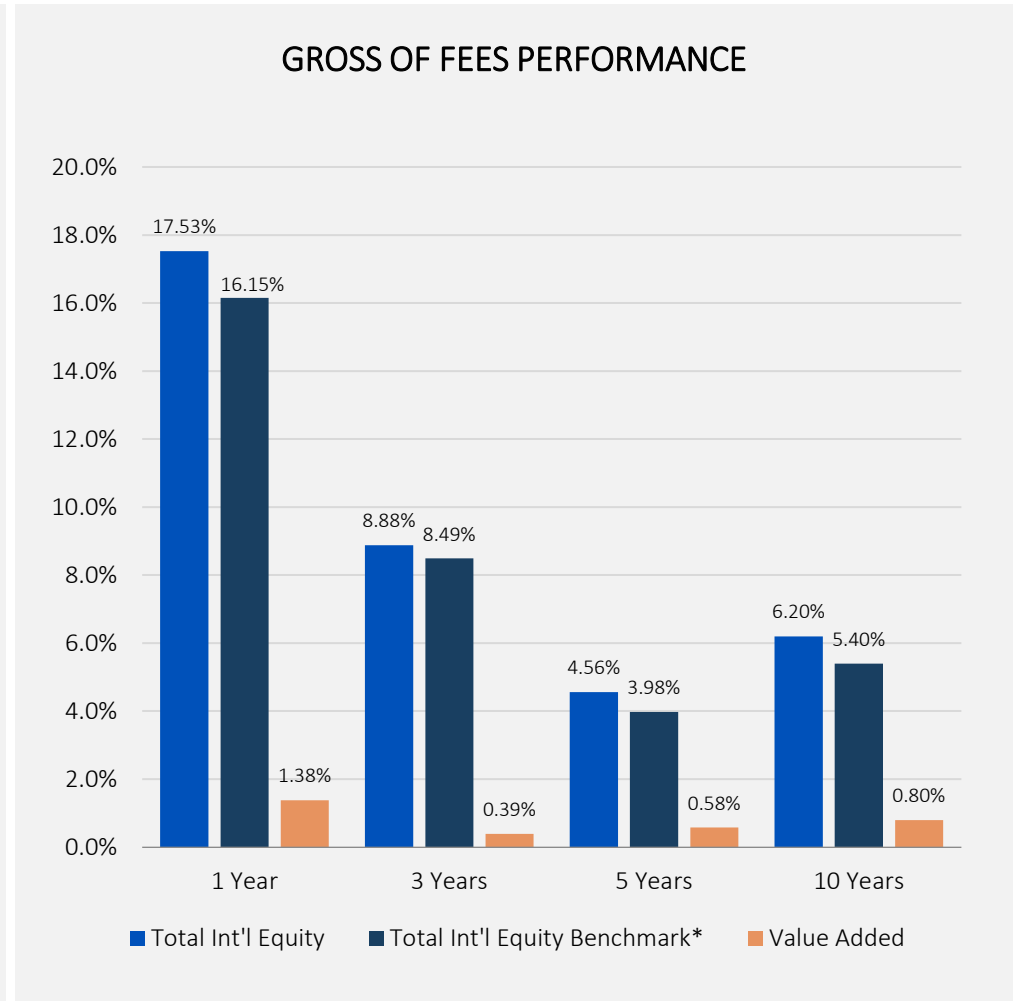
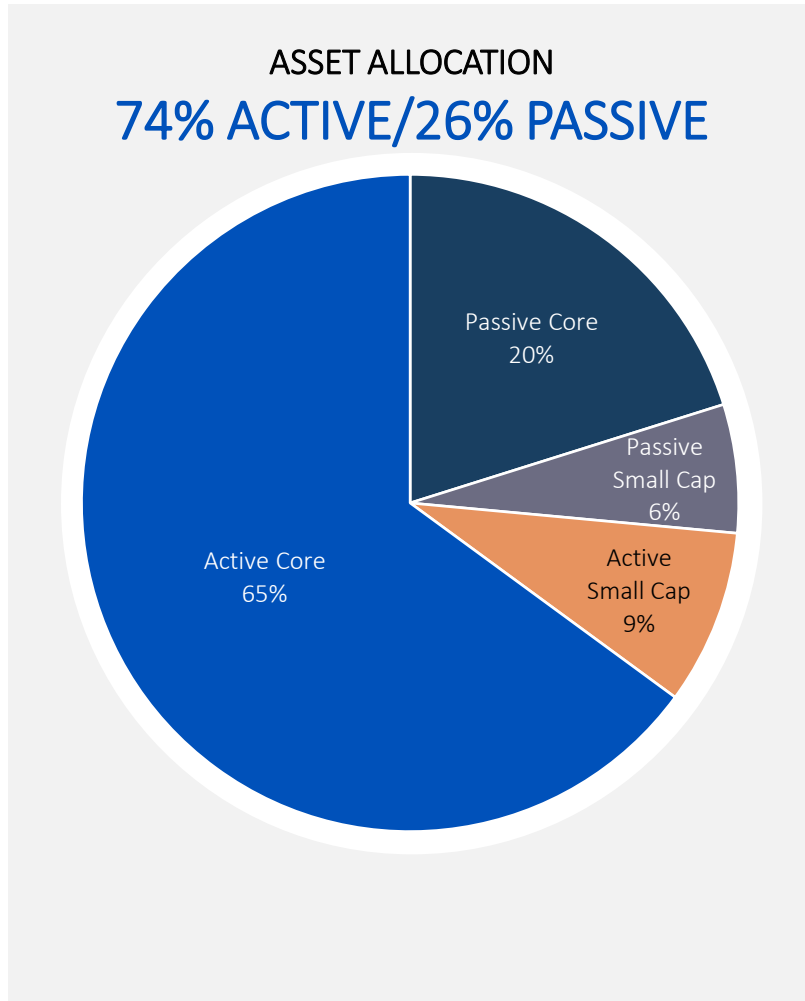
As of June 30, 2023, \$22.2 Billion – 23.0% of PRIT Fund



\*Total Domestic Equity Benchmark: Currently the Total Domestic Equity benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the total domestic equity portfolio.

# Developed International Equity

As of June 30, 2023, \$11.3 Billion – 11.7% of PRIT Fund

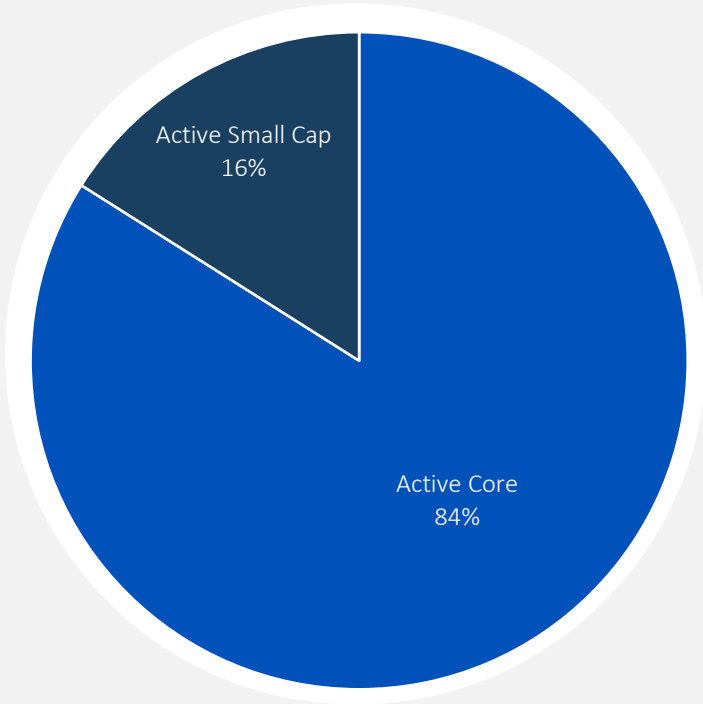


\*Total International Equity Benchmark: Custom MSCI World Ex-US IMI Net Divs, customized to exclude legislatively prohibited tobacco, Sudan Iran and Russian securities (blend is maintained by MSCI).

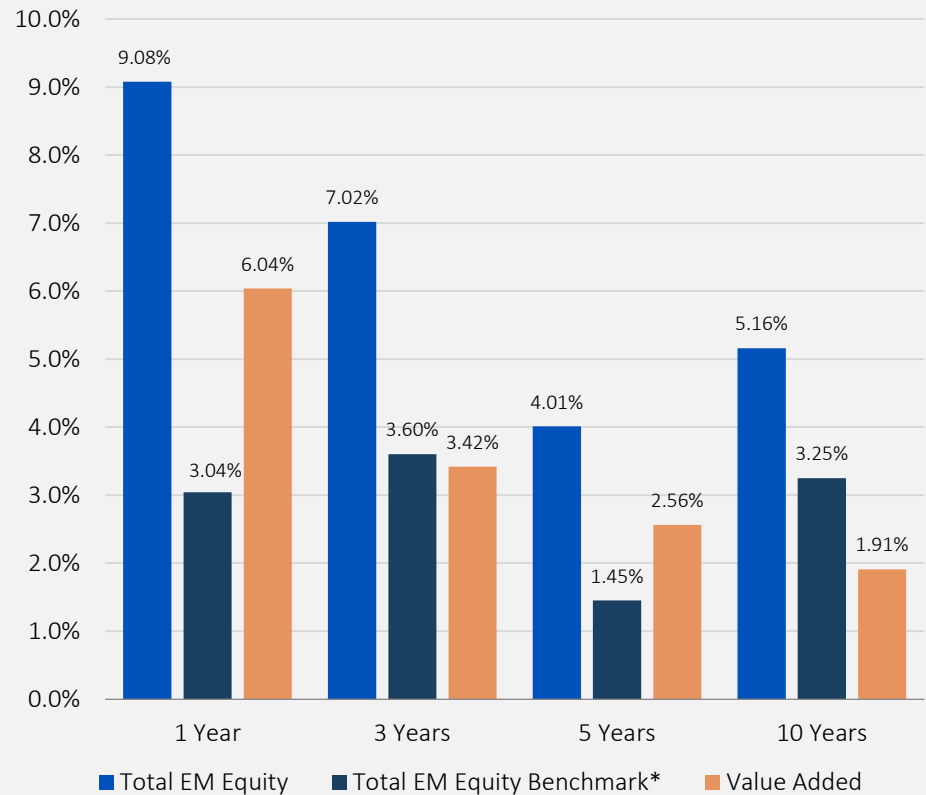
# Emerging Markets Equity

As of June 30, 2023, \$4.3 Billion – 4.4% of PRIT Fund

## ASSET ALLOCATION 100% ACTIVE



## GROSS OF FEES PERFORMANCE

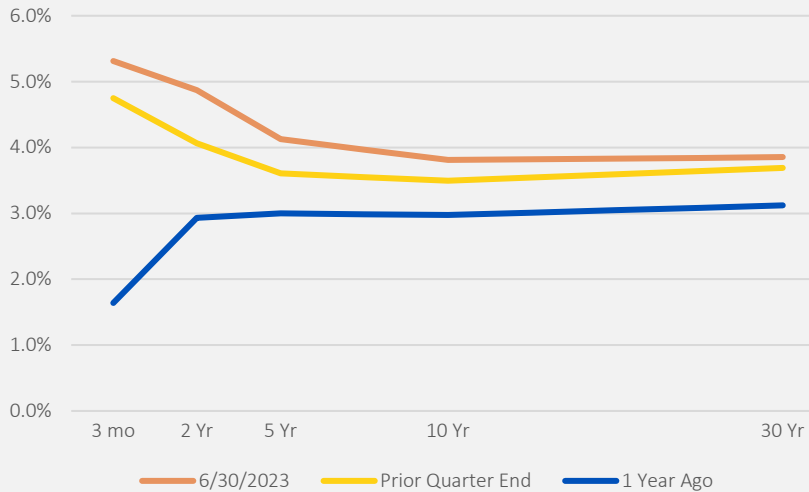


\*Total Emerging Markets Equity Benchmark: currently Custom MSCI Emerging Markets IMI Net Divs, customized to exclude legislatively prohibited tobacco, Sudan, Iran and Russian securities (blend is maintained by MSCI).

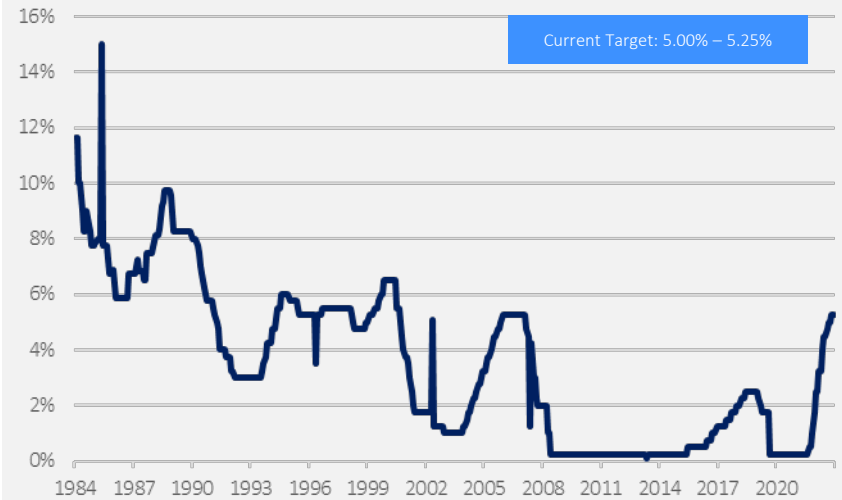


# Public Fixed Income Review

## U.S. TREASURY YIELD CURVE



## TARGET FED FUNDS RATE



## U.S. CREDIT SPREADS

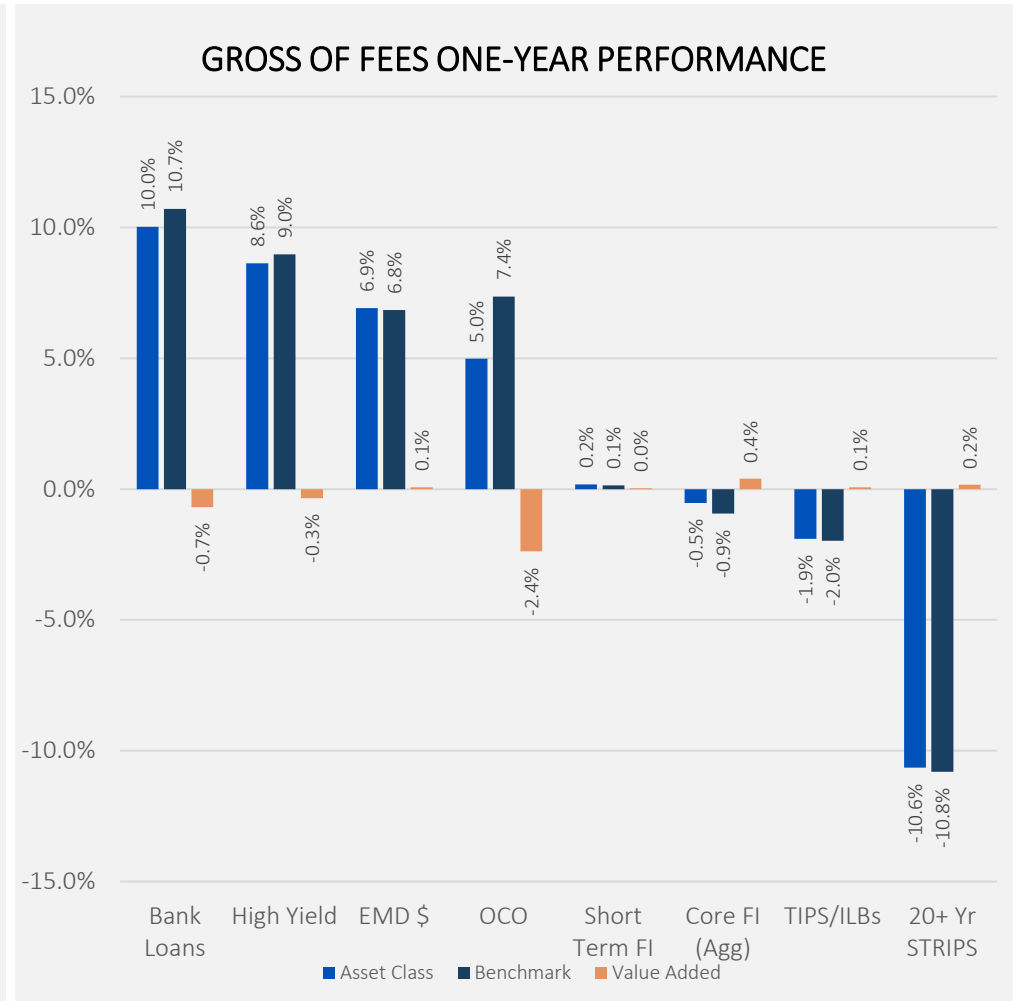
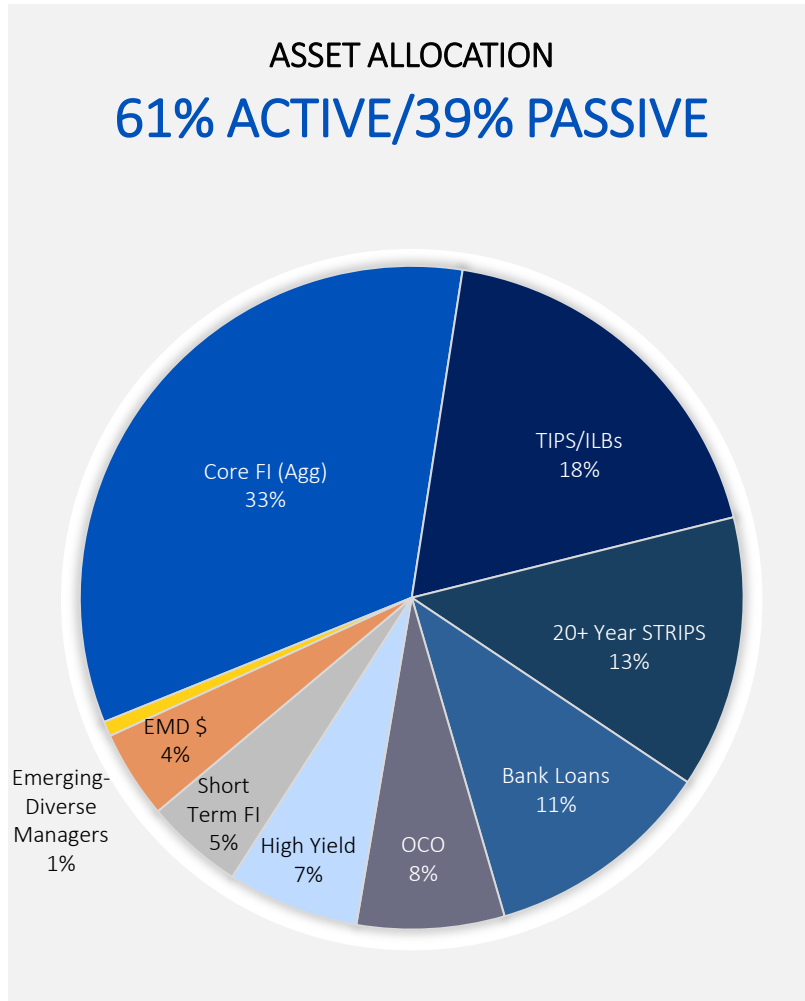


## EMERGING MARKETS DEBT SPREAD



# Core & Value-Added Fixed Income

As of June 30, 2023, \$18.6 Billion – 19.2% of PRIT Fund\* (Target 17%-29%)



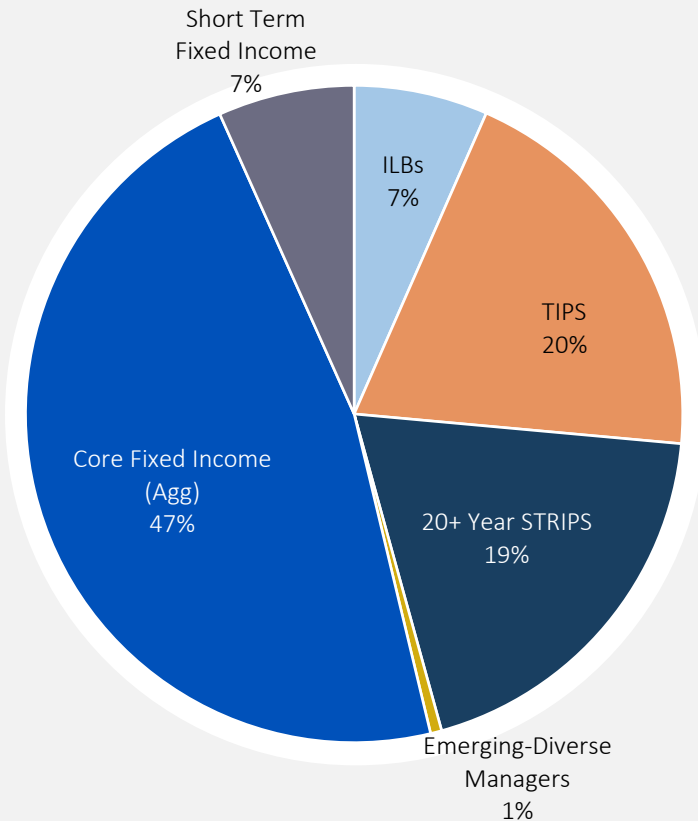
Source: BNY Mellon, PRIM Staff. As of June 30, 2023. \*Excludes Private Debt allocation.

# Domestic Investment Grade & Inflation-Linked Fixed Income

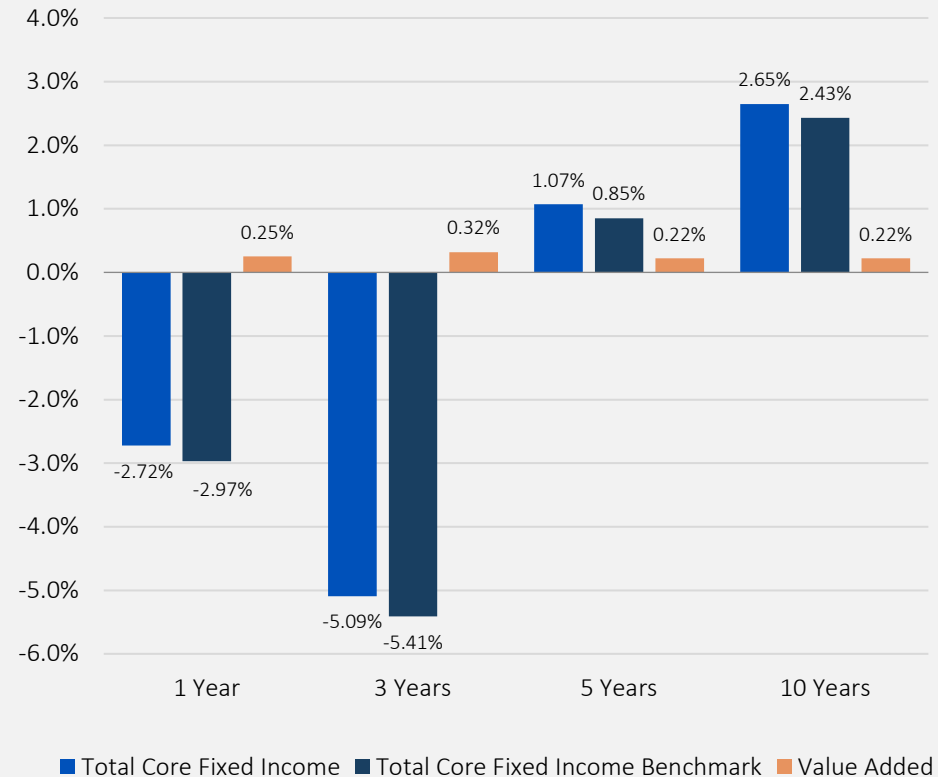
As of June 30, 2023, \$12.8 Billion – 13.3% of PRIT Fund (Target 12%-18%)

## ASSET ALLOCATION

**43% ACTIVE/57% PASSIVE**



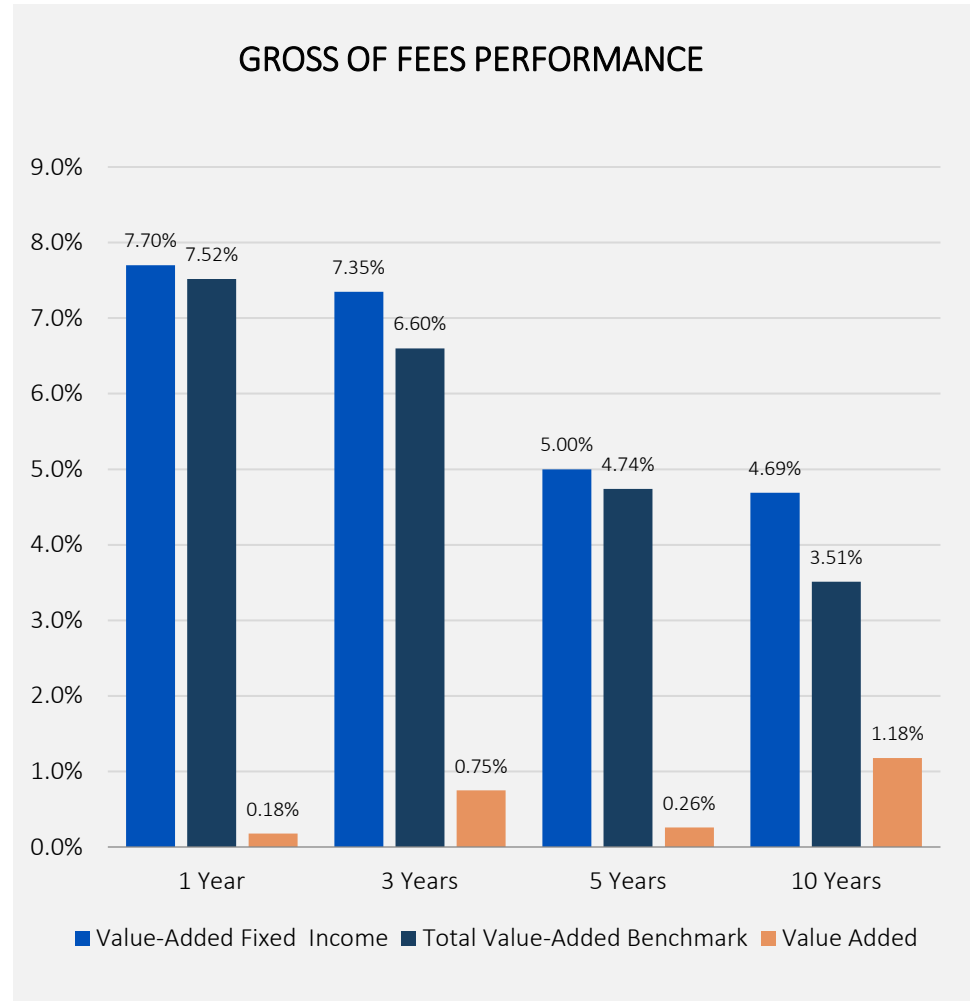
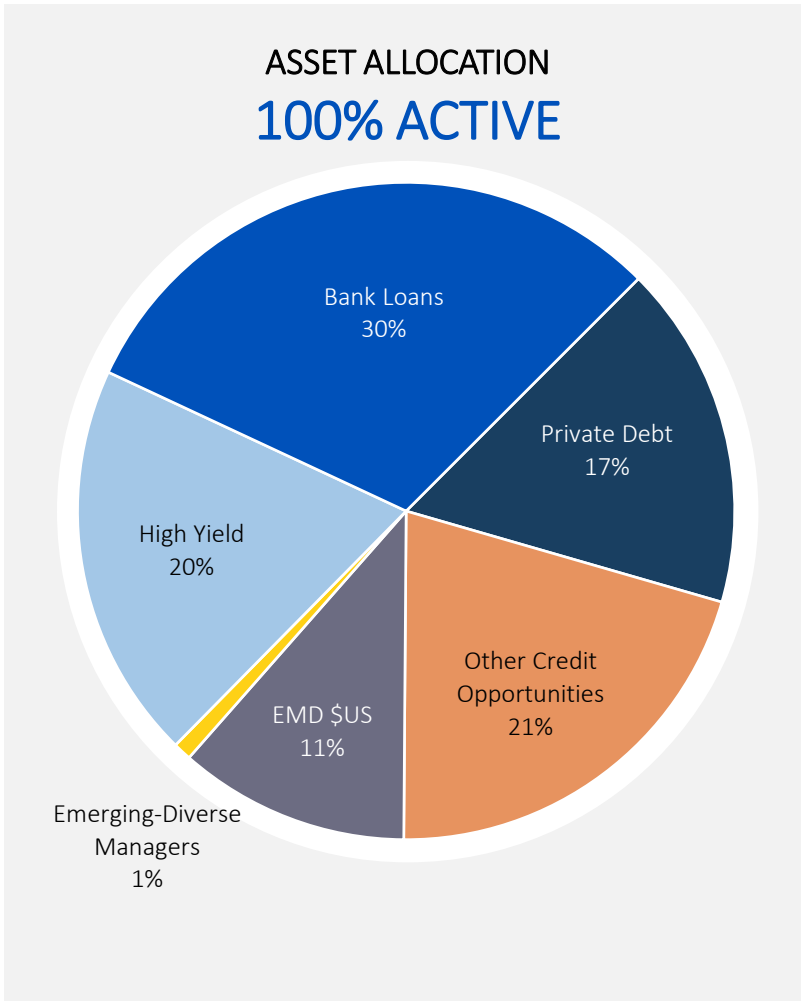
## GROSS OF FEES PERFORMANCE



\*Core Fixed Income Benchmark: Currently 46.6666% Bloomberg U.S. Aggregate Bond/20% Bloomberg Global IL U.S. Tips/6.6667% Bloomberg World Gov Inflation-Linked USD Hdg/20% Bloomberg US STRIPS 20+ Years/6.6667% Bloomberg U.S. Treasury: 1-3 Year. Formerly labeled 46.6666% BC Aggregate/20% BC US TIPS/6.6667% BC ILB US\$ Hedged/20% BC STRIPS 20+/6.6667% Bloomberg Barclays US Treasury 1-3 Year Index.

# Value-Added Fixed Income

As of June 30, 2023, \$6.9 Billion – 7.1% of PRIT Fund (Target 5%-11%)



\*Currently the Value-Added benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the value-added fixed income portfolio, Private Debt component is using actual Private Debt Returns through 12/31/2021; currently Burgiss Distressed Debt Universe Lagged, if the Burgiss return is not available, the actual portfolio net return will be used as a placeholder until the Burgiss Private Debt BM is published. These weightings will be automatically adjusted on a monthly basis.

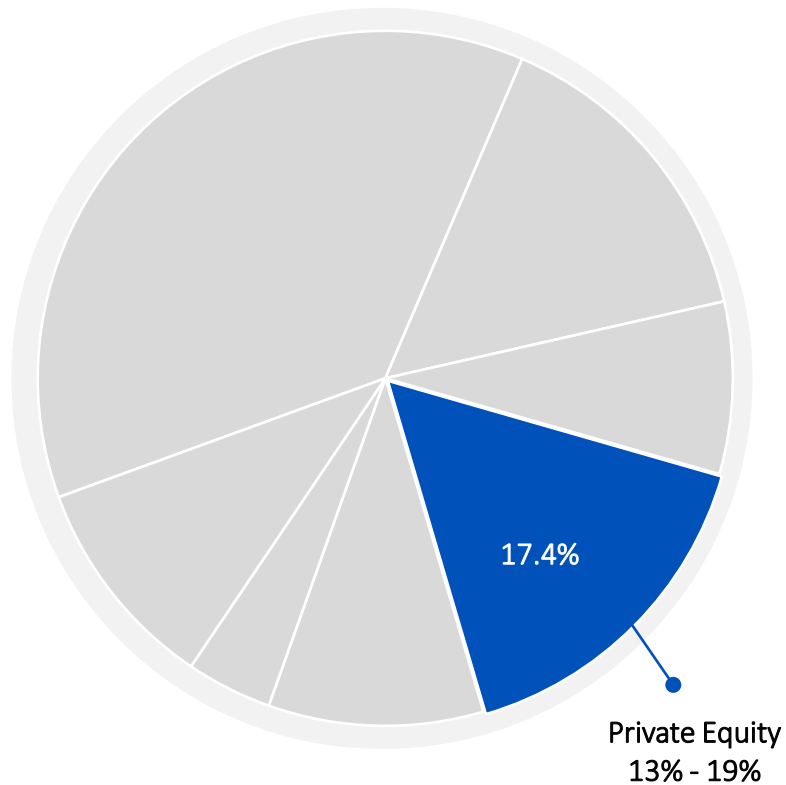
# PRIVATE EQUITY PORTFOLIO



# Private Equity Portfolio

## PRIT FUND TARGET ASSET ALLOCATION

Actual Allocation as of June 30, 2023



### Private Equity

\$16.8 billion, 17.4% of PRIT Fund

### Private Debt

\$1.2 billion, 1.2% of PRIT Fund

### 103 GP Relationships

### 383 Active Partnerships

- 71 Co-Investment Partnerships

### Emerging-Diverse Managers

7 team members

~ 30 investment decisions/year

### 5 core investment strategies:

- Large buyouts
- Small and mid cap buyouts
- Growth equity
- Venture capital
- Distressed debt

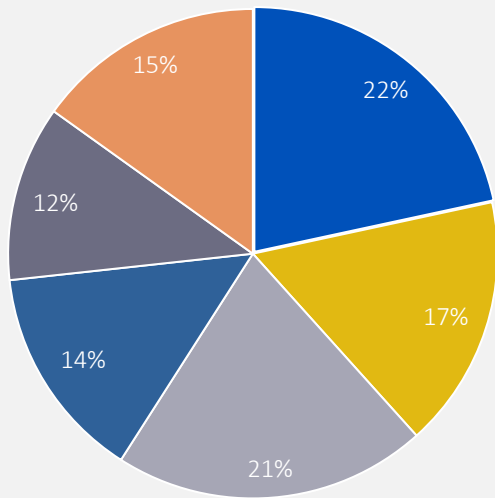


## Private Equity Key Initiatives

- **Execute successful Private Equity Investment strategy.**
  - Increase Private Equity target allocation range to PRIT Fund to from 12% to 18% to 13%-19%.
  - Commitment goal of \$2.2 billion to \$3.0 billion to funds and co-investments.
  - Continue to source and evaluate attractive new investment opportunities.
  - Continue to scale and improve co-investment program.
- **Continue to source and allocate to diverse investment managers.**
- **Continue to implement PRIM's Emerging-Diverse Manager Program.**
- **Private Equity Research:**
  - Further refine and accelerate venture capital strategy.
  - Develop new analytical tools to enhance decision making.
  - Evaluate secondary market opportunity
- **Build the team's expertise and capacity.**
  - Develop more robust private equity talent pipelines.
  - Recruit talented team members with complementary skills to existing members.
  - Increase collaboration with other PRIM teams.
- **Support the newly established ESG Committee to develop an ESG framework and related activities.**

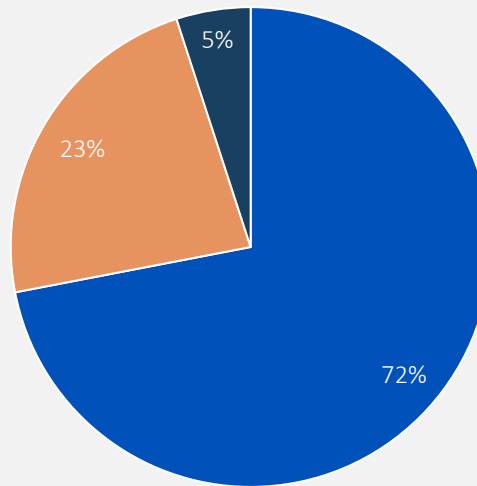
# Private Equity Diversification

## By Strategy



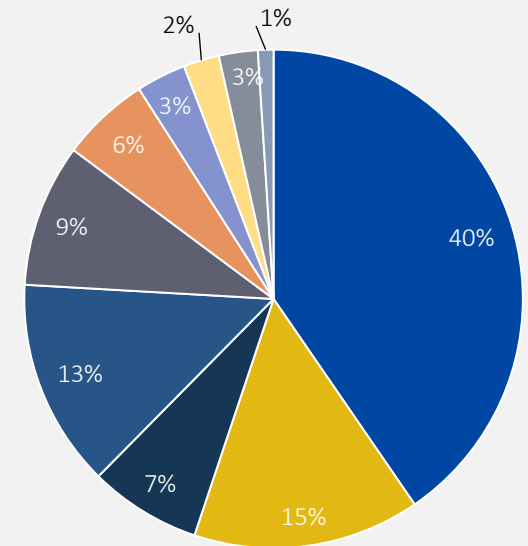
- Buyout - Mid
- Buyout - Large
- Buyout - Mega
- Buyout - Small
- Venture Capital
- Growth Equity

## By Geography



- North America
- Western Europe
- Other

## By Sector

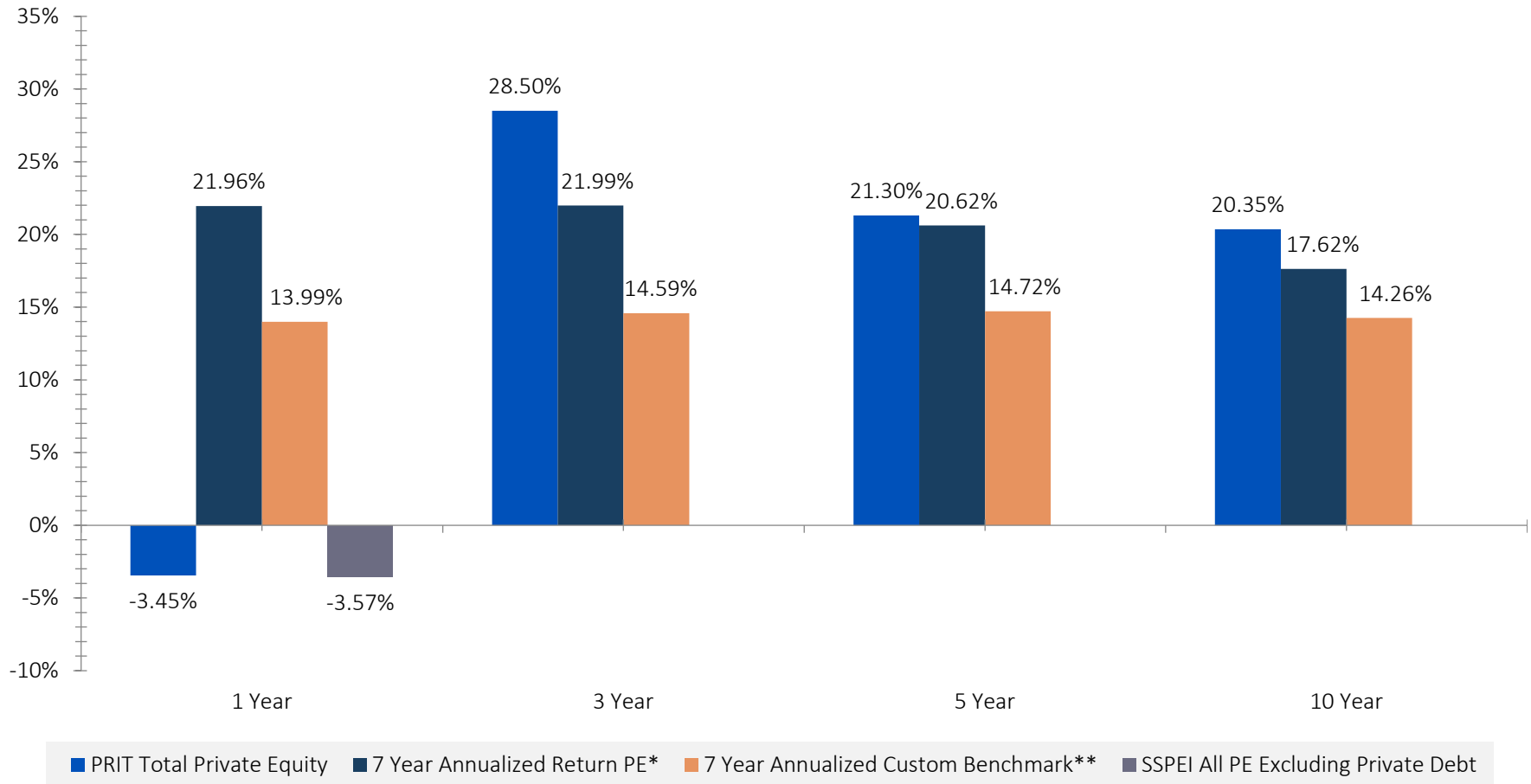


- Information Technology
- Health Care
- Consumer Discretionary
- Industrials
- Financials
- Communication Services
- Energy & Utilities
- Materials
- Consumer Staples
- Other



# Private Equity

Annualized Returns as of June 30, 2023 (Gross of Fees)



\* The 7 Year Annualized performance is used in the Policy Return and Policy Benchmark.

\*\*The 7 Year Annualized Benchmark: Currently year annualized return of a blend of the 88% Russell 3000 + 3% / 12% MSCI Europe IMI + 3%.

# Private Equity Performance by Vintage Year

Performance Summary By Vintage Year as of March 31, 2023

Private Equity Vintage Year	Capital Committed	Paid-In Capital	Percentage Contributed	Capital Distributed	Percentage Distributed	Reported Market Value	TVPI	Net IRR 3/31/2023	Cambridge Median IRR
1986	\$79,680,426	\$79,264,625	102.04%	\$ 238,804,549	301.28%	-	3.01x	15.58%	9.47%
1987	216,385,228	215,372,662	99.53%	420,456,645	195.22%	-	1.95x	11.34%	15.15%
1988	93,451,860	89,954,995	96.26%	184,708,592	205.33%	-	2.05x	14.99%	11.83%
1989	61,340,193	59,296,115	96.67%	126,898,769	214.01%	-	2.14x	20.38%	14.23%
1990	218,931,380	225,129,257	102.83%	516,114,811	229.25%	-	2.29x	13.51%	20.16%
1991	1,000,000	1,000,000	100.00%	796,310	79.63%	-	0.80x	(4.22%)	20.26%
1992	28,010,702	27,694,264	98.87%	51,950,840	187.59%	-	1.88x	23.29%	18.47%
1993	151,028,336	150,975,841	99.97%	282,602,309	187.18%	-	1.87x	18.20%	19.17%
1994	15,000,000	15,024,279	100.16%	28,813,938	191.78%	-	1.92x	19.98%	18.46%
1995	251,100,601	215,034,991	85.64%	414,254,435	192.65%	\$1	1.93x	17.23%	16.66%
1996	64,257,593	67,485,450	105.02%	110,478,819	163.71%	-	1.64x	12.65%	10.33%
1997	380,791,347	399,674,317	104.96%	744,523,311	186.28%	-	1.86x	17.37%	11.08%
1998	564,974,028	550,291,977	97.40%	812,641,641	147.67%	1,908,272	1.48x	7.75%	8.15%
1999	413,881,039	411,151,611	99.34%	373,455,602	90.83%	460,151	0.91x	(1.59%)	(0.22%)
2000	1,084,468,703	1,064,444,562	98.15%	1,802,519,192	169.34%	9,925,853	1.70x	12.65%	3.10%
2001	568,221,572	582,099,003	102.44%	1,217,833,799	209.21%	7,946,742	2.11x	26.09%	8.57%
2002	128,587,392	129,693,101	100.86%	231,245,933	178.30%	8,348,214	1.85x	12.16%	8.30%
2003	521,790,693	534,068,384	102.35%	983,563,958	184.16%	3,999,591	1.85x	17.54%	9.75%
2004	400,000,000	394,951,529	98.74%	930,055,382	235.49%	11,133,639	2.38x	23.30%	7.82%
2005	725,288,765	738,228,116	101.78%	1,175,166,950	159.19%	11,888,860	1.61x	9.53%	7.62%
2006	1,911,201,996	1,968,198,038	102.98%	3,120,698,152	158.56%	51,406,867	1.61x	8.55%	7.32%
2007	941,020,957	1,021,210,183	108.52%	1,677,996,105	164.31%	51,323,686	1.69x	11.62%	9.06%
2008	1,444,037,306	1,533,665,659	106.21%	2,792,816,458	182.10%	76,118,313	1.87x	14.37%	9.08%
2009	569,713,768	597,596,760	104.89%	1,128,854,875	188.90%	39,301,795	1.95x	18.90%	13.02%
2010	381,250,000	406,445,419	106.61%	1,062,485,186	261.41%	219,655,396	3.15x	21.43%	12.59%
2011	1,501,737,981	1,670,644,810	111.25%	2,991,824,007	179.08%	662,050,354	2.19x	17.75%	14.19%
2012	708,936,046	817,404,552	115.30%	1,505,249,261	184.15%	337,880,790	2.25x	21.59%	13.52%
2013	461,167,348	558,748,476	121.16%	785,716,302	140.62%	398,892,697	2.12x	16.92%	15.01%
2014	1,259,869,138	1,270,447,020	100.84%	1,834,458,984	144.39%	1,382,786,766	2.53x	22.46%	17.76%
2015	952,752,540	1,069,672,482	112.27%	1,200,869,629	112.27%	1,206,141,177	2.25x	22.08%	17.31%
2016	1,660,545,188	1,650,593,520	99.40%	1,565,334,845	94.83%	1,722,678,677	1.99x	20.52%	19.15%
2017	698,236,678	688,362,659	98.59%	426,293,956	61.93%	847,938,888	1.85x	20.98%	22.93%
2018	1,901,756,928	1,842,427,998	96.88%	824,729,917	44.76%	2,293,893,694	1.69x	22.17%	20.20%
2019	2,052,233,327	1,814,625,591	88.42%	475,415,476	26.20%	2,429,418,008	1.60x	27.15%	19.01%
2020	2,898,954,739	2,055,342,375	70.90%	95,868,350	4.66%	2,378,797,943	1.20x	12.65%	14.04%
2021	3,031,675,778	1,675,775,224	55.28%	6,268,797	0.37%	1,713,773,290	1.03x	2.35%	(0.14%)
2022	2,921,126,609	609,399,160	20.86%	192,725	0.03%	611,003,959	1.00x	0.47%	(15.54%)
2023	960,000,000	20,016,370	2.09%	-	0.00%	20,003,372	1.00x	(0.06%)	(15.32%)
<b>Total Private Equity:</b>	<b>\$32,222,406,185</b>	<b>\$27,221,411,373</b>	<b>84.48%</b>	<b>\$32,141,958,810</b>	<b>118.08%</b>	<b>\$16,498,676,994</b>	<b>1.79x</b>	<b>14.08%</b>	

# Private Markets Portfolios

## 2008 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Hellman & Friedman Capital Partners VII	Generalist/US	Buyout-Mega	200
TPG Partners VI	Generalist/Global	Buyout-Large	200
Onex Partners III	Generalist/North America	Buyout-Large	150
Blackstone Capital Partners VI	Generalist/Global	Buyout-Large	100
Odyssey Investment Partners IV	Industrial Manufacturing & Business Services/US	Buyout-Mid	100
Advent International GPE VI	Generalist/Global	Buyout-Mid	134
Charterhouse Capital Partners IX	Services, Healthcare, Consumer, and Industrials/Western Europe	Buyout-Mid	101
American Securities Fund V	Generalist/US	Buyout-Mid	75
H.I.G. Bayside Debt & LBO Fund II	Special Situation/US	Control-Small/Mid	75
Thoma Bravo IX	Software & Tech-Enabled Svcs/North America	Buyout-Mid	50
TowerBrook Investors III	Generalist/US & Europe	Buyout-Mid	50
Candover 2008 Fund	Generalist/Western Europe	Buyout-Mid	20
Battery Ventures VIII Side-Car	Technology/North America, Europe, and Israel	Venture-Multi-Stage	11
Union Square Ventures 2008	Web Svcs, Info Tech, Software, Mobile/North America	Venture-Early Stage	10
<b>Total Commitments</b>			<b>\$1,276</b>

# Private Markets Portfolios

## 2009 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Battery Ventures IX	Technology/North America, Europe, and Israel	Venture-Multi-Stage	29
Charlesbank Equity Fund VII	Consumer, Industrial, TMT, Business Svcs/North America	Buyout-Mid	95
Gores Capital Partners III	IT, Business Product & Svcs/North America	Buyout-Mid	100
Highland Capital Partners Fund VIII	Media, Tech/US	Venture-Multi-Stage	30
KPS Special Situations Fund III Supplemental	Special Situations/US	Buyout-Mid	50
SV Life Sciences V	Healthcare/US	Venture-Multi-Stage	25
TA XI	Tech, Healthcare, Financial Svcs, Consumer/Global	Buyout-Small	150
WestView Capital Partners II	Generalist/US	Buyout-Small	25
Xenon Private Equity Fund V	Generalist/Italy & Western Europe	Buyout-Small	24
<b>Total Commitments</b>			<b>\$528</b>

# Private Markets Portfolios

## 2010 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
American Securities Fund VI	Generalist/US	Buyout-Mid	150
Centerbridge Capital Partners Fund II	Consumer, Healthcare, RE, Financial Svcs, Industrials, TMT/US	Buyout-Large	150
Ethos Private Equity Fund VI	Generalist/South Africa	Buyout-Small	40
Flagship Ventures Fund IV	Therapeutics, Health Tech, and Agricultural Tech/North America	Venture-Multi-Stage	20
Gilde Buy-Out Fund IV	Generalist/Benelux	Buyout-Mid	37
Golder, Thoma, Cressey & Rauner Fund X	Financial Svcs. and Tech, Growth Business Svcs., Healthcare, TMT/US	Buyout-Mid	150
Insight Venture Partners Fund VII	Technology/North America	Venture-Early Stage	50
Insight Venture Partners Co-investment Fund II	Technology/North America	Growth Equity	15
Institutional Venture Partners Fund XIII	Information Technology & TMT/US	Venture-Late Stage	25
Montagu Private Equity Fund IV	Generalist/Western Europe	Buyout-Mid	74
Polaris Venture Partners Fund VI	Software/US	Venture-Multi-Stage	20
Rembrandt Venture Partners Fund II	Technology/North America	Venture-Early Stage	20
SAIF Partners Fund IV	Generalist/China and India	Growth Equity	25
Spark Capital III	Technology/North America	Venture-Early Stage	20
Union Square Ventures Opportunity Fund	Web Svcs, Info Tech, Software, Mobile/North America	Venture-Late Stage	11
<b>Total Commitments</b>			<b>\$807</b>

# Private Markets Portfolios

## 2011 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Berkshire Partners VIII	Consumer Products and Retail, Bus. Svcs. Comms, Industrials, & Transport./NA	Buyout-Large	100
Chequers Capital XVI	B2B Svcs, Manufacturing/Europe	Buyout-Small	36
Denham Commodity Partners Fund VI	Energy & Resources/Global	Buyout-Mid	100
Genstar Capital Partners VI	Commercial Services/US	Buyout-Mid	60
Hony Capital Fund V	Generalist/China	Buyout-Mid	40
Index Ventures Growth II	Technology/Global	Venture-Late Stage	27
Kepha Partners Fund II	Information Technology/US	Venture-Early Stage	15
Keytone Ventures II	Generalist/China	Venture-Multi-Stage	20
KKR North America Fund XI	Generalist/North America	Buyout-Mega	100
Providence Equity Partners Fund VII	Media, Communications, Technology/North America	Buyout-Large	100
Quad-C Partners VIII	Healthcare, Bus. & Consumer Svcs, Transport., Logistics, Industrials/US	Buyout-Small	50
Rembrandt Venture Partners Fund III	Technology/North America	Venture-Early Stage	20
Sofinnova Venture Partners VIII	Life Sciences/US & Europe	Early-Stage	20
Thoma Bravo Fund X	Software & Tech-Enabled Svcs/North America	Buyout-Mid	75
Union Square Ventures 2012 Fund	Web Svcs, Info Tech, Software, Mobile/North America	Venture-Early Stage	15
Vista Equity Partners Fund IV	Software, Data, and Tech-Enabled Svcs/US	Buyout-Mid	150
<b>Total Commitments</b>			<b>\$928</b>

# Private Markets Portfolios

## 2012 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Advent International GPE VII	Business & Financial Svcs; Healthcare; Industrial; Retail, Consumer & Leisure; Tech/Global	Buyout-Large	181
Ascent Venture Partners V	Enterprise Technology/US	Venture-Early Stage	12
Catalyst Investors III	Business & Consumer Tech-Enabled Services/North America	Growth Equity	26
Index Ventures Life VI (Medicxi)	Life Sciences/Europe	Venture-Early Stage	17
Index Ventures VI	Technology/Europe	Venture-Early Stage	14
Insight Venture Partners VIII	Technology/North America	Growth Equity	94
Institutional Venture Partners XIV	Information Technology & TMT/US	Venture-Late Stage	40
Nordic Capital Fund VIII	Healthcare, Tech & Payments, & Financial Svcs, Consumer /Northern Europe	Buyout-Large	78
Technology Crossover Ventures VIII	Technology/US & UK	Growth Equity	100
TowerBrook Investors IV	Generalist/US & Europe	Buyout-Mid	75
<b>Total Commitments</b>			<b>\$637</b>

# Private Markets Portfolios

## 2014 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
American Securities Fund VII	Generalist/US	Buyout-Mid	175
Ascent Venture Partners VI	Enterprise Technology/US	Venture-Early Stage	14
Centerbridge Capital Partners Fund III	Consumer, Healthcare, RE, Financial Svcs, Industrials, TMT/US	Buyout-Large	175
Charlesbank Equity Fund VIII	Consumer, Industrial, TMT, Business Svcs/North America	Buyout-Mid	110
H.I.G. Middle Market LBO Fund II	Manufacturing, Service Businesses/US	Buyout-Mid	50
Hellman & Friedman Capital Partners VIII	Generalist/US	Buyout-Mega	230
Index Ventures VII	Technology/Global	Venture-Early Stage	12
Insight Venture Partners Co-investment Fund III	Technology/North America	Growth Equity	22
Quantum Energy Partners Fund VI	Energy/North America	Buyout-Mid	100
Sofinnova Venture Partners IX	Life Sciences/US & Europe	Venture-Multi-Stage	30
Spark Capital Growth Fund	Media & Technology/North America	Venture-Late Stage	40
Thoma Bravo Fund XI	Software & Tech-Enabled Svcs/North America	Buyout-Mid	150
Thomas H. Lee Equity Fund VII	Generalist/North America	Buyout-Mid	50
Vista Equity Partners Fund V	Software, Data, and Tech-Enabled Svcs/North America	Buyout-Large	100
Xenon Private Equity Fund VI	Generalist/Italy & Western Europe	Buyout-Small	20
<b>Total Commitments</b>			<b>\$1,278</b>



# Private Markets Portfolios

## 2017 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Advent International GPE VIII Co-Investment	Business & Financial Svcs; Healthcare; Industrial; Retail, Consumer & Leisure; Tech/Global	Buyout-Large	20
Berkshire Fund IX Co-Investment	Consumer Products and Retail, Bus. Svcs. Comms, Industrials, & Transport./NA	Buyout-Large	20
Blackstone Capital Partners VII Co-Investment	Generalist/Global	Buyout-Large	11
Charlesbank Equity Fund IX & Charlesbank Equity Fund IX Overage Allocation Program	Consumer, Industrial, TMT, Business Svcs/North America	Buyout-Mid	150
Chequers Capital XVII	B2B Svcs, Manufacturing/Europe	Buyout-Small	50
CVC Capital Partners VII	Generalist/Europe	Buyout-Mega	235
Flagship Pioneering Fund VI	Life Sciences	Venture-Early Stage	25
GTCR Fund XII	Financial Services and Tech, Business Services, Healthcare, TMT/US	Buyout-Mid	200
Insight Venture Partners X	Technology/North America	Growth Equity	80
Lovell Minnick Equity Partners IV	Financial Services/North America	Buyout-Small	22
Nordic Capital Fund IX	Healthcare, Tech & Payments, & Financial Svcs/Northern Europe	Buyout-Large	126
Onex Partners Fund V, L.P	Generalist/North America	Buyout-Large	160
Quantum Energy Partners VII & Co-Investment	Energy/North America	Buyout-Mid	173
Thomas H. Lee Equity Fund VIII	Generalist/North America	Buyout-Mid	50
Thomas H. Lee Equity Fund VII Co-Investment	Generalist/North America	Buyout-Mid	12
Trident VII	Sector Focused/North America	Buyout-Mid	50
Waterland Private Equity Fund VII	Generalist/Western Europe	Buyout-Small	53
Westview Capital Partners IV	Generalist/North America	Buyout-Small	50
<b>Total Commitments</b>			<b>\$1,382</b>

# Private Markets Portfolios

## 2020 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Charlesbank Equity Fund X	Business Svcs, Consumer, Healthcare, Industrials, Tech/ North America	Buyout-Mid	180
Charlesbank Equity Overage Fund X	Business Svcs, Consumer, Healthcare, Industrials, Tech/ North America	Buyout-Mid	25
CVC Capital Partners Fund VIII	Generalist/Europe and North America	Buyout-Large	265
Elysian Capital Fund III	Generalist/United Kingdom	Buyout-Small	77
Flagship Pioneering Origination Fund VII	Therapeutics, Health Tech, and Agricultural Tech	Venture-Seed/Early Stage	55
GTCR Fund XIII	Financial Svcs & Tech, Business Svcs, Healthcare, TMT/US	Buyout-Mid	273
Hellman & Friedman Fund IX Co-Investment	Generalist/US	Buyout-Mega	17
Index Ventures X	Tech/Europe and U.S.	Venture-Seed/Early Stage	18
Index Ventures Growth V	Tech/Europe and U.S.	Venture-Late Stage	46
Insight Partners XI	Software, Software-Enabled Svcs, and Internet/US	Growth Equity	140
Nordic Capital Fund X	Healthcare, Tech & Payments, & Financial Svcs/Northern Europe	Buyout-Large	188
Providence Strategic Growth III Co-Investment	Software & Tech-Enabled Services/North America	Growth Equity	15
Quad-C Partners IX Co-Investments	Healthcare, Business & Consumer Svcs, Transportation, Logistics, Indust./US	Buyout-Small	32
Technology Crossover Ventures Fund XI	High Growth Technology/US and Western Europe	Growth Equity	200
Thoma Bravo Discover Fund III	Software and Tech Services/North America	Buyout-Mid	150
Thoma Bravo Explore Fund	Software and Tech Svcs/North America	Buyout-Small	60
Thoma Bravo Fund XIV	Software and Tech Services/North America	Buyout-Large	275
USV 2021	Technology/North America and Europe	Venture-Seed/Early Stage	11
USV Climate 2021	Technology - Climate Change Mitigation, Adaptation/North America and Eur.	Venture-Seed/Early Stage	4
Waterland Private Equity Fund VIII	Generalist/Western Europe	Buyout-Small	64
<b>Total Commitments</b>			<b>\$2,095</b>

# Private Markets Portfolios

## 2021 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Charlesbank Equity Fund IX Co-Investment	Consumer, Industrial, TMT, Business Svcs/North America	Buyout-Mid	25
CVC Capital Partners Fund VIII Co-Investment	Generalist/Europe and North America	Buyout-Large	15
Georgian Alignment Fund II	Software/North America	Growth Equity	50
Georgian Growth Fund VI	Software/North America	Growth Equity	100
GTCR Strategic Growth Fund	Financial Services and Tech, Growth Business Services, Healthcare, TMT/US	Buyout-Mid	100
Hellman & Friedman Capital Partners Fund X	Healthcare, Tech & Business Svcs, Media, Energy, Indust., Retail & Consumer/NA & Eur	Buyout-Mega	350
Index Ventures XI	Tech/Europe & US	Venture-Early Stage	20
Index Ventures Growth VI	Tech/Europe & US	Venture-Late Stage	50
Insight Venture Partners XII & Co-Investments	Software, Software-Enabled Services and Internet/ US	Growth Equity	188
Insight Partners XII Buyout Annex Fund	Software, Software-Enabled Services and Internet/Global	Buyout-Mid	50
Insight Partners Fund X Follow-on Fund	Software, Software-Enabled Services and Internet/US	Growth Equity	75
JMI Equity Fund X & Co-Investment	Software and Tech-Enabled Services/North America	Growth Equity	92
Nordic Capital Evolution Fund	Healthcare, Technology & Payments, and Financial Services/Northern Europe	Buyout-Small	84
Nordic Capital Fund X Co-Investments	Healthcare, Tech & Payments, & Financial Svcs/Northern Europe	Buyout-Large	126
Providence Strategic Growth Fund V	Software and Tech-Enabled Services/U.S.	Growth Equity	175
Quad-C Partners X & Co-Investment	Healthcare, Business & Consumer Svcs, Transportation, Logistics, Industrials/US	Buyout-Small	195
Spark Capital Fund VII	Consumer and Tech/North America	Venture-Seed/Early Stage	14
Spark Capital Growth Fund IV	Consumer and Tech/North America	Venture-Late Stage	28
Stone Point Trident VIII Co-Investments	Sector Focused/North America	Buyout-Large	62
TA Associates XIV	Tech, Healthcare, Financial Svcs, Consumer, Business Svcs/Global	Buyout-Small	335
TA Select Opportunities Fund II	Tech, Healthcare, Financial Svcs, Consumer, Business Svcs/Global	Buyout-Large	100
TCV Fund XI Co-Investments	High Growth Technology/US and Western Europe	Growth Equity	32
Thoma Bravo Fund XIV Co-Investments	Software and Tech Services/North America	Buyout-Large	113
Thomas H. Lee Equity Fund IX	Healthcare, Tech & Business Svcs, Financial Svcs/North America	Buyout-Mid	200
Thomas H. Lee Equity Fund VIII Co-Investment	Generalist/North America	Buyout-Mid	24
Thompson Street Fund VI	Software & Tech Svcs, Healthcare, Consumer & Business Svcs/US	Buyout-Small	150
Thompson Street Fund V Co-Investment	Software & Tech Svcs, Healthcare, Consumer & Business Svcs/US	Buyout-Small	20
Tidemark Fund I	Technology/North America	Growth Equity	75
Trident IX	Financial Services/North America	Buyout-Large	150
<b>Total Commitments</b>			<b>\$2,998</b>

# Private Markets Portfolios

## 2022 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
Advent International GPE X	Business & Financial Services; Healthcare; Industrial; Retail, Consumer & Leisure; Tech/Global	Buyout-Large/Mega	\$350
Chequers XVIII	Asset Light Industrials and B2B svcs. and distribution/France, Italy, Germany	Buyout-Small	(€80) \$91
JMI Equity Fund XI	Software and Tech-Enabled Services/North America	Growth Equity	\$100
Polaris Growth Fund II	Software and Tech-Enabled Services/North America	Buyout-Small	\$38
Thoma Bravo Discover IV	Software and Tech Services/North America	Buyout-Mid	\$150
Thoma Bravo Explore II	Software and Tech Services/North America	Buyout-Small	\$150
Thoma Bravo XV	Software and Tech Services/North America	Buyout-Large	\$275
USV 2022	Technology/North America and Europe	Venture-Seed/Early Stage	\$11
USV Opportunity 2022	Technology/North America and Europe	Venture-Late Stage	\$14
Nordic Capital Fund XI	Healthcare, Tech, and Financial Services/Northern Europe	Buyout -Mid	(€200) \$219
Insight Partners Vision Capital II	Emerging-Diverse Technology FoF/North America	Venture-Seed/Early Stage	\$30
Insight Partners Fund XI Follow-on Fund	Software, Software-Enabled Services and Internet/ US	Growth Equity	\$20
Medicxi IV	Biotechnology/Western Europe	Venture-Multi-Stage	(€35) \$37
Technology Crossover Ventures XII	High Growth Technology/US and Western Europe	Growth Equity	\$200
Sequoia Capital China Seed Fund III	Technology, Consumer, and Healthcare/China	Venture-Seed	\$4
Sequoia Capital China Venture Fund IX	Technology, Consumer, and Healthcare/China	Venture-Early Stage	\$10
Sequoia Capital China Growth Fund VII	Technology, Consumer, and Healthcare/China	Venture-Late Stage	\$40
Sequoia Capital China Expansion Fund I	Technology, Consumer, and Healthcare/China	Venture-Late Stage	\$45
USV Climate 2022	Technology: Climate Change Mitigation, Adaptation/NA and Europe	Venture-Early Stage	\$4
TowerBrook Investors VI	Generalist/US & Europe	Buyout-Mid	\$200
Altor Fund VI	Industrials, Financial Svcs., Tech, Consumer, Business Svcs./Northern Europe	Buyout-Mid	(€100) \$108
Lovell Minnick Equity Partners VI	Financials/North America	Buyout-Mid	\$150
Waterland Private Equity Fund IX	Generalist/Western Europe	Buyout-Mid	(€117) \$126
Waterland Partnership Fund I	Generalist/Western Europe	Buyout-Mid	(€13) \$14
WestView Capital Partners V	Generalist/North America	Buyout-Mid	\$100
Kinzie Fund II**	Consumer, Manufacturing, & Services/North America	Buyout-Mid	\$15
1315 Capital III**	Healthcare/North America	Growth Equity	\$15
NewView Capital Fund III**	Software & Tech Services/North America	Growth Equity	\$15
Red Arts Capital Opportunity Fund I**	Transportation & Logistics/North America	Buyout-Mid	\$15
Approved Co-Investments			\$547
<b>Total Commitments</b>			<b>\$3,093</b>

# Private Markets Portfolios

## 2023 Vintage Year Deal Activity

Name of Partnerships	Sector/Geography	Strategy	Amount
GTCR Fund XIV*	Financial Svcs & Tech, Business Svcs, Healthcare, TMT/US	Buyout-Mid	\$285
Hellman & Friedman Capital Partners XI*	Generalist/US	Buyout-Mega	\$300
TA Select Opportunities Fund III*	Tech, Healthcare, Financial Svcs, Consumer, Business Svcs/Global	Buyout-Large	\$35
TA XV*	Tech, Healthcare, Financial Svcs, Consumer, Business Svcs/Global	Buyout-Small	\$335
American Industrial Capital Partners VIII*	Sector Focused/North America	Buyout-Small	\$150
CVC Capital Partners IX*	Generalist/Europe and North America	Buyout-Large	\$274 (€250)
KPS Special Situations Mid-Cap Fund II*	Special Situations/North America	Buyout-Mid	\$75
PSG VI*	Software and Tech-Enabled Services/U.S.	Growth Equity	\$150
Wing Four	Technology/US	Venture-Early Stage	\$30
Approved Co-Investments			\$270
Total Commitments Through 5/18/2023			<b>\$1,904</b>
2023 Investment Plan			<b>\$2,200 - \$3,000</b>

# MWRA Employees' Retirement System

## Life-to-Date Activity Summary

Vintage Year	Percent Vintage Fund	Targeted Commitment	Adjusted Commitment	Drawn Capital	Percent Commitment			Interest Paid (Earned)	Management Fees
					Drawn	Distributions	Direct Fees		
2008	0.20%	3,000,000	2,430,460	2,214,017	91.09%	4,584,185	13,637	(2,238)	7,336
2009	0.07%	1,000,000	348,735	322,805	92.56%	791,540	0	(516)	927
2010	0.10%	1,000,000	786,250	747,648	95.09%	1,458,387	398	(890)	2,690
2011	0.15%	1,500,000	1,372,500	1,261,395	91.90%	2,646,927	8,303	(1,899)	4,049
2012	0.10%	1,000,000	628,638	570,434	90.74%	1,017,191	1	(795)	2,301
2014	0.14%	2,000,000	1,820,605	1,669,072	91.68%	1,951,719	2,756	(508)	4,773
2017	0.14%	2,000,000	2,070,090	1,742,552	84.18%	648,079	5,501	995	3,013
2020	0.25%	5,000,000	5,179,180	3,657,712	70.62%	82,622	140	3,086	2,611
2021	0.21%	5,000,000	6,229,353	3,762,736	60.40%	4,894	159	4,200	2,051
2022	0.23%	7,500,000	5,886,892	1,732,339	29.43%	(567)	0	4,026	2,416
2023	0.33%	10,000,000	902,626	386,307	42.80%	0	0	1,126	354
<b>LTD Total</b>		<b>\$39,000,000</b>	<b>\$27,655,329</b>	<b>\$18,067,016</b>	<b>65.33%</b>	<b>\$13,184,979</b>	<b>\$30,897</b>	<b>\$6,588</b>	<b>\$32,522</b>

As of most recent distribution notice – 9/01/2023

Please note that all management fees and interest paid/earned are in addition to the adjusted commitment.



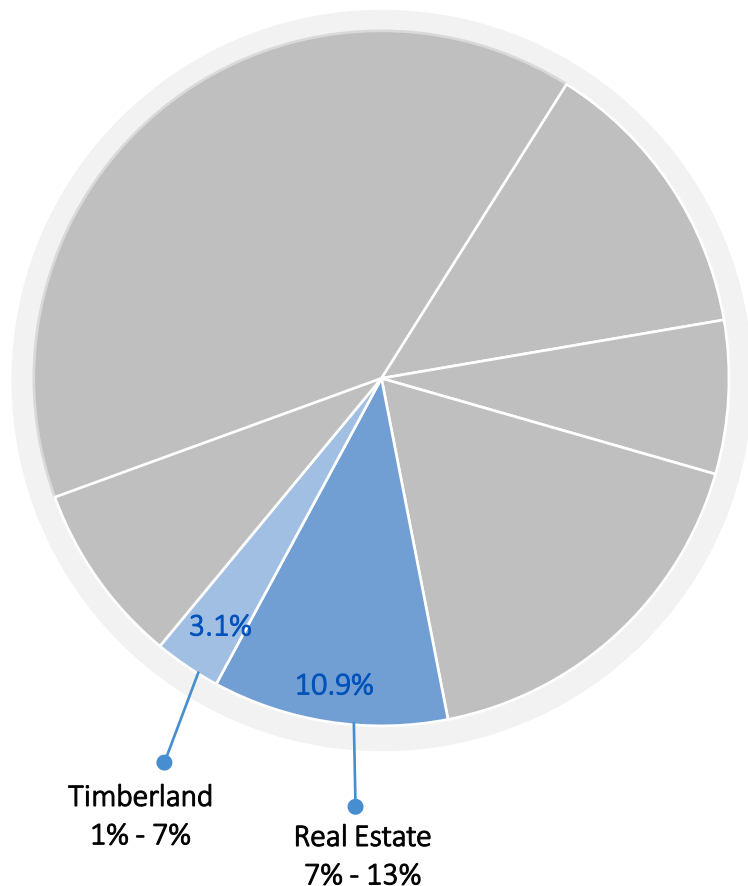
**REAL ESTATE AND TIMBERLAND  
PORTFOLIO**

**Mass  
PRIM**

# Real Estate and Timberland Portfolios

## PRIT FUND TARGET ASSET ALLOCATION

Actual Allocation as of June 30, 2023



\$13.3 billion, 14.0% of PRIT Fund

- Real Estate: \$10.5 billion, 10.9% of PRIT Fund
- Timberland: \$3.0 billion, 3.1% of PRIT Fund

### 16 portfolios

- 6 core portfolios
- 5 non-core portfolios
- 2 global REIT portfolios
- 2 timberland portfolios
- 1 direct investment portfolio

### Property Investments

- Real Estate – 120 properties
- Timberland – 23 properties

99 Global real estate securities

5 Emerging-Diverse Managers

### 4 primary strategies

- Core U.S. private real estate
- Non-core U.S. private real estate
- Global real estate securities
- Global timberland

5 team members



# Real Estate and Timberland Key Initiatives

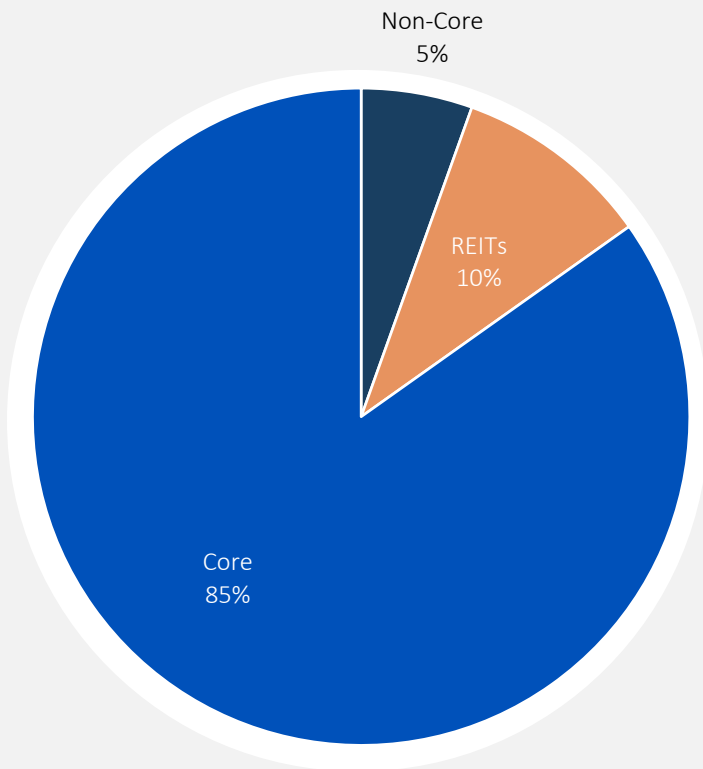


- Continue to source and allocate to diverse investment managers.
- Continue to implement PRIM's Emerging-Diverse Manager Program for Real Estate.
- Utilize REITs , PRIM's internal real estate financing facility, and other available capital sources to fund new acquisitions, address pending financing maturities and maintain PRIM's current leverage structure.
- Continue to execute PRIM's Internal Real Estate Management strategy, consistent with the 2019 Board-approved plan to allocate up to 15% of total Real Estate net asset value.
- Source high quality operating partnerships and investment opportunities.
- Effectively monitor and exercise decision authority on existing investments.
- Collaborate with the Public Markets team to source and conduct due diligence on Other Credit Opportunities investments.
- Oversee the implementation of asset business plans and hold-sell recommendations in the real estate and timberland separate accounts.
- Support the newly established ESG Committee to develop an ESG framework and related activities.

# Real Estate

As of June 30, 2023, \$10.5 Billion – 10.9% of PRIT Fund (Target 7%-13%)

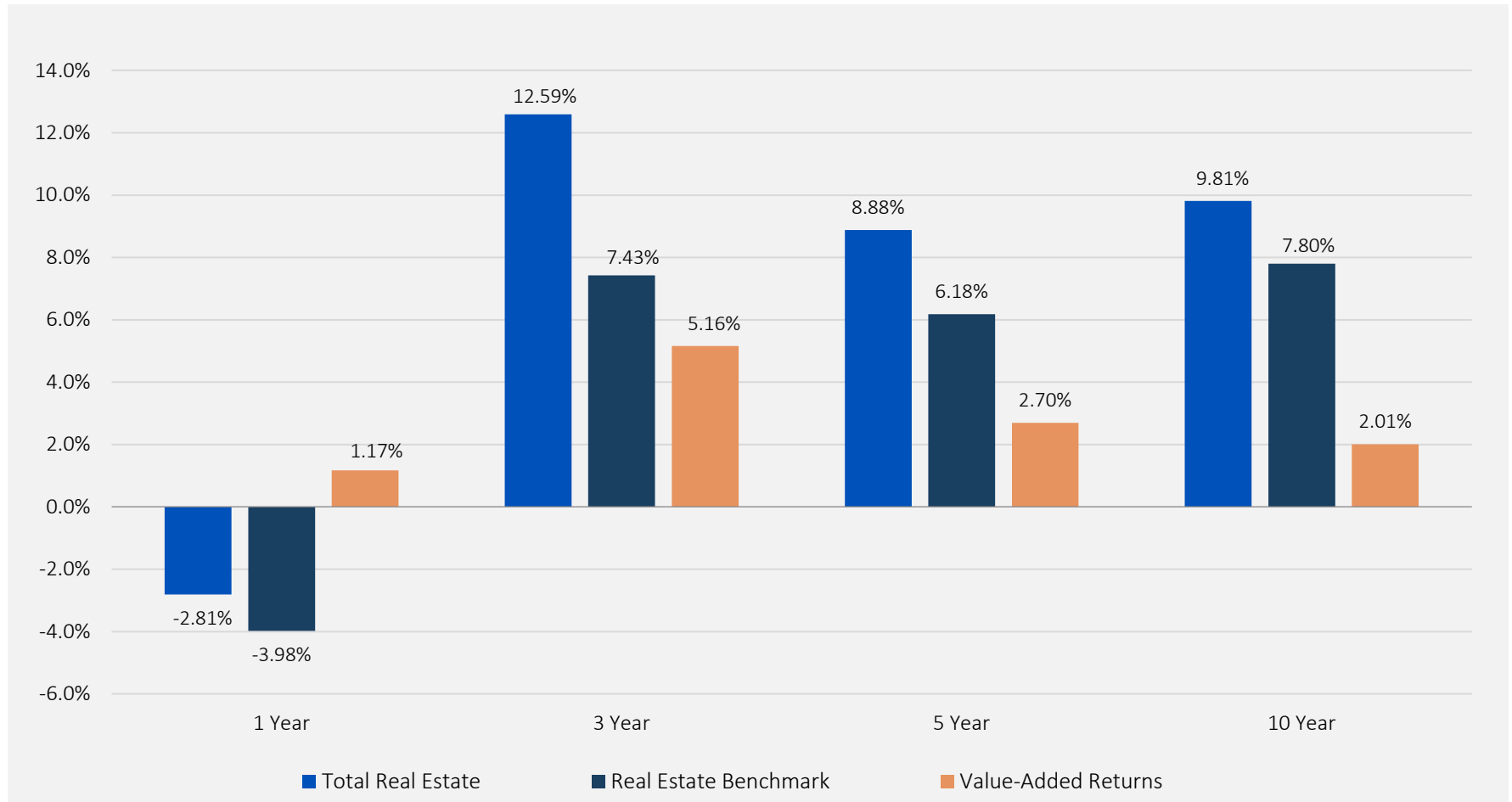
## ASSET ALLOCATION



- Equity investments in both directly-owned properties and **REIT** securities
- Directly-owned **Core** properties make up the majority of the real estate portfolio
  - **Core** properties are typically well-leased, operating properties that provide regular cash flow from rents
- **Non-Core** investments make up approximately 5% of the real estate portfolio
  - **Non-Core** includes properties that are under development

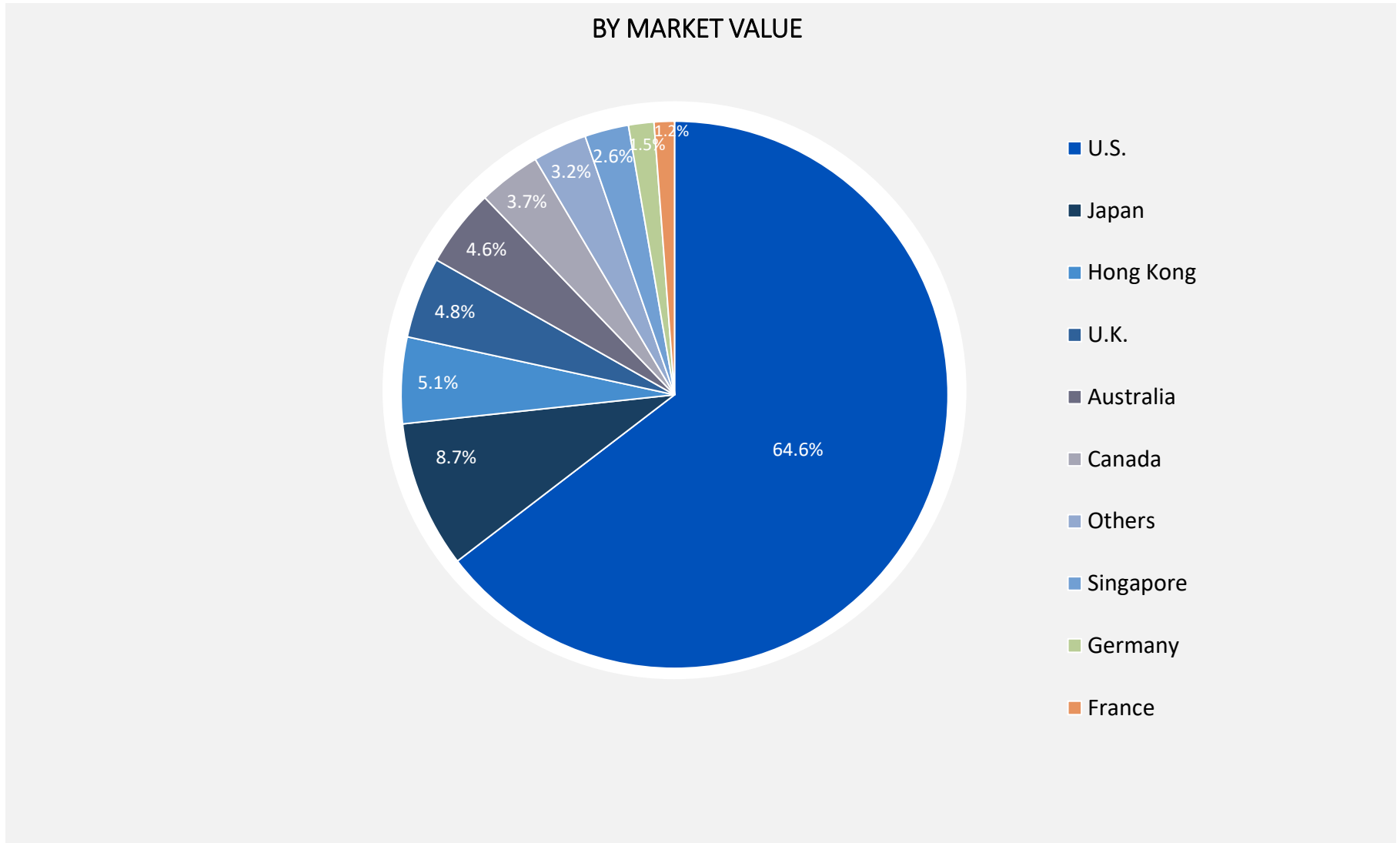
# Total Real Estate Performance

Annualized Returns as of June 30, 2023 (Gross of Fees)

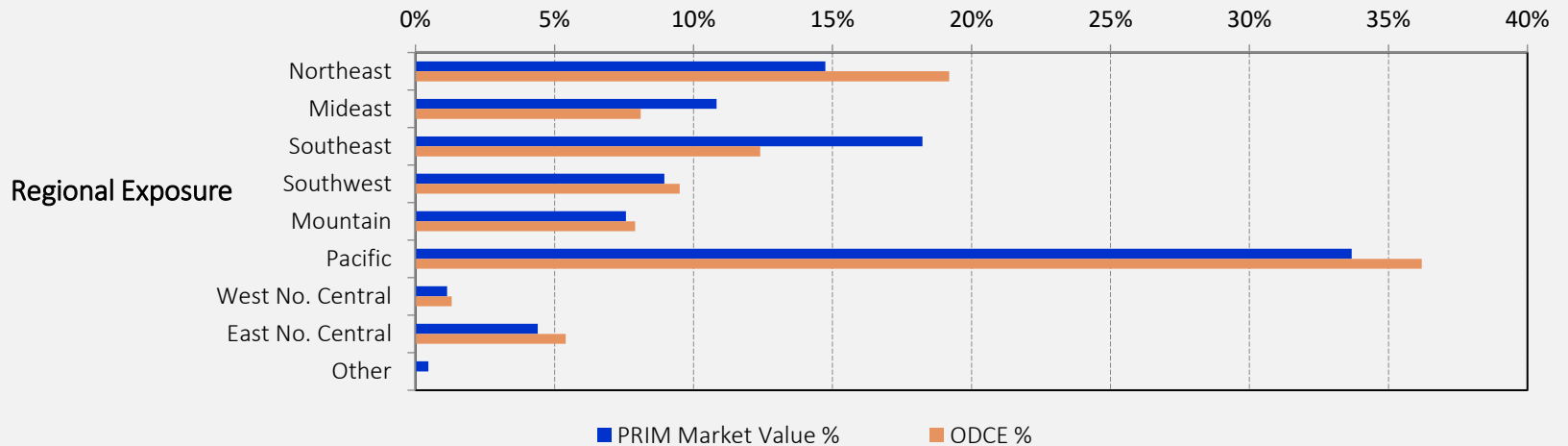
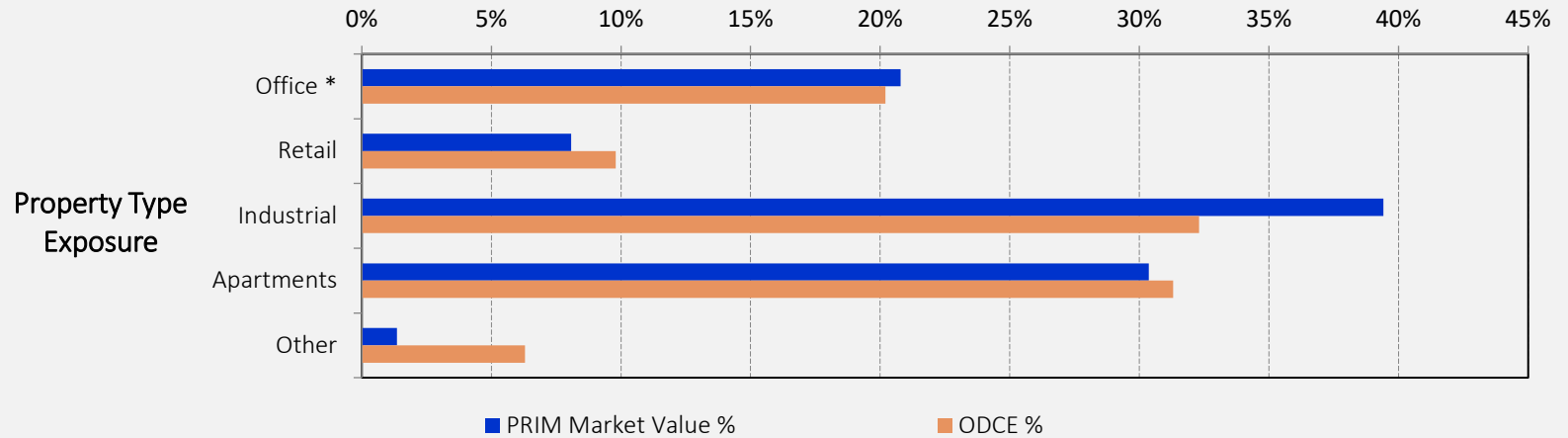


Benchmark: Currently benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the Total RE portfolio. These weights are based on the beginning adjusted monthly market value of each sub asset.

# Public Real Estate (REITs) Exposure by Country

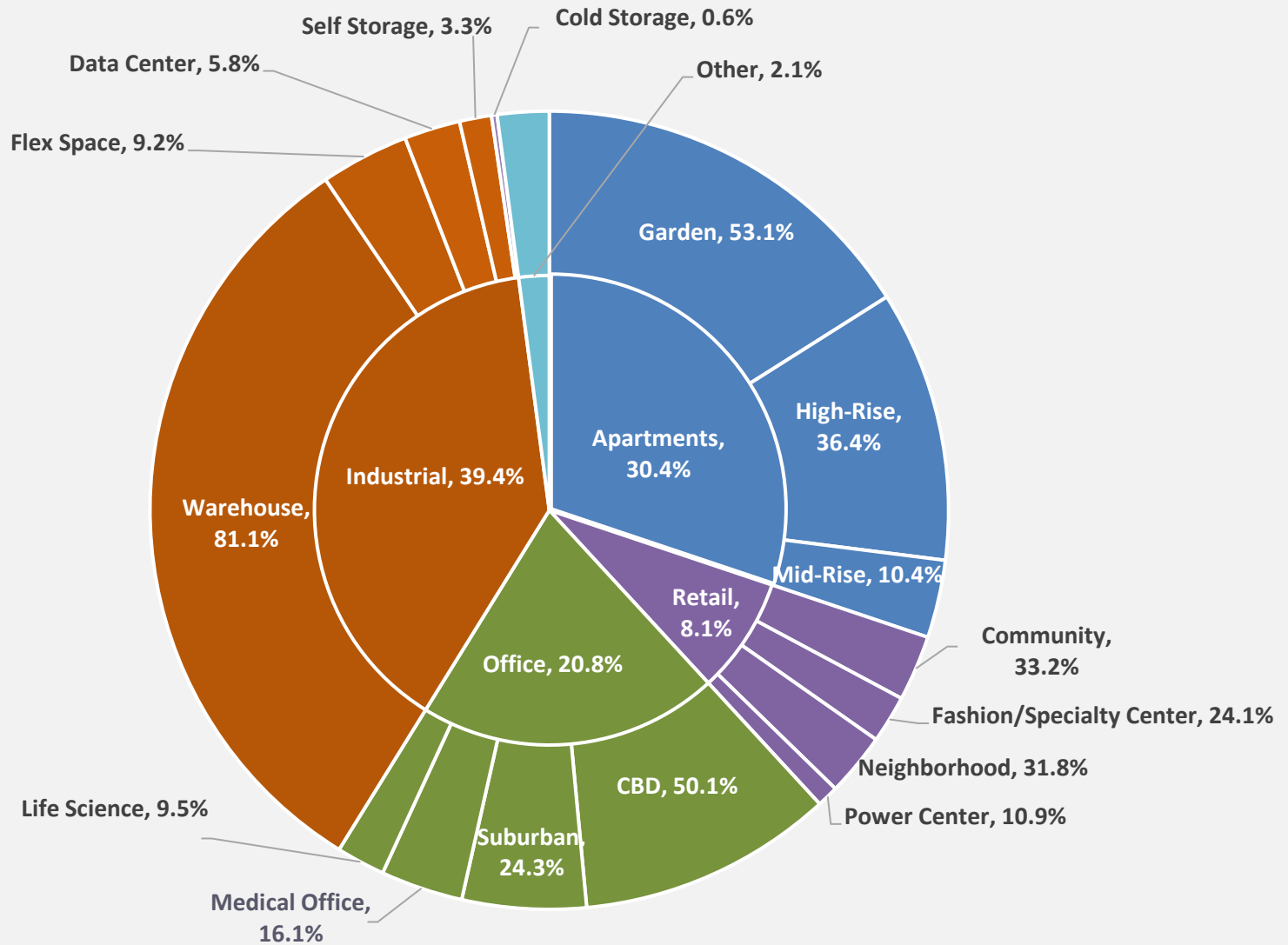


# Private Real Estate Portfolio Exposure



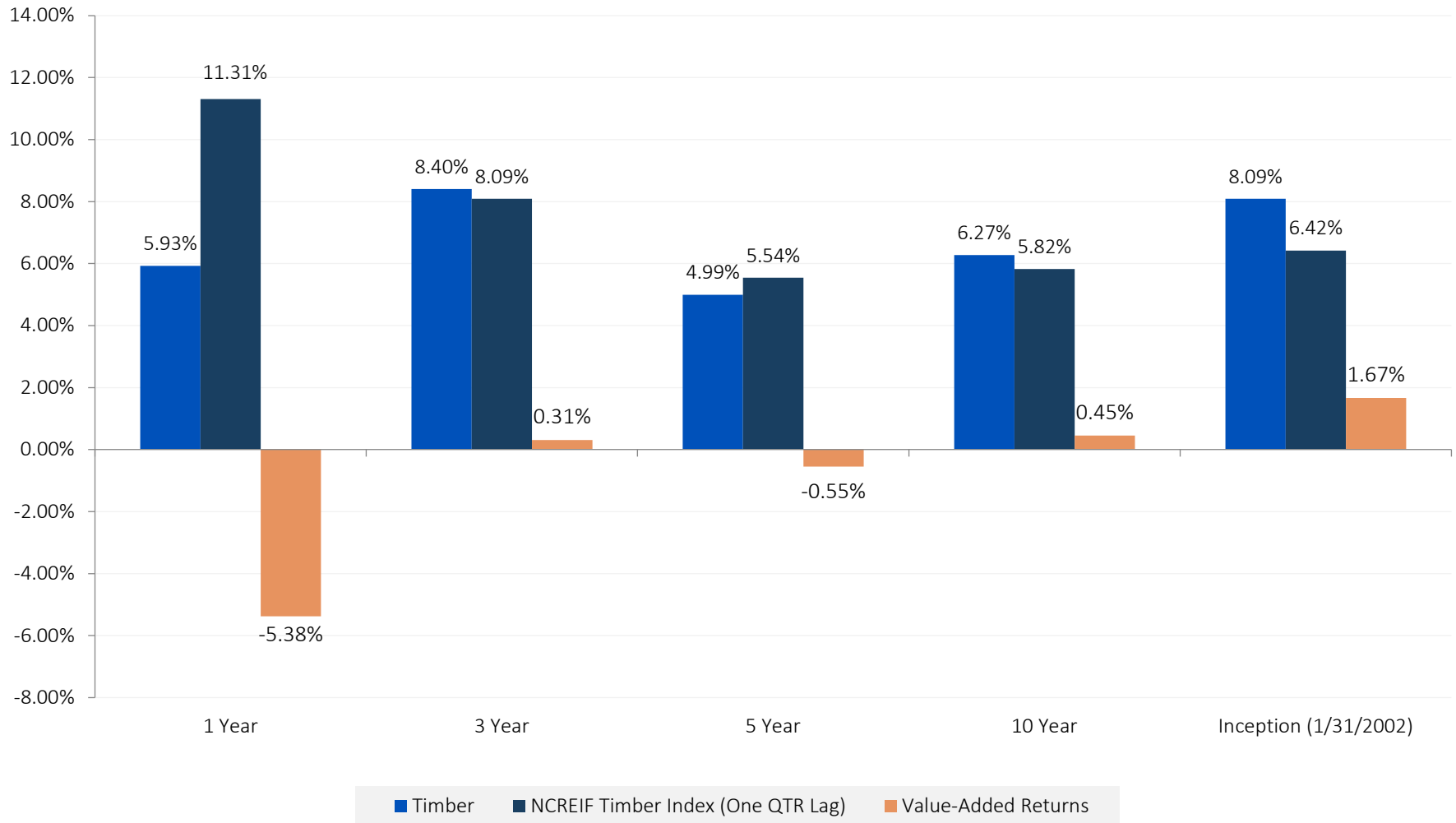
\* Office includes life science assets

# Property Subtype Breakdown



# Timberland

Annualized Returns as of June 30, 2023 (Gross of Fees)

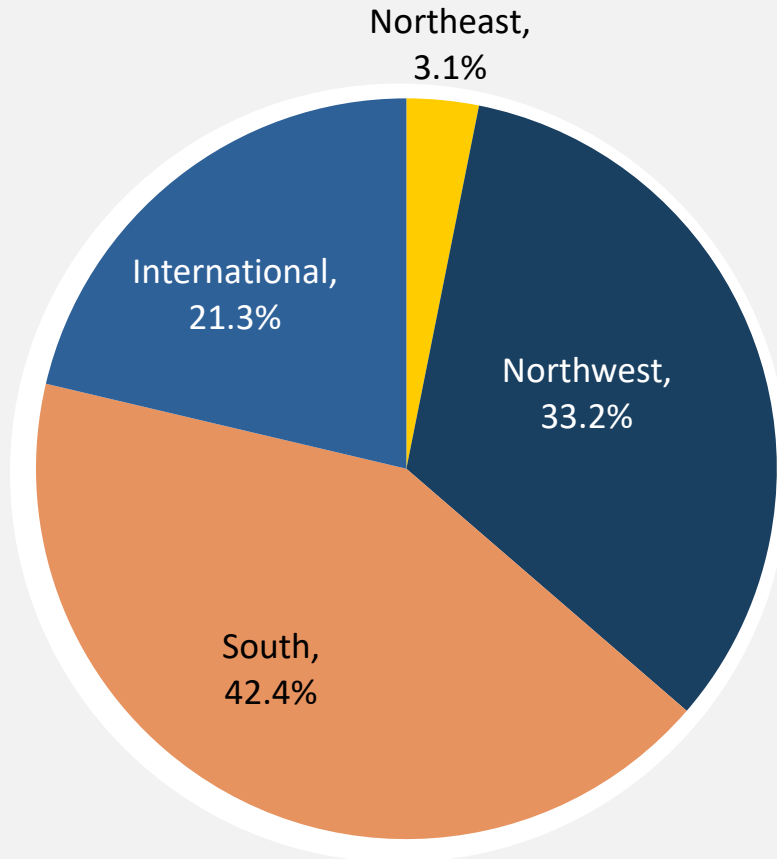


Benchmark: Currently NCREIF Timberland Index one quarter lag.

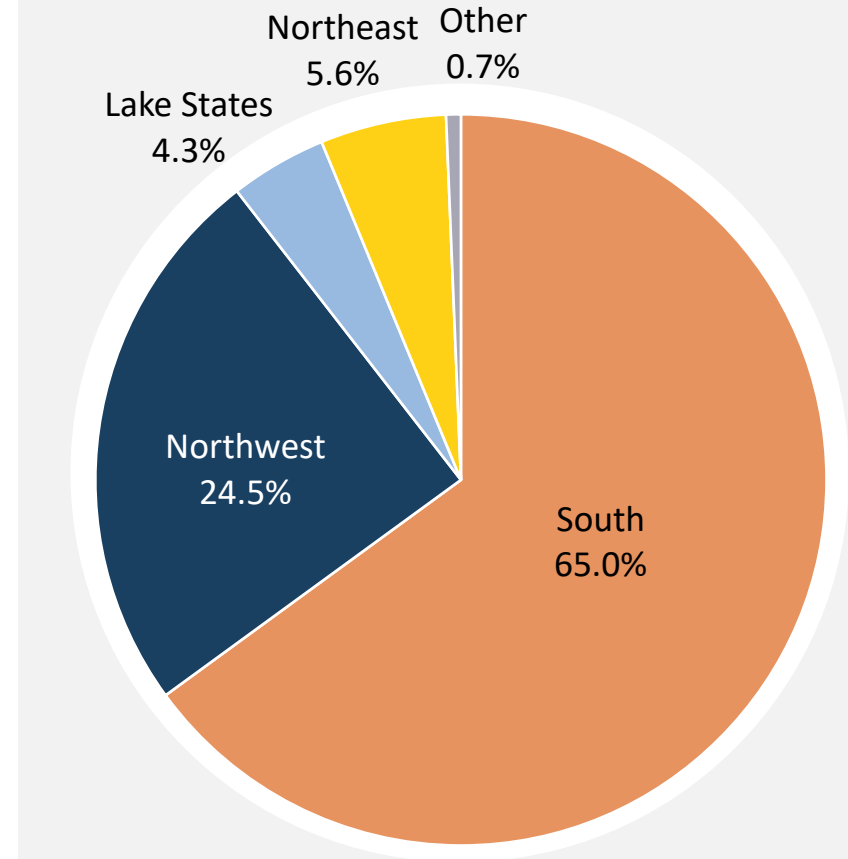
# Timberland Exposure by Region vs. Benchmark

As of June 30, 2023, \$3.0 Billion – 3.1% of PRIT Fund (Target 1%-7%)

## PRIM REGION EXPOSURE



## BENCHMARK

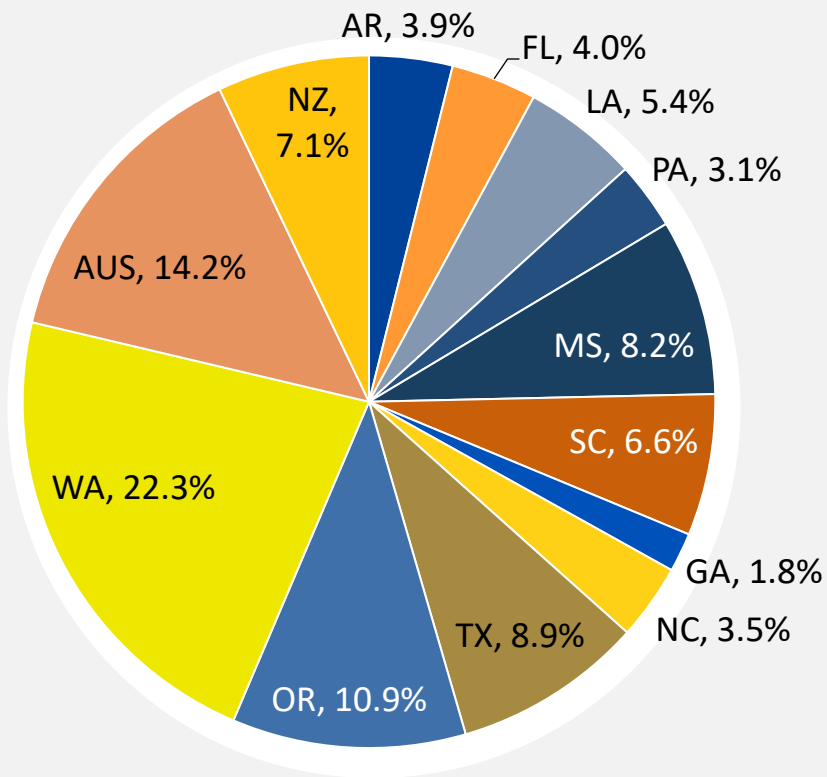




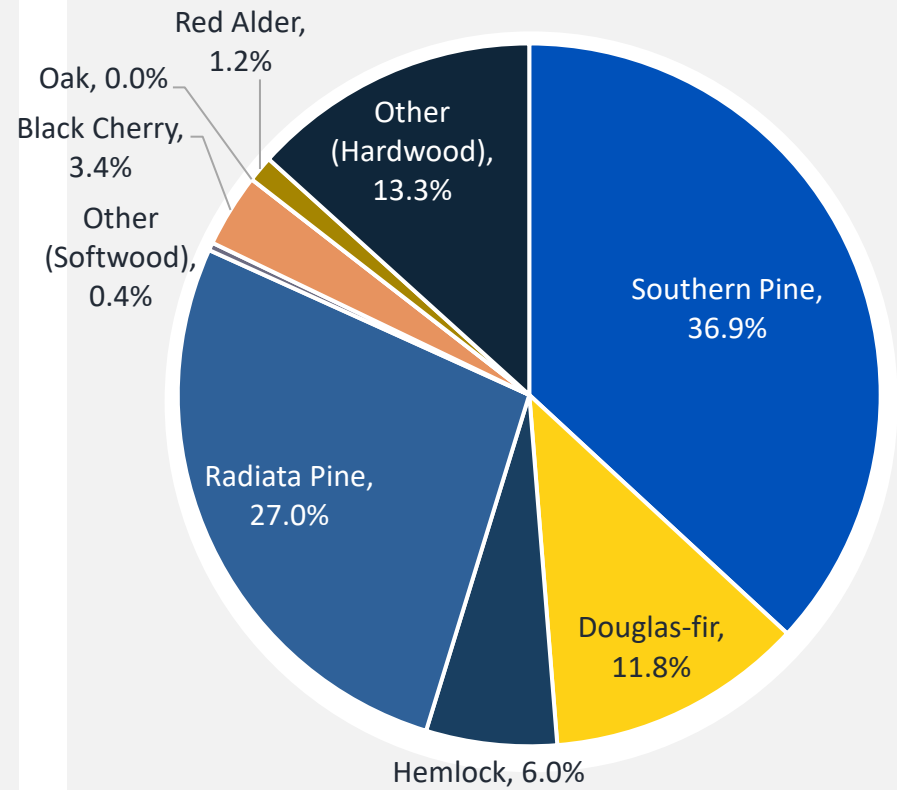
# Timberland Exposure by State/Region

# Timberland Exposure by Species

BY EQUITY VALUE



BY ACRES



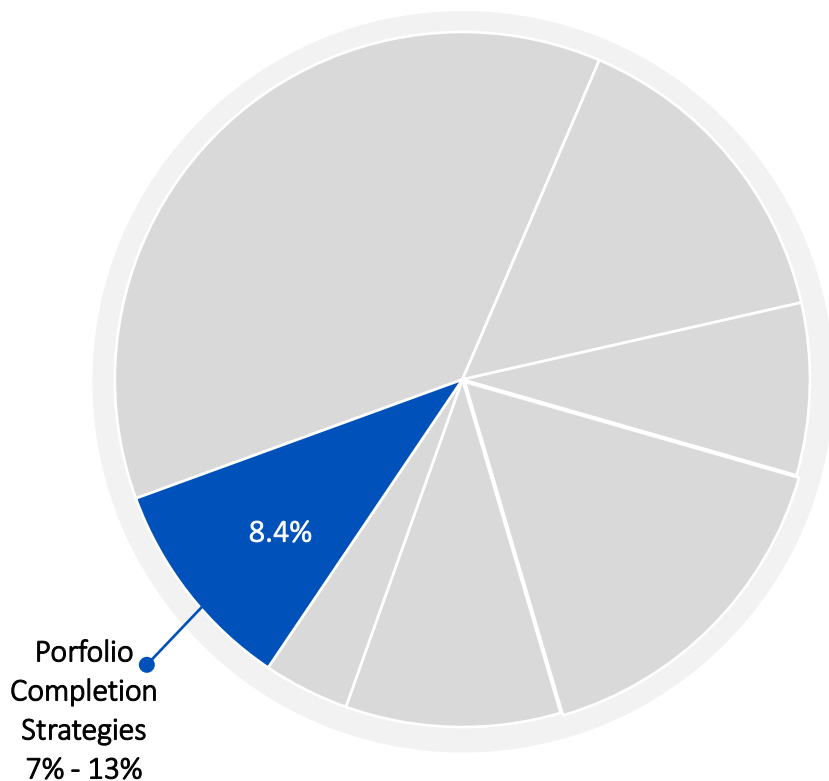
# PORTFOLIO COMPLETION STRATEGIES



# Portfolio Completion Strategies (PCS)

## PRIT FUND TARGET ASSET ALLOCATION

Actual Allocation as of June 30, 2023



PCS \$8.1 billion, 8.4% of PRIT Fund

- Directional Hedge Funds: \$2.1 billion, 26% of PCS
- Stable Value Hedge Funds: \$4.5 billion, 55% of PCS
- Hedge Fund of Funds: \$0.7 billion, 9% of PCS
- Real Assets: \$0.7 billion, 9% of PCS

28 Hedge Fund managers:

- 1 FoHF Manager
- 27 Direct Hedge Fund Managers

7 Real Assets Managers

Emerging-Diverse Managers

5 team members

Collaboration across all PRIM teams

# Portfolio Completion Strategies

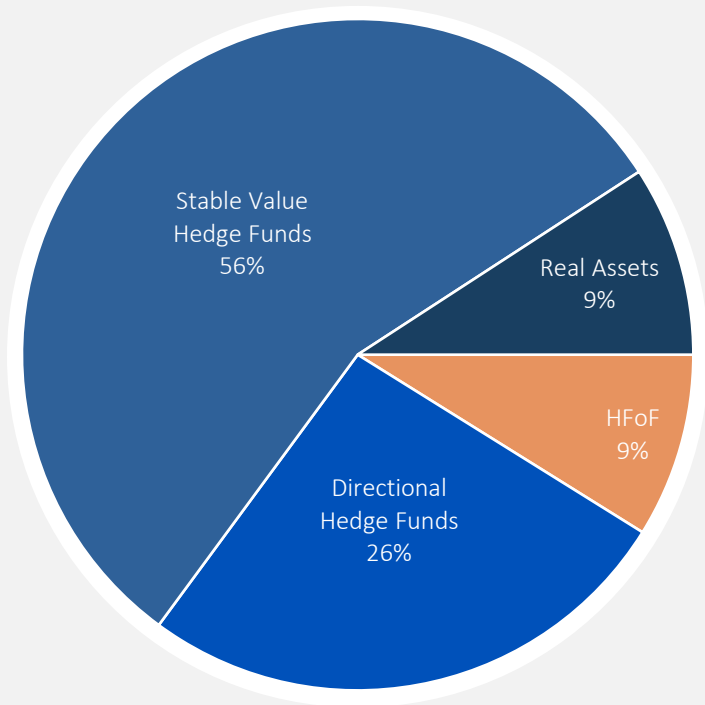
## Key Initiatives

- Investments:
  - Maintain allocation to Stable Value Funds.
  - Continue to identify co-investment opportunities.
  - Finish researching the expanding presence of multi-PM platforms and the impact on hedge fund industry.
  - Continue exploring Directional Funds; collaborate with Public Markets on sector/country specialist funds.
  - Evaluate the evolving thesis of Special Situation/Distressed Investing.
  - Continue to implement PRIM's Emerging Manager Program for Hedge Funds.
  - Clarify investment metrics and develop a holistic portfolio strategy for Real Assets.
  - Investigate the growing theme of Sustainability in the Real Assets context.
- Continue to source and allocate to diverse investment managers.
- Continue frequent collaboration with other PRIM teams.
- Support the newly established ESG committee to develop and ESG framework and related activities.

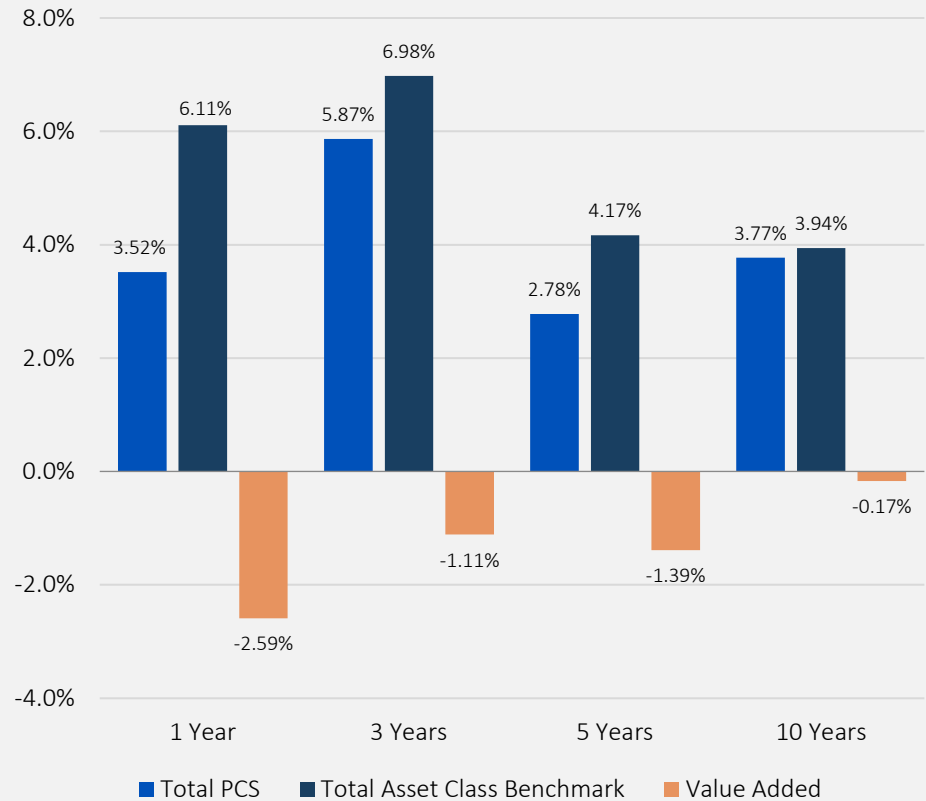
# Portfolio Completion Strategies

As of June 30, 2023, \$8.1 Billion – 8.4% of PRIT Fund (Target 7%-13%)

## ASSET ALLOCATION



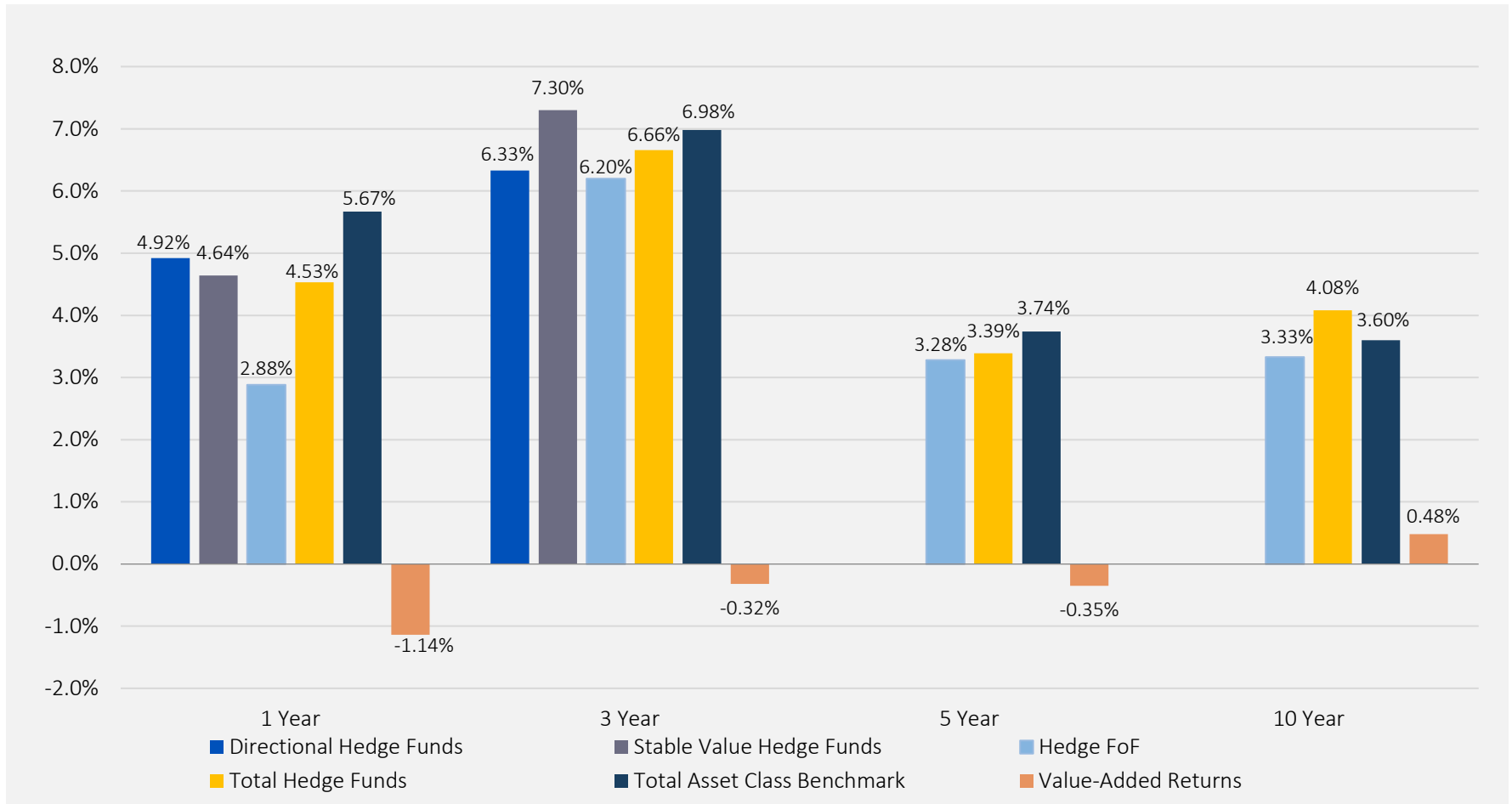
## PERFORMANCE\*



Benchmark: Total Portfolio Completions Composite Index was formed on April 1, 2017 by combining the prior Portfolio Completion Strategies with Total Hedge Funds. Total Portfolio Completion Strategies Composite Index is calculated by applying the underlying benchmark return for each sub asset class to the asset class's weight within the Total Portfolio Completion Strategies Composite. These weights are based on the beginning adjusted monthly market value of each sub asset. \*Hedge Funds returns, 91% of the PCS Portfolio, are net of fees.

# Hedge Funds Performance

Annualized Returns as of June 30, 2023 (Net of Fees)



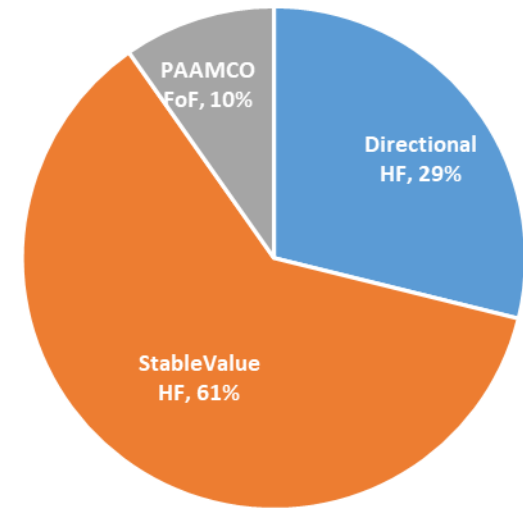
Benchmark: Currently, Total Hedge Funds benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the Total HF portfolio. These weights are based on the beginning adjusted monthly market value of each sub asset.

# PRIM Hedge Funds Portfolio Snapshot

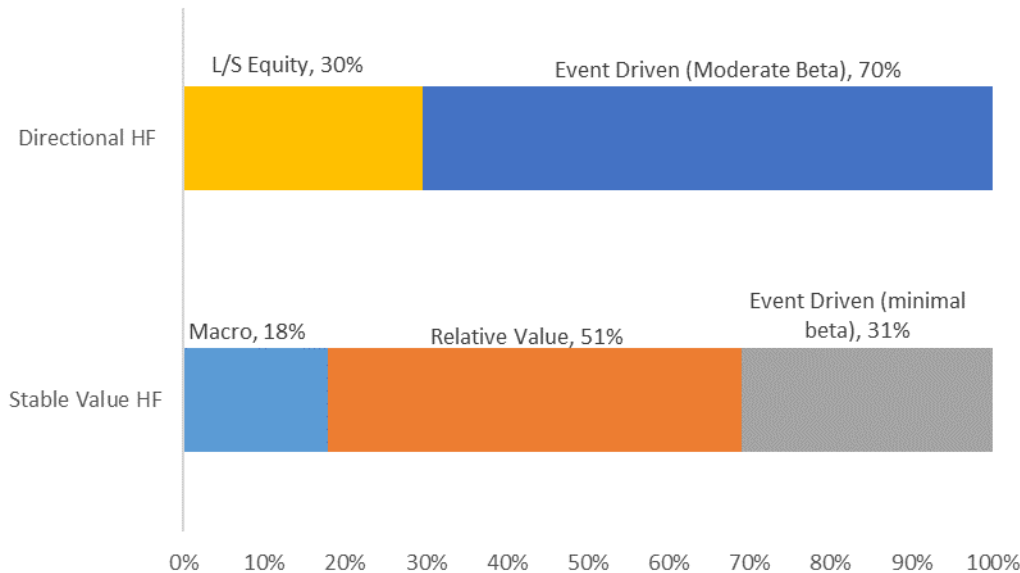
As of June 30, 2023, \$7.4 Billion – 7.6% of PRIT Fund

- Directional Hedge Funds: \$2.1 Billion
- Stable Value Hedge Funds: \$4.5 Billion
- Hedge Fund of Funds: \$0.7 Billion

### Hedge Fund Portfolio Breakdown



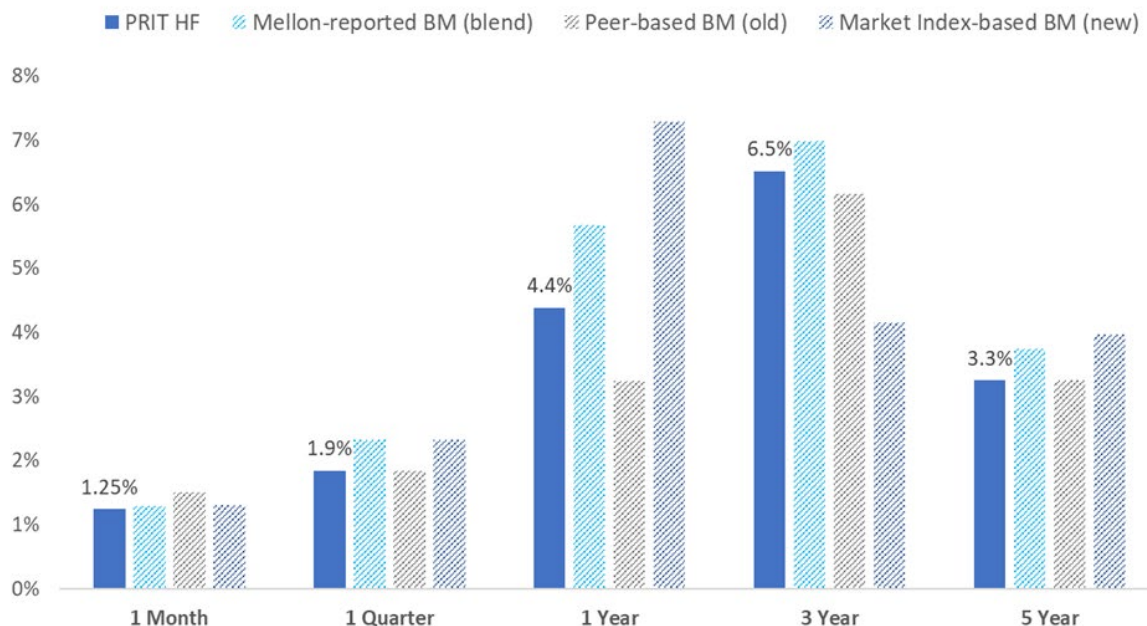
### Sub Strategy Breakdown



# PRIM Hedge Funds Performance Summary

As of June 30, 2023

Performance - PRIT HF (as of 6/2023)



	NAV	1 Month	1 Quarter	1 Year	3 Year	5 Year
<b>PRIT HF</b>	<b>\$7.36 bn</b>	<b>1.25%</b>	<b>1.9%</b>	<b>4.4%</b>	<b>6.5%</b>	<b>3.3%</b>
Mellon-reported BM (blend)		1.30%	2.3%	5.7%	7.0%	3.7%
Peer-based BM (old)		1.51%	1.8%	3.2%	6.2%	3.3%
Market Index-based BM (new)		1.31%	2.3%	7.3%	4.2%	4.0%

- Returns over 1 year are annualized.
- “Peer-based BM” is an aggregate of HFRI strategy indices. It was the benchmark used through 2/2023.
- “Market Index-based BM” is the new benchmark recently approved and implemented starting 3/2023.
- “Mellon-reported BM” blends Peer-based BM through 2/2023 and Market Index-based BM starting 3/2023.



# Sharpe Ratio and Market Beta Performance

As of June 30, 2023 (Net of Fees)

Sharpe Ratio by Asset Classes (as of Jun-2023)								
	Directional HF	StableValue HF	Total HF	Total PCS	PRIT Fund	MSCI ACWI	Barclays Agg	
1 Year	Return	4.9%	4.6%	4.4%	3.3%	5.6%	17.1%	-0.9%
	Volatility	11.6%	2.5%	4.2%	3.9%	9.8%	19.5%	8.9%
	<b>Return/Volatility</b>	<b>0.4</b>	<b>1.9</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</b>	<b>0.9</b>	<b>(0.1)</b>
	<i>EQ Beta</i>	<i>0.5</i>	<i>(0.0)</i>	<i>0.2</i>	<i>0.1</i>	<i>0.5</i>	<i>1.0</i>	<i>0.4</i>
	<i>Bond Beta</i>	<i>1.0</i>	<i>(0.0)</i>	<i>0.3</i>	<i>0.2</i>	<i>1.0</i>	<i>1.8</i>	<i>1.0</i>
	<i>Beta vs. PRIT Fund</i>	<i>1.1</i>	<i>0.0</i>	<i>0.3</i>	<i>0.3</i>	<i>1.0</i>	<i>2.0</i>	<i>0.8</i>
3 Year	Return	6.3%	7.3%	6.5%	5.7%	9.7%	11.5%	-4.0%
	Volatility	10.0%	3.1%	4.3%	3.9%	8.9%	17.3%	6.2%
	<b>Return/Volatility</b>	<b>0.6</b>	<b>2.3</b>	<b>1.5</b>	<b>1.5</b>	<b>1.1</b>	<b>0.7</b>	<b>(0.6)</b>
	<i>EQ Beta</i>	<i>0.5</i>	<i>0.1</i>	<i>0.2</i>	<i>0.2</i>	<i>0.5</i>	<i>1.0</i>	<i>0.2</i>
	<i>Bond Beta</i>	<i>0.9</i>	<i>(0.0)</i>	<i>0.3</i>	<i>0.2</i>	<i>1.0</i>	<i>1.9</i>	<i>1.0</i>
	<i>Beta vs. PRIT Fund</i>	<i>0.9</i>	<i>0.1</i>	<i>0.4</i>	<i>0.3</i>	<i>1.0</i>	<i>1.8</i>	<i>0.5</i>
5 Year	Return			3.3%	2.6%	7.3%	8.6%	0.8%
	Volatility			5.5%	5.2%	8.9%	17.9%	5.5%
	<b>Return/Volatility</b>			<b>0.6</b>	<b>0.5</b>	<b>0.8</b>	<b>0.5</b>	<b>0.1</b>
	<i>EQ Beta</i>			<i>0.2</i>	<i>0.2</i>	<i>0.5</i>	<i>1.0</i>	<i>0.1</i>
	<i>Bond Beta</i>			<i>0.2</i>	<i>0.1</i>	<i>0.7</i>	<i>1.4</i>	<i>1.0</i>
	<i>Beta vs. PRIT Fund</i>			<i>0.5</i>	<i>0.4</i>	<i>1.0</i>	<i>1.9</i>	<i>0.3</i>

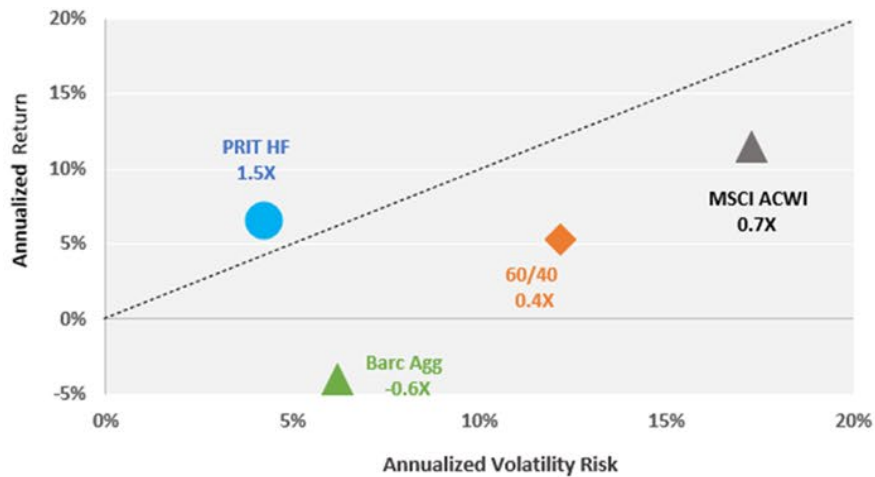
Note: returns are annualized, net of fees.

- Returns are annualized
- Since 2Q 2020, Mellon started separately reporting Stable Value vs. Directional, after Asset Allocation decided to bifurcate their different value propositions.

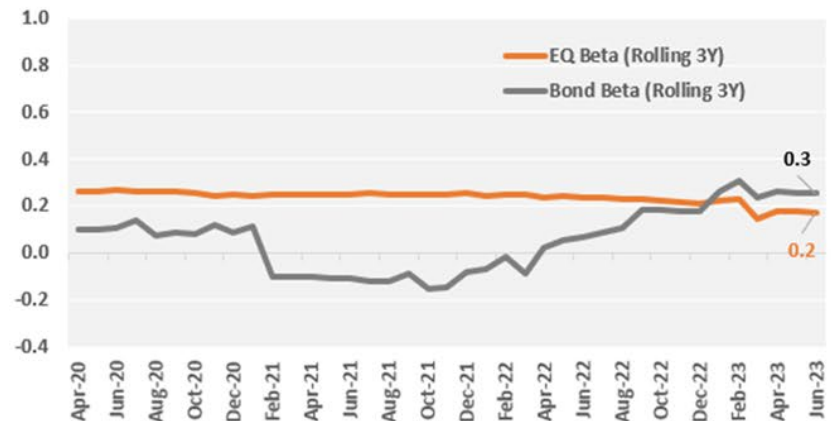
# Sharpe Ratio and Market Beta

As of June 30, 2023

### Risk-Adjusted Return : 3 Years



### Diversifying Benefit - PRIT HF's Beta



# PRIM Hedge Funds and PCS Performance Breakdown

As of June 30, 2023 (Net of Fees)

	NAV	as of Total HF	as of Total PCS	1 Quarter	1 Year	3 Year
<b>StableValue HF</b>	\$4.48 bn	61%	55%	<b>1.8%</b>	<b>4.6%</b>	<b>7.3%</b>
Mellon-reported BM (blend)				1.8%	4.1%	7.1%
Peer-based BM (old)				1.6%	1.9%	6.4%
Market Index-based BM (new)				1.8%	6.0%	3.4%
<b>Directional HF</b>	\$2.11 bn	29%	26%	<b>3.1%</b>	<b>4.9%</b>	<b>6.3%</b>
Mellon-reported BM (blend)				3.7%	9.1%	7.3%
Peer-based BM (old)				2.4%	5.6%	6.2%
Market Index-based BM (new)				3.7%	10.5%	6.5%
<b>PAAMCO FoF</b>	\$0.71 bn	10%	9%	<b>-0.7%</b>	<b>2.9%</b>	<b>6.2%</b>
Mellon-reported BM (blend)				1.8%	5.5%	5.8%
Peer-based BM (old)				1.4%	4.4%	5.4%
Market Index-based BM (new)				1.8%	6.0%	3.4%
<b>Real Assets</b>	\$0.74 bn	N/A	9%	<b>0.9%</b>	<b>-6.1%</b>	<b>-1.2%</b>
Mellon-reported BM				2.0%	10.1%	7.2%

- Returns over 1 year are annualized.
- Since 2Q2020, Mellon started separately reporting Stable Value vs. Directional, after Asset Allocation decided to bifurcate their different value propositions.
- “Peer-based BM” is an aggregate of HFRI strategy indices. It was the benchmark used through 2/2023.
- “Market Index-based BM” is the new benchmark recently approved and implemented starting 3/2023.
- “Mellon-reported BM” blends Peer-based BM through 2/2023 and Market Index-based BM starting 3/2023.

# Glossary of PRIT Fund Investment Terms

**Active Management** – Refers to a portfolio management strategy where the manager makes specific investments with the goal of outperforming an investment benchmark index.

**Barclays Capital Aggregate Bond Index** – An index that replicates the U.S. investment-grade bond market. The index is comprised of government and corporate bonds.

**Core Fixed Income Portfolio** – Investments in investment-grade bonds (see definition of Barclays Capital Aggregate Bond Index).

**Domestic Equity Portfolio** – Investments in shares of publicly-traded U.S. companies utilizing a large capitalization (large cap), small and middle capitalization (small/smld cap), and micro capitalization (micro cap) strategies.

**Emerging-Diverse Manager** – Investment managers with less than \$2B of AUM, less than 3 yrs track record, that are minority-owned or women-owned.

**Emerging Markets Equity Portfolio** – The primary strategy for this portfolio is investing in companies in developing countries, including, but not limited to, China, Brazil, Russia, South Korea, Taiwan, India and Turkey. These countries typically have less efficient securities markets, and thus there is opportunity for substantial returns.

**Hedge Fund Research, Inc. (HFRI)** – An organization that specializes in the areas of indexation and analysis of hedge funds.

**International Equity Portfolio** – The primary strategy for this portfolio is investing in companies in developed markets, industrialized nations outside of the United States, including, but not limited to, Japan, Germany, the United Kingdom, France, Italy, Switzerland, Hong Kong, Canada, and Australia.

**MSCI ACWI Index** – Captures large and mid cap representation across 23 Developed Markets and 25 Emerging Markets.

**MSCI Emerging Markets Index** – Captures large and mid cap representation across 25 Emerging Markets.

**MSCI Europe Investable Market Index** – Captures large, mid and small cap representation across 15 Developed Markets

**Passive Management** - An investing strategy that tracks a market-weighted index or portfolio. The most popular method is to mimic the performance of an externally specified index by buying an index fund.

**Portfolio Completion Strategies (PCS)** – The objective of the PCS portfolio is to provide the PRIT Fund access to broader investment opportunities. Investments selected for the PCS portfolio should enhance the risk/return profile of the PRIT Fund. Investments may include long-term strategic investments or short-term opportunistic investments. Some of these strategies include hedge funds and real assets.

**Private Equity Portfolio** – Two components comprise the PRIT Fund’s Private Equity portfolio: venture capital (early-stage and multi-stage) and special equity partnerships (buyout and growth equity). Unlike public markets, where the investor has the ability to “cash out” of positions at any time, these private market investments are illiquid.

**Real Estate Portfolio** – Equity investments in both directly-owned properties and REIT securities. Directly-owned core properties make up most of the portfolio. Core properties are typically well-leased, operating properties that provide regular cash flow from rents. Non-core investments include properties that are under development.

**REIT** – A company that owns, and in most cases operates, income-producing real estate. REITs often trade on major exchanges like other securities and provide investors with a liquid stake in real estate.

**Russell 3000 Index** – A stock market index that measures the performance of the largest 3,000 U.S. companies representing approximately 97% of the investable U.S. equity market.

**Standard & Poor’s (S&P) 500 Index** – A U.S. stock market index based on the market capitalizations of 500 large companies having common stock listed on the NYSE or NASDAQ.

**Timberland Portfolio** – Direct investments in timberland: in the United States timberland markets are divided into three regions, each with distinct economic characteristics: the Pacific Northwest, the Northeast and the Southeast. The Pacific Northwest is a high value softwood market, in which the growing cycle to produce a mature tree is forty to fifty years; in Australia, there is approximately 2 million hectares (4.9 million acres) of plantation timberlands that are almost evenly split between hardwood and softwood species.

**Treasury Inflation-Protected Securities (TIPS)** – Investment grade fixed income investments designed to provide a hedge against rising inflation. The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, the investor is paid the adjusted principal or original principal, whichever is greater.

**Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS)** – Bonds that are sold at a discount to their face value. The investor does not receive interest payments but is repaid the full-face value when the bonds mature. Also called “zero coupon” bonds.

**Value Added Fixed Income** – A fixed income portfolio consisting of the following strategies: high yield bonds (non-investment grade corporate debt); bank loans (senior secured corporate debt); emerging markets debt (debt issued within the emerging, or developing countries, marketplace, and private debt (investments in private partnerships that invest directly in companies under financial distress).



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THANK YOU

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**Firm: UBS Hedge Fund Solutions LLC**

**Strategy/Product:**

**Client: MWRA**

**NEPC Manager Due Diligence Questionnaire - Update**

**Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

**Firm/Organization**

1. Have there been any changes in ownership or management in the past year?

There have been no changes to the ownership structure of HFS over the past year. HFS is a wholly owned subsidiary of UBS Asset Management (Americas) Inc., which itself is a wholly owned subsidiary of UBS Americas Holding LLC, which in turn is owned by UBS AG and ultimately by UBS Group AG. Additionally, as formally announced in September 2022, after an illustrious 24-year investment career in the hedge fund industry, Bruce Amlicke stepped back from his role as Chief Investment Officer (CIO) and Head of HFS in Q1 2023 and transition to a Senior Advisor. Effective 1 March 2023, Edoardo (Edo) Rulli became CIO and Head of HFS.

2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

As of 30 June 2023, HFS's AUM totaled approximately USD 46.2 billion including non-discretionary assets.

All amounts are in USD millions

Mandate Form	1/1/2019	1/1/2020	1/1/2021	1/1/2022*	1/1/2023	4 / 1 / 2023
Commingled	5,555	5,472	7,443	8,840	8,900	8,934
Single Mandate	26,975	26,540	25,528	26,722	25,449	25,023
Advisory	5,838	5,425	5,411	7,434	11,385	11,803
<b>Total</b>	<b>38,368</b>	<b>37,438</b>	<b>38,382</b>	<b>42,995</b>	<b>45,772</b>	<b>45,761</b>

Totals may not sum due to rounding.

Please note that Custom/Bespoke AUM is inclusive of discretionary management of HFS and its affiliates.

\*In January 2022 there was a change in the mandate for a few products, which resulted in a reclassification from "single mandate" to "advisory"

3. Have there been any new or discontinued products in the past year?

From time to time, HFS has terminated various products. These includes funds created as structured products with pre-determined expiration dates, and custom or specific mandates that were wound down either due to lack of demand or client redemptions as a result of changing market opportunities and / or performance related issues. However, on April 1st, 2023 HFS and GWM launched an ESG-focused fund of hedge fund portfolio designated as SFDR Article 8 that is offered on GWM UBS Manage SI Platform.



4. Are any products capacity constrained?

At this time there are no capacity constrained products. The investment team evaluates all products on a regular basis for potential limitations on the ability to take in new capital.

5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.

HFS is not involved in any direct pending litigation or legal proceedings which would have a material impact to its operations. However, HFS is an affiliate of UBS AG which is subject to various legal proceedings. UBS AG and other companies within the UBS Group, due to the nature of our business, they are involved in various claims, disputes and legal proceedings, arising in the ordinary course of business. The Group makes provisions for such matters when, in the opinion of management and its profession advisors, it is probable that a payment will be made by The Group, and the amount can be reasonably estimated.

6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.

In a global business such as ours, a diverse workforce is a competitive advantage. Our strategy is to continue to shape a diverse and inclusive organization that is innovative, provides outstanding service to our clients, offers equitable opportunities for all and is a great place for work for everyone. Our broad approach focuses on gender, race, ethnicity, LGBTQ+, age, disability, and mental health, among other aspects, with inclusive leadership playing an important role. Increasing gender and ethnic diversity are our highest near-term strategic diversity, equity and inclusion priorities.

Diversity and inclusion considerations are also integrate in our Operational Due Diligence review. We ask managers and gender and racial / ethnic representation across investment and non-investment teams, as well as with respect to firm ownership. D&I is then assigned a score, and is an input in the manager's overall ESG score.

### **Portfolio Management Team**

1. Have there been any changes in the portfolio management team in the past year?

As formally announced in September 2022, after an illustrious 24-year investment career in the hedge fund industry, Bruce Amlicke stepped back from his role as Chief Investment Officer (CIO) and Head of HFS in Q1 2023 and transition to a Senior Advisor. Effective 1 March 2023, Edoardo (Edo) Rulli became CIO and Head of HFS.

2. Are there any expected changes to the team in the future (planned additions or departures)?

In the event an individual were to leave the firm, key investment personnel are extensively cross-trained, and a team approach is encourage among the senior investment professionals. HFS portfolios are managed by the Chief Investment Officer ("CIO") who is supported by the Head of Portfolio Management, Head of Research, Investment Risk, Regional Heads, Strategy Heads and Senior Portfolio Managers. The scale of our business allows for sufficient functional redundancies to mitigate disruptions to our investment program from the potential departure of any particular individuals.



## Process

1. Have there been significant changes in any of the areas below in the past year? **No.**

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

## Philosophy

1. Describe recent changes in investment philosophy, if any.

There have been no changes in UBS HFS's investment philosophy. The fundamental tenets of HFS's investment philosophy are as follows:

- We believe that markets offer temporary inefficiencies that are potentially monetizable by HFS in concert with high conviction hedge fund talent. Inefficiencies are often the result of several factors including:
  1. Forced selling of assets, leading to temporary distortions in supply and demand.
  2. Regulatory driven inefficiencies
  3. Complex, misunderstood securities or themes
  4. Variant discounting of fundamentals
- We view ourselves as investors, not just allocators. We believe in a highly active approach, supported by an Investment Team with capital markets and hedge fund investor experience. This real world experience enhances our ability to vet market opportunities, differentiate between managers and monitor current investments. We are active managers of active managers and rely heavily on independent evaluation of strategies to support our allocation (or de-allocation) decisions.
- We believe focusing on investor advocacy, governance and operational due diligence results in advantageous terms and protection of capital. Fees are a critical focus and we seek to use our scale as a large investor to reduce fees we pay to underlying sub-funds whenever possible. We believe hedge fund fees are a function of: 1) supply and demand for capacity; and 2) the ability of a manager to generate sustainable alpha. HFS seeks to ensure the fees we pay are commensurate with these factors.

## Portfolio

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please see meeting presentation for details.

2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

A&Q Neutral Alpha Strategies Limited Share Class – BR (USD m)

	<b>January 1</b>	<b>March 30</b>	<b>June 30</b>	<b>September 31</b>	<b>December 31</b>
<b>2018</b>	-	-	37820446.67	37943482.59	41788926.41
<b>2019</b>	41788926.41	44317950.25	45195225.24	45329150.97	46814052.63
<b>2020</b>	22925348.26	22226784.17	10551998.27	10987085.84	11512881.69
<b>2021</b>	11512881.69	11498375.71	11636907.05	12974746.51	13203016.63
<b>2022</b>	13203016.63	132286775.44	13640932.75	13725986.28	14017299.6





<b>2023</b>	14017299.6	1426805.42	14232224.09	-	-
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- Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

<b>Breakdown of AUM by 5 largest clients:</b>	<b>AUM (USD m)</b>	<b>Total (%)</b>
UBS Wealth Management JV Advisory*	10,596	23%
UBS Wealth Management JV Discretionary*	7,708	17%
Corporate Pension	7,353	16%
Sovereign Wealth Fund	1,962	4%
Sovereign Wealth Fund II	635	1%

Source: HFS

% of AUM is shown by size of total assets, including both Discretionary and Non-Discretionary

AUM is representative of business line AUM

AUM is as of 1 April 2023

\*HFS has several joint ventures with UBS Wealth Management across multiple programs for their clients to use for investing in hedge funds

## Performance / Market Outlook

- If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

Please see meeting presentation for details for the investors specific share class.

- Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.

The product generated a positive return in July. Performance was driven by Trading strategies, while Credit / Income, Multi-Strategy, and Relative Value strategies also contributed to returns. Equity Hedged approaches generated relatively flat returns. In Equity Hedged, equity event approaches added to gains. Fundamental and opportunistic trading approaches produced relatively flat returns. In Credit / Income, other income approaches added to gains. Corporate long / short approaches generated relatively flat returns. In Relative Value, capital structure / volatility arbitrage, fixed income relative value, and quantitative equity approaches produced positive performance, while agency MBS strategies detracted from returns. In Trading, discretionary and commodities approaches generated positive performance.

US Equity Hedged strategies produced relatively flat returns in July. While most managers posted positive performance during the month, which was largely driven by beta gains, there was variation within cohorts as a function of increased stock dispersion. Alpha generation was challenged in July, with negative long / short spread caused by episodic short squeezes and notable de-grossing across the industry. However, across HFS, exposure movements were more manager-specific with varying gross market value trends. In general, it was another risk-on month as signs of moderating inflation along with a resilient consumer continued to support the goldilocks soft landing narrative. Small capitalization stocks outperformed large capitalization stocks. Banks and energy sectors outperformed, while more defensive areas within healthcare lagged. Most earnings reports thus far have been ahead of expectations, but the market has rewarded these 'earnings beats' to a lesser degree than usual. Conversely, companies missing estimates have been penalized to a greater extent

Asian Equity Hedged strategies produced positive returns for the month. In Japan, the market was mixed as the BOJ announced their plans to increase the band on the 10-year JGB to 100 basis points. Despite this announcement, hedge funds in the space generated mostly muted returns. In Offshore China, markets were strong, driven by policy announcements and short covering, particularly at



month-end, where the government set the stage for further stimulus. Equity markets reacted positively due to future expectations as well as extremely light position levels prior to the announcements. In Onshore China, markets were also positive but onshore investors appeared more cautious than offshore investors. July was a challenging month for China hedge funds overall. Most hedge funds in the space did not capture the sharp rally, as very few funds had conviction to increase long exposure at this juncture without seeing more details and commitment from the government. Funds with large short exposures generally incurred losses. However, there were a few positive outliers.

Corporate long / short strategies typically generated flat performance in July. Spreads tightened in both investment grade and high yield markets as there was a significant amount of outperformance in the lower-rated issuers. In corporate long / short sub-strategy, there were high levels of dispersion in July, although all but one fund's performance ranged from flat to positive for the month. Those managers with lower net exposures underperformed relative to the funds positioned in a net long manner. Losses were incurred from the Chinese property sector. The corporate long-biased sub-strategy also performed well amid the rally in risk assets in July. Like last month, long positions drove performance, and funds capitalized on investments in high yield bonds and leveraged loans, which produced positive carry and mark-to-market gains.

Agency MBS strategies generated negative returns. During the month, there were some variations in performance across managers. Investments in mortgage derivatives were additive to performance due to the positive carry and favorable fundamentals. Residential mortgage derivatives performed well as prepayment speeds continued to stay at low levels. However, relative value positions produced mixed results, and differences in basis positioning contributed to the dispersion in manager returns.

Capital structure / volatility arbitrage strategies generally produced positive performance in July. As equities rallied throughout the month, convertible bonds typically underperformed. In contrast, valuations of the rest of the universe expanded gradually throughout the month. A notable characteristic of July was the absence of any new convertible issuance in the US for the first time since August 2011. All of July's new issuance came from Europe (approximately USD 1.10bn) and Asia excluding Japan (approximately USD 2.35bn). Year-to-date, global CB issuance now totals USD 42.9bn, led by the US (approximately USD 27.39bn), followed by Europe (approximately USD 7.81bn), Asia (approximately USD 6.65bn), and Japan (approximately USD 1.03bn). Lastly, some managers also participated in buybacks, which were additive to performance and expect the buyback trend to continue for the remainder of the year. During the month, non-investment grade convertible bond spreads decreased -40bps to 518bps, while the Bloomberg US HY 'B' Index spread decreased -32bps to 366bps, demonstrating some spread tightening. The implied volatility of investment-grade convertible bonds with at least one year of call protection ended the month at 25.3%, versus 26.4% in the prior month.

Fixed income relative value strategies produced positive returns for the month. Most of the gains were driven by cash / futures basis strategies across the US, and to a lesser extent Japan, with some managers succeeding in German basis. Swap spread trading in the US and Europe were also generally additive, although less so in Japan, while tenor basis produced more mixed results. Some funds with exposure to European front-end widening trades also underperformed, while some funds generated gains from US front-end tightening exposures. Macro trading was slightly positive from directional short positions in Japan, although currently, managers generally hold less directional risk.

Quantitative equity strategies generally produced positive returns in July. Quant risk premia widened as characterized by expanding residual volatility and increasing dispersion. The momentum factor was challenged, in addition to expected losses in low beta factor. Fundamental quants and equity extension funds, which typically are more exposed to momentum, value, and low beta factors, tended to underperform. Statistical arbitrage and machine learning strategies generally fared better



as they were positioned to take advantage of technical reversals. Multi-strategy approaches featured more muted returns, mostly from diversifying macro trading strategies that rely less on traditional trend following and alternative markets. Short-term models produced modest gains in fixed income and commodities, which were offset by losses incurred in equities.

Discretionary strategies produced positive performance in July. Developed macro managers generated gains from short positions in Japanese rates. US rates trading was also generally positive with a mix of curve steepening trades, short volatility, and more tactical trading around expectations of the US Federal Reserve meetings. Equally, curve steepening trades in the UK were generally additive, while FX themes were more mixed across long positions in JPY, short positions in CNH and positive contribution from Latam carry trades. Macro relative value approaches generally outperformed more directional managers, with both cross-country and relative value trades being the primary driver of gains. Equity themes resulted in more mixed performance, with some managers benefitting from long positions in Japan and NDX, while others generated negative performance from having a short bias. Emerging markets macro managers generated positive performance, with a mix of EM rates receivers, both in Latam but also CEMEA (ZAR, Romania), as well long positions in credit (SSA, Latam, ZAR), while FX was more mixed, as managers incurred losses from CNH short exposure and negative carry in Zambia, Egypt and Nigeria. Overall, commodity managers produced positive performance, with gains from short exposure in natural gas. Long-biased metals specialists also benefitted from the rally in that space.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

Please see meeting presentation for details.

**4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

Please see meeting presentation for details.



For professional / institutional / qualified investors only

# Massachusetts Water Resources Authority Employees' Retirement System

## Portfolio Review

UBS Hedge Fund Solutions ("HFS")

The views expressed are as of the date of this material and are a general guide to the views of UBS Hedge Fund Solutions LLC, a division within UBS Asset Management.

September 2023



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Section 1 **Monthly Performance Report – July 2023**

Section 2 **HFS Q2 2023 Strategy Outlook**

# Risk considerations

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The Fund's investment program is speculative and entails substantial risks which may place your capital at risk. An investment in the Fund includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-US securities and illiquid investments. The Fund invests largely in other unregulated hedge funds. Such a portfolio of hedge funds may increase an investor's volatility for potential losses or gains.

One or more of the funds, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio (as well as the Fund's) may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that a fund's strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. The investment funds in which the Fund invests can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies. In addition, the overall performance of the Fund is dependent not only on the investment performance of individual managers, but also on the ability of the Fund's Adviser to effectively select and allocate the Fund's assets among such managers on an ongoing basis.

The Fund's portfolio may be highly leveraged and the volatility of the price of its interests may be great. The Fund's fees and expenses may substantially offset the Fund's trading profits. There is no secondary market for interests in the Fund and none is expected to develop. In addition, the ability to transfer one's interest in the Fund is restricted. It is possible that the Fund will be unable to provide tax information to investors without significant delays, and investors may need to seek extensions on the time to file their tax returns at the federal, state and local levels. Interests are not deposits or obligations of, or guaranteed or endorsed by any bank or other insured depository institution, and are not insured by the Federal Deposit Insurance Corporation, Financial Service Compensation Scheme or other relevant non-US governmental agency. Investors should consider the Fund as a supplement to an overall investment program and should invest only if they are willing to undertake the risks involved.

Section 1

# Monthly Performance Report – July 2023

# A&Q Neutral Alpha Strategies Limited

## Key information

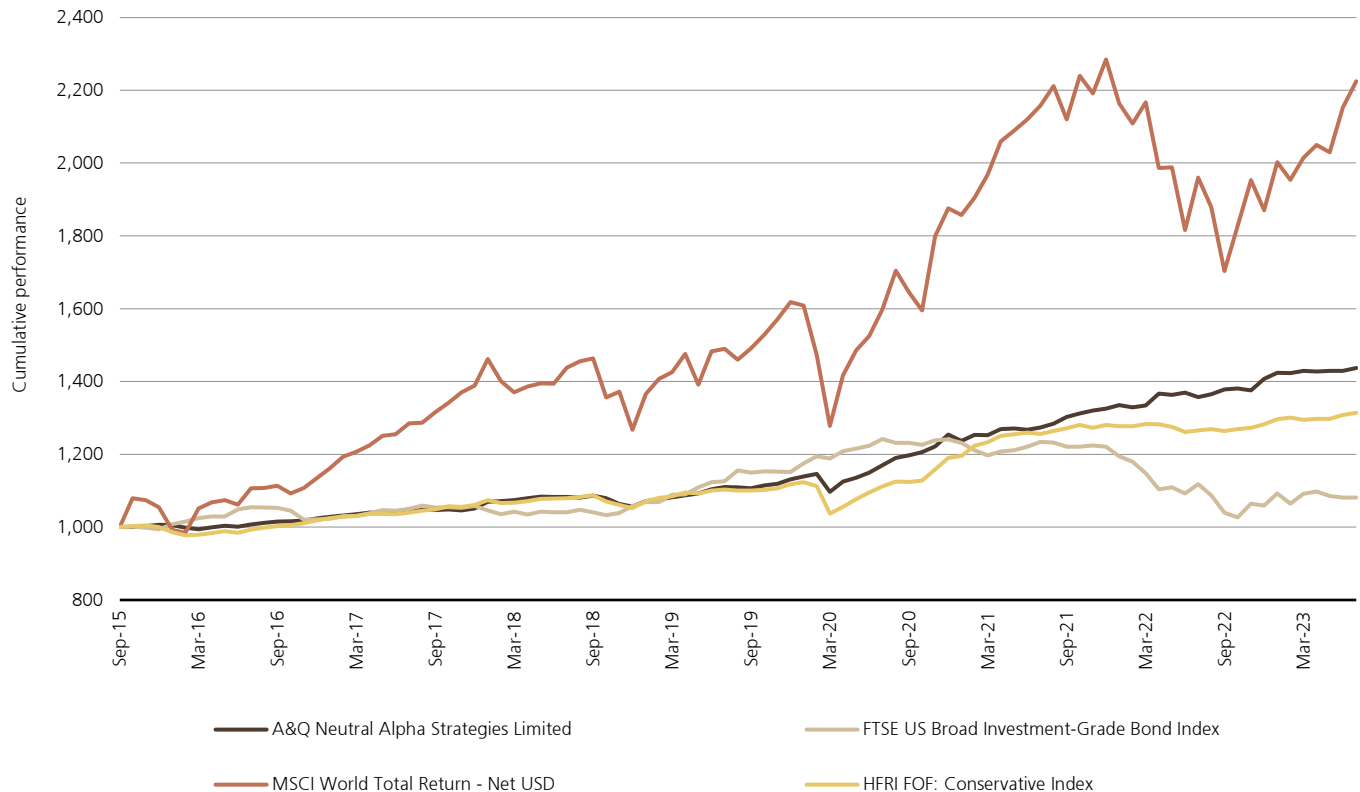
Share class - currency	BR-USD	Master fund assets as at 1 Jul '23	USD 1,832 million
Share class inception date	01-Oct-15	Number of funds as at 1 Jul '23	29
Net asset value	USD 1,437.18	Number of funds added over the last 12 months	8
		Number of funds redeemed over the last 12 months	13

## Historical monthly performance

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
<b>2023</b>	1.18	-0.09	0.46	-0.14	0.09	0.02	0.57						2.11
<b>2022</b>	0.71	-0.50	0.42	2.44	-0.23	0.45	-0.90	0.56	0.97	0.15	-0.34	2.32	6.17
<b>2021</b>	-1.39	1.32	-0.04	1.36	0.08	-0.23	0.45	0.85	1.46	0.72	0.60	0.43	5.72
<b>2020</b>	0.66	0.67	-4.33	2.59	0.94	1.20	1.79	1.71	0.57	0.74	1.35	2.63	10.85
<b>2019</b>	1.37	0.45	0.59	0.46	0.50	1.01	0.61	-0.13	-0.18	0.70	0.40	1.09	7.08
<b>2018</b>	1.81	0.11	0.26	0.49	0.41	-0.02	-0.02	-0.18	0.53	-0.70	-1.43	-0.67	0.55
<b>2017</b>	0.45	0.32	0.32	0.45	0.11	-0.25	0.38	0.50	-0.09	0.19	-0.24	0.46	2.62
<b>2016</b>	-0.10	-0.75	-0.33	0.43	0.42	-0.22	0.62	0.42	0.34	0.09	0.15	0.65	1.72
<b>2015</b>										0.05	0.26	0.35	0.65

A&Q Neutral Alpha Strategies Limited returns represent the profits and losses of the Fund's class BR shares net: (i) a 0.90% annualized management fee, (ii) a 0% performance fee deducted from monthly profits, and (iii) expenses charged to the Fund in the month shown. The returns are based on calculations and information provided to the Fund's Investment Manager, UBS Hedge Fund Solutions LLC, by the Fund's Administrator, MUFG Alternative Fund Services (Cayman) Limited. In addition to being unaudited, the returns have not been reviewed by an independent third party. Therefore, the returns are subject to change without notification to the recipient based on, amongst other things, an annual audit of the Fund. Any returns presented may or may not be indicative of the returns of the share class, series, and/or fund offered to you. Your actual returns may be different and can be determined from the NAV statements sent by the fund's administrator.

## Performance of A&Q Neutral Alpha Strategies Limited and several indices



Each index shown as if the index was at 1,000 as of October 1, 2015. The chart displayed above is intended solely for illustrative purposes. Neither the Fund nor any of the other indices shown are intended to track each other as they follow different investment strategies/programs, and different results over similar periods can be expected.  
Note: Data assumes re-investment of any dividend where applicable.

Source: UBS Hedge Fund Solutions, FTSE Russell, Morgan Stanley Capital International, Hedge Fund Research, Inc.. Indices are for illustrative purposes only.

**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**



## Performance statistics

Time period	Statistic	A&Q Neutral Alpha Strategies Limited	FTSE US Broad		Net USD	HFRI FOF: Conservative Index
			Investment-Grade Bond	Index		
Month-to-date	Cumulative return	0.57%	-0.03%		3.36%	0.53%
Last full quarter	Cumulative return	-0.03%	-0.89%		6.83%	1.03%
Year-to-date	Cumulative return	2.11%	2.11%		18.95%	2.50%
Rolling 1 year	Annualized return	5.88%	-3.26%		13.48%	3.85%
	Annualized volatility	2.55%	8.51%		18.74%	1.64%
Rolling 3 years	Annualized return	7.10%	-4.54%		11.67%	5.75%
	Annualized volatility	3.04%	6.11%		17.78%	2.92%
	Sharpe ratio	1.73	-1.00		0.62	1.36
	Correlation	1.00	-0.20		-0.11	0.44
Rolling 5 years	Annualized return	5.83%	0.76%		9.12%	4.02%
	Annualized volatility	3.68%	5.51%		18.29%	4.43%
	Sharpe ratio	1.11	-0.14		0.48	0.53
	Correlation	1.00	-0.05		0.33	0.76
Rolling 10 years	Annualized return	-	-		-	-
	Annualized volatility	-	-		-	-
	Sharpe ratio	-	-		-	-
	Correlation	-	-		-	-
Since inception*	Annualized return	4.74%	1.00%		10.75%	3.55%
	Annualized volatility	3.08%	4.67%		15.61%	3.70%
	Sharpe ratio	1.08	-0.05		0.65	0.60
	Sortino ratio	2.55	0.30		1.01	1.30
	Correlation	1.00	-0.07		0.31	0.75
	Beta	1.00	-0.05		0.06	0.62
	Highest 1 month loss	-4.33%	-4.38%		-13.23%	-6.78%
	Maximum draw-down	-4.33%	-17.40%		-25.42%	-7.64%
% Positive months	73.40%	52.13%		68.09%	73.40%	

\*Note: See share class inception date on top left of front page.

Source: UBS Hedge Fund Solutions, FTSE Russell, Morgan Stanley Capital International, Hedge Fund Research, Inc.. Indices are for illustrative purposes only.

Please see Endnotes for selected statistics definitions and index descriptions.

**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

## Performance contribution and portfolio concentration summary

### Strategy contribution (gross of fees)

Strategy	Month-to-date	Last full quarter	Year-to-date
Equity Hedged	0.00%	0.19%	0.58%
Relative Value	0.17%	0.54%	1.58%
Credit/Income	0.01%	-0.24%	0.12%
Multi-Strategy	0.11%	0.24%	0.62%
Trading	0.33%	-0.56%	-0.29%
Co-Investment	0.04%	0.09%	0.24%
Cash & Other Assets	0.00%	-0.07%	-0.20%
<b>Total</b>	<b>0.65%</b>	<b>0.19%</b>	<b>2.65%</b>
<b>A&amp;Q Neutral Alpha Strategies</b>			
Limited Class BR-USD Net return	0.57%	-0.03%	2.11%

### Month-to-date performance contribution by fund

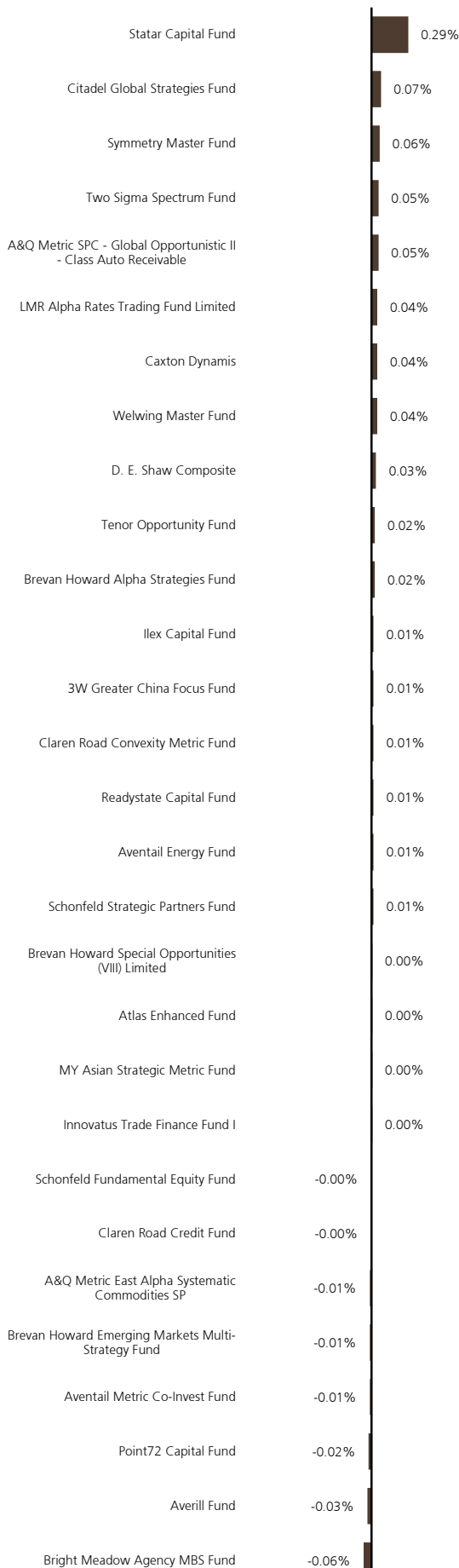
Largest positive contribution by a single fund	0.29%
Largest negative contribution by a single fund	-0.06%
Number of funds with positive contribution	21
Number of funds with negative contribution	8

### Portfolio concentration

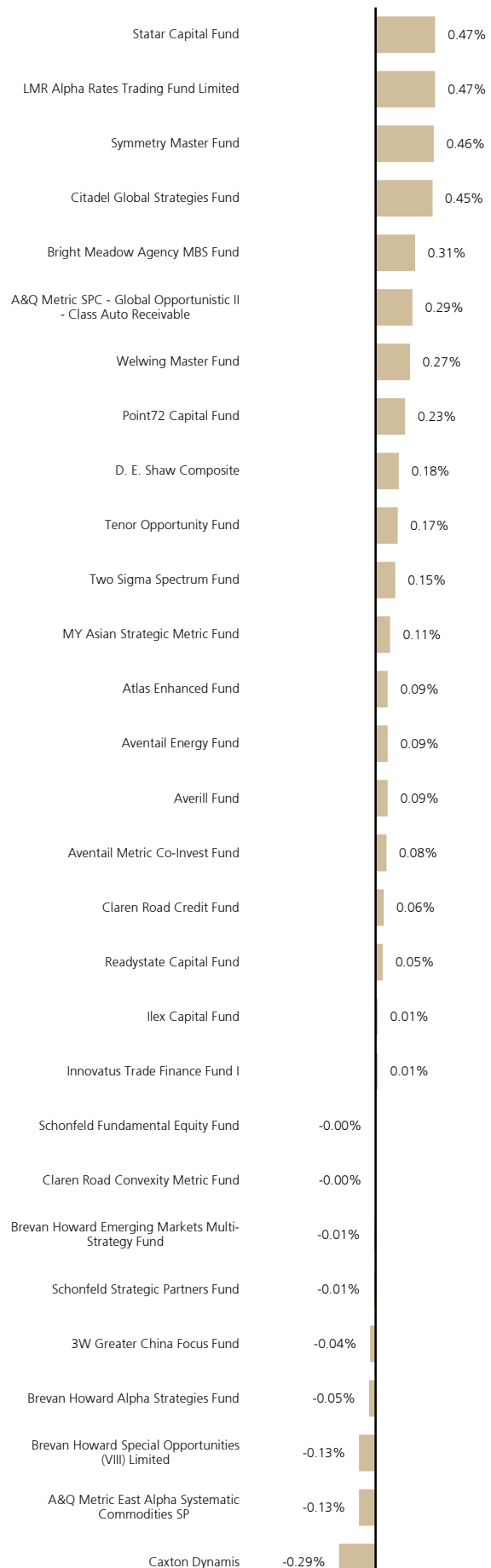
	Current	12 months ago
Largest single position	7.6%	6.3%
Top 5 positions	30.4%	26.4%
Top 10 positions	51.2%	47.1%
Top 75% of portfolio	17 funds	19 funds

Please see Endnotes for an explanation of the performance contribution calculation methodology.

**Month-to-date (gross) performance contribution by fund\***



**Year-to-date (gross) performance contribution by fund\***



\*Note: includes funds held at any time during the month reported; net of fund management and performance fees. Please see Endnotes for an explanation of the underlying performance contribution calculation methodology. Source: UBS Hedge Fund Solutions

**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

**Performance contribution by fund**

Strategy <sup>1</sup>	Fund name <sup>2</sup>	Investment Date date	Termination date <sup>3</sup>	Month-to-date			Last full quarter			Year-to-date		
				Alloc. <sup>4</sup>	ROR	Cont. <sup>5</sup>	Alloc. <sup>4</sup>	ROR	Cont. <sup>5</sup>	Alloc. <sup>4</sup>	ROR	Cont. <sup>5</sup>
Equity Hedged	Atlas Enhanced Fund	Feb-21	--	5.33%	0.05%	0.00%	5.39%	0.91%	0.05%	5.38%	1.68%	0.09%
	Point72 Capital Fund	Feb-18	--	4.03%	-0.39%	-0.02%	3.99%	3.07%	0.12%	3.97%	5.75%	0.23%
	Aventail Energy Fund	Aug-22	--	2.83%	0.25%	0.01%	2.94%	-2.12%	-0.06%	2.91%	2.93%	0.09%
	MY Asian Strategic Metric Fund	Mar-20	--	2.26%	0.11%	0.00%	2.24%	1.51%	0.03%	2.24%	4.83%	0.11%
	Schonfeld Fundamental Equity Fund	Mar-21	--	2.18%	-0.02%	-0.00%	2.21%	-0.01%	0.00%	2.22%	-0.18%	-0.00%
	Averill Fund	Jan-22	--	2.15%	-1.21%	-0.03%	2.08%	4.66%	0.10%	2.08%	4.45%	0.09%
	3W Greater China Focus Fund	Apr-23	--	1.87%	0.54%	0.01%	1.90%	-2.32%	-0.05%	1.08%	-1.79%	-0.04%
	Illex Capital Fund	Jul-23	--	1.76%	0.83%	0.01%	--	--	--	0.25%	0.83%	0.01%
<b>Equity Hedged total:</b>				<b>22.41%</b>	<b>-0.02%</b>	<b>0.00%</b>	<b>20.74%</b>	<b>0.93%</b>	<b>0.19%</b>	<b>20.13%</b>	<b>2.98%</b>	<b>0.58%</b>
Relative Value	Symmetry Master Fund	Oct-14	--	7.61%	0.78%	0.06%	7.51%	3.06%	0.23%	7.50%	6.27%	0.46%
	LMR Alpha Rates Trading Fund Limited	Apr-21	--	5.85%	0.76%	0.04%	5.80%	2.56%	0.15%	5.75%	8.32%	0.47%
	Readystate Capital Fund	Feb-23	--	4.08%	0.18%	0.01%	4.08%	1.34%	0.05%	3.30%	1.66%	0.05%
	Welwing Master Fund	Sep-22	--	4.05%	1.00%	0.04%	4.00%	3.18%	0.13%	4.00%	6.71%	0.27%
	Bright Meadow Agency MBS Fund	Aug-21	--	4.02%	-1.38%	-0.06%	3.26%	1.10%	0.07%	3.17%	10.12%	0.31%
	Two Sigma Spectrum Fund	Sep-07	--	3.79%	1.31%	0.05%	3.79%	0.51%	0.02%	3.78%	4.11%	0.15%
	Tenor Opportunity Fund	Jun-20	--	3.77%	0.64%	0.02%	3.75%	2.19%	0.08%	3.75%	4.53%	0.17%
	Vatic Adventus Fund	Apr-22	Jun-23	--	--	--	1.37%	-5.70%	-0.08%	1.85%	-9.84%	-0.22%
	Barnegat Investments Limited	Mar-01	May-23	--	--	--	0.36%	3.44%	0.01%	0.52%	12.76%	0.08%
	A&Q Metric Fir Tree Opportunity SPAC Fund	Apr-21	Mar-23	--	--	--	0.00%	-0.35%	-0.01%	0.01%	8.11%	-0.01%
PSquared Event Opportunities Fund	May-14	May-23	--	--	--	1.47%	-4.46%	-0.10%	1.74%	-5.70%	-0.14%	
<b>Relative Value total:</b>				<b>33.16%</b>	<b>0.51%</b>	<b>0.17%</b>	<b>35.39%</b>	<b>1.61%</b>	<b>0.54%</b>	<b>35.38%</b>	<b>4.59%</b>	<b>1.58%</b>
Credit/Income	Claren Road Credit Fund	Sep-20	--	5.95%	-0.01%	-0.00%	6.12%	-2.38%	-0.15%	6.05%	1.05%	0.06%
	Claren Road Convexity Metric Fund	Aug-21	--	0.77%	1.15%	0.01%	0.78%	-1.53%	-0.01%	0.78%	-0.40%	-0.00%
	Innovatus Trade Finance Fund I	Oct-18	--	0.61%	0.05%	0.00%	0.61%	0.50%	0.00%	0.61%	1.55%	0.01%
	L&R Asia Credit Alpha Fund	Nov-21	Jun-23	--	--	--	2.03%	-4.21%	-0.09%	1.80%	0.39%	0.02%
	Aeolus Keystone January 2017 Fund	Jan-17	Jan-23	--	--	--	--	--	--	0.00%	1.03%	0.00%
	Aeolus Keystone January 2019 Fund	Jan-19	May-23	--	--	--	0.00%	134.64%	0.00%	0.00%	342.27%	0.01%
	Axonix Special Opportunities SBL Fund	Nov-16	Mar-23	--	--	--	--	--	--	0.66%	1.39%	0.02%
<b>Credit/Income total:</b>				<b>7.33%</b>	<b>0.12%</b>	<b>0.01%</b>	<b>9.55%</b>	<b>-2.47%</b>	<b>-0.24%</b>	<b>9.91%</b>	<b>0.64%</b>	<b>0.12%</b>
Multi-Strategy	Citadel Global Strategies Fund	Sep-14	--	5.65%	1.27%	0.07%	5.60%	2.77%	0.15%	5.56%	8.31%	0.45%
	D. E. Shaw Composite	Apr-13	--	3.67%	0.85%	0.03%	3.62%	2.88%	0.10%	3.63%	5.06%	0.18%
	Schonfeld Strategic Partners Fund	Aug-21	--	2.34%	0.23%	0.01%	2.37%	-0.79%	-0.02%	2.38%	-0.52%	-0.01%
<b>Multi-Strategy total:</b>				<b>11.66%</b>	<b>0.93%</b>	<b>0.11%</b>	<b>11.58%</b>	<b>2.07%</b>	<b>0.24%</b>	<b>11.57%</b>	<b>5.42%</b>	<b>0.62%</b>
Trading	Caxton Dynamis	Apr-21	--	4.19%	1.06%	0.04%	4.29%	-2.56%	-0.11%	4.35%	-6.29%	-0.29%
	Brevan Howard Emerging Markets Multi-Strategy Fund	Jul-23	--	3.08%	-0.39%	-0.01%	--	--	--	0.44%	-0.39%	-0.01%
	Brevan Howard Alpha Strategies Fund	Apr-21	--	3.05%	0.52%	0.02%	3.10%	-1.01%	-0.03%	3.14%	-1.75%	-0.05%
	A&Q Metric East Alpha Systematic Commodities SP	Apr-21	--	2.99%	-0.32%	-0.01%	3.54%	-2.85%	-0.08%	3.60%	-4.30%	-0.13%
	Statar Capital Fund	Feb-21	--	2.58%	11.19%	0.29%	3.22%	-12.11%	-0.35%	3.60%	10.28%	0.47%
Element Capital Fund	Feb-11	Apr-23	--	--	--	0.45%	0.35%	0.00%	1.36%	-8.89%	-0.28%	
<b>Trading total:</b>				<b>15.89%</b>	<b>2.06%</b>	<b>0.33%</b>	<b>14.60%</b>	<b>-4.08%</b>	<b>-0.56%</b>	<b>16.50%</b>	<b>-2.41%</b>	<b>-0.29%</b>
Co-Investment	A&Q Metric SPC - Global Opportunistic II - Class Auto Receivable	May-22	--	4.48%	1.07%	0.05%	4.10%	3.41%	0.14%	3.85%	7.83%	0.29%
	Aventail Metric Co-Invest Fund	Nov-22	--	0.88%	-1.47%	-0.01%	0.84%	7.99%	0.07%	0.85%	9.21%	0.08%
	Brevan Howard Special Opportunities (VIII) Limited	Dec-22	--	0.72%	0.32%	0.00%	0.86%	-13.03%	-0.11%	0.83%	-15.15%	-0.13%
<b>Co-Investment total:</b>				<b>6.08%</b>	<b>0.62%</b>	<b>0.04%</b>	<b>5.80%</b>	<b>1.77%</b>	<b>0.09%</b>	<b>5.54%</b>	<b>4.50%</b>	<b>0.24%</b>
<b>Total:</b>				<b>96.53%</b>	<b>--</b>	<b>0.65%</b>	<b>97.66%</b>	<b>--</b>	<b>0.26%</b>	<b>99.03%</b>	<b>--</b>	<b>2.85%</b>
Cash & other assets:				3.47%	--	0.00%	2.34%	--	-0.07%	0.97%	--	-0.20%
<b>A&amp;Q Neutral Alpha Strategies Limited Class BR-USD</b>												
<b>Total allocation and net return:</b>				<b>100.0%</b>	<b>--</b>	<b>0.57%</b>	<b>100.0%</b>	<b>--</b>	<b>-0.03%</b>	<b>100.0%</b>	<b>--</b>	<b>2.11%</b>

**Notes:**

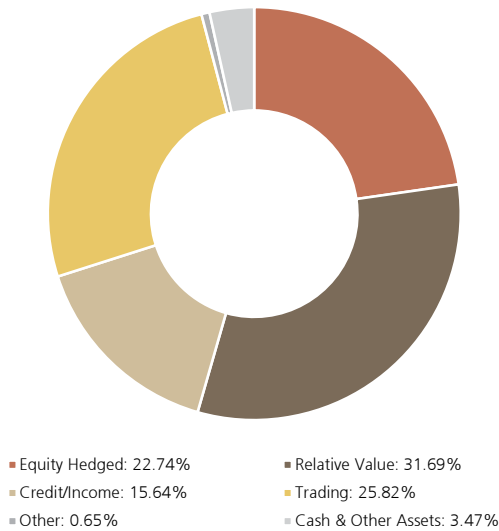
1. Strategy category assigned by investment manager based on the dominant strategy of the underlying fund.
  2. Sorted in descending order, by allocation within strategy category.
  3. Date when product is no longer subject to market value fluctuation in the underlying fund; termination dates are as of the end of the month.
  4. Allocation as of the beginning of the period; hence, investments made during the month reported, but not held at the beginning of the month will show a 0% allocation. Quarter-to-date and year-to-date allocations show average allocation for the time period.
  5. Last full quarter and year-to-date contribution of managers with current allocations of zero are calculated up to the date of termination.
- Please see Endnotes for an explanation of the calculation methodology used for RORs (rates of return) of the component funds, as well as performance contribution.

Source: UBS Hedge Fund Solutions

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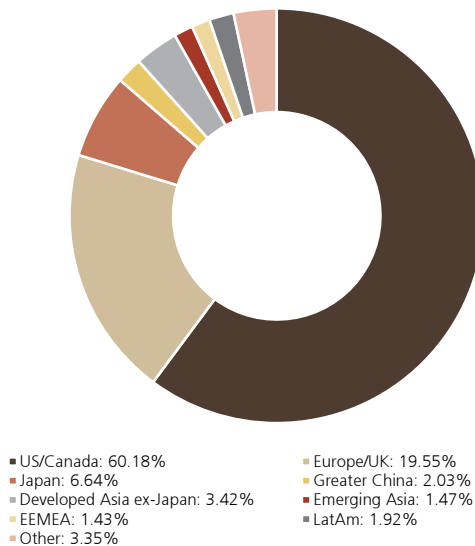
## Portfolio strategy and exposure view (as of July 1, 2023)

### Strategy exposure

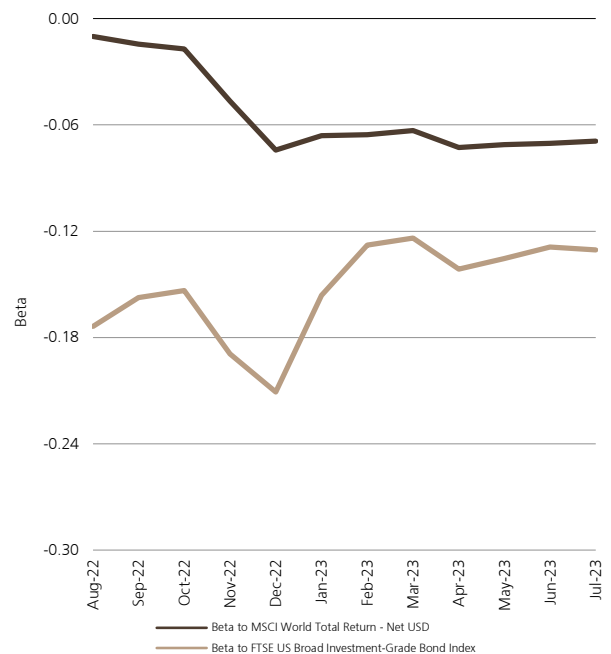


Strategy / sub-strategy	% Allocation
<b>Equity Hedged</b>	<b>22.74%</b>
Fundamental	8.47%
Equity Event	2.26%
Opportunistic Trading	12.01%
<b>Relative Value</b>	<b>31.69%</b>
Quantitative Equity	4.38%
Merger Arbitrage	0.92%
Cap Structure/Vol Arb	6.86%
Fixed Income Relative Value	15.51%
Agency MBS	4.02%
<b>Credit/Income</b>	<b>15.64%</b>
Distressed	0.00%
Corporate Long/Short	10.37%
Asset-Backed	0.18%
Reinsurance / ILS	0.00%
CLO/Corporate Lending	0.00%
Other Income	5.09%
<b>Trading</b>	<b>25.82%</b>
Systematic	2.32%
Discretionary	15.15%
Commodities	8.34%
<b>Other</b>	<b>0.65%</b>
Virtual Assets	0.28%
Niche	0.37%
Cash/MMF	0.00%
Liquidating/Side Pockets	0.00%

### Geographic exposure



### Rolling 2-year portfolio beta\*



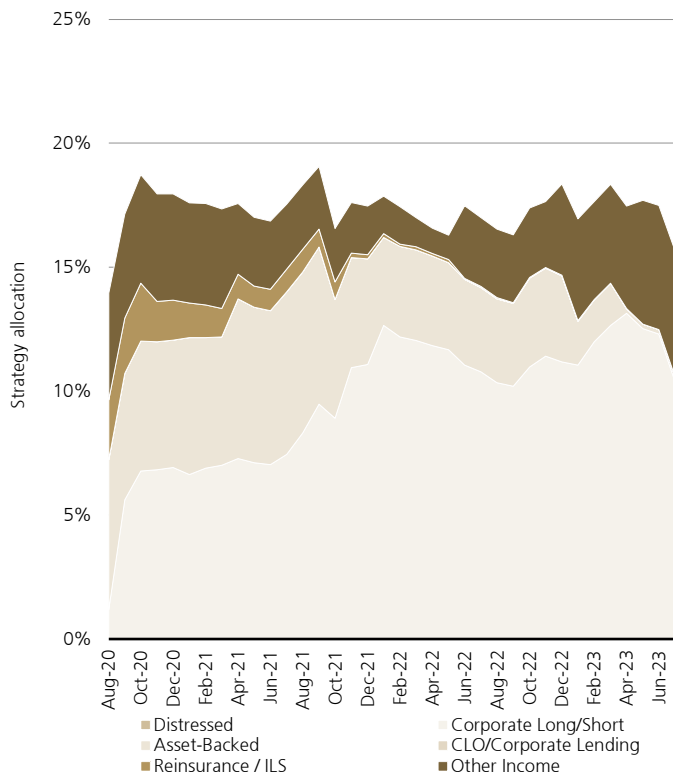
\*Note: Based on monthly performance figures for the fund.

Note: All categorizations of Strategy and Geography of the Fund's holdings are determined by the Investment Manager based, in part, upon its investment experience, knowledge of the sub-funds or unaudited information provided by third parties. The data supporting the categorizations may be from different time periods and may not be the most recent information available from the sub-funds. Totals may not add up to 100% due to rounding.

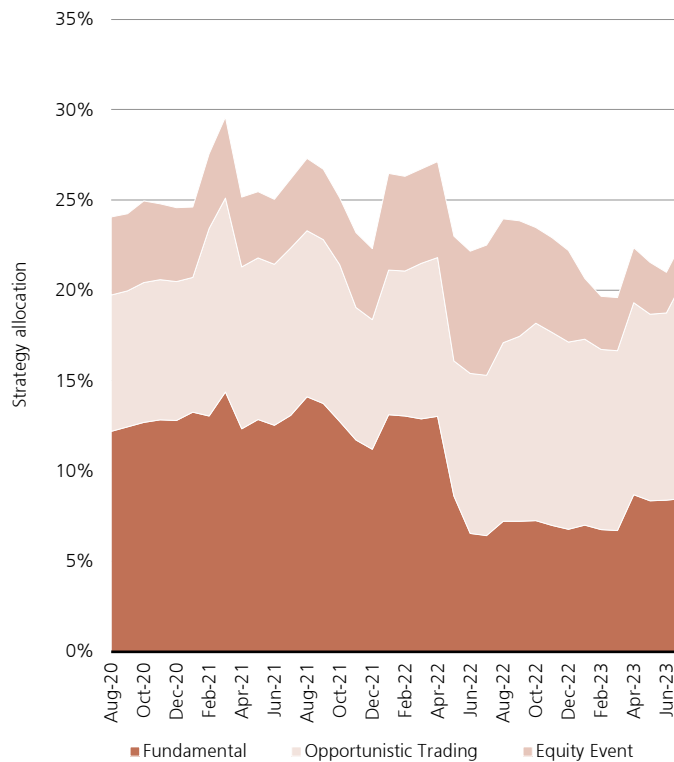
PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Portfolio strategy and exposure view (as of July 1, 2023)

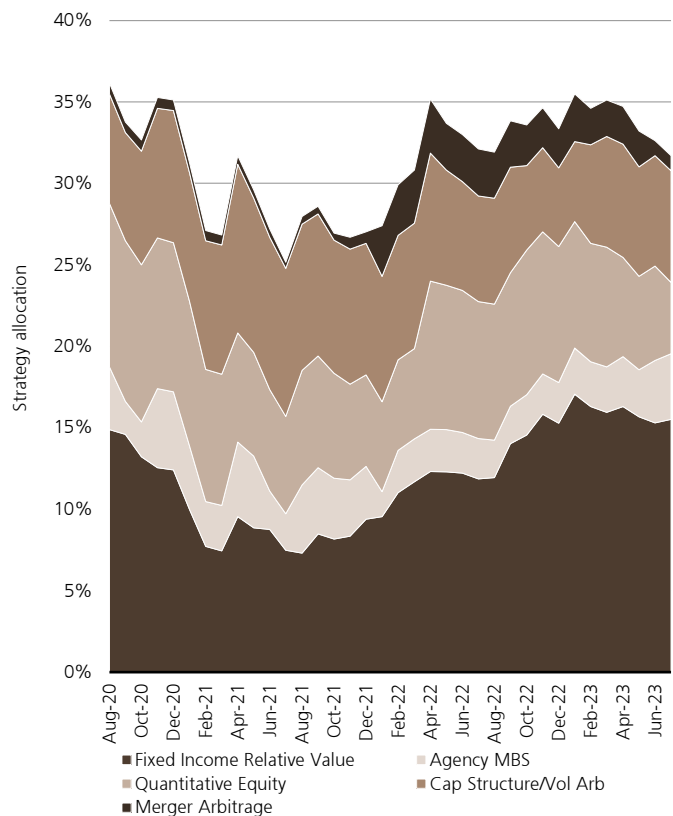
Monthly Credit/Income exposures over the last 3 years



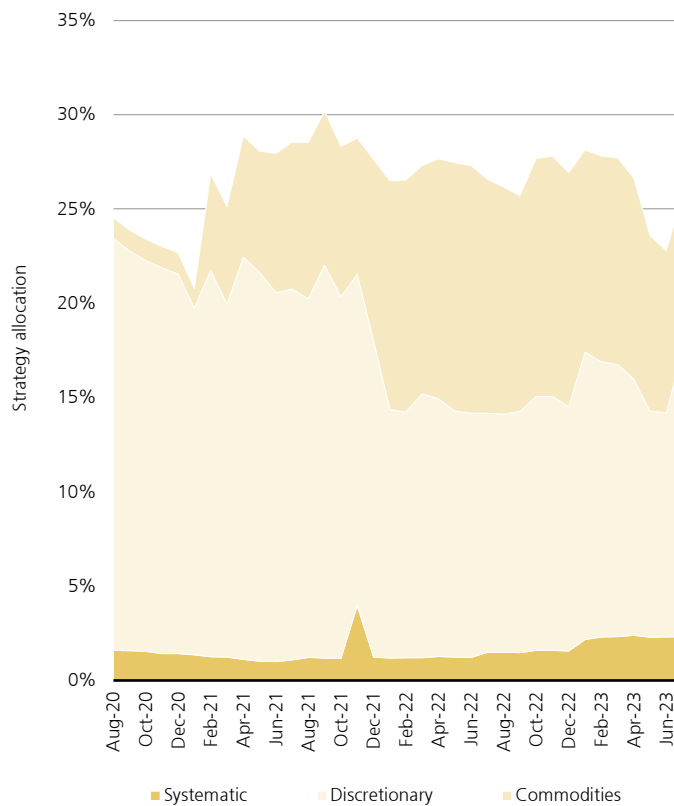
Monthly Equity Hedged exposures over the last 3 years



Monthly Relative Value exposures over the last 3 years



Monthly Trading exposures over the last 3 years



Note: The complete table historical monthly strategy allocations for the fund are available upon request. All categorizations of Strategy and Geography of the Fund's holdings are determined by the Investment Manager based, in part, upon its investment experience, knowledge of the sub-funds or unaudited information provided by third parties. The data supporting the categorizations may be from different time periods and may not be the most recent information available from the sub-funds. **Additionally, UBS Hedge Fund Solutions annually revisits our strategy and sub-strategy classifications. As such, some strategies and sub-strategies that existed in prior periods may not be consistent with the current classifications. Please see Endnotes regarding the changes to the strategy exposures during the period shown.**

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

## Market commentary for July 2023

### General market overview

Risk assets generated broadly positive performance in July as inflation data suggested that the US Federal Reserve could be near the end of their tightening cycle. While the overall outlook remains favorable near term, the macro implications of higher interest rates for longer reinforced recession fears for later this year or in 2024. Asset pricing was supported by constructive market sentiment given strong employment and housing data, despite underperformance related to the China reopening. The Dow Jones Industrial Average, S&P500 and NASDAQ indices produced positive performance of 3.35%, 3.11% and 4.05%, respectively. Across Europe, equity market performance was also positive despite expectations for additional near term interest rate hikes, particularly from the Bank of England. The MSCI Europe, DAX and FTSE Indices generated positive performance of 1.90%, 1.85% and 2.48%, respectively. Asian developed markets produced essentially flat performance with the Nikkei 225 Index posting a loss of -0.05%, due to a stronger Japanese Yen and higher JGB yields. Emerging market nations generated positive results in July in line with the risk-on climate. Brazilian, Indian and Chinese equity markets produced gains of 3.27%, 2.80% and 2.78%, respectively. US interest rate markets were mixed despite expectations for another tightening move from the Fed and strong macro data. The two-year US Treasury yield fell to 4.88% from 4.90% while the ten-year US Treasury yield increased to 3.96% from 3.84%. The Barclays US Corporate Investment Grade Index rose 0.34% and the Barclays US Corporate High Yield Index rallied 1.38%, with carry income offsetting the slight back up in yields. Commodity prices were broadly higher in July with oil rising 15.8% while gold rallied another 4.1%. In currency markets, the Euro rose 0.79% against the US dollar from 1.0916 to 1.1002 while the US dollar fell 2.88% against the Japanese Yen from 144.51 to 140.34.

## Portfolio commentary for July 2023

### Portfolio commentary (by strategy)

The product generated a positive return in July. Performance was driven by Trading strategies, while Credit / Income, Multi-Strategy, and Relative Value strategies also contributed to returns. Equity Hedged approaches generated relatively flat returns. In Equity Hedged, equity event approaches added to gains. Fundamental and opportunistic trading approaches produced relatively flat returns. In Credit / Income, other income approaches added to gains. Corporate long / short approaches generated relatively flat returns. In Relative Value, capital structure / volatility arbitrage, fixed income relative value, and quantitative equity approaches produced positive performance, while agency MBS strategies detracted from returns. In Trading, discretionary and commodities approaches generated positive performance.

US Equity Hedged strategies produced relatively flat returns in July. While most managers posted positive performance during the month, which was largely driven by beta gains, there was variation within cohorts as a function of increased stock dispersion. Alpha generation was challenged in July, with negative long / short spread caused by episodic short squeezes and notable de-grossing across the industry. However, across HFS, exposure movements were more manager-specific with varying gross market value trends. In general, it was another risk-on month as signs of moderating inflation along with a resilient consumer continued to support the goldilocks soft landing narrative. Small capitalization stocks outperformed large capitalization stocks. Banks and energy sectors outperformed, while more defensive areas within healthcare lagged. Most earnings reports thus far have been ahead of expectations, but the market has rewarded these 'earnings beats' to a lesser degree than usual. Conversely, companies missing estimates have been penalized to a greater extent.

Asian Equity Hedged strategies produced positive returns for the month. In Japan, the market was mixed as the BOJ announced their plans to increase the band on the 10-year JGB to 100 basis points. Despite this announcement, hedge funds in the space generated mostly muted returns. In Offshore China, markets were strong, driven by policy announcements and short covering, particularly at month-end, where the government set the stage for further stimulus. Equity markets reacted positively due to future expectations as well as extremely light position levels prior to the announcements. In Onshore China, markets were also positive but onshore investors appeared more cautious than offshore investors. July was a challenging month for China hedge funds overall. Most hedge funds in the space did not capture the sharp rally, as very few funds had conviction to increase long exposure at this juncture without seeing more details and commitment from the government. Funds with large short exposures generally incurred losses. However, there were a few positive outliers.

Corporate long / short strategies typically generated flat performance in July. Spreads tightened in both investment grade and high yield markets as there was a significant amount of outperformance in the lower-rated issuers. In corporate long / short sub-strategy, there were high levels of dispersion in July, although all but one fund's performance ranged from flat to positive for the month. Those managers with lower net exposures underperformed relative to the funds positioned in a net long manner. Losses were incurred from the Chinese property sector. The corporate long-biased sub-strategy also performed well amid the rally in risk assets in July. Like last month, long positions drove performance, and funds capitalized on investments in high yield bonds and leveraged loans, which produced positive carry and mark-to-market gains.

Agency MBS strategies generated negative returns. During the month, there were some variations in performance across managers. Investments in mortgage derivatives were additive to performance due to the positive carry and favorable fundamentals. Residential mortgage derivatives performed well as prepayment speeds continued to stay at low levels. However, relative value positions produced mixed results, and differences in basis positioning contributed to the dispersion in manager returns.

Capital structure / volatility arbitrage strategies generally produced positive performance in July. As equities rallied throughout the month, convertible bonds typically underperformed. In contrast, valuations of the rest of the universe expanded gradually throughout the month. A notable characteristic of July was the absence of any new convertible issuance in the US for the first time since August 2011. All of July's new issuance came from Europe (approximately USD 1.10bn) and Asia excluding Japan (approximately USD 2.35bn). Year-to-date, global CB issuance now totals USD 42.9bn, led by the US (approximately USD 27.39bn), followed by Europe (approximately USD 7.81bn), Asia (approximately USD 6.65bn), and Japan (approximately USD 1.03bn). Lastly, some managers also participated in buybacks, which were additive to performance and expect the buyback trend to continue for the remainder of the year. During the month, non-investment grade convertible bond spreads decreased -40bps to 518bps, while the Bloomberg US HY 'B' Index spread decreased -32bps to 366bps, demonstrating some spread tightening. The implied volatility of investment-grade convertible bonds with at least one year of call protection ended the month at 25.3%, versus 26.4% in the prior month.

Fixed income relative value strategies produced positive returns for the month. Most of the gains were driven by cash / futures basis strategies across the US, and to a lesser extent Japan, with some managers succeeding in German basis. Swap spread trading in the US and Europe were also generally additive, although less so in Japan, while tenor basis produced more mixed results. Some funds with exposure to European front-end widening trades also underperformed, while some funds generated gains from US front-end tightening exposures. Macro trading was slightly positive from directional short positions in Japan, although currently, managers generally hold less directional risk.

Quantitative equity strategies generally produced positive returns in July. Quant risk premia widened as characterized by expanding residual volatility and increasing dispersion. The momentum factor was challenged, in addition to expected losses in low beta factor. Fundamental quants and equity extension funds, which typically are more exposed to momentum, value, and low beta factors, tended to underperform. Statistical arbitrage and machine learning strategies generally fared better as they were positioned to take advantage of technical reversals. Multi-strategy approaches featured more muted returns, mostly from diversifying macro trading strategies that rely less on traditional trend following and alternative markets. Short-term models produced modest gains in fixed income and commodities, which were offset by losses incurred in equities.

Discretionary strategies produced positive performance in July. Developed macro managers generated gains from short positions in Japanese rates. US rates trading was also generally positive with a mix of curve steepening trades, short volatility, and more tactical trading around expectations of the US Federal Reserve meetings. Equally, curve steepening trades in the UK were generally additive, while FX themes were more mixed across long positions in JPY, short positions in CNH and positive contribution from Latam carry trades. Macro relative value approaches generally outperformed more directional managers, with both cross-country and relative value trades being the primary driver of gains. Equity themes resulted in more mixed performance, with some managers benefitting from long positions in Japan and NDX, while others generated negative performance from having a short bias. Emerging markets macro managers generated positive performance, with a mix of EM rates receivers, both in Latam but also CEMEA (ZAR, Romania), as well long positions in credit (SSA, Latam, ZAR), while FX was more mixed, as managers incurred losses from CNH short exposure and negative carry in Zambia, Egypt and Nigeria. Overall, commodity managers produced positive performance, with gains from short exposure in natural gas. Long-biased metals specialists also benefitted from the rally in that space.

## Manager commentary for 10 largest fund holdings

Fund	Strategy	Month-to-date			Monthly commentary
		Alloc.	ROR	Cont.	
Symmetry Master Fund	Relative Value/ Fixed Income Relative Value	7.61%	0.78%	0.06%	Bond relative value, swap spreads and JPY rates short positions generated gains, while losses were incurred from equities and directional FX.
Claren Road Credit Fund	Credit/Income/ Corporate Long/Short	5.95%	-0.01%	0.00%	The fund produced a flat return in July. Risk assets continued to perform well as credit spreads tightened over the course of the month. Overall, this was a challenging backdrop for the fund given the net short bias of the portfolio. At the portfolio level, profits from the long portfolio were completely offset by losses on the short side. In addition, the carry of the portfolio was marginally negative. In terms of contributors, long investments in the European financial, energy, and high yield sovereign sectors contributed positively to performance. In terms of detractors, the single name loss-making positions were primarily attributable to shorts in autos, US financials, and IG sovereign debt.
LMR Alpha Rates Trading Fund Limited	Relative Value/ Fixed Income Relative Value	5.85%	0.76%	0.04%	The fund's positive performance was driven by European bond RV, particularly in Germany and the US. STIR strategies also added to performance, mostly in the US, as did short US rates volatility strategies that recovered losses from earlier in the year. UK inflation strategies incurred losses.
Citadel Global Strategies Fund	Multi-Strategy/ Multi-Strategy	5.65%	1.27%	0.07%	The fund's performance in July was primarily driven by the commodities and fixed income strategies. The credit portfolio generated modest returns for the month. The equities strategy was the top detractor, followed by quantitative strategies.
Atlas Enhanced Fund	Equity Hedged/ Opportunistic Trading	5.33%	0.05%	0.00%	Positive performance was attributable to the commodities and macro strategies, while the equities strategy was the largest detractor. Directional exposure was the top contributor within the macro strategy, while energy was the largest contributor within the commodities strategy. Within the equities strategy, positions within the industrials, TMT, consumer and financials sectors detracted.
A&Q Metric SPC - Global Opportunistic II - Class Auto Receivable	Co-Investment	4.48%	1.07%	0.05%	This investment vehicle holds receivables from an auto parts manufacturer. HFS began investing in the receivables in late 2019 and believes the yields are attractive given the duration and relative return versus the company's publicly traded debt. The position generated gains for the month in line with yield expectations.
Caxton Dynamis	Trading/ Discretionary	4.19%	1.06%	0.04%	The fund generated a positive return for the month, driven by rates strategies. Within rates, US steepeners, short positions in Japan, and flatteners in Japanese rates were key contributors. FX strategies incurred losses for the month.
Readystate Capital Fund	Relative Value/ Cap Structure/Vol Arb	4.08%	0.18%	0.01%	Performance attribution was led by positive performance from convertible arbitrage and distressed. The key detractor was a capital structure trade where the fund was short highly levered high yield corporates hedged with a long equity sliver. One equity relative value trade was challenged as an expected bid for a company never materialized.
Welwing Master Fund	Relative Value/ Fixed Income Relative Value	4.05%	1.00%	0.04%	Most of the gains were generated by US bond basis and shorts in US asset swap spreads. Cash management was also additive to performance. The manager reported that there were no material detractors from performance for the month.
Point72 Capital Fund	Equity Hedged/ Opportunistic Trading	4.03%	-0.39%	-0.02%	The fund's equity and quant strategies contributed negatively to performance, while the macro portfolios produced positive returns. Within the fundamental equity strategy, positions in TMT and healthcare sectors incurred losses, while positions in the energy sector were additive.

Please see Endnotes for an explanation of the calculation methodology used for RORs (rates of return) of the component funds.  
PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS



### Manager commentary for top 3 fund contributions

Fund	Strategy	Month-to-date			Monthly commentary
		Alloc.	ROR	Cont.	
Statar Capital Fund	Trading/ Commodities	2.58%	11.19%	0.29%	The fund generated gains from having a short bias in natural gas. The manager reported that there were no material detractors from performance for the month.
Citadel Global Strategies Fund	Multi-Strategy/ Multi-Strategy	5.65%	1.27%	0.07%	The fund's performance in July was primarily driven by the commodities and fixed income strategies. The credit portfolio generated modest returns for the month. The equities strategy was the top detractor, followed by quantitative strategies.
Symmetry Master Fund	Relative Value/ Fixed Income Relative Value	7.61%	0.78%	0.06%	Bond relative value, swap spreads and JPY rates short positions generated gains, while losses were incurred from equities and directional FX.

### Manager commentary for bottom 3 fund contributions

Fund	Strategy	Month-to-date			Monthly commentary
		Alloc.	ROR	Cont.	
Bright Meadow Agency MBS Fund	Relative Value/ Agency MBS	4.02%	-1.38%	-0.06%	The fund generated a negative return in July. Overall, gains from carry were offset by spread widening and mark-to-market losses. However, the trends in prepayment remained supportive for the strategy. In particular, the fund was negatively impacted by the volatility of the mortgage basis RV position given the increase in rate volatility during the month.
Averill Fund	Equity Hedged/ Fundamental	2.15%	-1.21%	-0.03%	The fund generated a negative return driven by losses from a core long position that was negatively impacted by a regulatory update, as well as select short positions in AI-oriented healthcare companies. Conversely, a long position in a mid-cap eye-related company and a short position in an eye-related company were the top contributors to performance.
Point72 Capital Fund	Equity Hedged/ Opportunistic Trading	4.03%	-0.39%	-0.02%	The fund's equity and quant strategies contributed negatively to performance, while the macro portfolios produced positive returns. Within the fundamental equity strategy, positions in TMT and healthcare sectors incurred losses, while positions in the energy sector were additive.

## Risk considerations

The Fund's investment program is speculative and entails substantial risks which may place your capital at risk. An investment in the Fund includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-U.S. securities and illiquid investments. The Fund invests largely in other unregulated hedge funds. Such a portfolio of hedge funds may increase an investor's volatility for potential losses or gains.

One or more of the funds, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio (as well as the Fund's) may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that a fund's strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. The investment funds in which the Fund invests can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies. In addition, the overall performance of the Fund is dependent not only on the investment performance of individual managers, but also on the ability of the Fund's Adviser to effectively select and allocate the Fund's assets among such managers on an ongoing basis.

The Fund's portfolio may be highly leveraged and the volatility of the price of its interests may be great. The Fund's fees and expenses may substantially offset the Fund's trading profits. There is no secondary market for interests in the Fund and none is expected to develop. In addition, the ability to transfer one's interest in the Fund is restricted. It is possible that the Fund will be unable to provide tax information to investors without significant delays and investors may need to seek extensions on the time to file their tax returns at the federal, state and local levels. Interests are not deposits or obligations of, or guaranteed or endorsed by any bank or other insured depository institution, and are not insured by the Federal Deposit Insurance Corporation, Financial Service Compensation Scheme or other relevant non-U.S. governmental agency. Investors should consider the Fund as a supplement to an overall investment program and should invest only if they are willing to undertake the risks involved.

## Endnotes

### Strategy definitions

#### Equity Hedged

Equity Hedged managers generally use fundamental analysis to invest in publicly traded equities and seek to generate alpha through superior security selection. Portfolio construction is driven primarily by bottom-up fundamental research; top-down analysis may also be applied. Sub-strategies include: Fundamental, Equity Event, and Opportunistic Trading.

#### Trading

Trading strategies are generally top-down in nature and often driven by econometric and macroeconomic research. These strategies may utilize financial instruments, such as foreign exchange, equities, rates, sovereign debt, currencies, and commodities to express a manager's view. In executing different approaches, managers may use either fundamental or quantitative models or a combination of both. Sub-strategies include: Systematic, Discretionary (previously known as Global Macro) and Commodities.

#### Relative Value

Relative value is a broad category, generally encompassing strategies that are non-fundamental and non-directional, and often quantitatively driven. Managers in this strategy typically use arbitrage to exploit mispricings and other opportunities in various asset classes, geographies, and time horizons. Managers frequently focus on capturing the spread between two assets, while maintaining neutrality to other factors, for example to geography, changes in interest rates, equity market movement, and currencies, to name a few examples. Sub-strategies include: Fixed Income Relative Value, Agency MBS, Quantitative Equity, Cap Structure/Vol Arb and Merger Arbitrage.

#### Credit/Income

In Credit/Income strategies, managers utilize credit analysis to evaluate potential investments and use debt or debt-linked instruments to execute their investment theses. Their approach can be either fundamental, quantitative, or a combination of both. Sub-strategies include: Distressed, Corporate Long/Short, Asset-Backed (previously known as Structured Products), Reinsurance / ILS (previously known as Reinsurance), CLO/Corporate Lending (part of Structured Products prior to January 2016) and Other Income (previously known as Other).

#### Other

This category contains investment approaches that are outside of the mainstream hedge fund strategies (Equity Hedged, Credit/Income, Relative Value, and Trading). The category includes Virtual Assets and Niche investment approaches. Money Market funds and cash strategies are also included in this category, as are Liquidating/Side Pockets.

#### Risk Parity

Risk Parity generally focuses on the passive allocation of risk, rather than of capital, in an attempt to provide a higher Sharpe ratio alternative to the traditional 60% stock / 40% bond portfolio through the use of a wider range of uncorrelated assets, low leverage, and low equity risk. Please note, while an alternative to traditional asset allocation, Risk Parity is not a hedge fund Strategy.

## Contribution Methodologies

Monthly sub-fund contributions: Monthly sub-fund contributions (gross) are determined by dividing the monthly profit and loss associated with each sub-fund by the product's net assets.

Monthly contribution by strategy: Monthly contribution by strategy is determined by aggregating sub-fund contribution values for each sub-fund mapped to a specific strategy. Multi-Period Contributions (i.e. Last Full Quarter and Year-to-Date): The method used by the investment manager to calculate multi period contributions involves compounding monthly contribution values during subsequent periods by monthly Fund returns. The method provides a result whereby the sum of the period's contribution values is equal to the period's Fund (Gross) return determined by compounding monthly Fund returns. Net returns of the Fund reflect the deduction of 0.90% management and 0% performance fees, as well as applicable fund expenses.

## Component Fund Returns

Note that as component funds typically offer multiple classes of shares with similar performance attributes, the investment manager has, where possible, sought to provide a "blended" return based on the returns of the respective share classes held by the product. When it was not possible to calculate a return for a share class, the investment manager utilized the primary share class return which may be different than the return actually generated by the share class for the period referenced in the report. These returns are net the respective management and performance fees of the underlying funds.

## Statistics definitions

**Volatility** is measured using the standard deviation. The standard deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

**Sharpe ratio** measures the relationship of reward to risk in an investment strategy. It is generally interpreted that a higher ratio implies lower risk. The ratio is calculated as the arithmetic average of monthly relevant returns less the risk-free returns divided by the monthly standard deviation of the relevant returns; this figure is then annualized by multiplying by the square root of 12. The risk-free return is calculated as the monthly equivalent of the stated annual yield of a relevant short-term interest rate product corresponding to the currency of the share class presented.

**Sortino ratio** is a variation of the Sharpe ratio, which differentiates downside risk from general volatility to help measure the return relative to "harmful" volatility. The ratio is calculated as the monthly compound geometric relevant return divided by the downside deviation of those returns; this figure is then annualized by multiplying by the square root of 12. The downside deviation focuses on negative values in a distribution and equals the square root of the sum of squared negative returns divided by the total number of returns.

## Index descriptions

The use of indices is for illustrative purposes only. Unlike the Fund, some indices are unmanaged, are not available for direct investment and are not subject to management fees and other fees and expenses. The Fund does not restrict its investments to securities in the indices described. No index is directly comparable to the investment strategy of the Fund. Information about the index is derived from sources that we believe to be reliable, but we have not independently verified them and do not warrant as to its accuracy or completeness.

### **FTSE US Broad Investment-Grade Bond Index**

The FTSE US Broad Investment-Grade Bond Index is an unmanaged index generally representative of the performance of the investment-grade corporate and U.S. government bonds.

### **MSCI World Total Return - Net USD**

The MSCI World Index is a free float-adjusted market capitalization weighted index that seeks to measure the equity market performance of developed markets. The Index includes large and mid-capitalization equities across 23 Developed Market countries. With 1,632 constituents, the Index covers approximately 85% of the free float-adjusted market capitalization in each country. The MSCI World Total Return (Net) USD Index includes reinvestment of net dividends. Index performance is translated into the feeder currency using the applicable daily currency exchange rate from Bloomberg.

### **HFRI FOF: Conservative Index**

The HFRI Fund of Fund (FOF) Conservative Index seeks to track the performance of fund of fund strategies classified as "conservative". Conservative strategies exhibit one or more of the following characteristics: seeks consistent returns by primarily investing in funds that generally engage in more "conservative" strategies such as Equity Market Neutral and Fixed Income Arbitrage. Returns are denominated in USD.

Section 2

# HFS Q3 2023 Strategy Outlook

# Risk considerations

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The strategies described herein are speculative and entail substantial risks which may place your capital at risk. An investment in these strategies includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-US securities and illiquid investments. The strategy invests largely in other unregulated hedge funds. Such a strategy of hedge funds may increase an investor's volatility for potential losses or gains.

A particular manager of any strategy, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that any particular strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. These strategies can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies.

The strategies may be highly leveraged and the volatility of the price of its interests may be great. The fees and expenses charged by any individual manager of a strategy may substantially offset any trading profit.

# Looking ahead in hedge fund investing



## Macro thoughts and portfolio themes

**With the soft June inflation print in the US, we expect policymakers to gradually shift their focus from inflation to growth. However, we believe that the "higher-for-longer" narrative will continue to dominate over the short-term, supported by a resilient global economy and tight labor market.**

- Besides manufacturing activity, the last few months of economic data have demonstrated a remarkable ability for Western economies to absorb the impact of higher interest rates.
- Wage growth, however, while moderating remains elevated, indicative of more complex cyclical and structural imbalances. From a cyclical standpoint, buoyant demand for lower income jobs (e.g. construction and hospitality) contrasts with rising lay-offs in those industries that hired excessively during the pandemic. At the same time, demographic trends are pushing the ratio between dependents and workers on a long-term inflationary trajectory.
- As such, we continue to believe that a certain degree of unemployment is required to settle inflation back to target, resulting in some form of recession next year. For the time being, central banks will likely remain on hold, recognizing the restrictive power of positive real rates, while inflation continues to moderate and many consumers enjoy higher real disposable income.

**With a seemingly more benign macro backdrop in Q3, we look to add to EM-focused discretionary macro, fundamental long / short equity and structured credit, while maintaining a generally modest beta profile in our portfolios.**

- However, with inflation on a clear downward trajectory and weak demand from China, we plan to decrease our exposure to higher beta commodity strategies.
- In the current regime, we expect rates volatility to trend lower, but anticipate it will remain well above QE levels. As such, we maintain healthy (but marginally smaller relative to last quarter) allocations to fixed income relative value strategies as they are expected to continue to benefit from this environment.
- Finally, we continue to place emphasis on attractive, uncorrelated sources of carry from agency mortgages, diversified structured credit and short duration income.

The views expressed are as of July 2023 and are a general guide to the views of UBS Hedge Fund Solutions LLC (HFS), a division within UBS Asset Management. This document does not replace portfolio and fund-specific materials. Commentary is at a macro or strategy level.

# Looking ahead in hedge fund investing



## Strategy views and portfolio summary

**Trading:** With a more benign macro backdrop, we continue to add to EM-focused discretionary trading managers, while decreasing exposure to DM-focused strategies. In commodities, with inflation clearly on a downward trajectory and weak demand from China, we find the top-down rationale for an overweight allocation less compelling.

For **EM-focused discretionary macro** strategies, HFS prefers managers that have a **relative value skew** as we are conscious of adding EM beta at this juncture.

The near-term outlook for **DM-focused discretionary macro** strategies could remain **somewhat challenged** in the absence of clear trends in the macro data. However, managers that can trade more nimbly and tactically, and / or deploy more of an RV style could be well-positioned to capture short-term reversals.

In **commodities**, we will **reduce exposure** to more correlated oil-driven and metals strategies, but plan to maintain our allocation to more idiosyncratic opportunities in gas / power.

HFS holds a **neutral outlook** for **systematic trading** as a choppy market environment may prove challenging for these managers.

**Relative Value:** We are taking some profits from fixed income relative value and increasing our target allocation to capital structure / volatility arbitrage strategies.

After strong performance from **fixed income relative value** over the past few years, we **trim** our allocation to reflect a more moderate volatility regime and increased tail risk (stemming from position crowding).

We believe that the opportunity set for **capital structure / volatility arbitrage** strategies will improve given that issuance is expected to increase as we approach a wall of debt maturing in 2025 and 2026. We expect more opportunities in Q4 than in Q3.

HFS maintains a **negative outlook** for **merger arbitrage and event-driven strategies**. Regulatory interference remains problematic, causing longer deal completion timelines and more extreme downside break levels.

We **decrease** our target allocation to **quantitative equity** strategies. While we observe several factors supportive of quantitative equity strategies, at the same time we acknowledge the limited capacity in the space and difficulty in launching a new standalone hedge fund.

**Equity Hedged:** HFS is increasing our allocation to Equity Hedged. After several quarters of reductions, we are beginning to reallocate to more fundamentally-oriented strategies, using our allocation to opportunistic trading managers as a source of funding. We strive to limit beta exposure as markets seem richly priced relative to interest rate levels.

US equity markets have been dominated by macroeconomic sentiment and narrow market leadership, but we anticipate these **trends will reverse** which should **bode well for fundamental stock picking**.

In China, we plan to maintain our relatively low exposure to long / short equity managers. Compared to last quarter, our **near-term outlook is less constructive** given the weak economic rebound thus far, the government's lack of urgency to reignite the economy, and heavy outflows from the region.

In **Japan, equity event** remains a **high conviction** strategy as corporate change gains momentum. A weaker Yen and increased investor interest should also provide tailwinds.

**Credit / Income:** We continue to add to our allocations to agency MBS, while maintaining conviction in our core allocations to defensively positioned, trading-oriented corporate long / short managers. We remain underweight long-biased credit.

In **corporate long / short**, although the opportunity set was more muted in late Q2 as market volatility abated, corporate credit remains attractive given expectations for increasing technical and fundamentally driven volatility, as well as a growing frequency in corporate events (stress / distress, new issue, refi's, M&A).

We continue to **increase** exposure to **agency MBS**, which we think should benefit from more stable rates volatility, a lack of new supply and normalizing technicals as regional banks' balance sheet overhang gets absorbed.

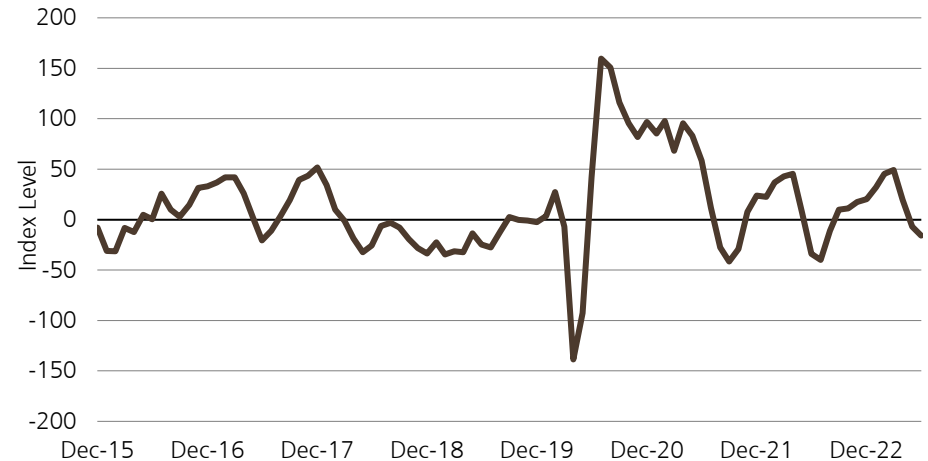
In **asset-backed**, HFS plans to **increase allocations** as we seek additional sources of carry. Structured credit markets remain attractive, given strong carry and potential for positive MTM with wider spreads following the 2022 sell off. Structured credit markets have also lagged the YTD rally in corporate credit and now offer more attractive relative yield and spread levels.

We **remain patient** in more liquid, **long-biased credit** as spreads tightened somewhat over the quarter.

# Trading—Discretionary

- Following substantial losses in Q1, most managers struggled to re-risk their portfolios amid rangebound markets and heightened macroeconomic uncertainty. DM macro managers generally posted losses for Q2, although there were a few exceptions for those who managed to either capture the larger trades in UK rates or tactically trade the US front-end. In contrast, many EM macro managers had a strong recovery in Q2, benefitting from a mix of EM receiver trades, notably in LatAm and central Europe, as well as more idiosyncratic stories such as Turkey, FX devaluations in the likes of Nigeria, or distressed frontier names in Zambia and Tunisia. General spread compression was also a tailwind for performance in EM.
- Forward-looking, we believe that the near-term outlook for DM-focused discretionary trading strategies could remain somewhat challenged in the absence of clear trends in the macro data and very data-dependent markets. Managers that can trade more nimbly and tactically, and / or deploy more of an RV style could be well-positioned to capture short-term reversals. However, it may take some time for the next big trades, such as the re-steepening of the DM rates curves or the weakening of the USD, to materialize. Equally, widely held short positions in Japanese rates are taking longer than expected to play out. However, we believe that DM-focused managers should be able to perform in a recessionary environment by re-positioning the portfolio to be long in fixed income (where there is a significant amount of risk premium, particularly in the front-end) and adding to shorts in equities and credit.
- We expect to continue to add to our EM-focused exposure as we believe the opportunity set remains attractive, driven by the increasing macro divergence between emerging and developed markets. Inflation has continued to moderate and EM central banks are expected to initiate a cutting cycle in the second half of 2023, while the US hiking cycle is potentially nearing its end. Hence, we believe receiving opportunities in EM remain quite attractive, even if some of the adjustment has already occurred. In some cases, however, the current market pricing of cuts is more aggressive which may potentially warrant a rotation within EM.

Citi Economic Surprise G10 Index



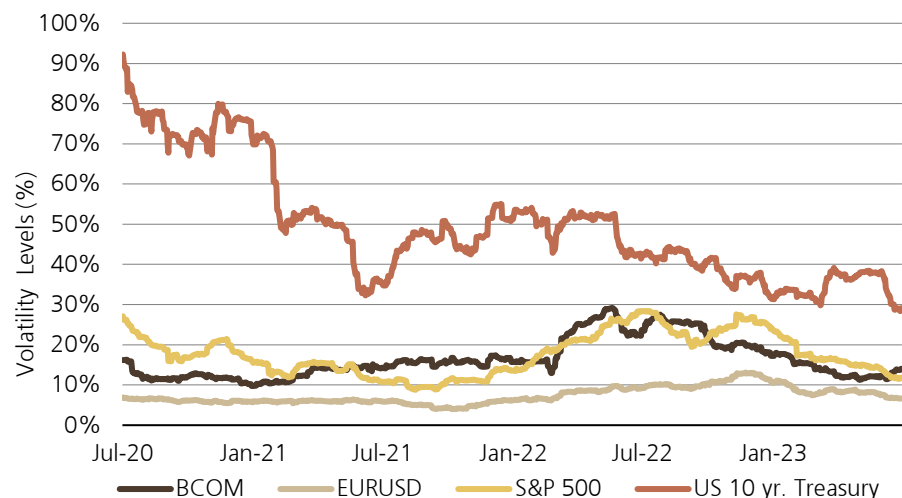
Discretionary trading strategies generally tend to underperform when the index is closer to zero, which indicates that economic data releases are generally in line with market expectations. Source: Bloomberg; Daily data; Dec 31, 2015-Jun 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- In FX, managers should be able to continue capturing high carry as real rates remain elevated with lower inflation, while the USD is expected to weaken with the Fed on pause. In addition, some of the devaluation plays in more distressed markets remain intact. Sovereign credit spreads are fairly tight, but within certain HY markets, there are select trades with compelling idiosyncratic stories and catalysts, such as a restructuring process.
- Recession risks remain a key headwind for EM assets, and longer-biased managers could be challenged in such a scenario. Therefore, we prefer managers that can trade in a more opportunistic or RV style, with less beta.



# Trading—CTAs

## Realized 60-day volatility across asset classes continues to decline

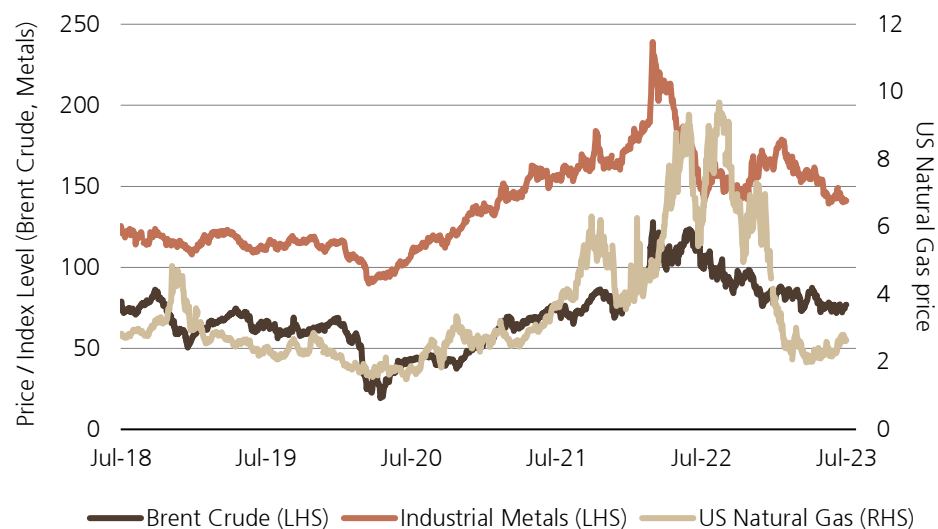


Source: Bloomberg; Monthly data; Jul 1, 2020-Jun 30, 2023. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS holds a **neutral** outlook for **systematic trading**. While high interest rates, lower volatility and increased dispersion in markets are generally supportive of systematic trading strategies, we believe that a lack of clear trends will prove challenging for these managers and therefore, expect mixed performance. That being said, we believe that systematic trading strategies have a place in portfolios as a liquid alternative to discretionary macro strategies.
- Many trend-following funds recovered from Q1 losses and is now mostly flat YTD, benefitting from a decrease in volatility and cross-asset correlations in Q2. Positive returns from commodities in April, followed by gains in equities and rates in later months forced many managers to maintain positioning almost identical to what they had at the start of the year: long equities, short bonds and short energy. In the more immediate future, as we near the end of the hiking cycle, central bank policy may no longer be supportive of previous trends which may adversely impact returns.

# Trading—Commodities

US Natural Gas, Brent Crude and Industrial Metals



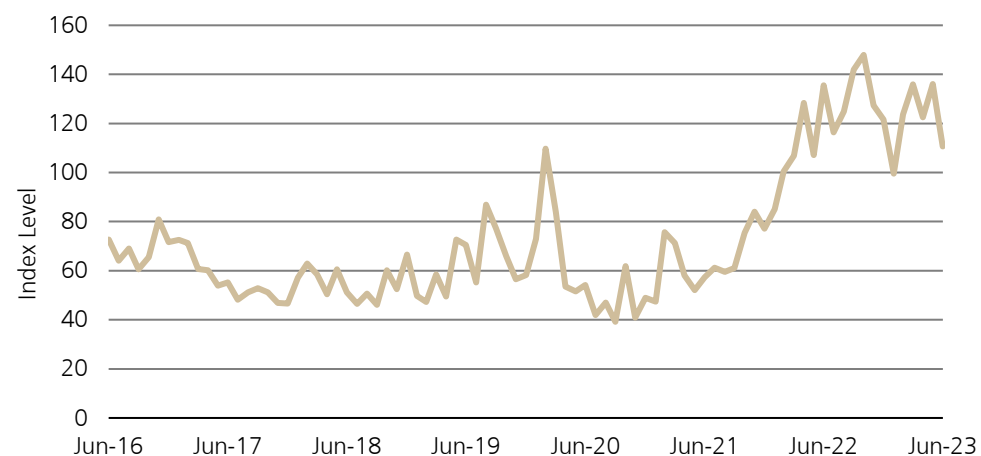
Source: Bloomberg; Daily data; Jul 9, 2018-Jul 7, 2023. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- While inflation is likely to remain above central bank targets for some time, it appears inflation is beginning to moderate as we near the end of the cycle; as such, the top-down rationale for holding a large allocation to **commodities** is less compelling. We plan to maintain our allocation to gas / power-focused strategies but are trimming our overall allocation to commodities further by reducing oil-driven and metals strategies. This allocation decision is also partly driven by manager-specific considerations as we review AUM growth, capacity and risk allocations to specific markets.
- Commodities remained challenged in Q2, where oil and metals trading, both directionally and RV, continued to be negatively impacted by risk on / risk off dynamics in the macro environment. Meanwhile, summer price volatility has been difficult for fundamental trading in natural gas, although it may provide a chance to build risk.
- Looking ahead, opportunities in natural gas remain plentiful over the medium-term, with a lack of storage capacity, changes in producer behavior, the energy transition and LNG dynamics bringing various calendar spread, cross-market and directional trading themes into play. For oil and metals, demand in these markets is generally more sensitive to economic growth conditions (aside from rare materials specific to the green energy transition theme). Therefore, trading is likely to remain challenged as price action could continue to be dominated by macro uncertainty and CTA flows, with a lack of clear direction until we transition to the next stage of the economic cycle.

# Relative Value—Fixed Income Relative Value

- While HFS maintain a positive outlook for **fixed income relative value (FIRV)**, we believe it makes sense to take some profits from what is currently the historical peak size of our allocation. Note that US agency mortgage basis and mortgage derivatives RV trading continues to be an additive sub-strategy for FIRV in the current environment. While we do not have exposure to these strategies via our core FIRV managers, we have separate allocations to mortgage specialists that we have been adding to.
- FIRV managers have generally produced strong performance over the last couple of years since the “Fed pivot” to a more hawkish stance in June 2021 catalyzed a move higher in rates volatility and yields. Traditional micro-arbitrage trades such as cash / futures basis and bond RV have been able to deliver higher returns per unit of leverage as dislocations have been much wider (this has also offset the impact of higher margin requirements to some extent). In addition, larger issuance needs and the quantitative tightening (QT) process, together with volatile macro risk sentiment, have made swap spread trading in both the US and Europe a decent two-way opportunity for FIRV managers, whereas in the past, these opportunities were only defined by seasonal trends. In 2022, FIRV managers also benefited from opportunistic macro trades and inflation trading strategies given the structural underpricing of inflation markets versus realized inflation prints.
- More recently in 2023, cash / futures basis trading in the US has opened up further, although cash / futures basis in Europe has become less interesting due to changes in structural futures flow dynamics at higher yield levels. Japanese cash / futures basis was a notable return driver in the first half of 2023, but managers have now had to reduce exposures somewhat due to the lack of repo availability. Swap spreads also remain a key opportunity, however the risk / reward from macro and inflation strategies are no longer as asymmetric. Concentration of FIRV manager positioning in US cash / futures basis, bond RV and swap spread trading reduces the number of return drivers and may increase the magnitude of losses (due to crowding) in a deleveraging environment. Therefore, all else equal, we expect FIRV returns in the second half of 2023 to be lower than in 2022 and the first half of 2023.

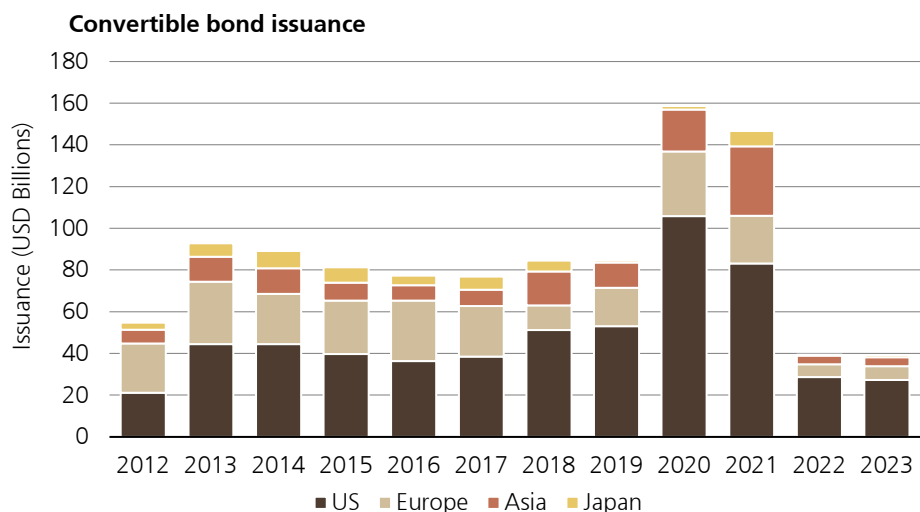
MOVE Index



Source: Bloomberg; Daily data; June 30, 2016-June 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- That said, a high risk-free rate provides an additional boost to returns given the high cash levels held in most FIRV portfolios (an estimate of 5% yield from 3-month US T-bills on 60% of the portfolio held in cash adds roughly 3% to returns). And with the FOMC effectively on hold now, rates volatility can continue to moderate somewhat from today's levels, but we do not expect yields and volatility to decline to ZIRP-era levels.
- There is also the potential for further volatility shocks given the heightened financial stability risks at this level of policy rates, which may allow FIRV managers to add to cash / futures trades on temporary dislocations. The potential for steepening yield curves is another positive, as is the continuing QT process given increased bond supply into the market.

# Relative Value—Capital Structure / Volatility Arbitrage

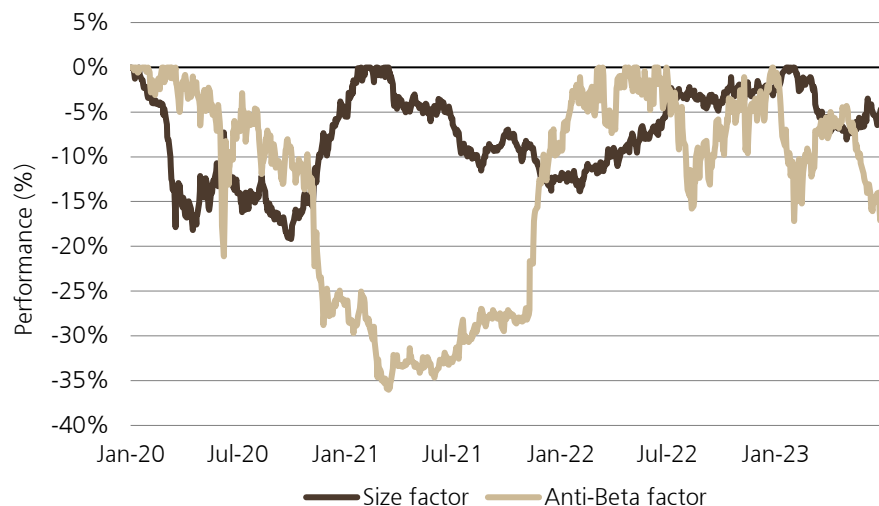


Source: Bank of America Merrill Lynch Global Research. Data is from Jan 1, 2012-Jun 30, 2023. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS plans to increase our allocation to **capital structure / volatility arbitrage** strategies. We believe the opportunity set for the strategy should benefit as issuers approach a wall of debt maturing in 2025 and 2026. However, we anticipate this may bring more opportunities in Q4 of this year than in Q3.
- With the macro environment appearing to normalize, we have seen more stability in credit spreads and interest rates which has proved beneficial for capital structure relative value strategies.
- As it relates to convertible arbitrage specifically, refinancing-oriented corporate actions continue to gather steam and should a surge of new issuance arise in Q4, this “one-two punch” should be supportive of returns for managers at the size and scale required to take advantage this opportunity.

# Relative Value—Quantitative Equity

## Drawdowns in Size and Anti-Beta factors

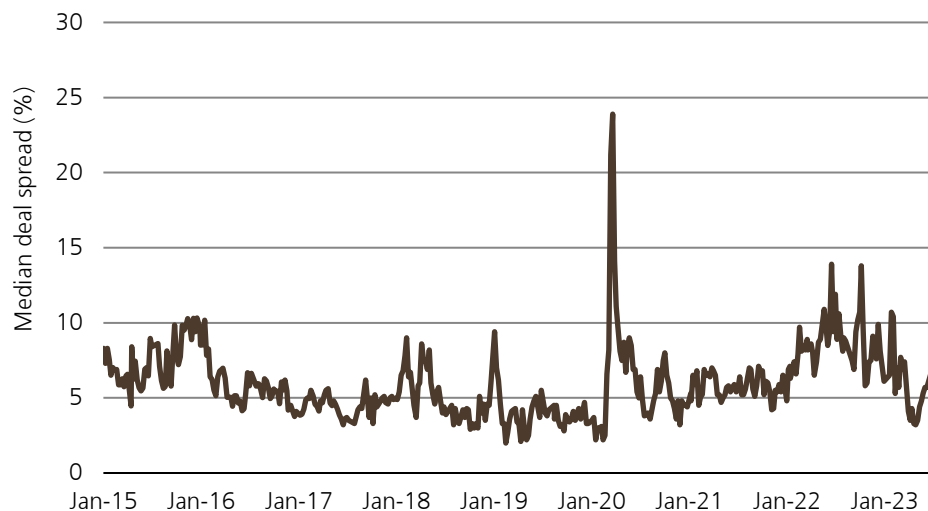


Source: Bloomberg, HFS; Daily data; Jan 2, 2020-Jun 30, 2023. Data illustrates maximum drawdowns, which are computed within 12 months moving window. Quant equity performance is negatively affected by drawdowns in Size and Anti-Beta factors. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS continues to hold a slightly positive outlook for **quantitative equity** strategies, particularly statistical arbitrage. While we observe several factors supportive of quantitative equity strategies, at the same time we acknowledge the limited capacity in the space and difficulty in launching a new standalone hedge fund. Therefore, we plan to decrease our target allocation to quantitative equity.
- In Q2, the narrow market leadership led by AI-related companies caused underperformance of the size and anti-beta factors which negatively impacted quantitative equity performance. Residual volatility compression resulted from the expansion of sector driven stock returns.
- Our base case and risk-on scenarios both assume a decrease in market volatility, which we believe would benefit fundamental quants more than statistical arbitrageurs. However, in risk-off and tail scenarios, we expect fundamental quants to underperform relative to statistical arbitrage strategies.
- High interest rates should remain supportive of fundamental alphas and liquidity in the stock market remains healthy. We believe that volatility and residual volatility are still supportive of statistical arbitrage strategies at their current levels.

# Relative Value—Merger Arbitrage

## Median annualized merger arbitrage spreads

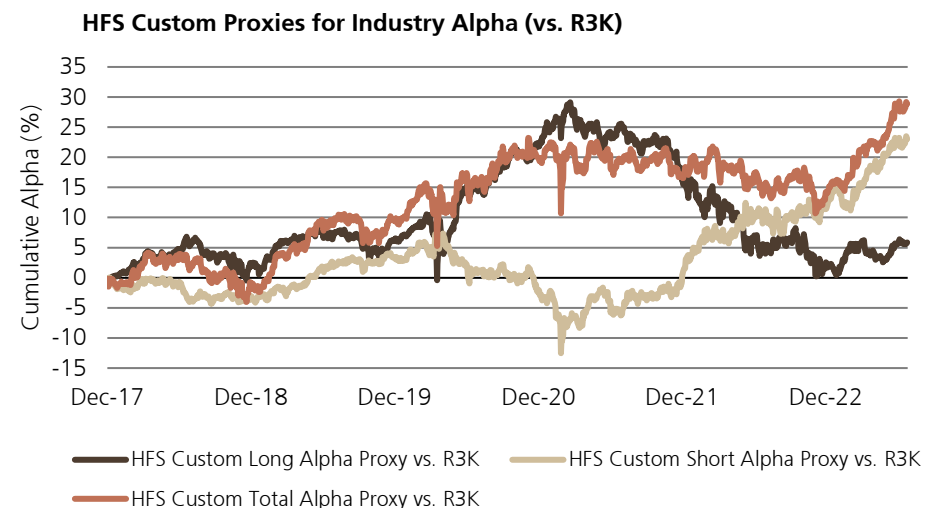


Source: UBS Special Situations, Bloomberg; Weekly data; Jan 2, 2015-Jun 30, 2023. Data includes definitive deals with median spreads ranging from 0% to 50% and have more than five days to closing. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS maintains a negative outlook on **merger arbitrage** and event-driven strategies. Regulatory interference remains problematic, causing longer deal completion timelines and more extreme downside break levels.
- As a result, deal flow for mega-cap companies (the type that arbitrageurs typically prefer to pursue) is down significantly on a year-over-year basis. However, we believe there continues to be a potential opportunity in a collection of broken / implied broken deal trades with attractive risk / reward. Although the timing for these trades is uncertain and the market pricing implies a high probability of deal break, some managers appear to be looking to take advantage of these situations. On the positive side, the hung deal log jam looks to be clearing with banks having cut their hung debt exposure by more than half since May 2022.

# Equity Hedged

- Within **Equity Hedged**, after several quarters of reductions, we are beginning to reallocate to fundamentally-oriented strategies, using our allocation to opportunistic trading managers as a source of funding. Overall, our allocation to Equity Hedged will still maintain a low-beta profile. We believe that with more clarity on inflation / peak rates, moderating factor volatility and alpha tailwinds, the forward-looking environment for fundamental stock-picking should improve.
- Industry alpha has generally trended higher this year, driven by successes in both the long and short portfolios, but particularly from the short side as this year's rise in rates has provided a meaningful tailwind for short alpha. Despite some episodic short squeezes, we remain constructive on the outlook here. We expect the high cost of capital will begin to challenge the prospects of less viable companies, creating a healthy opportunity set for short positions. In addition, for some managers, the enhanced rebates on short holdings may also provide a supplementary source of income. While the long alpha this year has mostly been driven by technology-related holdings, we expect returns from stock selection to improve as market leadership broadens and reverts to historical levels.
- As we contemplate adding back risk, two themes that appear interesting to us today are the energy transition and AI. Both themes offer promising long-tailed growth that should be less correlated to macroeconomic conditions. With respect to the energy transition, the economic benefits related are now being outlined by the Treasury, which should create new growth opportunities for the industry. Also, while the AI story is in its early days, market enthusiasm has been quite strong, which in some cases may imply aggressive valuations, creating the potential for two-sided opportunities.
- HFS plans to maintain our equity long / short exposure in **China**, although we are less constructive relative to last quarter given the weak economic rebound thus far and the government's lack of urgency to reignite the economy. In addition, negative sentiment in China equities and outflows from the region is also a concern. We expect the market to remain rangebound with limited upside until we see more commitment from the government to support the economy. However, the absolute downside seems limited due to light positioning and low valuations (both absolute and relative). HFS believes that China is still "tradeable", but we remain cautious over the medium- to long-term due to the risks arising from overall policy direction (common prosperity, regulatory, etc.) and geopolitics.

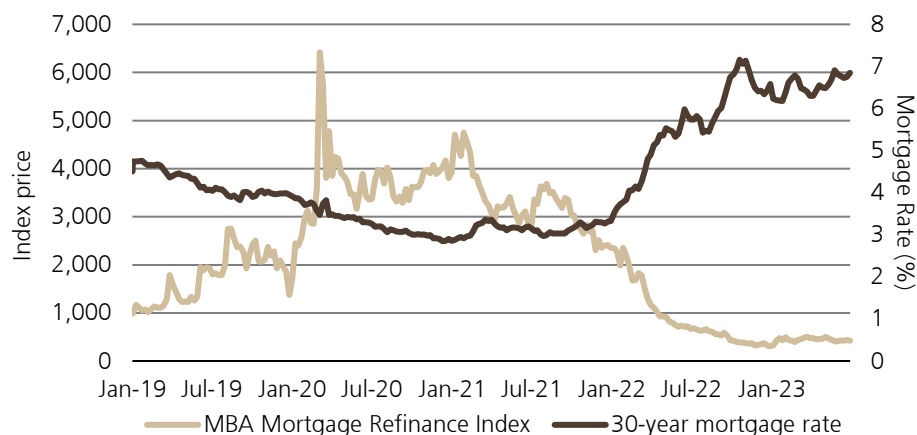


Source: UBS HFS, Bloomberg; Daily data; Dec 1, 2017-Jun 26, 2023. HFS Custom Long Alpha is a proxy for long alpha captured by long / short equity hedge fund managers using 11 long GS VIP Sector specific indices with a weighting scheme consistent with industry exposures. UBS Custom Short Alpha is a proxy for short alpha captured by long / short equity hedge fund managers using multiple short indexes including GSTHVISP Index, GSCBMSAL Index, MSSHRTUS Index and MSXXSHRT Index with a weighting scheme consistent with industry exposures. HFS Custom Total Alpha Proxy is a proxy for the total alpha captured by long / short equity hedge fund managers and is equivalent to the sum of the HFS Custom Long Alpha Proxy and the HFS Custom Short Alpha Proxy. These three HFS Custom proxies for industry alpha are measured against the Russell 3000. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- In contrast, Japanese equity markets are improving as a result of rising inflation, a relatively weaker Yen, and shareholder activism. From a valuation perspective, we believe that Japan is more attractive relative to other DM countries. **Japan equity event** remains a high conviction strategy as corporate change is gaining more momentum.

# Credit / Income

Prepayment speeds and mortgage rates



Source: Mortgage Bankers Association, Bloomberg; Weekly Data; Jan 3, 2019-Jun 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- We believe that **corporate long / short** strategies remain well-positioned to benefit from increased dispersion and volatility as companies grapple with deteriorating fundamentals, rising rates and a looming recession. Allocations remain focused on defensively positioned, trading-oriented managers that may take advantage of dislocations or event-driven opportunities. Though the opportunity set has been more muted in late Q2 as market volatility abated, the space remains attractive given expectations for increasing technical and fundamentally driven volatility, as well as a growing frequency in corporate events (stress /distress, new issue, refi's, M&A). Dispersion also remains high, resulting in an improved environment for credit selection. Rising rates have also led to more attractive yields and price discounts, resulting in better carry, improved convexity and pull-to-par, as well as downside protection.
- In **corporate long-biased** and **distressed**, HFS remains underweight as the distressed opportunity set, while growing, remains in its earlier stages and high yield spreads remain tight. While companies face higher cost of funding, squeezed margins and slowing demand, high yield spreads remain well below historical averages for recessionary environments, ending Q2 at 405 bps. However, distressed activity has increased, with defaults ticking above 2.41% and 2.82% for bonds and loans, respectively. HFS continues to monitor the space for increasing distress and widening spreads, which will likely provide a more attractive opportunity set and better entry point.
- In **asset-backed**, HFS plans to increase allocations as we seek additional sources of carry. Structured credit markets remain attractive, given strong carry and potential for positive MTM with wider spreads following the 2022 sell off. Structured credit markets have also lagged the YTD rally in corporate credit and now offer more attractive relative yield and spread levels. HFS allocations are concentrated in high conviction strategies with a focus on high quality assets with stable fundamentals and attractive carry including multifamily CMBS, RMBS and consumer-oriented ABS. HFS also maintains tactical allocations to other segments, such as CLOs.
- HFS plans to increase current **agency MBS** allocations, with a focus on derivatives strategies. Managers are now enjoying attractive carry at approximately 75-100 bps per month. While IO derivatives have experienced some spread tightening from recent wides, they may continue to offer upside as prepayment speeds slow, with more than 95% of US borrowers now out of the money for refinancing. Managers also continue to see attractive trading opportunities in derivatives and the mortgage basis as macro events continue to create rate volatility.



# Endnotes

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## Index descriptions

The use of indices is for illustrative purposes only.

### Citi Economic Surprise G10 Index

The Citi Economic Surprise Indices measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.

### Bloomberg Industrial Metals SubIndex (BCOMIN Index)

Formerly known as Dow Jones-UBS Industrial Metals Subindex (DJUBSIN index), the index is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

### US Generic Government 10-year yield (USGG10YR Index)

Reflects the generic government 10-year yield for US issues of treasuries.

### S&P 500 (SPX Index)

The Standard and Poor's 500 Index (S&P500) is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

### EURUSD Spot Exchange Rate (EURUSD Curncy)

Price of 1 EUR in USD.

### Brent Crude (CO1 Comdty)

Current pipeline export quality Brent blend as supplied at Sullom Voe. ICE Brent Futures is a deliverable contract based on EFP delivery with an option to cash settle.

### US Natural Gas (NG1 Comdty)

First month futures contract on Henry Hub Natural Gas.

### MOVE Index

This is a yield curve weighted index of the normalized implied volatility on 1-month Treasury options. It is the weighted average of 1m2y, 1m5y, 1m10y and 1m30y Treasury implied vols with weights 0.2/0.2/0.4/0.2, with volatilities on the CT2, CT5, CT10, and CT30.

### Size factor (DJTMNSS Index)

Dow Jones U.S. Thematic Market Neutral Size Index intends to reflect the performance of a strategy whereby an investor would express a long position on small-cap companies and a short position on large-cap companies.

### Anti-Beta factor (DJTMNAB Index)

Dow Jones U.S. Thematic Market Neutral Anti-Beta Index intends to reflect the performance of a strategy whereby an investor would express a short position on high beta companies and a long position on low beta companies.

### MBA Mortgage Refinance Index

The MBA refinancing index is a gauge of requests for mortgage loan refinancings. The MBA Mortgage Refinance index is a leading indicator of prepayment speeds and mortgage loan production volatility. It reflects loan applications, so changes in actual refinance fundings tend to lag changes in the index by about 45 days.

# Endnotes

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## Index descriptions

The use of indices is for illustrative purposes only.

### HFS Custom Long Alpha Proxy

HFS Custom Long Alpha is a custom proxy for the long alpha (measured against the Russell 3000) captured by long / short equity hedge funds using 11 long GS VIP Sector specific indices with a weighting scheme consistent with industry exposures.

### HFS Custom Short Alpha Proxy

HFS Custom Short Alpha is a custom proxy for the short alpha (measured against the Russell 3000) captured by long / short equity hedge funds using multiple short indexes including GSTHVISP Index, GSCBMSAL Index, MSSHRTUS Index and MSXXSHRT Index with a weighting scheme consistent with industry exposures.

### HFS Custom Total Alpha Proxy

HFS Custom Total Alpha is a custom proxy for the total alpha (measured against the Russell 3000) captured by long / short equity hedge fund managers and is equivalent to the sum of the HFS Custom Long Alpha Proxy and HFS Custom Short Alpha Proxy.

### GSTHVISP Index

The GS Very Important Short Position (VISP) list tracks short exposure of hedge funds. The equal-weighted basket consists of 50 S&P 500 constituents with the highest total dollar value of short interest outstanding. The VISP basket is designed as a short hedge for the Hedge Fund VIP List (GSTHHVIP) to replicate the performance and long / short nature of hedge fund holdings.

### GSCBMSAL Index

An equally weighted basket of the 50 highest short interest names in the Russell 3000. Names in the basket have a market cap greater than \$1 billion. This basket is updated on a monthly basis.

### MSSHRTUS Index

MSSHRTUS is an informational index that represents an equally weighted basket of 50 conviction shorts in the US, as defined by Morgan Stanley's proprietary Crowding Factor. It provides a gauge of short alpha performance within this focus universe, rather than through traditional short interest lenses.

### MSXXSHRT Index

The Morgan Stanley High Short Interest basket consists of 150 names within the Russell 3000 that have a float-adjusted market cap greater than \$1bn and rank high on several metrics including short interest % of float, days-to-cover, and short interest variability. The basket systematically rebalances each month when new data becomes publicly available and is liquidity weighted with a 2.0% cap.

### Russell 3000 Index

The Russell 3000 Index measures the performance of the largest 3000 US companies representing approximately 98% of the investable US equity market. The index is reconstituted annually to ensure new and growing equities are reflected. Dividends are not reinvested.

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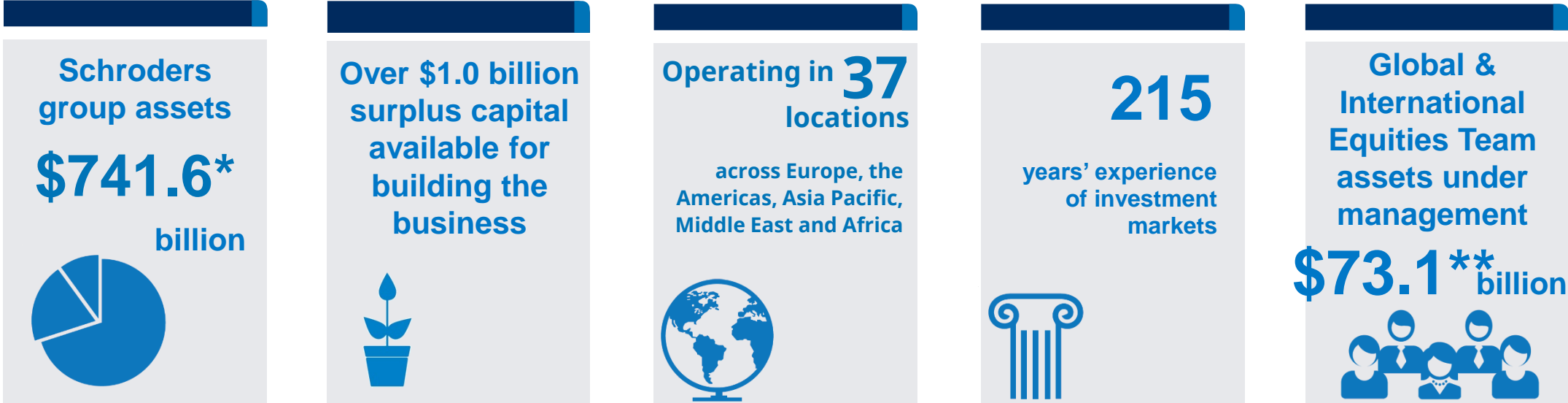
# MWRA – Annual Board Review

Karim El Nokali – Investment Strategist  
John Gallagher – Institutional Director

October 2023

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A worldwide team dedicated to asset management



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# Schroder International Equities: A distinctive approach

Active managers add value through three primary ways...

## The Schroders difference

### Research



**Breadth of research coverage**  
Over 100+ analysts based around the world distilling ideas that are style neutral with a quality bias

**Global perspective**  
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**Innovative use of data analytics**  
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**Integration of ESG**  
Assessing the materiality of non-financial factors and their impact on the durability of a company's earnings



### Portfolio construction



**Consistent application of philosophy**  
Portfolio construction driven by bottom-up stock picking

**Risk-based construction**  
Ensuring consistent alignment between portfolio risk and manager conviction

**Controlled factor risk**  
Alignment of risk and stock selection to drive enhanced performance consistency

**Fundamental risk framework**  
Proprietary forward looking risk system designed to enhance portfolio downside protection



### Engagement



**Active ownership**  
Regular dialogue with companies promoting improvement of long term returns

**Dedicated engagement resources**  
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# International Alpha (ACWI ex USA)

## Value creation evidenced

### Efficiency of alpha

- Proprietary risk framework helping to drive consistently strong risk adjusted returns

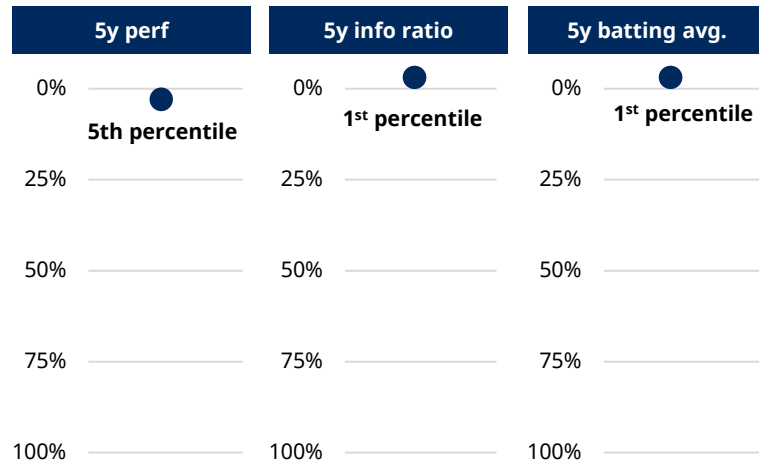
### Persistency of alpha

- Success rates across market environments demonstrate low factor dependency to drive relative performance

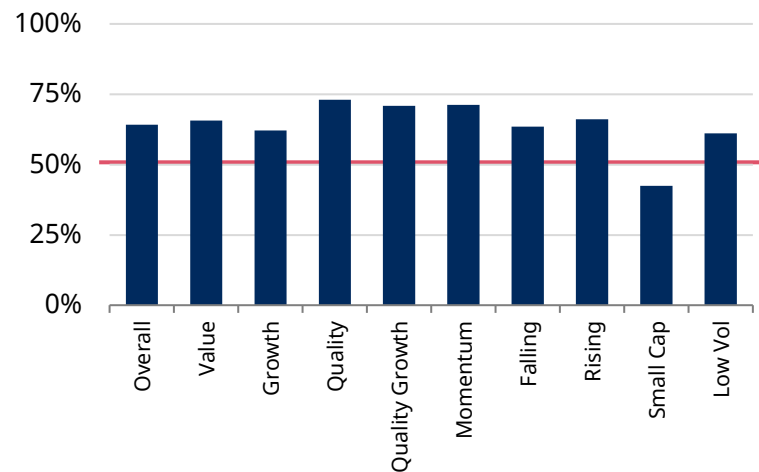
### Consistency of alpha

- Consistency from breadth of research and our focus on delivering alpha through idiosyncratic stock picking

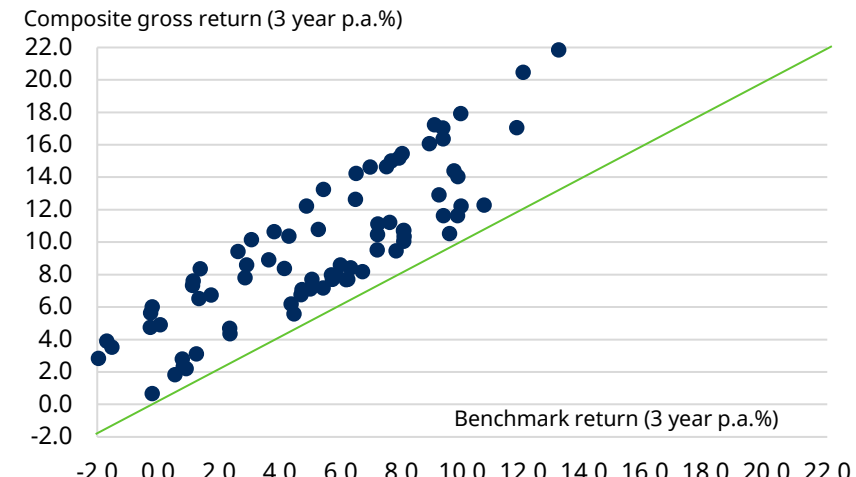
## International Alpha: concentrated by names, diversified by risk



Vs eVestment Non-US Diversified Large Cap Equity (app. 300 strategies)



Batting average based on monthly returns across market environments



Rolling 3y excess returns since inception of PM team in January 2014

**Performance shown is past performance. Past performance is not a guide to future performance. The value of investment can go down as well as up and is not guaranteed.**

Source: Schroders, eVestment. Peer group data as of 30 June 2023. Performance is based on monthly returns for the strategy composite gross of fees in USD versus the MSCI ACWI ex-US (NR) Index. Batting average refers to the comparison of the fund's monthly returns to those of the MSCI All Country World Index ex USA NDR Index, as a percentage of fund outperformance over the stated time period. Market environments based on the index, as follows: 'overall' refers to the standard ACWI ex USA cap weighted index monthly returns. 'Rising' months are when the index return is greater than 0, and 'falling' months when the index return is less than 0. 'Value' reflects months when value stocks outperform growth stocks, and 'growth' reflects months when growth stocks outperform value stocks. 'large' reflects months when large-cap stocks outperform small/mid-cap stocks, and 'SMID' reflects months when small/mid-cap stocks outperform large-cap stocks. Growth stocks are generally those with higher price-to-book ratios and forecasted growth values, and value stocks are generally those with lower price-to-book ratios and forecasted growth values. Large-cap stocks are generally those with market caps of \$10bn or higher, and small-cap stocks are generally those with market caps of \$2bn or lower. Market environments (value, growth, falling, rising, momentum, large and small/mid) defined using MSCI indices and are as of 30 June 2023. Rolling 3-year performance is based on rolling 3-year returns for the International Alpha strategy composite gross of fees in USD vs. the MSCI ACWI ex-US from January 2014.

# Global Equities

## Strategy assets under management

	Global (US\$m)	International (Global ex US) (US\$m)	US Large Cap (US\$m)	Total (US\$m)
<b>Equity</b>	<b>15,254</b>	<b>18,000</b>	<b>2,964</b>	<b>36,219</b>
<b>Alpha<sup>2</sup></b>	<b>12,854</b>	<b>10,266</b>	<b>2,758</b>	<b>25,879</b>
<b>Thematic<sup>1</sup></b>	<b>14,289</b>			<b>14,289</b>
<b>Total</b>	<b>42,398</b>	<b>28,266</b>	<b>5,723</b>	<b>76,387</b>

Source: Schroders, as at 30 June 2023. <sup>1</sup>Thematic strategies are Global Climate Change, Global Healthcare, Global Healthcare Innovation, Global Disruption, Changing Lifestyle, Smart Manufacturing, Energy Transition and Global Cities. <sup>2</sup>Alpha strategies now include Global Sustainable Growth

# Global Equities Team

## Portfolio Management Team

### Global Equities

**Alex Tedder**

Head of Global and Thematic Equities,  
Multi Regional Equity (32)

**Frank Thormann, CFA**

Portfolio Manager (24)

### International Equities

**James Gautrey, CFA**

Portfolio Manager (21)

**Simon Webber, CFA**

Portfolio Manager (24)

### Global Specialist Equities

**Charles Somers, CFA**

Portfolio Manager (24)

**Scott Maclellan, CFA**

Portfolio Manager (10)

## Global Sector Specialists (GSS)

**Dan McFetrich, CFA**

Head of Research (22)  
GSS - Industrials

**John Bowler**

GSS - Healthcare (28)

**Ines Duarte Da Silva**

GSS - Consumer Staples &  
Healthcare (12)

**Isabella Hervey-Bathurst, CFA**

GSS - Utilities (10)

**Andre Reichel, CFA**

GSS - Financials (11)

**Michael White, CFA**

GSS - Communication Services (10)

**Jonathan McMullan**

GSS - Technology (16)

**Paddy Flood, CFA**

GSS - Technology (7)

**Marine Jacquemoud, CFA**

GSS - Energy & Materials (12)

**Simone Geldenhuys, CFA**

GSS - Consumer Discretionary (4)

**Thomas Hammond**

Investment Analyst - Autos (6)

**Maurice Hewins**

Investment Analyst - Climate Technology (3)

**Ajani Sivapalan**

Sustainability Analyst (8)



### Investment Directors

Gavin Marriott, CFA (38)  
John Chisholm, CFA (28)  
David Docherty (30)  
Yashica Reddy (11)



### Local Research

Team of 100+ analysts  
across 16 countries



### Investment Insights

Investment Insights Unit  
Team of over 20 Data Scientists  
and Analysts



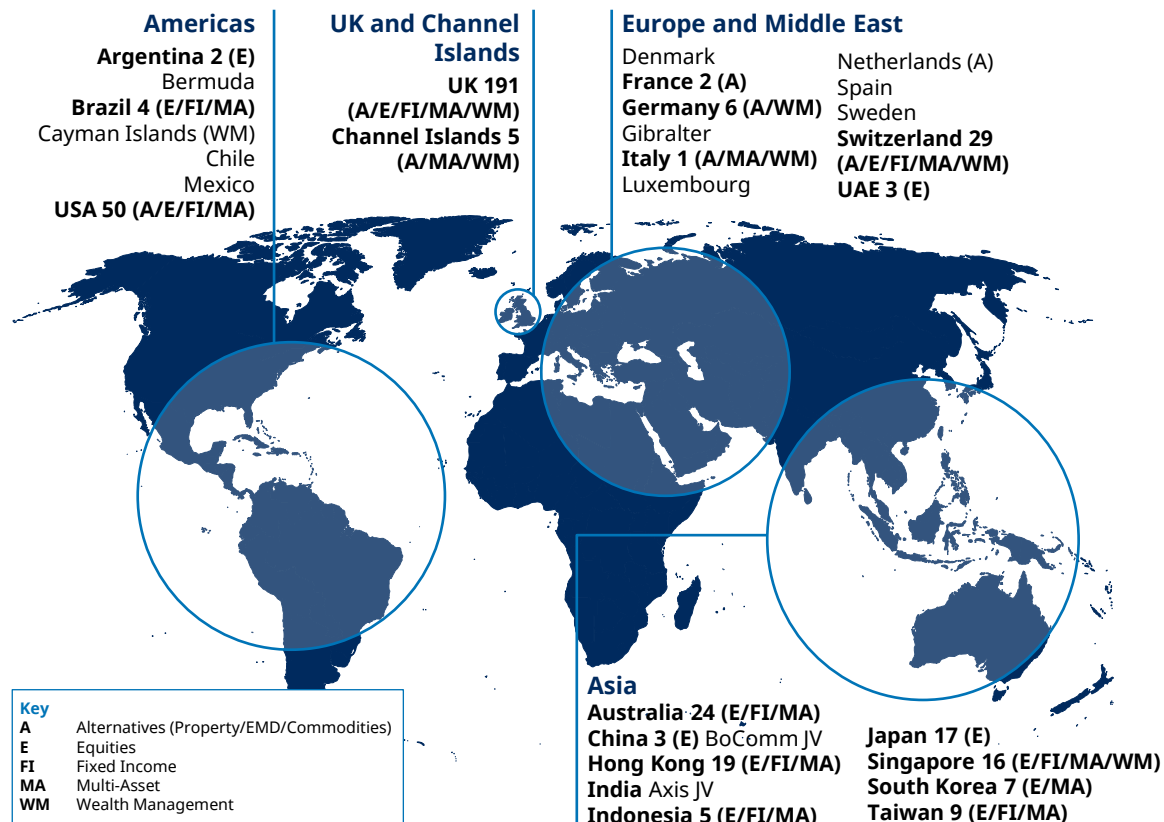
### Sustainable Investment

Team of over 50 dedicated  
Sustainable Investment  
analysts and professionals

# A process underpinned by a global research capability

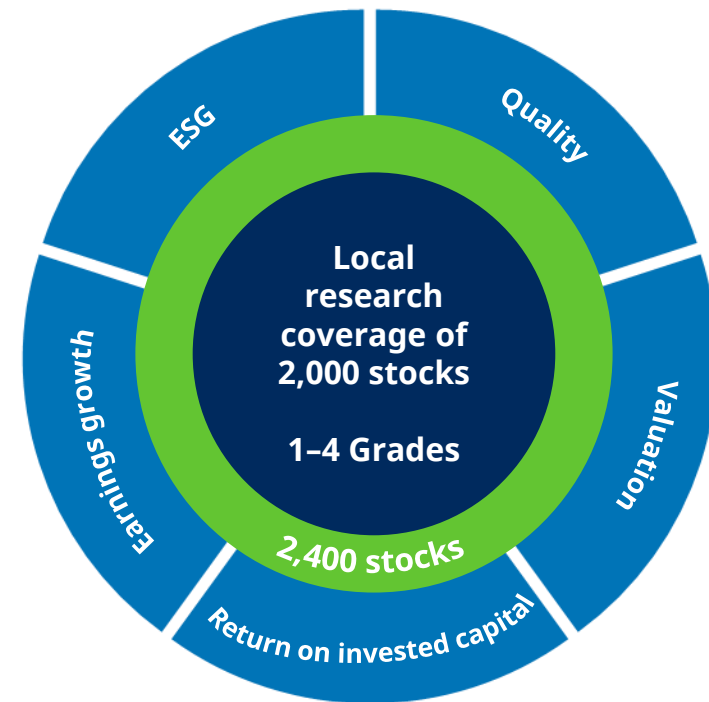
## Global investment capability

- Over 400 fund managers and analysts worldwide
  - Over 100 equity analysts and 25 credit analysts



## Regional equity analysts' research output

- Analysis is **style-neutral** with a **Quality-bias**
- Assessment/grading reflect regional philosophies and approach and, local opportunity set
- Stocks graded '1'- strong buy to '4' - strong sell



Source: Schroders, as at 30 June 2023. Investment professional employee numbers by role and location. ESG (Environmental, Social and Governance) For illustrative purposes only.





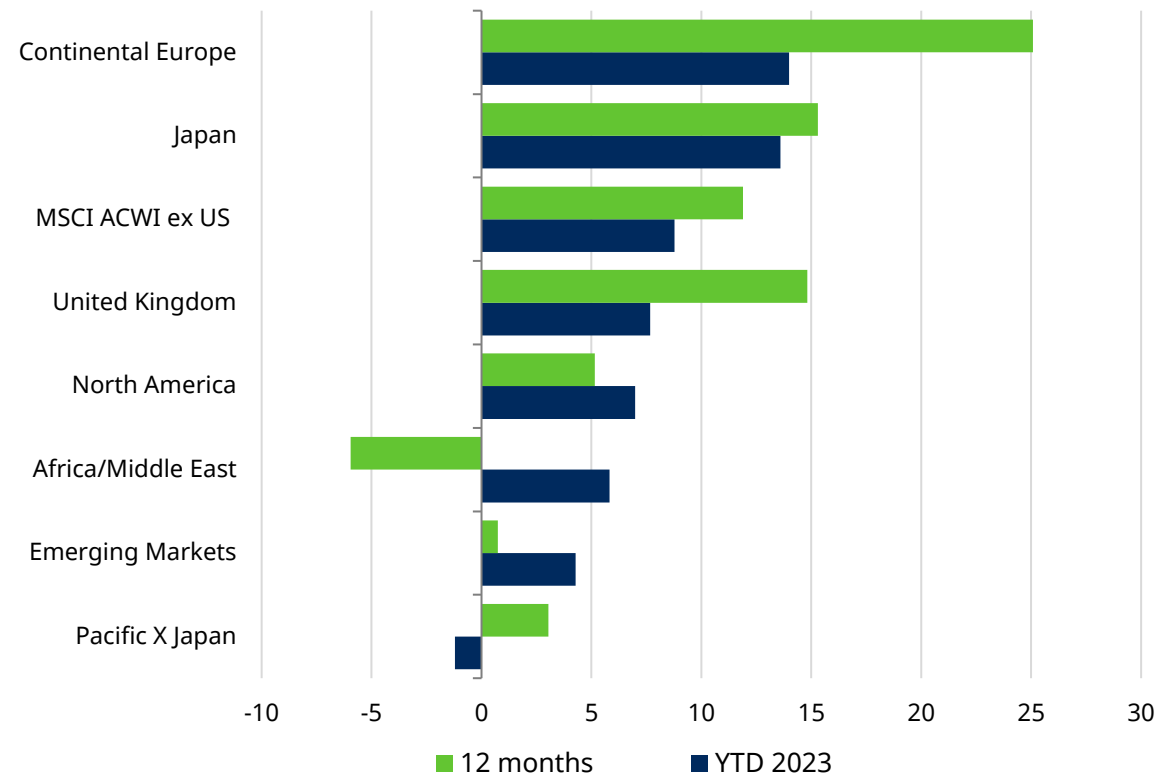
# International Equities

Portfolio performance and positioning

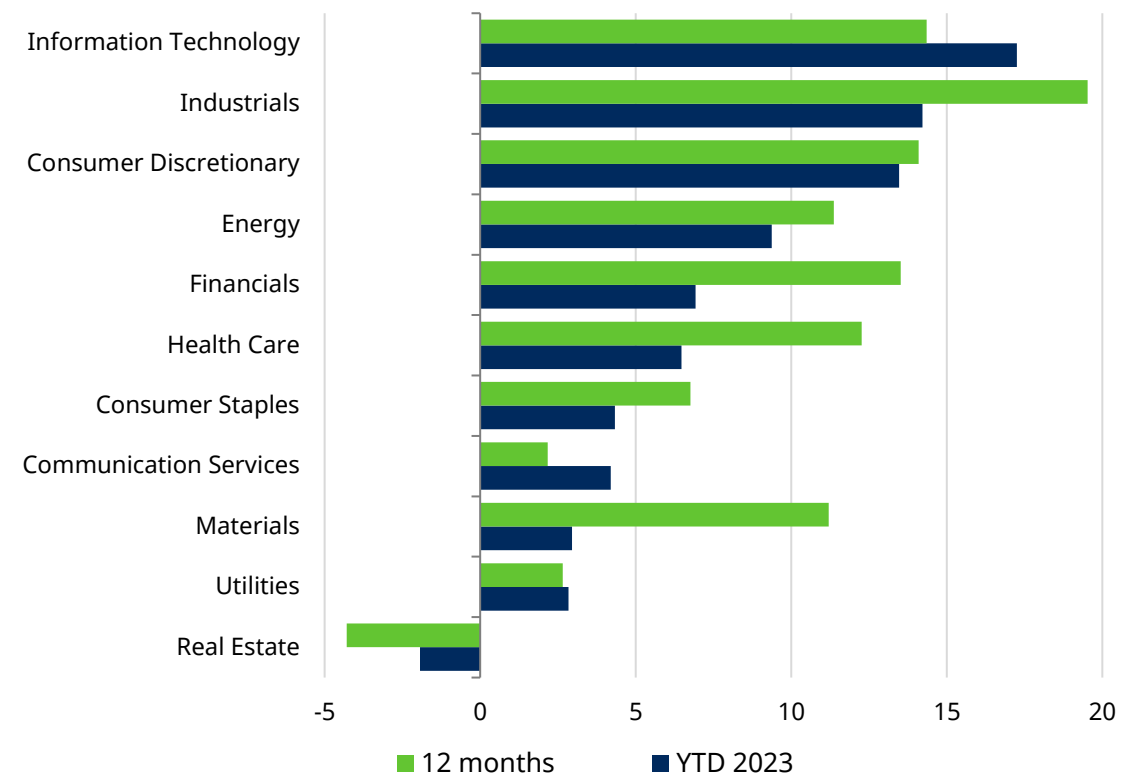
# Market background

As at 31 August 2023

## Region returns<sup>1</sup> (USD %)



## Sector returns<sup>1</sup> (USD %)



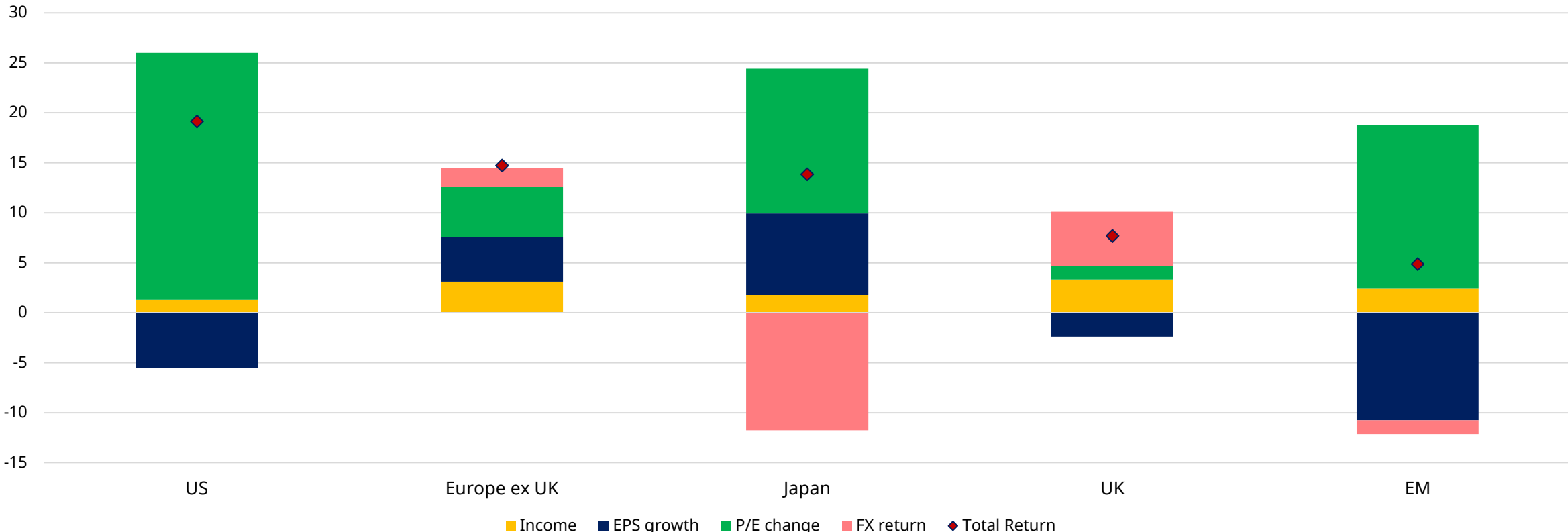
**Past Performance is not a guide to future performance and may not be repeated.**

Source: FactSet, MSCI. <sup>1</sup>Based on MSCI AC World ex US. The regions and sectors shown above are for illustrative purposes only and are not to be considered a recommendation to buy or sell.

# Drivers of global equity returns

Weak earnings have been offset by rising valuation multiples

YTD \$ return by source, %



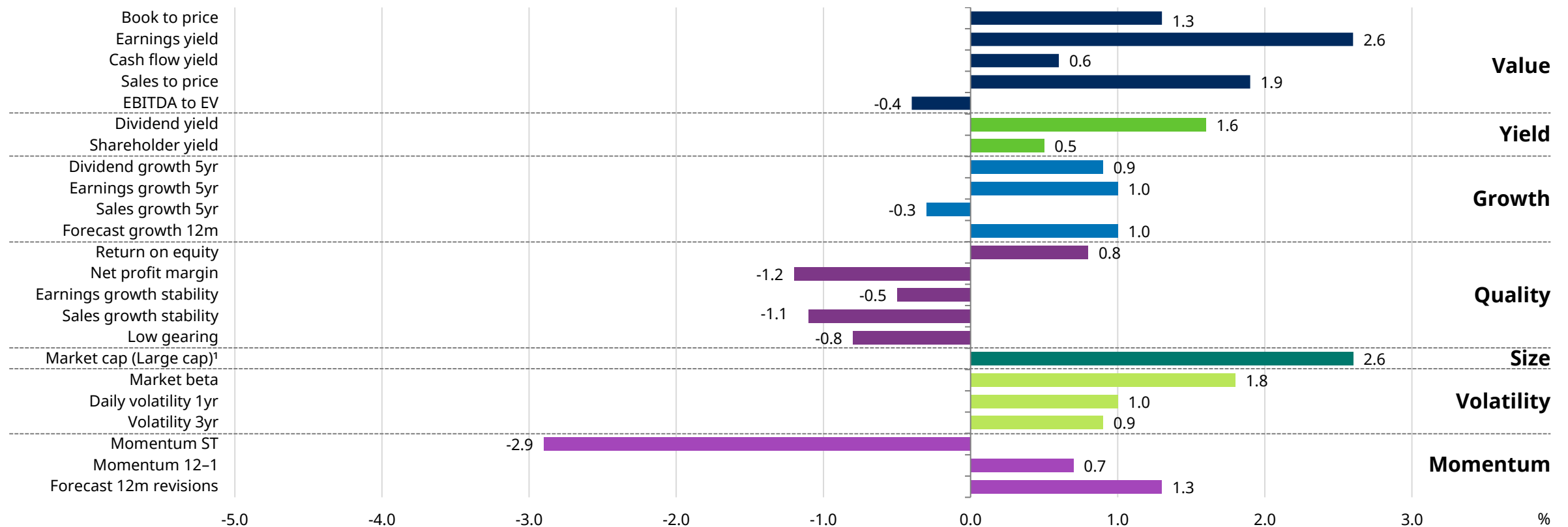
Past performance is not a guide to future performance and may not be repeated.  
Source: Datastream Refinitiv, MSCI and Schroders Strategic Research Unit. Data to 31 August 2023 in US dollars.

# Market background

## Style performance – Global ex-US

12 months to 30 June 2023

Style factor performance – return relative to developed markets region – (top 50% of style)



Past Performance is not a guide to future performance and may not be repeated.

Source: © 2023 Style Research Ltd. All rights reserved. All trademarks are the property of their respective owners. <sup>1</sup>Market cap = top 70% of developed markets region. As at 30 June 2023.

# Performance

## MWRA – Schroders International Alpha

### Performance to 31 August 2023 (% Gross returns in USD)

	YTD 2023	12 Months	3 years p.a.	5 years p.a.	7 years p.a.	Since Inception* p.a.
MWRA (gross)	+10.3	+16.6	+5.3	+7.3	+8.8	+7.7
MWRA (net)	+9.9	+16.0	+4.7	+6.7	+8.1	+7.0
MSCI AC World ex US (NDR) TL	+8.8	+11.9	+4.0	+3.3	+5.2	+4.7
<b>Relative performance to gross returns</b>	<b>+1.5</b>	<b>+4.7</b>	<b>+1.3</b>	<b>+4.0</b>	<b>+3.6</b>	<b>+3.0</b>

### Calendar years performance (% Gross returns in USD)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
MWRA*	-18.6	+12.1	+25.5	+26.4	-12.1	+30.7	-0.4	+0.6	-4.1	+22.9
MSCI AC World ex US (NDR) TL	-16.0	+7.8	+10.7	+21.5	-14.5	+25.0	+1.0	-0.8	-4.9	+22.8
<b>Relative performance</b>	<b>-2.6</b>	<b>+4.3</b>	<b>+14.8</b>	<b>+4.9</b>	<b>+2.4</b>	<b>+5.7</b>	<b>-1.4</b>	<b>+1.4</b>	<b>+0.8</b>	<b>+0.1</b>

Past performance is not a guide to future performance and may not be repeated. The value of investment can go down as well as up and is not guaranteed. The return may increase or decrease as a result of currency fluctuations. Please refer to the important information on the effect of fees at the end of the presentation for further details  
 Source: Schroders. Gross of fees. p.a. represents annualised performance. \*Inception date of MWRA is February 2, 2012. Returns has been chain linked using the Hartford International Stock Fund up to the 19 November 2019 and then to the Schroder International Alpha CIT

# Schroders International Alpha CIT – Risk considerations

- Past performance is not a guide to future performance and may not be repeated. The value of investments and the income from them may go down as well as up and investors may not get back the amounts originally invested.
- Liquidity risk: In difficult market conditions, the fund may not be able to sell a security for full value or at all. This could affect performance and could cause the fund to defer or suspend redemptions of its shares.
- Operational risk: Operational processes, including those related to the safekeeping of assets, may fail. This may result in losses to the fund.
- Currency risk: The fund may lose value as a result of movements in foreign exchange rates.
- Derivatives risk – Efficient Portfolio Management and Investment Purposes: Derivatives may be used to manage the portfolio efficiently. A derivative may not perform as expected, may create losses greater than the cost of the derivative and may result in losses to the fund. The fund may also materially invest in derivatives including using short selling and leverage techniques with the aim of making a return. When the value of an asset changes, the value of a derivative based on that asset may change to a much greater extent. This may result in greater losses than investing in the underlying asset.
- Emerging Markets & Frontier risk: Emerging markets, and especially frontier markets, generally carry greater political, legal, counterparty, operational and liquidity risk than developed markets.
- Counterparty risk: The fund may have contractual agreements with counterparties. If a counterparty is unable to fulfil their obligations, the sum that they owe to the fund may be lost in part or in whole.
- Performance risk: Investment objectives express an intended result but there is no guarantee that such a result will be achieved. Depending on market conditions and the macro economic environment, investment objectives may become more difficult to achieve.
- IBOR: The transition of the financial markets away from the use of interbank offered rates (IBORs) to alternative reference rates may impact the valuation of certain holdings and disrupt liquidity in certain instruments. This may impact the investment performance of the fund.

# MWRA Transactions

As of August 31, 2023

	Date	Amount (US\$)
<b>Initial Contribution</b>	02/02/2012	17,354,622
<b>Follow-on Contributions</b>	02/07/2012	900,000
	07/05/2012	1,100,000
	07/27/2012	500,000
	10/05/2012	2,000,000
	02/01/2013	1,250,000
	12/22/2014	2,000,000
	02/17/2015	1,500,000
	08/04/2015	1,000,000
	11/28/2016	2,000,000
	12/27/2017	345,246
	05/06/2019	4,000,000
<b>Subsequent Withdrawals</b>	11/14/2013	(4,000,000)
	07/19/2017	(6,000,000)
	12/05/2017	(3,000,000)
<b>Full Redemption (MF)</b>	11/15/2019	(32,139,612)
	Date	Amount (US\$)
<b>Initial Contribution (CIT)</b>	11/19/2019	32,139,612
<b>Follow-on Contributions (CIT)</b>	05/06/2020	1,000,000
<b>Follow-on Contribution (CIT)</b>	09/17/2020	6,000,000
<b>Subsequent Withdrawal (CIT)</b>	06/21/2021	(2,500,000)
<b>Subsequent Withdrawal (CIT)</b>	11/23/2021	(16,000,000)
<b>Subsequent Withdrawal (CIT)</b>	02/01/2022	(6,000,000)
<b>Market Value as of August 31, 2023</b>		\$28,055,229.26

# Attribution – sector

## Schroder International Alpha Equity Trust

### 12 Months to 31 August 2023

(%)	Portfolio weight	Benchmark <sup>1</sup> weight	Portfolio return	Benchmark <sup>1</sup> return	Allocation	Selection	Total effect
Communication Services	4.1	5.3	-12.3	2.4	0.25	-0.32	-0.07
Consumer Discretionary	10.7	11.8	23.6	14.4	-0.10	1.24	1.14
Consumer Staples	10.1	8.5	4.3	6.7	-0.16	-0.34	-0.49
Energy	2.9	5.7	9.5	11.3	-0.07	-0.13	-0.19
Financials	13.1	20.6	15.8	13.5	-0.13	0.32	0.19
Health Care	18.2	9.7	14.0	12.3	-0.07	0.23	0.17
Industrials	17.1	13.2	18.4	19.4	0.41	-0.14	0.26
Information Technology	17.9	12.1	30.1	14.3	0.48	2.32	2.81
Materials	1.5	7.8	18.9	11.1	0.13	0.06	0.19
Real Estate	—	2.0	—	-4.3	0.40	—	0.40
Utilities	3.5	3.1	13.0	2.6	-0.01	0.38	0.37
[Cash]	1.0	—	3.7	—	0.02	—	0.02
Residual	—	—	—	—	—	—	-0.08
<b>Total</b>	<b>100</b>	<b>100</b>	<b>16.61</b>	<b>11.89</b>	<b>1.16</b>	<b>3.64</b>	<b>4.72</b>

Past performance is not a guide to future performance and may not be repeated. The value of investment can go down as well as up and is not guaranteed. The return may increase or decrease as a result of currency fluctuations.

Residual = Total Portfolio Return – Total Benchmark Return – Total Effect.

Source: Schroders, USD, Gross, <sup>1</sup>MSCI AC World ex US (NDR) TL. Sectors mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell.



# Attribution – region

## Schroder International Alpha Equity Trust

### 12 Months to 31 August 2023

(%)	Portfolio weight	Benchmark <sup>1</sup> weight	Portfolio return	Benchmark <sup>1</sup> return	Allocation	Selection	Total effect
Africa/Middle East	—	0.6	—	-6.0	0.13	—	0.13
Continental Europe	41.1	32.9	24.3	25.1	1.43	-0.37	1.06
Emerging Markets	17.4	27.1	14.7	0.7	1.26	2.52	3.77
Japan	11.9	14.7	9.8	15.3	-0.04	-0.69	-0.73
North America	3.9	7.5	27.1	5.1	-0.06	1.23	1.17
Pacific X Japan	2.5	7.6	-7.8	3.0	0.42	-0.64	-0.22
United Kingdom	22.2	9.5	11.0	14.8	0.37	-0.76	-0.39
[Cash]	1.0	—	3.7	—	0.02	—	0.02
Residual	—	—	—	—	—	—	-0.10
<b>Total</b>	<b>100</b>	<b>100</b>	<b>16.61</b>	<b>11.89</b>	<b>3.54</b>	<b>1.29</b>	<b>4.72</b>

Past performance is not a guide to future performance and may not be repeated. The value of investment can go down as well as up and is not guaranteed. The return may increase or decrease as a result of currency fluctuations.

Residual = Total Portfolio Return – Total Benchmark Return – Total Effect.

Source: FactSet, USD, Gross. <sup>1</sup>MSCI AC World ex US (NDR) TL. Regions mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

# Attribution – stock

## Schroder International Alpha Equity Trust

### 12 Months to 31 August 2023

Top 10 contributors	Portfolio weight	Benchmark <sup>1</sup> weight	Portfolio return	Benchmark <sup>1</sup> return	Total effect
Booking Holdings Inc	2.1	0.0	65.5	0.0	+0.97
SAP	2.7	0.5	65.7	65.7	+0.97
Mercadolibre Inc	2.0	0.0	60.4	0.0	+0.91
Siemens Ag	2.5	0.5	51.5	51.5	+0.68
Schneider Electric	2.6	0.4	46.3	46.3	+0.66
Mitsubishi Ufj Fin	1.7	0.3	49.6	59.3	+0.65
Erste Group Bk Ag	1.7	0.0	65.5	65.5	+0.64
Infineon Technologies	2.0	0.2	47.6	47.6	+0.63
B3	1.4	0.1	17.4	17.4	+0.38
Burberry Group	1.6	0.0	40.1	40.1	+0.35

Top 10 detractors	Portfolio weight	Benchmark <sup>1</sup> weight	Portfolio return	Benchmark return	Total effect
AIA Group	2.9	0.5	-4.3	-4.3	-0.46
Toronto Dominion Bank	1.2	0.5	-3.3	-2.3	-0.46
Equinor Asa	0.7	0.1	-15.7	-13.2	-0.44
Vestas Wind System	2.0	0.1	-8.1	-8.1	-0.35
Hong Kong Exchange	0.2	0.2	-32.4	-1.8	-0.35
Reckitt Benckiser	2.2	0.2	-3.7	-3.7	-0.35
Roche	2.6	1.0	-6.7	-7.1	-0.34
Diageo	2.2	0.4	-3.9	-3.9	-0.31
Alibaba Group	1.6	0.7	-4.3	-4.3	-0.29
Kddi Corp	1.5	0.2	1.2	-1.0	-0.29

Past performance is not a guide to future performance and may not be repeated. The value of investment can go down as well as up and is not guaranteed. The return may increase or decrease as a result of currency fluctuations.

Source: FactSet, USD, Gross. <sup>1</sup>MSCI AC World ex US (NDR) TL. Stocks mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

# Recent stock transactions

Significant new buys and sells since 31 March 2023 to 31 August 2023

<b>Buys</b>		<b>Weight (%)</b> <b>08/31/2023</b>
<b>Novo Nordisk</b>	Health Care	3.3
<b>Unilever</b>	Consumer Staples	2.1
<b>Rio Tinto</b>	Materials	1.5
<b>Terumo Corp</b>	Health Care	1.4
<b>Cont Amperex Technology</b>	Industrials	1.2

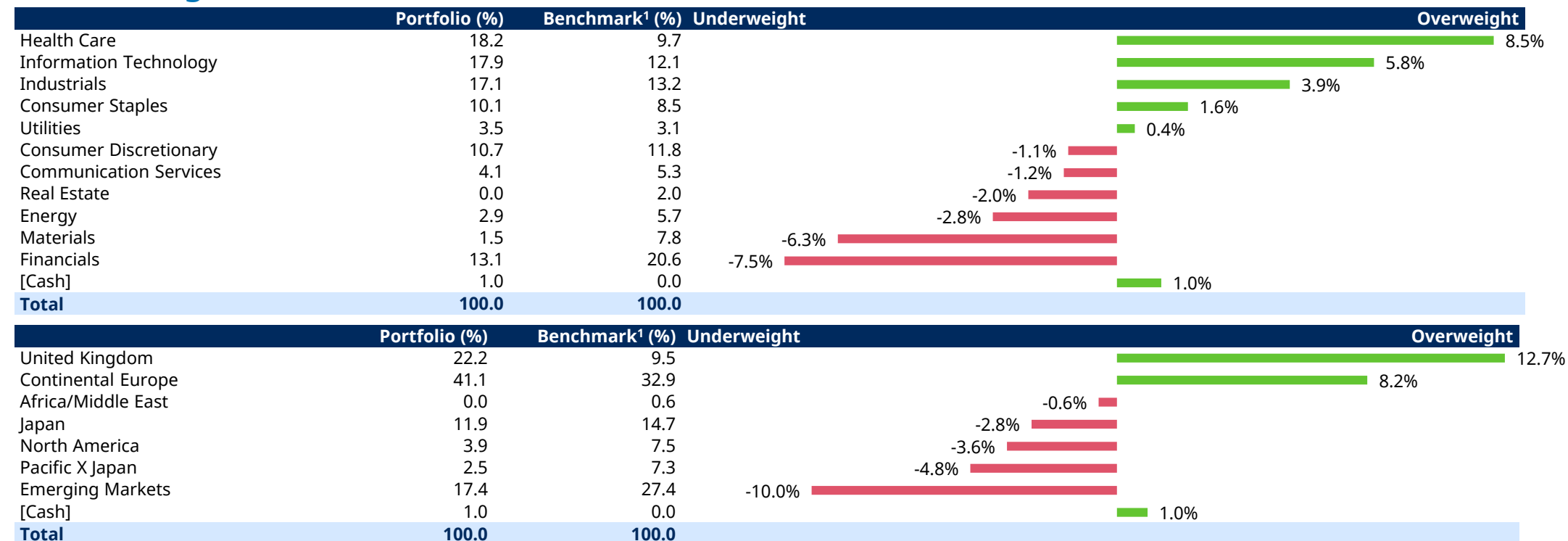
<b>Sells</b>		<b>Weight (%)</b> <b>03/31/2023</b>
<b>Nestle</b>	Consumer Staples	3.0
<b>Toronto-Dominion Bk</b>	Financials	1.9
<b>Sika</b>	Materials	1.2

Securities mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell. The value of an investment can go down as well as up and is not guaranteed. Information is subject to change at any time and does not necessarily represent current portfolio construction. No offer for sale of a security is intended by this illustration.

# Sector and region positions

## Schroders International Alpha CIT

As at 31 August 2023



Source: Schroders, FactSet. <sup>1</sup>MSCI All Country World Ex-United States

The accounting data used by FactSet is un-audited, therefore any subsequent cleaning of data will not be reflected in FactSet.

The sectors, securities, regions and countries shown above are for illustrative purposes only and are not to be considered a recommendation to buy or sell.

# Top 10 holdings by absolute weight

## Schroders International Alpha CIT

As at 31 August 2023

Stock	Region	Sector	Portfolio weight (%)	Benchmark <sup>1</sup> weight (%)	Active weight (%)
TSMC	Emerging Markets	Information Technology	3.5	1.8	+1.8
Samsung Electronics	Emerging Markets	Information Technology	3.3	1.2	+2.2
Novo Nordisk A/S	Continental Europe	Health Care	3.3	1.3	+2.0
Schneider Electric	Continental Europe	Industrials	2.9	0.4	+2.5
Shell Plc	United Kingdom	Energy	2.9	0.9	+2.0
SAP	Continental Europe	Information Technology	2.8	0.6	+2.2
Sanofi	Continental Europe	Health Care	2.7	0.5	+2.2
ASML	Continental Europe	Information Technology	2.7	1.1	+1.6
Roche	Continental Europe	Health Care	2.7	0.9	+1.8
AIA Group	Pacific X Japan	Financials	2.5	0.4	+2.1
<b>Total</b>			<b>29.3</b>	<b>9.1</b>	

Source: Schroders, FactSet. <sup>1</sup>MSCI All Country World Ex-United States.

The accounting data used by FactSet is un-audited, therefore any subsequent cleaning of data will not be reflected in FactSet.

The sectors, securities, regions and countries shown above are for illustrative purposes only and are not to be viewed as a recommendation to buy or sell

# Schroders International Alpha CIT

As at 31 August 2023

Consumer										
Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	IT	Materials	Com Services	Real Estate	Utilities
Alibaba	Carrefour	Shell	AIA Group	AstraZeneca	Bunzl	ASML	Rio Tinto	KDDI		Iberdrola
Booking Holdings	Lindt & Spruengli		B3 SA	Essilor	Cont Amperex Tech	Infineon Tech		Tencent Holdings		National Grid
Bridgestone	Diageo		Erste Group Bank	GSK	Legrand	Keyence				
Burberry	Reckitt Benckiser		FinecoBank	Lonza Group	NIBE Industrier	MercadoLibre				
Lululemon Athletica	Unilever		HDFC Bank	Novo Nordisk	Recruit	Samsung Electro				
Porsche			Mitsubishi UFJ	Roche	Relx	SAP				
			Svenska Handelsbank	Sanofi	Schneider Electric	TSMC				
				Terumo	Siemens					
					SMC Corp					
					Vestas Wind Systems					

Orange text indicates a Core holding, Blue an Opportunistic holding.

Source: Schroders. Securities shown are for illustrative purposes only and should not be viewed as a recommendation to buy or sell.

# Style exposure

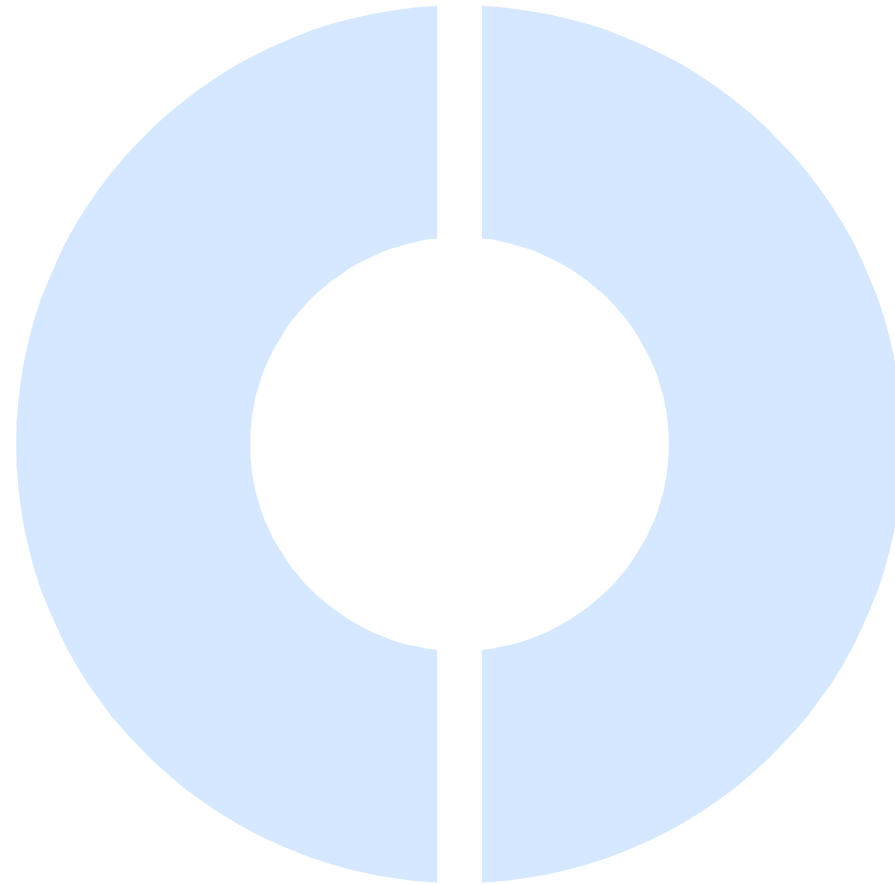
## Schroders International Alpha CIT portfolio

### Portfolio style skyline – Schroder International Alpha Equity – current versus last 3 years



Source: Style Research, Schroders, Skyline represents style factor exposures for a representative Schroders International Alpha CIT portfolio versus MSCI AC ex US as of 14 September 2023. red mark represents current factor exposure. Bar represents range over the past 3 years.

**Schroders**



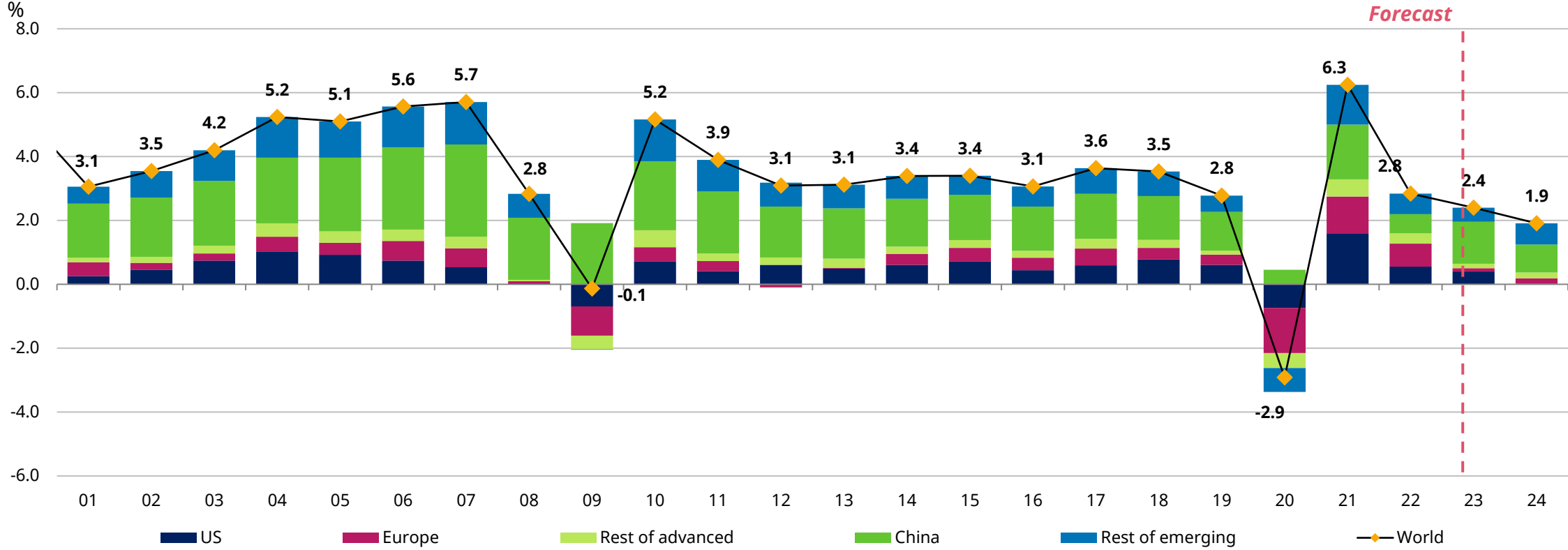
**Market Outlook**



# Global growth forecast

Inflation, tightening monetary policy and earnings risk remain headwinds for 2023

## Contributions to World GDP growth (y/y)

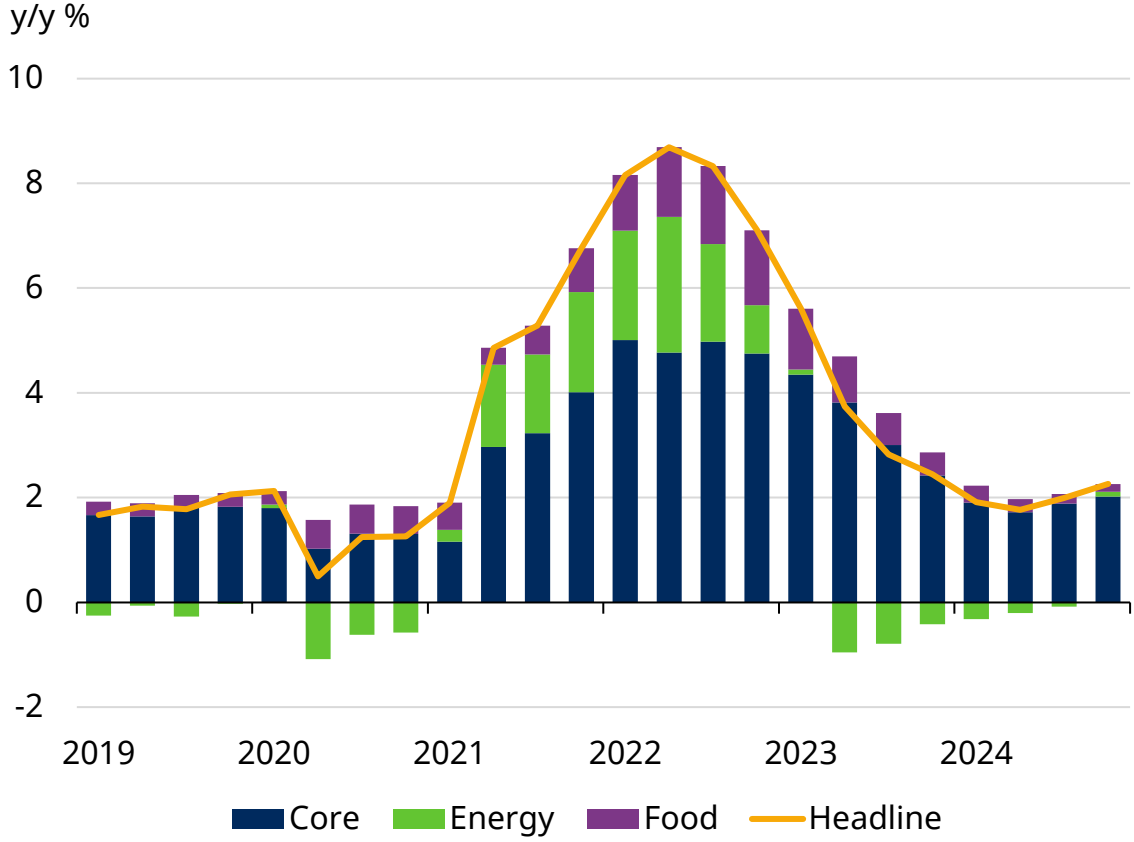


Source: Schroders Economics Group, 22 May 2023. Forecasts and assumptions may be affected by external economic or other factors. Please see the forecast risk warning on the important information slide. Previous forecasts: World GDP growth 1.9% (2023) and 2.2% (2024), World Inflation 3.9% (2023) and 2.1% (2024).

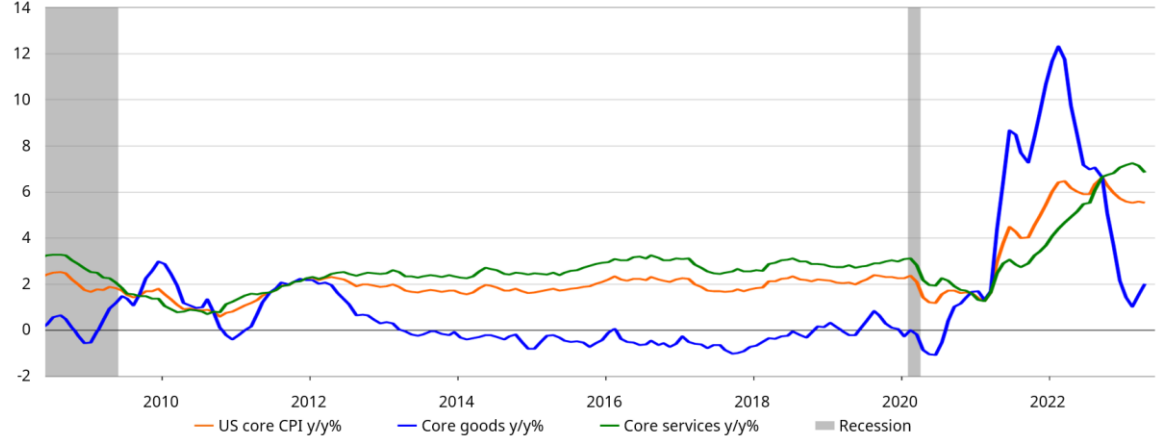
# Inflation has peaked, but will take time to come down

As goes demand, inflation has moved from goods to services

## Lower energy prices should subtract from CPI inflation...



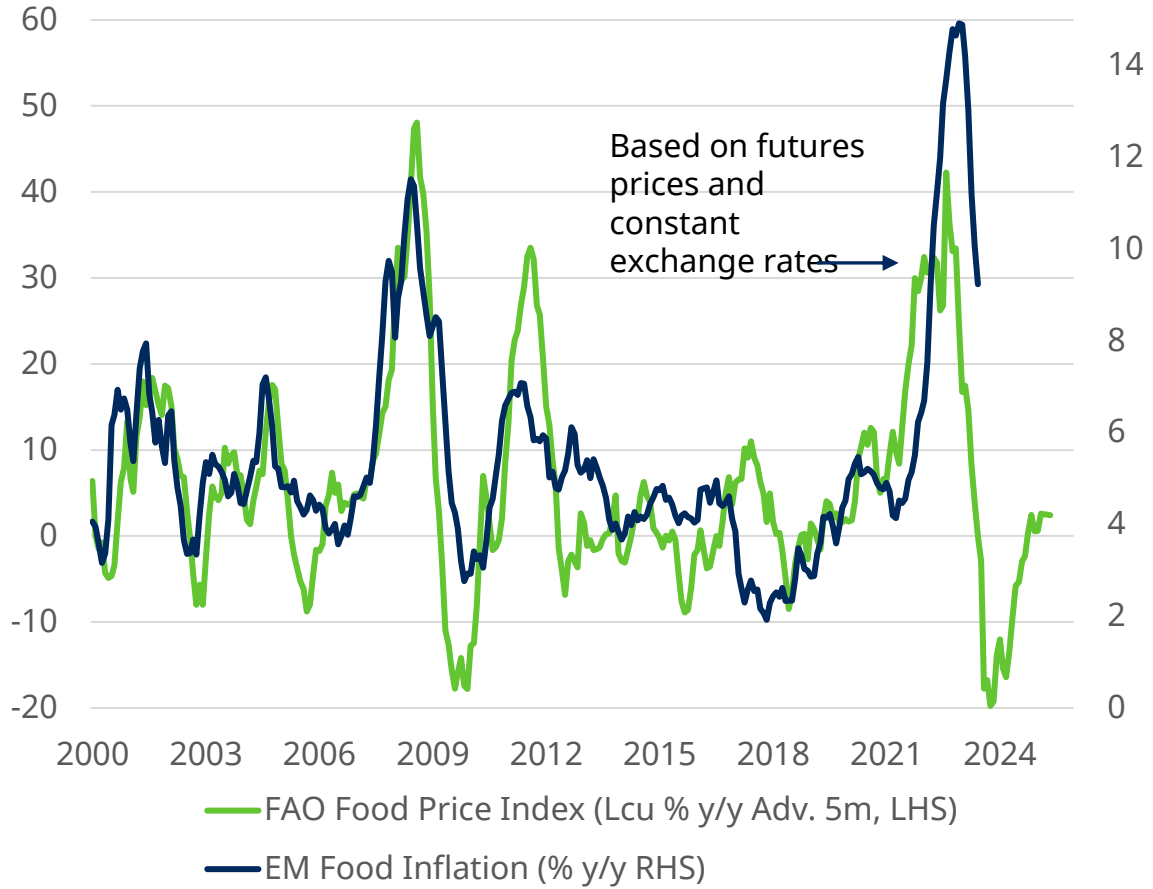
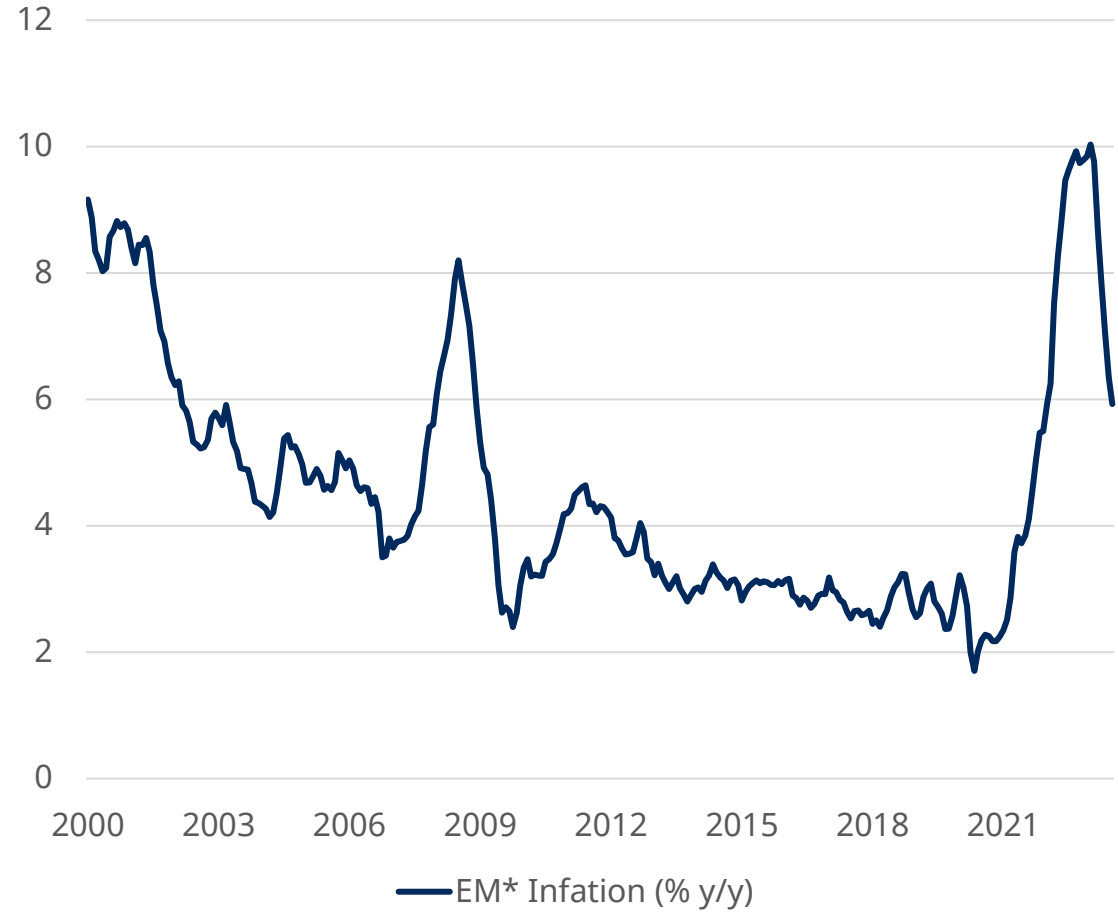
## ...but core services is proving sticky and remains elevated<sup>2</sup>



Source: Refinitiv, Schroders Economics Group. 23 March 2023. <sup>2</sup>Source: Refinitiv Datastream, Schroders, 30 May 2023. Forward looking views and forecast may not be realized.

# EM inflation is falling sharply across the board

Energy adjustment is largely done, food will drive headline rates lower into year-end



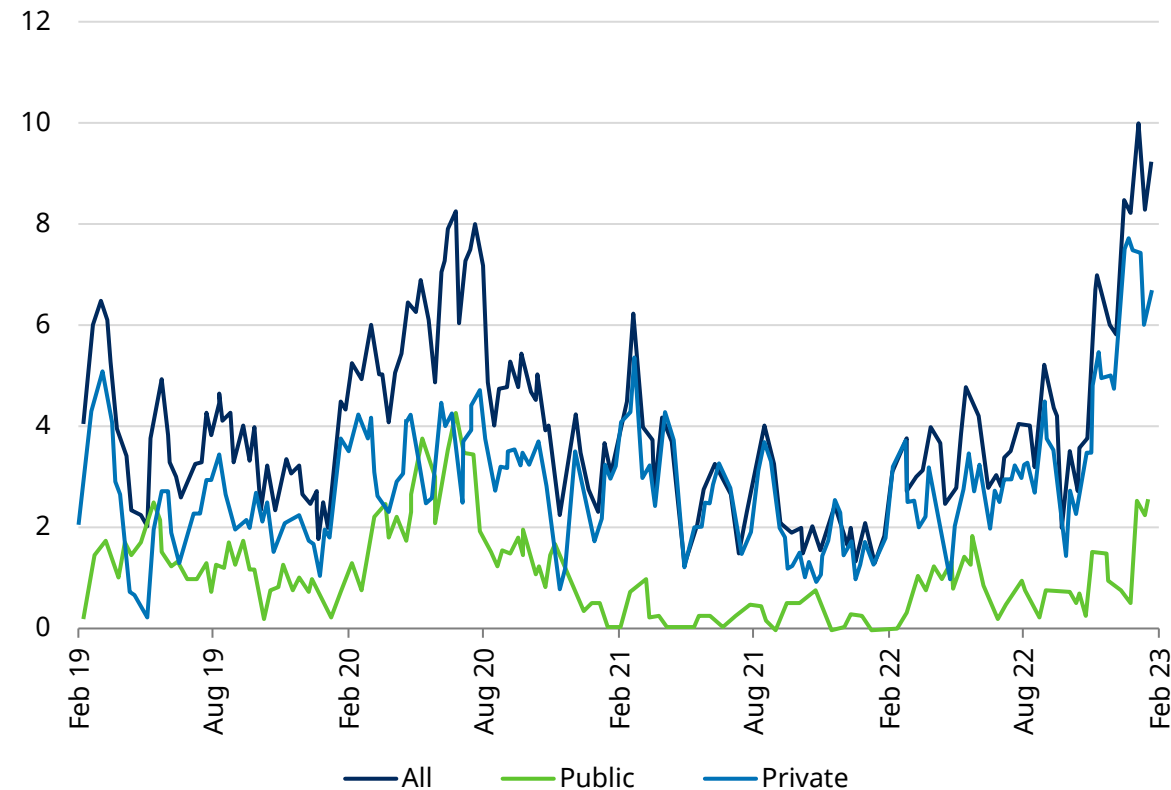
Source: Refinitiv, Schroders Economics Group. 30 August 2023 \*17 Major EMs, equal-weighted

# Tighter financial conditions

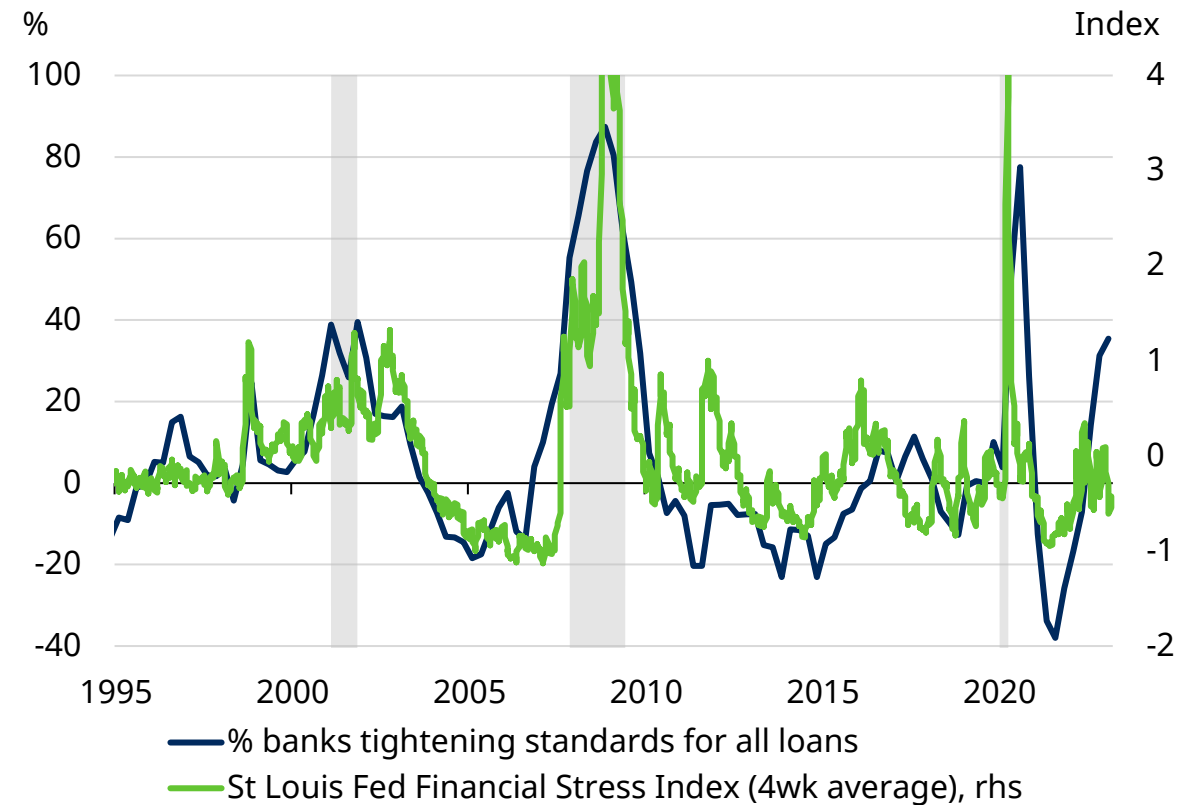
Companies with high operating and financial leverage face higher risk

## US corporate bankruptcy filings surging YTD above COVID levels

Bankruptcy Filings



## Banks had tightened credit and will likely rein it in further

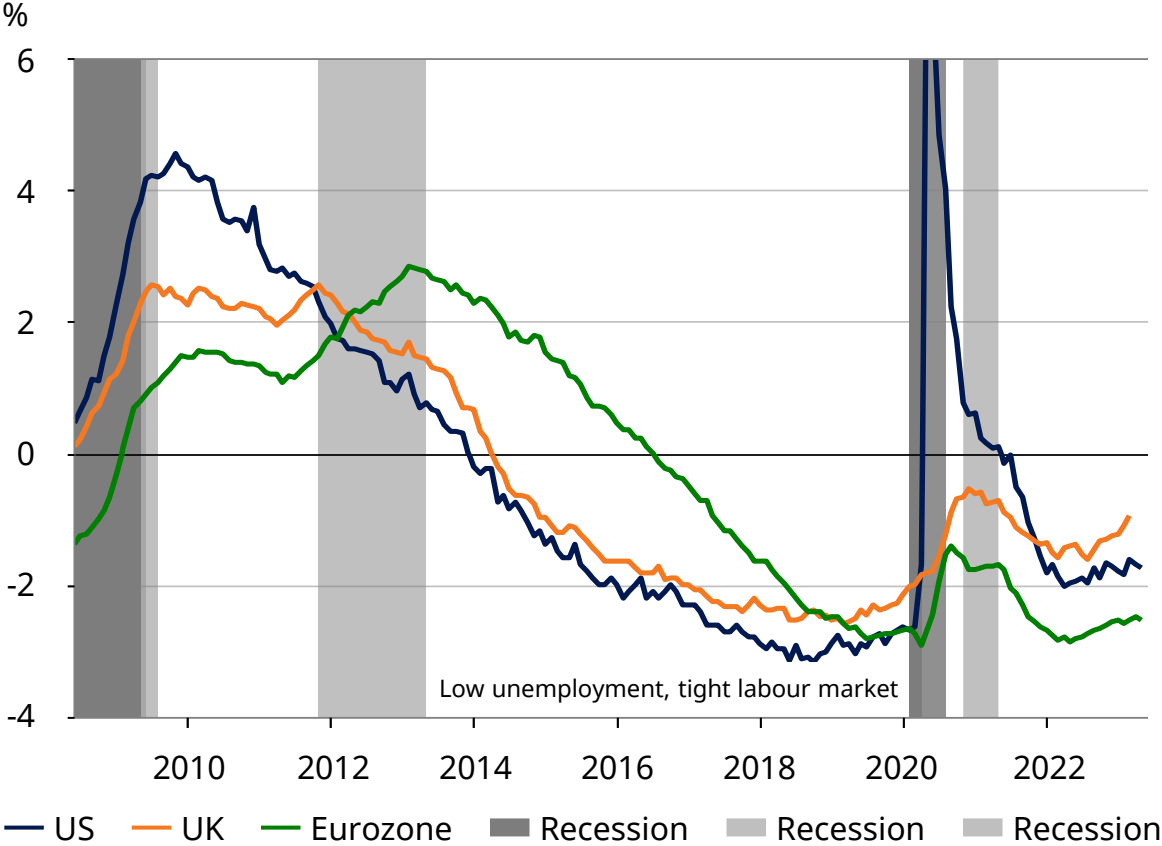


Source: UBS Evidence Lab, Bankruptcies.com. Refinitiv, Schroders Economics Group. 23 March 2023. "The views shared are those of the Schroders Economic Group and are subject to change.

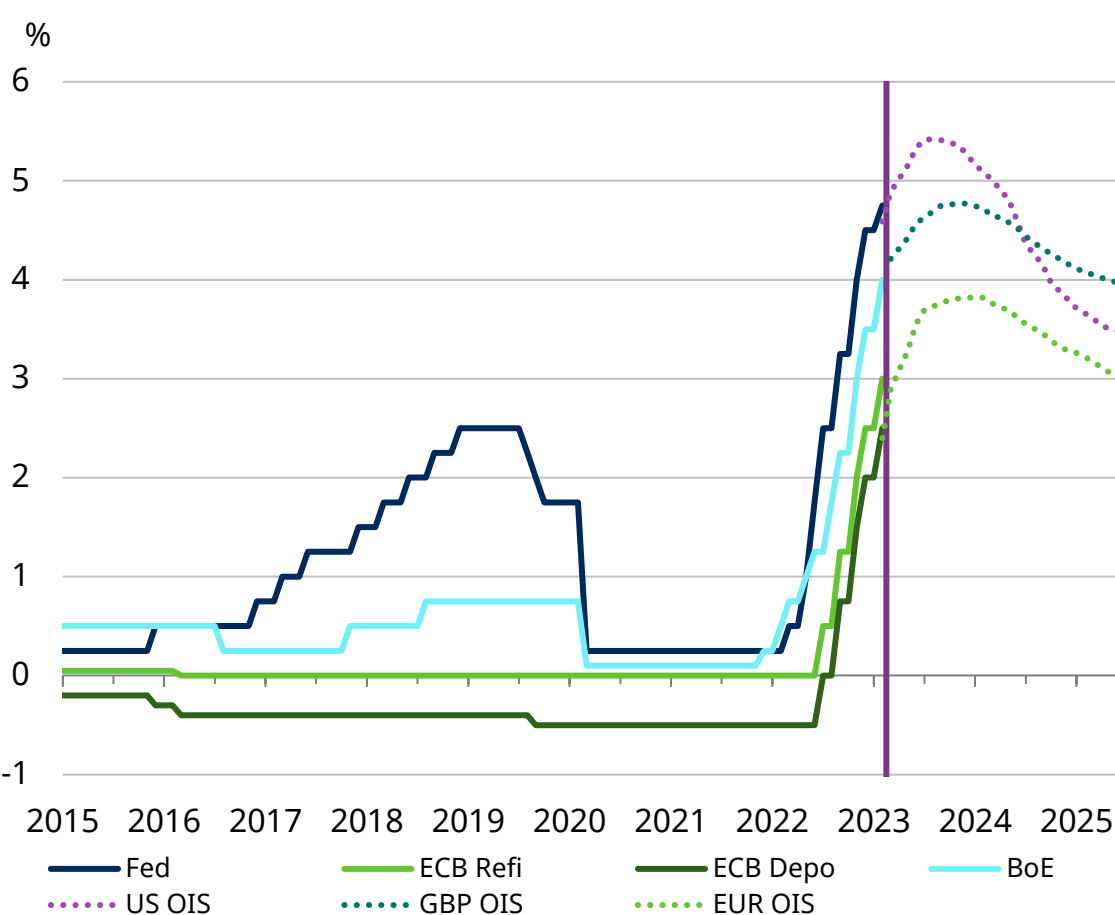
# Labour markets are still tight everywhere

Cooling at the margin, but unlikely to deter central banks near term

Unemployment rate vs. 10Y avg



Regime change; higher for longer

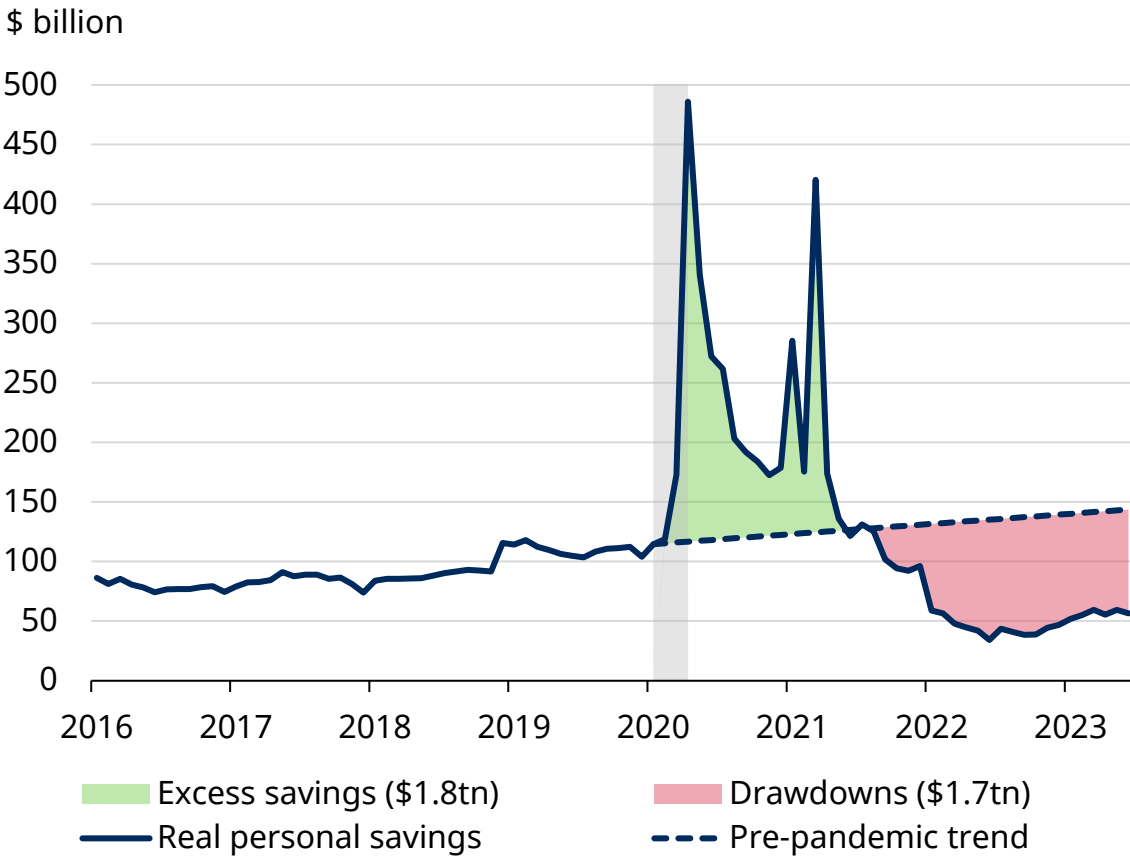


Source: Schroders, Refinitiv Datastream, 1 June 2023.

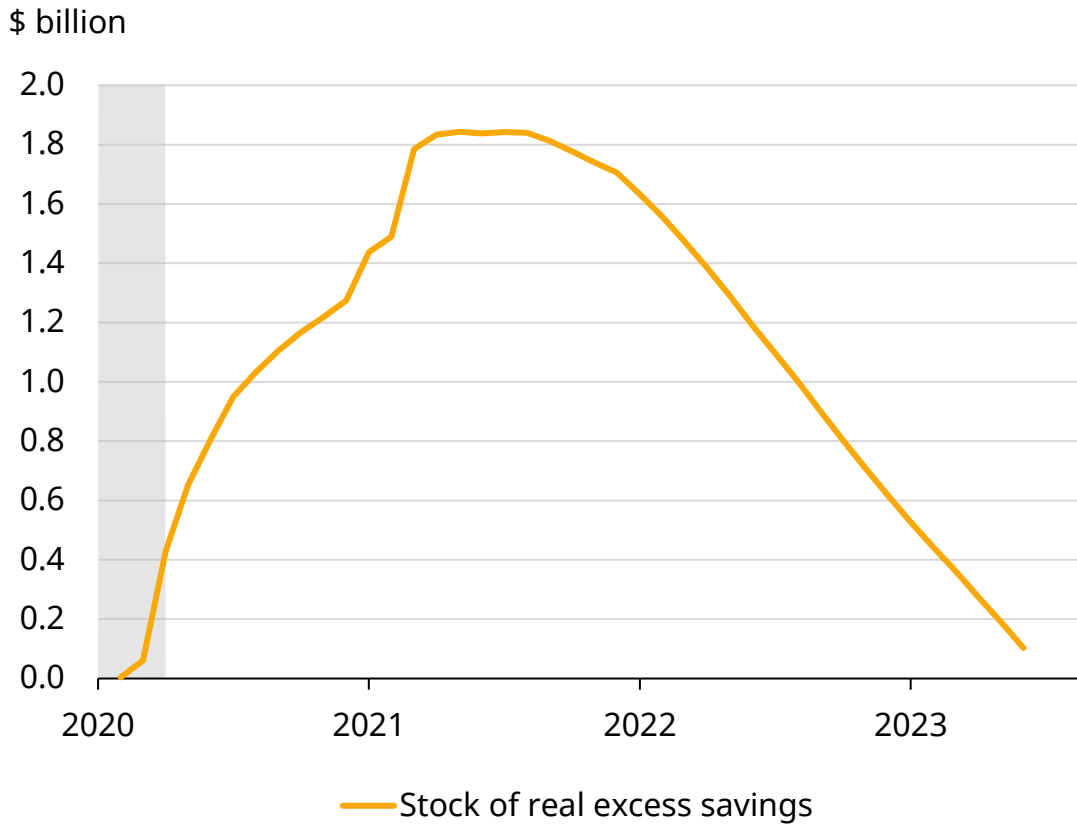
# Excess savings plugged the shortfall in real incomes

But they have now been almost completely exhausted

Households built up some \$1.8 trillion in excess savings...



...but most has now been spent, with around 5% remaining

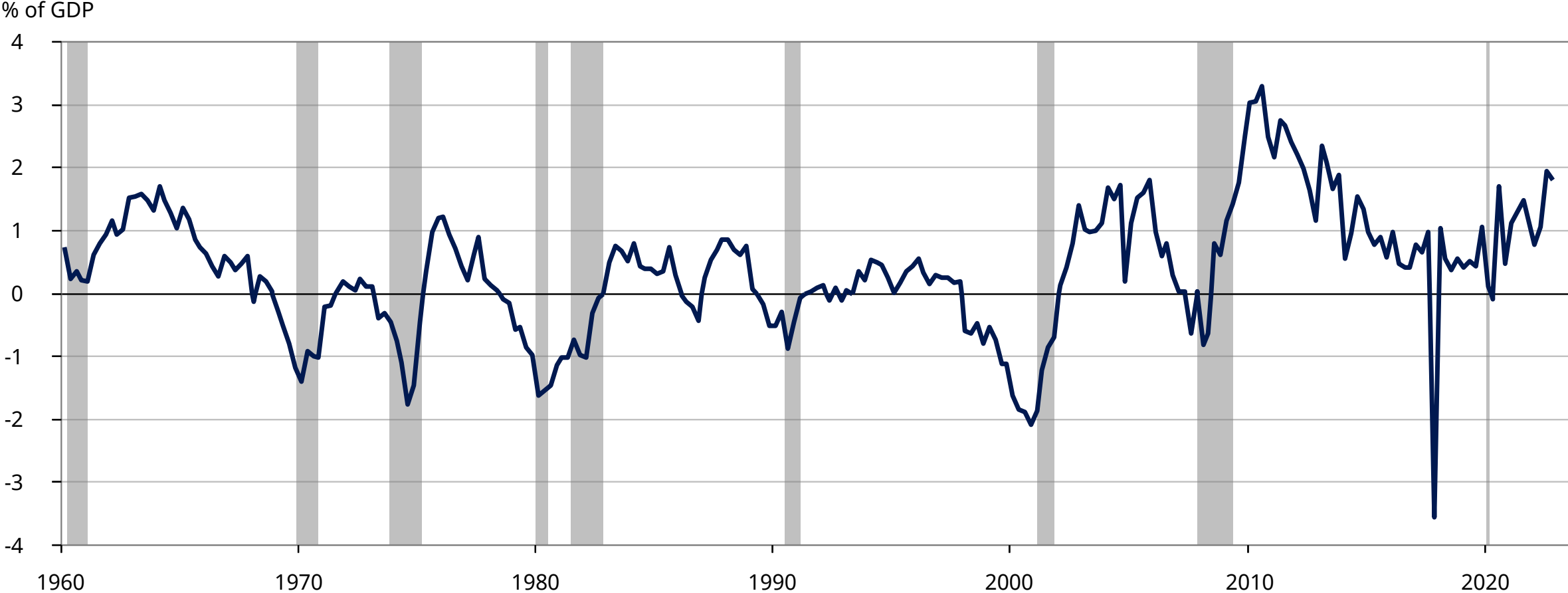


Source: Schroders Economics Group, Bureau of Economic Analysis, Refinitiv. 3 August 2023

# Corporate sector remains in cash surplus

Cash balance normally turns negative before recessions begin

## Corporates Internal Funds Minus Investment

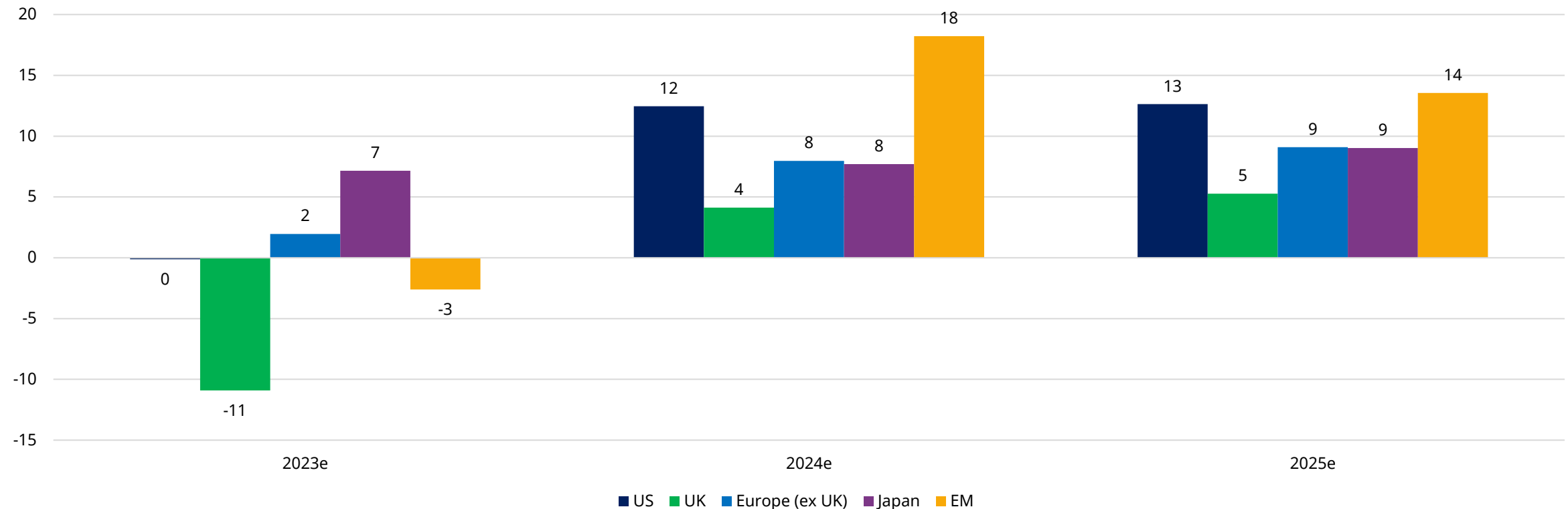


Source: Refinitiv, Schroders Economics Group, 31 May 2023.

# 2023 consensus forecasts looking more realistic

2024 still uncertain though

## YoY EPS growth, %



**Forecasts included are not guaranteed and should not be relied upon.**

Source: Datastream Refinitiv and Schroders Strategic Research Unit. Data to 31 July 2023.

Notes: Japan EPS for 2022 is 4 quarter sum until 31 March of next calendar year, e.g. 2023 = 31/03/2023 – 31/03/2024.



# Global sector valuations (MSCI ACWI)

## EOM valuation vs 15-year median (% above or below)

Sector	CAPE	Forward P/E	Trailing P/E	P/B	Dividend yield
Energy	34%	-15%	-44%	16%	-21%
Materials	5%	8%	-25%	7%	-19%
Cons stap	-7%	4%	6%	12%	3%
Financials	0%	-3%	5%	17%	0%
Utilities	8%	0%	21%	11%	0%
Health care	2%	11%	2%	16%	12%
Industrials	18%	16%	0%	28%	9%
Cons disc	4%	24%	44%	33%	45%
IT	42%	61%	62%	109%	47%
Comm Svcs	19%	26%	70%	40%	237%

Key: <-25%   -25% to -15%   -15% to -5%   -5% to 0%   0% to 5%   5% to 15%   15% to 25%   >25%

**Cheap**

**Neutral**

**Expensive**

Real estate has been excluded due to data only being available since 2016. Note that the dividend yield on the communication services sector is very low vs history. This is down to compositional changes over time e.g. Alphabet is now the biggest constituent by a long way, with Meta the next biggest. These are very different to the higher yielding companies in the sector in the past. Source: Datastream Refinitiv, MSCI and Schroders Strategic Research Unit. Data to 31 July 2023.

# Strong performance has eroded cheapness

Many valuation metrics have moved closer to or above their median

Valuation vs 15-year median (% above or below)

Equity market	CAPE	Forward P/E	Trailing P/E	P/B	Dividend yield
US	30 (27%)	20 (23%)	24 (20%)	4.5 (58%)	1.5 (36%)
UK	14 (7%)	11 (-14%)	12 (-17%)	1.7 (-4%)	3.8 (0%)
Europe ex. UK	20 (20%)	13 (-2%)	16 (-5%)	2.0 (16%)	3.0 (7%)
Japan	19 (-8%)	15 (7%)	18 (13%)	1.5 (15%)	2.2 (-8%)
EM	12 (-14%)	13 (9%)	14 (5%)	1.7 (3%)	3.1 (-13%)

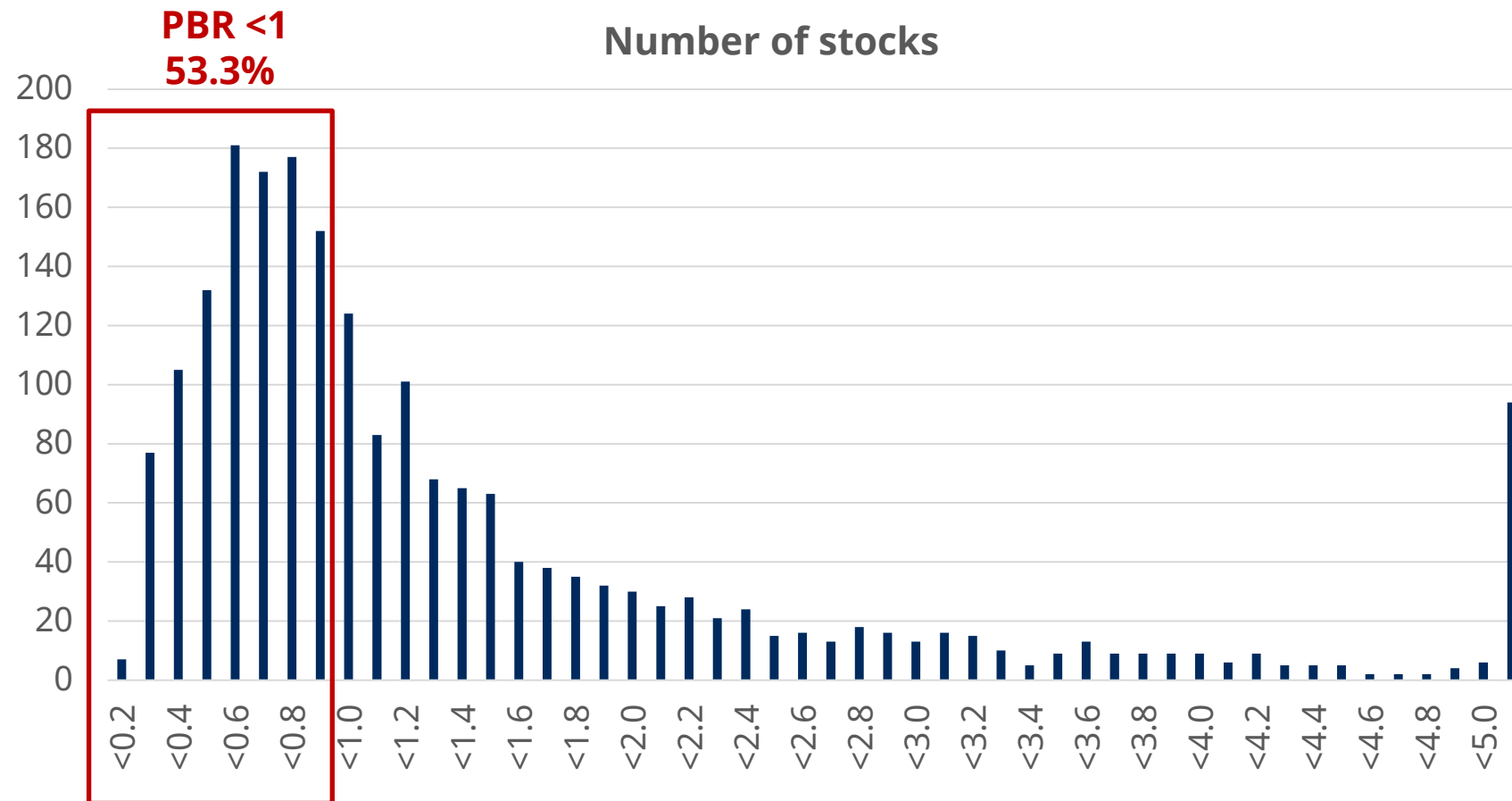
Key:	<-25%	-25% to -15%	-15% to -5%	-5% to 0%	0% to 5%	5% to 15%	15% to 25%	>25%
	Cheap			Neutral		Expensive		

Source: Datastream Refinitiv, MSCI and Schroders Strategic Research Unit. Data to 31 July 2023. Figures are shown on a rounded basis. Assessment of cheap/expensive is relative to 15-year median.

# 53% of Japanese companies are valued below book value

Revaluation potential following Tokyo Stock Exchange instruction

## Price to Book ratio distribution - TOPIX



Notices sent to all with P/B < 1

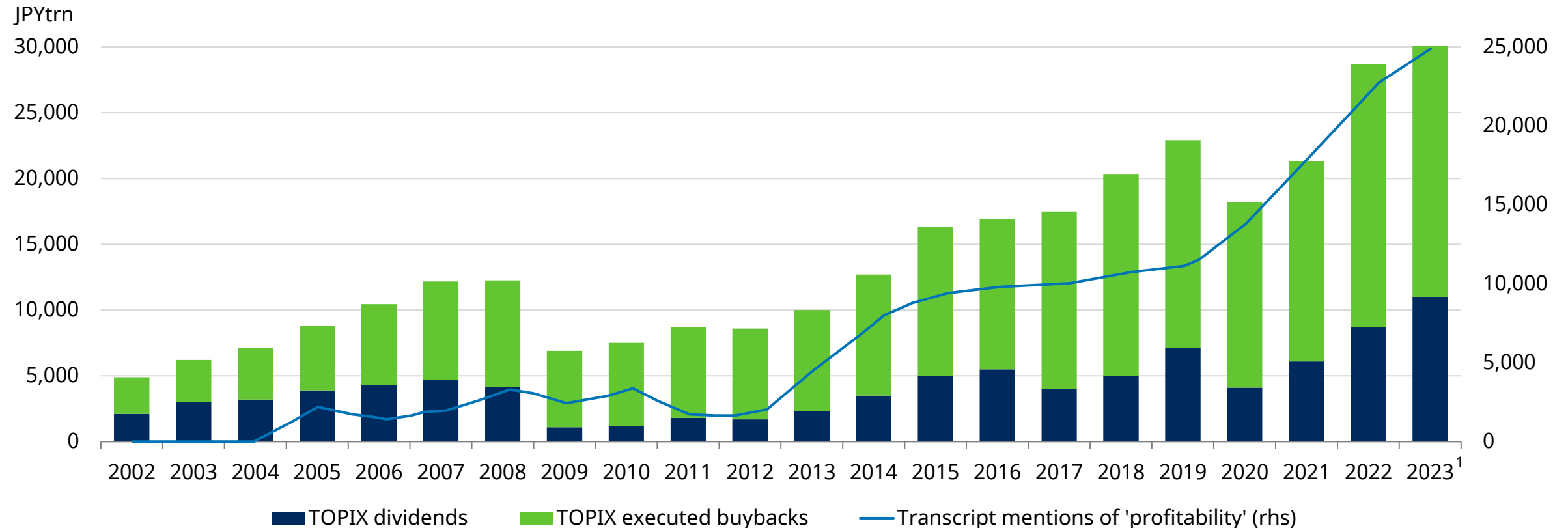
Urged to set out plans to be revalued, by focusing on cost of capital and stock price

Source: Bloomberg, Tokyo Stock Exchange, Schroders, as at 31 March 2023

# Japan – resurgence of profitability and productivity

Continued focus on improving governance and putting excess cash to work

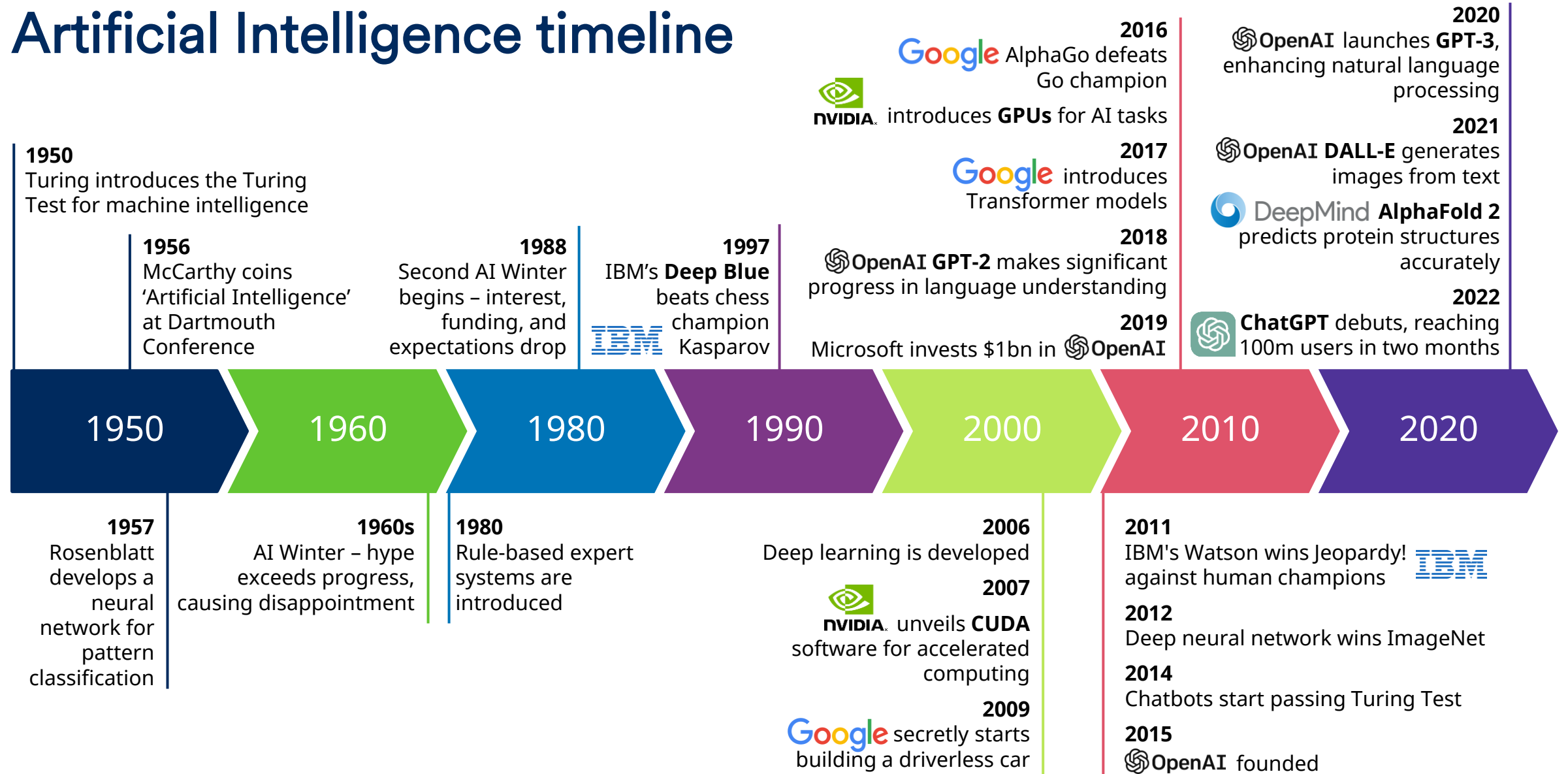
Tokyo stock exchange requested companies trading below book value, develop capital improvement plans



Cash reduction leading to increased buyback activity


Source: TSE, Nikkei NEEDS, AlphaSense, Morgan Stanley Research, Data as of 24 May 2023, (<sup>1</sup>2023 data has been annualised).

# Artificial Intelligence timeline








# Impact of Generative AI on industries

## Sector-Agnostic Impact to Enterprises

	Enterprise search (internal 'ChatGPT' for enterprises)
	Research and first draft content creation
	Summarization and transcribing of meetings
	Superior knowledge management
	Improved productivity across functions thus increasing ROI
	Personalized customer experience

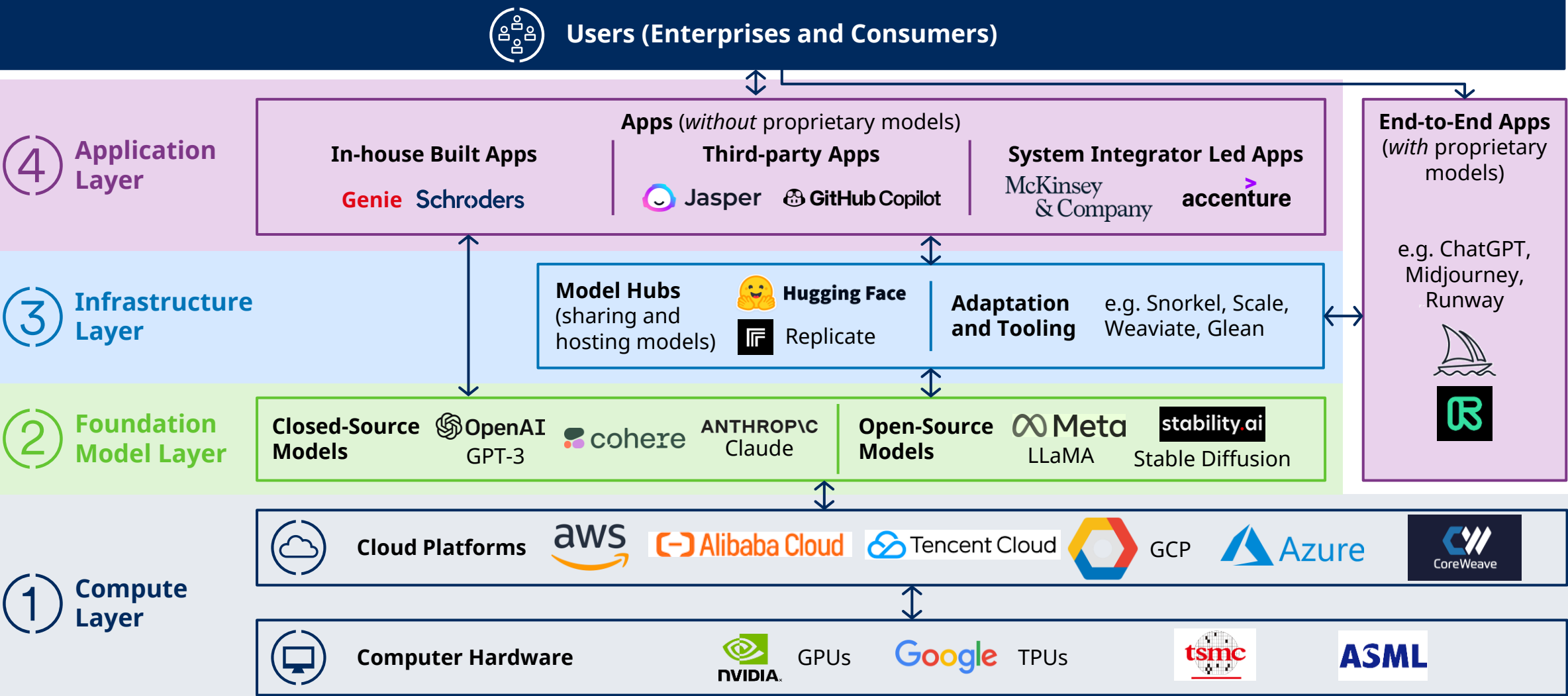
## Sector Specific Impact to Enterprises

	<b>Healthcare</b>	<ul style="list-style-type: none"> <li>- Drug discovery and development</li> <li>- Mental health chatbots</li> </ul>
	<b>Media</b>	<ul style="list-style-type: none"> <li>- Cheaper and faster content creation</li> <li>- Personalized and user generated content</li> </ul>
	<b>Financial Services</b>	<ul style="list-style-type: none"> <li>- Improved compliance and risk management</li> <li>- Reduced need for customer facing personnel</li> </ul>
	<b>Software</b>	<ul style="list-style-type: none"> <li>- Intelligent applications</li> <li>- No code application development</li> </ul>
	<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>- Increased demand for semis e.g. GPUs/CPUs</li> </ul>

Source: Schroders Capital, 2023.  
Views shared are those of Schroders and may be subject to change.

# Generative AI tech stack – where could the value accrue?

Clear winners emerging in chips, GPUs and cloud...



Source: Schroders, 2023.  
 Views shared are those of Schroders and may be subject to change. Companies shown for illustrative purposes only. Logos shown are the property of their respective entity.



**Investment philosophy and process**



# Investment philosophy

## Focus on un-anticipated growth

- We seek to exploit **3 persistent inefficiencies**
  - ① Markets over-react to short term news flow
  - ② Markets extrapolate historic growth and fail to correctly interpret catalysts that change the trajectory of growth
  - ③ Markets fail to look far enough ahead when appraising the earnings power of companies
- Market inefficiencies often drive material differences between underlying company fundamentals and market estimates (the '**Growth Gap**')
  - Disciplined investment in stocks which deliver positive earnings surprise could deliver consistent outperformance over time

Source: Schroders, as at 31 March 2023. For illustrative purposes only. The views and opinions contained herein are those of the Global and International Equity team and are subject to change. There is no guarantee that the investment philosophy will lead to portfolio outperformance.

# The stocks we look for

## Forward earnings growth not yet identified by the market – the growth gap

### Core growth

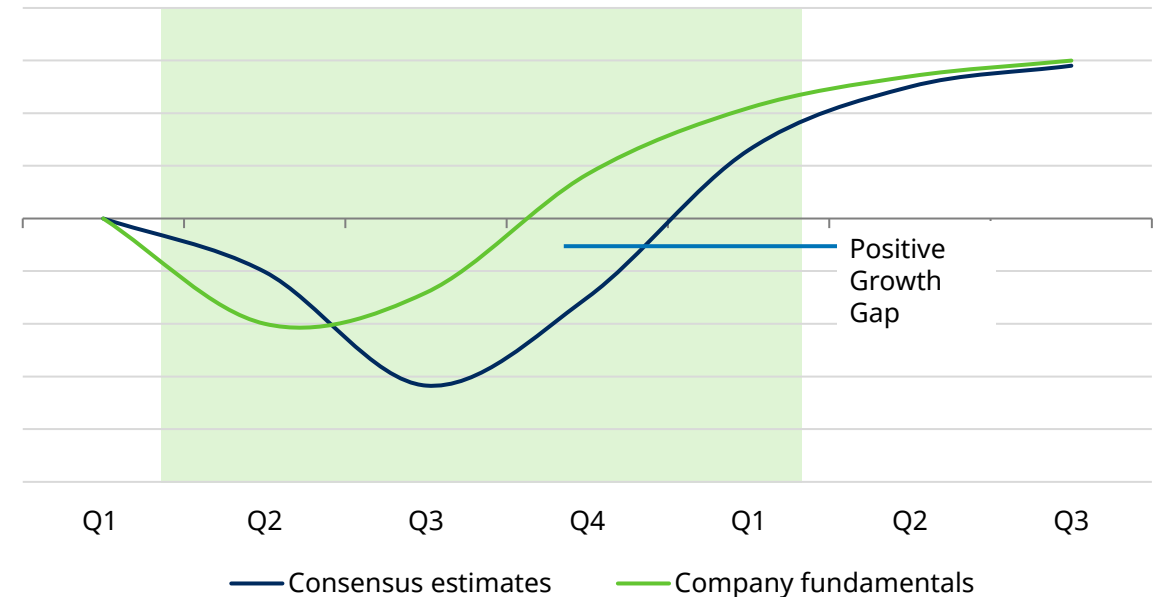
Markets often fail to look far enough ahead



- **Structural**
- **Sustainable competitive advantage**
- **Innovation**

### Opportunistic growth

Consensus often fails to anticipate inflection



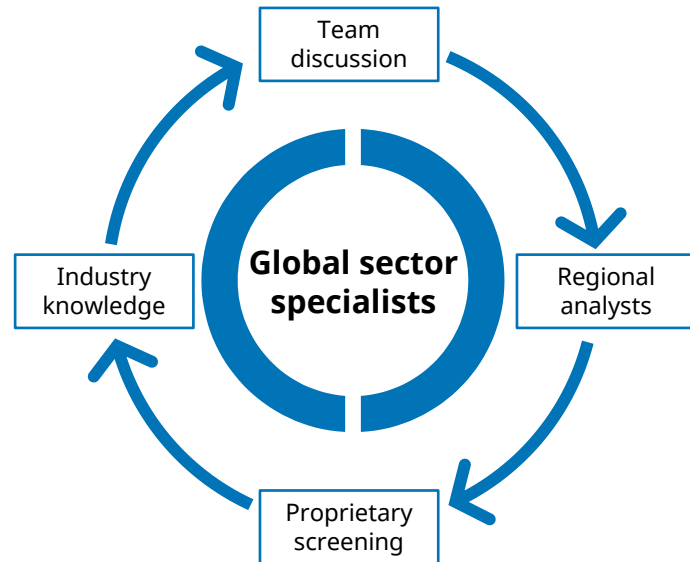
- **Cyclical**
- **Transitional growth**
- **Turnarounds/restructuring**

Source: Schroders. The 'company earnings' line in the graph represents our forecast (as opposed to the consensus estimates). The opinions stated in this presentation include some forecasted views. We believe that we are basing our expectations and beliefs on reasonable assumptions within the bounds of what we currently know. However, there is no guarantee that any forecasts or opinions will be realised. For illustrative purposes only. Past Performance is not a guide to future performance and may not be repeated.

# Investment process

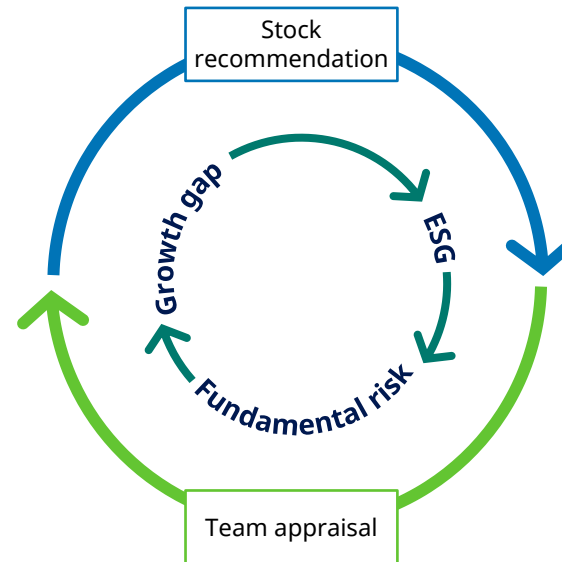
Filtering the universe to identify best ideas

## Idea generation



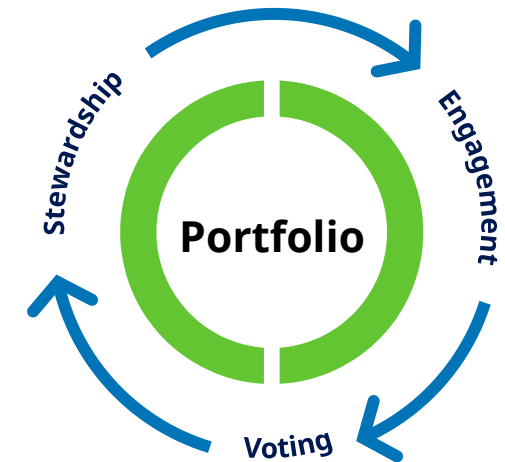
- GSS – primary source for idea generation
- Regional analysts provide local perspective
- GSS recalibrate analysis to reflect the team philosophy and approach

## Stock selection



- An independent investment view
- GSS recommendation
- Team-based appraisal

## Portfolio construction and risk control



- Risk adjusted return expectation
- Proprietary risk framework

Source: Schroders, as at 31 March 2023. There is no guarantee that the investment process will produce returns or protect against a loss of principal. ESG = Environmental, Social And Governance and GSS = Global Sector Specialists.

# Sustainable investment

## Three primary layers of ESG integration

### ESG at Schroders

- Long history of responsible investment imbedded in our culture and investment process
- Supported by a well resourced team of 50+ dedicated ESG specialists
- ESG Specialists work alongside analysts and investors to identify and understand key ESG issues
- Active engagement with companies to improve their performance
  - We have achieved an impressive record of positive response to change from hundreds of companies

### How ESG is integrated in the investment process



- Thematic and bespoke research
- Training for analysts and ESG research audit
- 10 proprietary tools and dashboard (Context, SustainEX, etc)
- Thorough analysis of risks and opportunities



- Fundamental risk score is a key input in determining position sizes
- ESG, management quality and transparency are primary factors for assessing quality and sustainability risk scores



- Company meetings with analysts and ESG specialists
- Requests for change and disclosure
- Partnering with other investors and interest groups to exert greater influence

**An integral part of our efforts to manage and enhance our clients' investments**

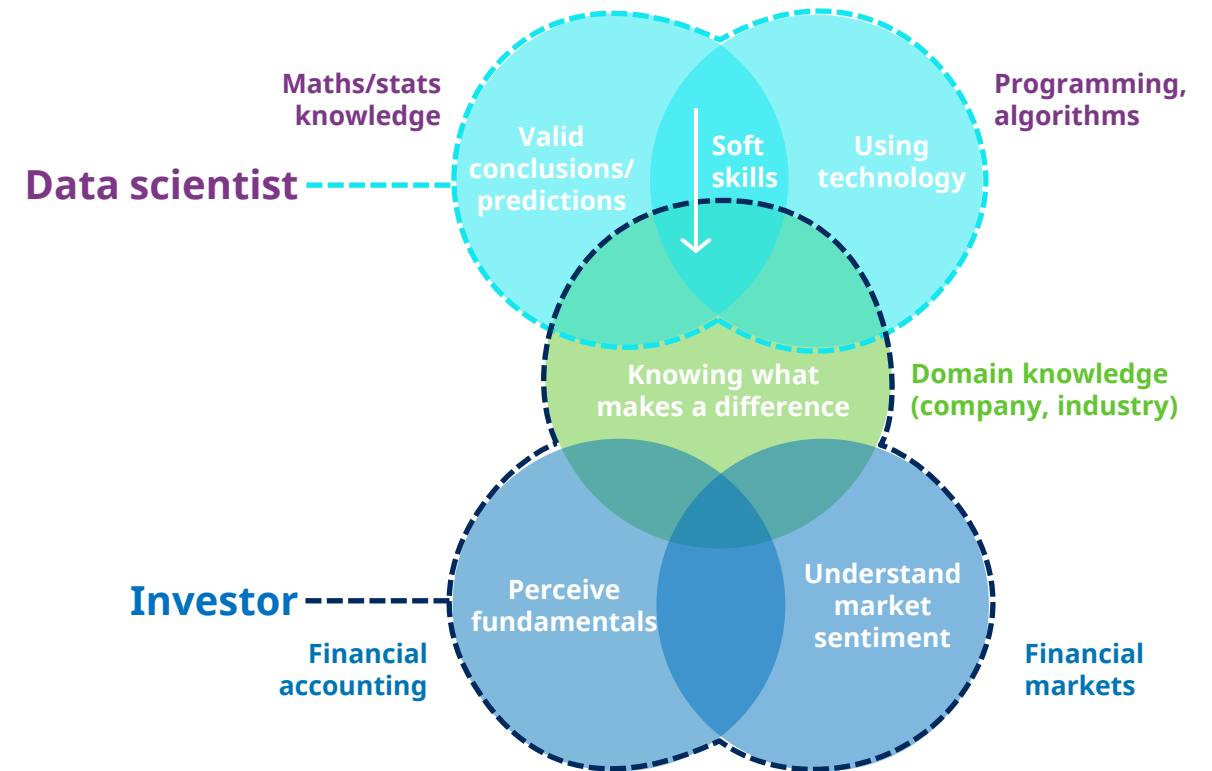
# Investment Insights Unit

Enabling better investment decisions

## To enable analysts and PMs to make better investment decisions

- Equipping them with timely, relevant, industry-leading and usable **data**
- Servicing investors with quality **data science**, statistical rigour and engaging visualisations
- Supporting **investment process and tools**, using our position as technologists within Investment
  - Putting investment ontology + systems at heart of processes
  - Intelligent and relevant **newsflow** to investors
- **Forging connections** between investors of all asset classes and data scientists across Schroders group

## Marrying skills of investors and data scientists to build the perfect team



Gain and maintain an information edge

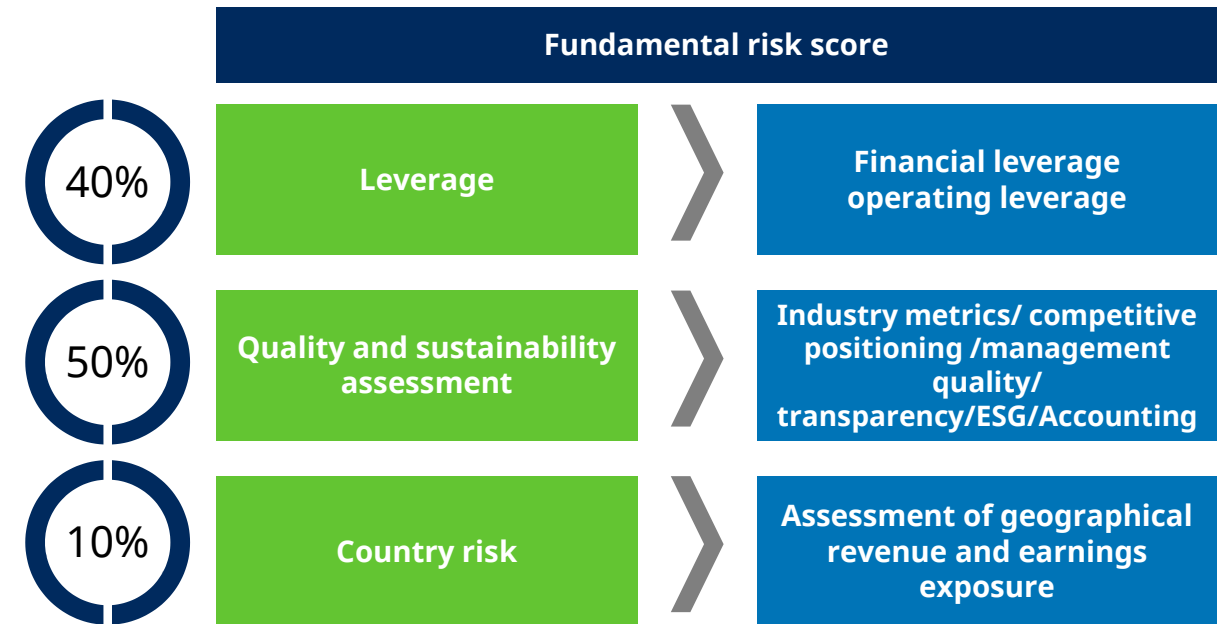
Source: Schroders, as at 31 March 2023. The opinions stated are those of the Schroder Data Insights Unit and are subject to change.

# Fundamental risk

## An innovative and dynamic risk framework

- A proprietary, **forward-looking** and dynamic view of risk based on GSS' assessment of company fundamentals
- All companies are scored across the same fundamental risk categories
  - Increasing consistency of risk assessment
- Risk scores provide team with:
  - A transparent and debatable view of risk
  - A useful position-sizing tool to ensure portfolio risk consistently reflects conviction

## A robust risk calibration tool designed to enhance downside protection



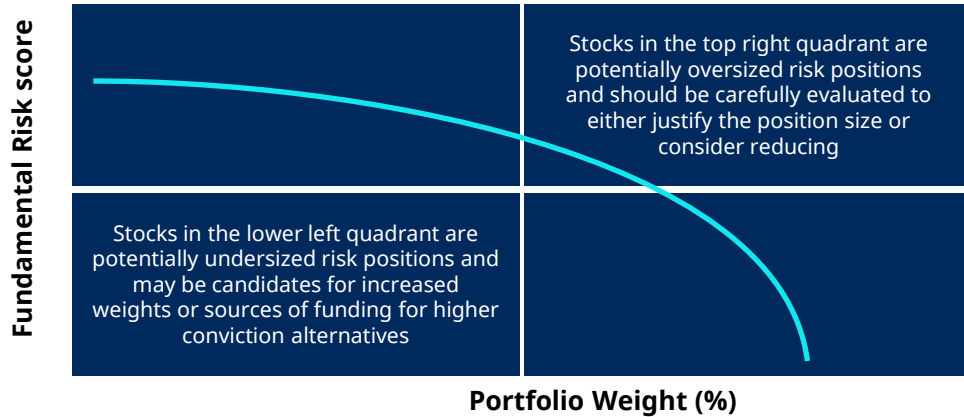
## Strengthening decision making through more robust and dynamic information

Source: Schroders, as at 31 March 2023. For illustrative purposes only. The views and forecasts contained herein are those of the Global and International Equity team and are subject to change. The proprietary Risk Management tool mentioned is designed to enhance the risk evaluation process but does not guarantee the identification or abatement of all risk.

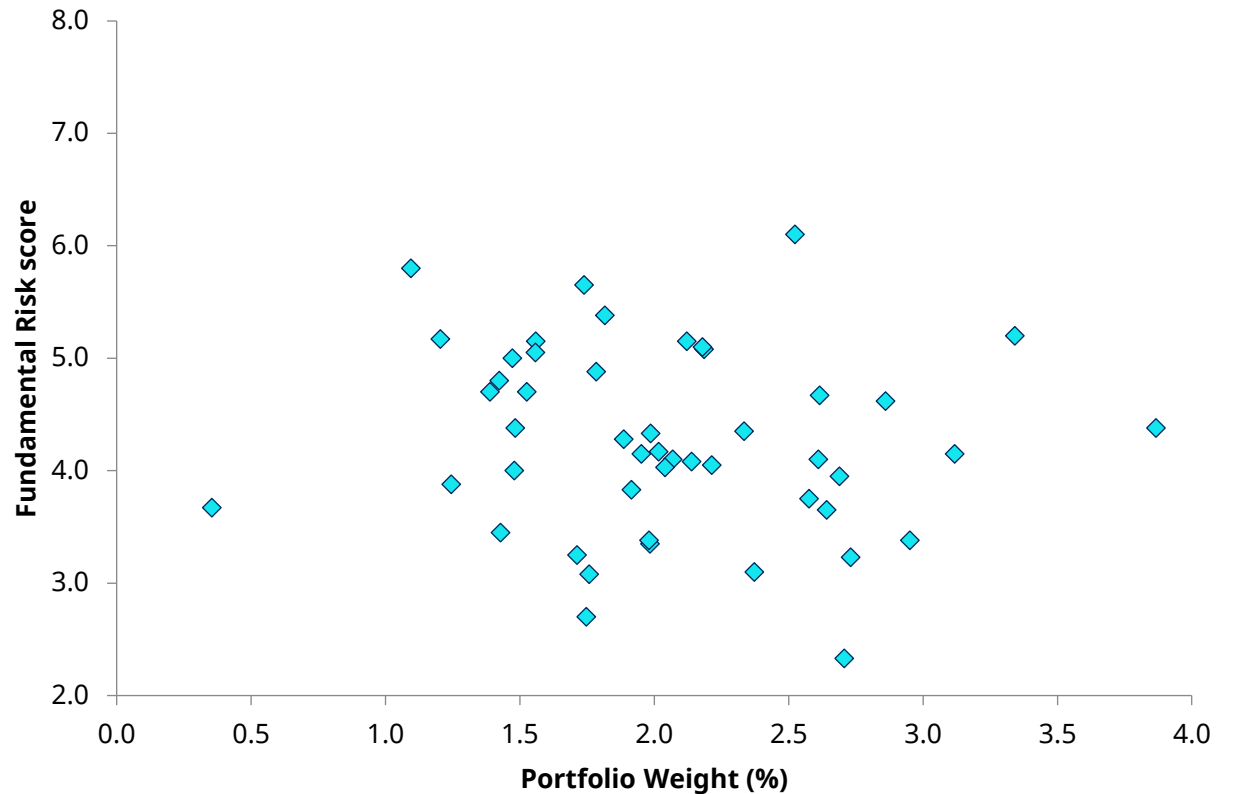
# Fundamental risk

## Example: International Alpha

### A systematic framework to drive consistent debate



### Portfolio scatter plot



Top 10 Fundamental Risk Scores	Absolute Weight (%)	Fundamental Risk Score
Mitsubishi UFJ Financial Group, Inc.	2.5	6.1
Contemporary Amperex Technology Co., Ltr	1.1	5.8
Erste Group Bank AG	1.7	5.7
MercadoLibre, Inc.	1.8	5.4
Samsung Electronics Co., Ltd.	3.3	5.2
Alibaba Group Holding Limited	1.2	5.2
Carrefour SA	1.6	5.2
Tencent Holdings Ltd.	2.1	5.2
Infineon Technologies AG	2.2	5.1
Iberdrola SA	2.2	5.1

Source: Schroders, FactSet. As at 30 June 2023, based on a representative International Alpha portfolio. For illustrative purposes only and not a recommendation to buy or sell shares. A full list of holdings will be provided upon request.

# Portfolio construction

Driven by bottom-up assessment

## Weights reflect risk-adjusted return expectations

### Lower active weight

Lower relative upside  
Higher fundamental risk  
Lower liquidity

### Higher active weight

High relative upside  
Low fundamental risk  
High liquidity

## Decision-making

### Co-Fund Manager structure with distinct lead focus

International Equity – Simon Webber (lead)  
International Alpha – James Gautrey (lead)

## Core/opportunistic holdings

### Core names: 'long-term winners'

Anticipated holding period: >3 years  
Expected turnover: 30%  
Typical portfolio weight: 60–70%

### Opportunistic names: 'tactical opportunities'

Anticipated holding period: <1 year  
Expected turnover: 80–120%  
Typical portfolio weight: 30–40%



# Portfolio risk management

## A robust multi-layered approach

### Portfolio risk management

Structural	Position sizing	Factor monitoring	Performance analysis
<ul style="list-style-type: none"><li>- Investment objectives</li><li>- Client guidelines</li></ul>	<ul style="list-style-type: none"><li>- Volatility</li><li>- Contribution to Risk</li></ul>	<ul style="list-style-type: none"><li>- Style, industry, country, currency, characteristics</li></ul>	<ul style="list-style-type: none"><li>- Attribution</li><li>- Risk decomposition</li></ul>
Oversight			
<ul style="list-style-type: none"><li>- Independent Risk Team</li><li>- Global Head of Equities</li></ul>		<ul style="list-style-type: none"><li>- Fund Managers</li><li>- Product Managers</li></ul>	



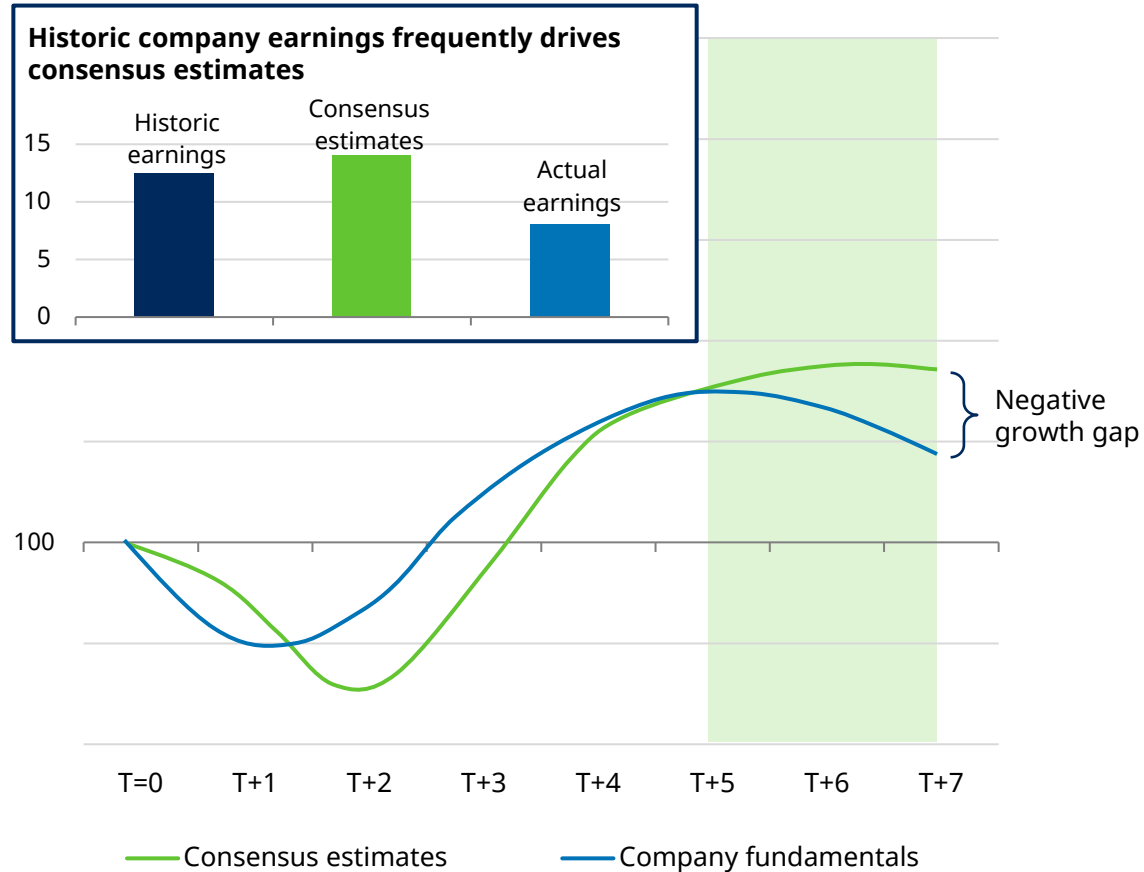
- Our understanding of portfolio drivers and risk factors is designed to drive our consistency of returns
- We utilise a pragmatic approach within a disciplined framework of continual review

Source: Schroders, as at 31 March 2023. For illustrative purposes only. There is no guarantee the risk management approach used will achieve its intended objective.

# Sell discipline

## The growth gap turns negative

### Markets extrapolate recent growth



### A holding is sold when...

- The growth gap turns 'negative'
- We identify a stock offering better risk adjusted returns
- We lose conviction in our investment thesis
- Material ESG deterioration and/or lack of engagement progress
- Valuation no longer compelling

Source: SG Equity Research, Growth: Past, expected and actual (US1985–2007). Data for Core/Growth stocks. Historical data can not guarantee or predict future results.

# Schroders' proposition

## A differentiated approach

- Well-resourced, highly experienced team with global perspective
- Distinctive philosophy focused on unanticipated growth
- Integration of principles of sustainability
- Innovative approach to research and risk management
- A focus on seeking to enhance consistency and downside protection through portfolio construction

Source Schroders. The views and opinions stated in this document are those of the Schroder Global and International team and are subject to change.

**Schroders**



**Appendix**

# Performance

## Schroder International Alpha Equity Trust

### Performance to 31 August 2023 (% Gross returns in USD)

	3 Months	YTD	1 Year	3 Years p.a.	Since Inception p.a.
Schroder International Alpha Equity Trust	+0.8	+10.3	+16.6	+5.3	+10.1
MSCI AC World ex US (NDR) TL	+3.8	+8.8	+11.9	+4.0	+5.8
<b>Relative performance</b>	<b>-3.0</b>	<b>+1.5</b>	<b>+4.7</b>	<b>+1.3</b>	<b>+4.3</b>

### Calendar years performance (% Gross returns in USD)

	2022	2021	2020
Schroder International Alpha Equity Trust	-18.6	+12.1	+25.5
MSCI AC World ex US (NDR) TL	-16.0	+7.8	+10.7
<b>Relative performance</b>	<b>-2.6</b>	<b>+4.3</b>	<b>+14.8</b>

Past performance is not a guide to future performance and may not be repeated. The value of investment can go down as well as up and is not guaranteed. The return may increase or decrease as a result of currency fluctuations. Please refer to the important information on the effect of fees at the end of the presentation for further details

Source: Schroders. Gross of fees. p.a. represents annualised performance.

Date Inception: 7-Jan-2019. From inception chain linked to MSCI AC World ex US (NDR) TL

# Biographies

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**James Gautrey**  
Portfolio Manager

James joined the graduate programme at Schroders in 2001 working with senior management and client directors. From 2002 he worked as a Pan European research analyst covering technology, telecoms and support services. In 2006 he moved to the Global and International Equities team becoming a Global Sector Specialist for the technology sector, having previously also covered telecoms and autos. In 2014 James assumed Portfolio Management responsibilities for a number of the team's International Equity portfolios. James is a CFA Charterholder.



**Simon Webber**  
Portfolio Manager

Simon joined Schroders in 1999, initially as a research analyst in the Global Technology Team. In 2001 he became a Fund Manager on the US Desk, specialising in technology and industrials. In 2002 he assumed analytical responsibilities for the US telecoms, media and software sectors. In 2004 he joined the Global and International Equities Team as a Global Sector Specialist and has covered multiple sectors including utilities, autos, telecoms and consumer discretionary. He became a Fund Manager for EAFE mandates in 2009 and has managed the Global Climate Change strategy since its launch in 2007. Simon is a CFA Charterholder.

# Biographies



**Alex Tedder**

Head of Global and Thematic Equities,  
Multi Regional Equity

Alex re-joined Schroders in July 2014 as Head of Global Equities, having commenced his investment career at Schroders in 1990 with responsibility for promoting European Equity mandates alongside Schroders' Private Equity operation. In 1994 he moved to Deutsche Asset Management Ltd, where he worked in various capacities including Managing Director and Head of International Equities/Fund Manager. He was lead manager of the Deutsche International Select Equity Fund (MGINX) from inception in May 1995. He also previously served as co-manager of DWS International Fund, DWS Worldwide 2004 Fund, Deutsche Global Select Equity Fund and Dean Witter European Growth Fund. Alex re-joins Schroders from American Century Investments in New York, where he worked from 2006 as Senior Vice President and Senior Fund Manager (Global and Non-US Large Cap Strategies). He was lead manager of the American Century International Growth Fund (TWIEX) from July 2006 to March 2014. A dual citizen of UK and Switzerland, Alex was educated at Winchester College (UK) and University of Freiburg/Fribourg, Switzerland, where he obtained a Masters' Degree in Economics and Business Administration.



**Frank Thormann**

Portfolio Manager

Frank joined as a Fund Manager for Global and US Large Cap Equity portfolios. He joined in 2017 from Frankfurt-based Union Investment where he was a global Fund Manager. Having initially focused on the North American component of Union's Concentrated Global Equity portfolios, he assumed overall portfolio management responsibility for the UniFavorit Concentrated Global Equity Fund in early 2010. The fund achieved a five-star rating from Morningstar during his tenure. Before joining Union Investment in 2008, Frank worked at American Century Investments in Kansas City, USA where he was a multi-industry analyst for the American Century Ultra Fund, as well as for the AC Select Equity Fund. Frank earned his Bachelor Degree in Finance and Mathematics at Loras College, USA. He gained a Masters in Finance and International Business at the University of Missouri. Frank is a CFA Charterholder.



**Charles Somers**

Portfolio Manager/Global Sector  
Specialist

Charles is a Fund Manager for the Global Alpha Plus strategy, Global Sustainable Growth strategy and number of specialist institutional global equity portfolios. He also has global sector responsibility for consumer staples as one of the team's Global Sector Specialists. Charles initially joined Schroders in 1998 as a research analyst on the US desk in London. In 2001 he was seconded to Schroders' New York office, where he covered healthcare and financial stocks. He returned to London in 2002 to join the Pan European research team, taking responsibility for the consumer staples sector. In 2006 Charles left Schroders to take a position as a Fund Manager at Intrinsic Value Investors, a long-only fund management company focused on European equities. He returned to Schroders in 2008 to take the position of Global Sector Specialist for consumer discretionary and consumer staples. Charles is a CFA Charterholder.



**Scott MacLennan**

Portfolio Manager

Scott joined the team in July 2022. Scott is currently Co-Manager of the Global Sustainable Growth strategy and Lead Portfolio Manager of the Sustainable Growth & Income strategy in the Global & International Equities Team at Schroders. Scott has previously managed Institutional European ex-UK portfolios since 2017, and co-managed the Schroder ISF European Sustainable Equity fund since launch in late 2018, the Schroder ISF European Market Neutral fund from early 2021, the Schroder European Sustainable Equity ex UK fund from late 2021, and the Hartford Schroders Sustainable International Core fund since launch in 2022. Scott joined Schroders in 2015 as an investment analyst in the European Blend Team, initially responsible for the European Autos, Consumer and Leisure sectors, extending into Materials and Utilities & Renewables. His investment experience began at Neptune Investment Management in 2012, where he started a Research Analyst, responsible for Global Industrials, and then later as a Fund Manager, focusing on all-cap UK companies. He has an MA in Classics from Cambridge University and is a CFA Charterholder.

# Biographies



**John Bowler**

Global Sector Specialist

John joined Schroders in 2003 as the Global Sector Specialist covering the healthcare sector. He is also Portfolio Manager for the Schroder Global Healthcare Fund and has primary research responsibility for Pan-European Pharmaceuticals. His investment career commenced in 1994 when he joined Hill Samuel Asset Management in 1994 as a graduate trainee, later becoming a junior portfolio manager for UK equities. From 1997 he worked at State Street Research and Management as a portfolio manager/analyst. He joined Schroders from AXA Investment Managers, where he worked from 1998 in a global healthcare research role. He was voted top buy-side analyst for the pharmaceutical and healthcare sector in the Institutional Investor Pan European Equity survey in 2002.



**Dan McFetrich**

Global Sector Specialist

Dan joined the Global and International Equities team as the Global Sector Specialist for the industrials sector in April 2015. He joined us from Fidelity Worldwide Investment where he worked from 2008 as a senior industrials analyst covering both industrials and chemicals stocks. Prior to this, he worked at Dresdner Kleinwort where he covered the food retail sector from 2004. From 2001 he worked at Nomura Asset Management as a research analyst covering European consumer goods. His career commenced in 1996 when he joined Arthur Anderson as a corporate tax consultant. Dan is a CFA Charterholder and a chartered accountant (ACA). He also holds an M.A. in Economics from Cambridge University.



**Andre Reichel**

Global Sector Specialist

Andre joined Schroders in 2011 as a graduate on the Global and International Equities team. He is a Global sector Specialist covering the financials sector, whilst also covering utilities and real estate. He joined the team as an equity analyst covering emerging markets and selected developed market companies within the financials sector, including Asian, Latin American and European banks, insurance firms, real estate companies and diversified financials. Prior to joining Schroders, he worked as a strategy consultant at Meritco in Shanghai. In this role, he engaged in commercial due diligence for investors, conducting financial modelling and analysis of the competitive landscape for projects in the pharmaceutical, chemical, construction and retail industries. Andre is a CFA Charterholder



**Isabella Hervey-Bathurst**

Global Sector Specialist

Isabella is Global Sector Specialist for the Utilities sector and Climate Change. Isabella joined Schroders in 2014 as a graduate on the Global and International Equities team. She provides research support for the Global Climate Change strategy. Prior to joining Schroders, she worked as an investment associate at Ruffer. In this role, she worked closely with a senior fund manager looking after pension fund and charity client portfolios. Isabella has a M.A. from Cambridge and an MSc in International Political Economy from The London School of Economics. She has completed the IMC and is a CFA Charterholder.



# Biographies



**Paddy Flood**  
Global Sector Specialist

Paddy is a Global Sector Specialist covering the Technology sector – a remit spanning a range of sub industries including semiconductors, software and payments. He joined Schroders in 2019 and works alongside Jonathan McMullan who also covers the technology sector. Prior to joining Schroders, Paddy worked as an Investment Analyst on the European Equities desk at Standard Life Aberdeen covering several sectors including chemicals, HPC and consumer. Paddy is a CFA Charterholder, has BSc in Economics from the University of Bath and has completed the IMC.



**Ines Duarte Da Silva**  
Global Sector Specialist

Joined Schroders in 2018. Investment career commenced in 2011. Currently Research Analyst covering the healthcare sector, based in London. Ines joined Schroders from Bank of America Merrill Lynch, where she had worked since 2015 and had been responsible for European Medtech & Healthcare Services research. Before this, Ines worked at Espirito Santo Investment Bank in Lisbon from 2011 as an equity research analyst, leading the Iberian Mid-Cap team. Earlier, Ines gained experience as a financial analyst in 2011 at the NOVA School of Business and Economics, after completing her Master in Finance. Master in Finance, NOVA School of Business and Economics. Degree in Mathematics Applied to Economics & Management, ISEG School of Economics and Management



**Marine Jacquemoud**  
Global Sector Specialist

Marine joined the Global and International Equities team as the Global Sector Specialist for the energy and materials in January 2020. She joined us from Universities Superannuation Scheme where she worked from 2015 as an portfolio Manager covering a range of sectors including industrials and energy. Prior to this, she worked at Lombard Odier Asset Management where she was a Convertible Bond Analyst and From 2011 as an Energy Equity Analyst. Marine career commenced in 2010 when she joined BNP Paribas. Marina is a CFA Charterholder.



**Simone Geldenhuis**  
Global Sector Specialist

Simone joined Schroders in September 2018 on the Graduate Programme, after graduating from the London School of Economics with a BSc in Accounting and Finance. Given the rotational nature of the programme, she started on the Schroders Multi-Sector Fixed Income desk covering EM Strategy, before transitioning onto the Global and International Equities desk to cover Consumer names. Since September 2020, Simone has been a full-time analyst on the team and is now a Global Sector Specialist covering Consumer. Simone is a CFA Charterholder.

# Biographies



**Michael White**

Global Sector Specialist

Michael joined the Global and International Equities team as the Global Sector Specialist for the Communication Services sector in February 2022. He joined us from Capital Group where he worked from 2020, covering Chemicals, Industrials and Payments sectors. Prior to this, he worked at Arden Partners where he was an Equity Research Analyst with generalist coverage across various companies. He completed the graduate scheme at EY, and is a qualified accountant and CFA Charterholder. He also holds an BSc (Hons) 1st, Economics, University of Nottingham.



**Jonathan McMullan**

Global Sector Specialist

Jonathan joined the Global and International Equities team as the Global Sector Specialist for the information technology in September 2021. He joined us from Newton Investment Management where he worked from 2010 as an Global Equity Analyst covering global technology and communication services sectors. Prior to this, he worked at Deloitte where he was a Manager undertaking project management of a high-profile portfolio of audit clients within the investment management. Jonathan is an Associate Chartered Accountant (ACA), ICAEW and has completed the IMC. He also holds an Economics and Accounting (MA with Honours, 2:1), University of Edinburgh.



**Thomas Hammond**

Investment Analyst – Autos – Global and International Equities

Tom joined Schroders in November 2019 as an Insurance Analyst in our Insurance Solutions team. He joined the team in 2021 as a Sustainable Equity Analyst. He covers the automotive sector and provides research support for the Global Sustainable Growth Strategy. Prior to joining Schroders, Tom worked as an investment analyst for Gatemore Capital Management, an alternative asset manager. He holds a BA in Law (Jurisprudence) from the Oxford University.



**Maurice Hewins**

Investment Analyst – Climate Technology – Global and International Equities

Maurice joined Schroders in 2019 as a graduate on the graduate scheme. He joined the Global and International Equities team in 2021 as an Equity Analyst. He provides research support for our Global Climate Change strategies. Maurice has a Masters in Chemistry from the University of Manchester.

# Biographies



**Ajani Sivapalan**  
Sustainability Analyst

Ajani joined the Global & International Equity team as a Global Sustainability Analyst in January 2023, having previously worked on the Schroders British Opportunity Trust as an ESG analyst since 2021. She had overall responsibility for the consideration of material ESG factors across the portfolio companies carrying out company research and engagement. Ajani joined Schroders in 2019, initially as a strategic business analyst supporting the Global Head of Equities. Ajani's investment experience began at Willis Towers Watson in 2014, where she started as a Quantitative Analyst, responsible for developing the company's quantitative investment tools. Following this, she was a Senior Investment Analyst at City Financial Investment working alongside macro and equity portfolio managers and building investment analytics and an Equity Strategist at Oxford Economics with a particular focus on quantitative expected-returns frameworks for strategic and tactical asset allocation. She has a PhD in Econometrics from Imperial College Business School and a MSc in Financial Mathematics and BSc in Mathematics from King's College London.



**Gavin Marriott**  
Investment Director – Global  
and International Equities

Gavin joined Schroders in 2007 and is an investment director for Global and International Equities. Prior to 2008, he managed Pan Pacific and Japanese Equity products. His investment career commenced in 1984 with Scottish Equitable, where he held a number of marketing and sales-related positions. From 1996 he worked for M&G Investment Management, where he had responsibility for product development and marketing. In 1998 he became a director at Merrill Lynch Investment Managers (MLIM) with product management responsibility for high performance institutional and retail UK Equity portfolios. Gavin is a CFA Charterholder.



**John Chisholm**  
Investment Director – Global  
and International Equities

John joined Schroders in 2014 and is an investment director for Global and International Equities. Prior to joining Schroders, he was a founding principal and institutional portfolio manager at Hermes Global Equities Advisors. From 2005 to 2009 he worked at Fortis Investments, first as an investment specialist for global and emerging market equities, then as head of equity investment specialists. His career commenced in 1994 when he joined The Boston Company as a custody specialist before joining Chase Manhattan Bank in 1996 as a senior fund accountant. In 1998 he joined MFS Investment Management where he worked in both fund administration and institutional marketing. John is a CFA Charterholder.

# Investment Insights Unit (IIU)

## Head of Investment Insights

Parimal Patel, PhD

### Investment Insights Unit

**Debbie Abban-Mensah**

Data Scientist

**Kamil Bartocha**

Head of Data Science R&D

**Tim Gordon**

Data Scientist

**Dawn Lyall**

Executive Assistant

**Jonathan Yow**

Lead Quant Data Scientist

**Ignacio Benitez, CFA**

Lead Insight Analyst

**Mark Chisholm**

Lead Data Scientist

**Katherine Green**

Data Engineer

**Deena Parmar\***

US Small and Mid Cap Equities

**Michal Ziembinski, PhD \***

Emerging Market Equities

**James Blake**

Lead Geospatial Data Scientist

**Elliott Cunningham**

Data Scientist

**Francesca Guinane**

Investment Director

**Graham Taylor, CFA**

Investment Insights Strategy Manager

**Oliver Barter, PhD**

Data Scientist

**Charles Fox**

Lead Geospatial Data Scientist

**Nikhil Iyengar\***

Fixed Income US

**Dominic Tonge**

Lead Data Scientist

**Ryan Croft**

Graduate Trainee

**Suneet Kooner**

Graduate Trainee

**Tom Steggall**

Graduate Trainee

Supported by Global Technology Enterprise Platform

# Investment Insights Unit

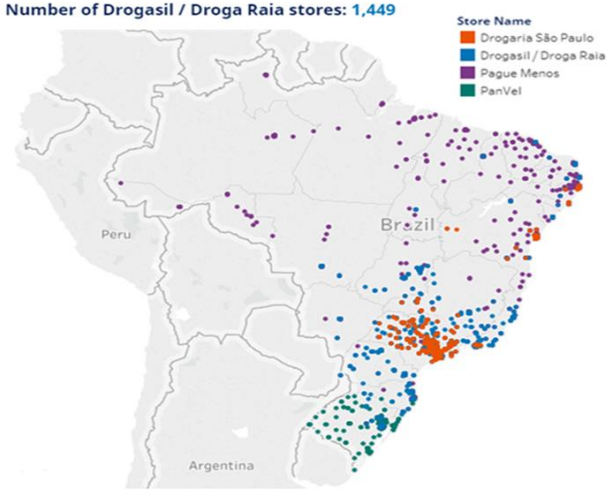
Wealth of tools to help investors fill in “blind spots” with alternative data

## Geo-spatial data

Scenario analysis

Raia Drogasil – retail store growth and competition

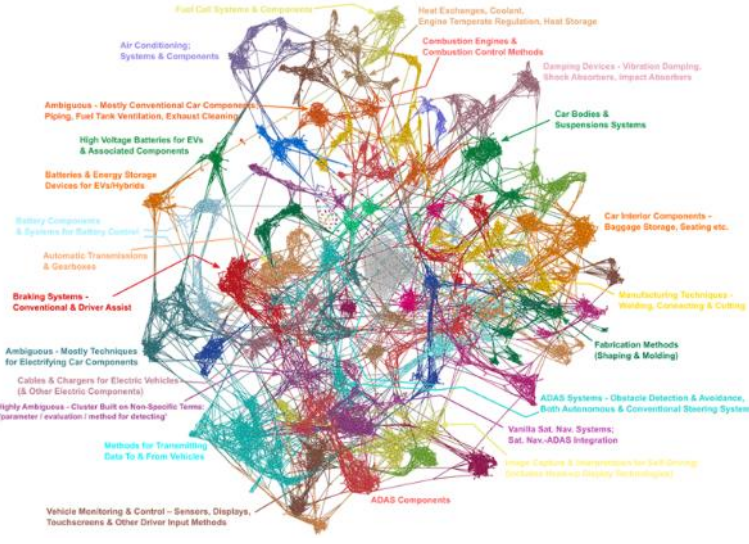
Store locations for Drogaria São Paulo, Drogasil / Droga Raia, Pague Menos and 1 more States: All



## Natural language processing

Data visualization

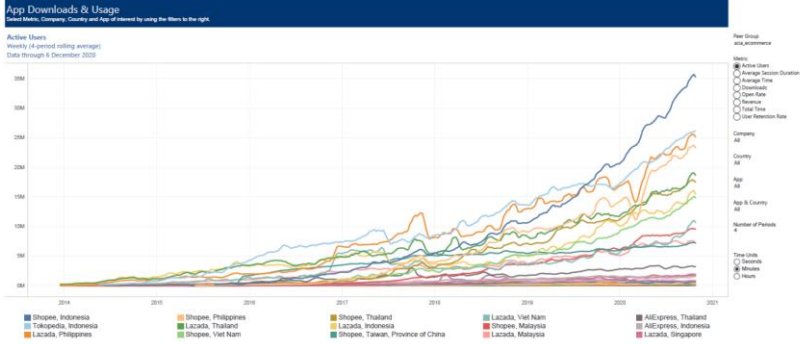
BMW patent clustering



## Web-crawled data

Real-time performance indicators

Sea Ltd. - App downloads and user engagement data



Source: Schroders Securities shown are for illustrative purposes only and should not be viewed as a recommendation to buy or sell.



# Sustainability at Schroders

Our experience and expertise

**21+**  
years

Our sustainability journey

**50+**

Dedicated ESG specialists

With **400+** years

Combined investment experience

**Fully ESG integrated**

across our managed assets

**5,300+**

engagements in 2022<sup>3</sup>

Across **58**

Countries globally

**10**

Proprietary investment tools and frameworks

**16,000+**

Companies covered by our portfolio-level sustainability reporting tools

**UN PRI signatory**

since 2007

**1st**

Asset manager to tie their cost of capital to sustainability goals

**UN global compact**



Signatory

**Net Zero Asset Manager**

Founding member of initiative

Source: Schroders, December 2022 unless otherwise stated.. <sup>2</sup>For certain businesses acquired during the course of 2020, 2021 and 2022 we have not yet integrated ESG factors into investment decision-making. There are also a small number of strategies for which ESG integration is not practicable or now possible, for example passive index tracking or legacy businesses or investments in the process of or soon to be liquidated, and certain joint venture businesses are excluded. <sup>3</sup>More than 360 sustainable investment team led, 1100 analyst/fund manager led, 530 campaigns and collaborative engagements, 3300 mass communication around voting season.

# Sustainable Investment Team

A global team with over 400 years' collective experience



With further dedicated resources across the firm

**Schroders**  
capital

**Schroders**  
solutions

**Cazenove**  
Capital

Sustainable Equity and Credit  
Analysts embedded with  
investment desks



50+ ESG Investment Champions



20+ Investment Insights Unit

# Schroders Diversity and Inclusion

#rethinktheroles  
#rewritetherules



## Our commitment

- Diversity of thought and experience has always been at the heart of Schroders
- Providing an inclusive environment is crucial to our long-term success
- Peter Harrison, Group CEO & Phillip Middleton, Chief Executive Officer, North America
- Management are personally accountable for Schroders' D&I
- We know stereotypes need to change, and we're working to replace them with more inclusive perspectives

## Our people



- 45% of our board is comprised of women
- 32% of senior management are women
- Targets linked to executive pay
- Increase transparency by collecting more diversity profile data
- Pledge to publish ethnicity pay gap report
- 13 Employee Resource Groups operating
- Provide unconscious bias training
- Utilize technology to improve job postings to be more inclusive

## Our business



- Foster a diverse and inclusive business
- Revamp flexible work policies
- Introduced our first Transgender policy in the UK
- Enhance parental leave policies
- Endeavor to partner with diverse suppliers in the US
- Global Supplier Code of Conduct incorporates human rights & diversity
- ESG policy explicitly calls for diversity to be considered at the board and executive levels

## Our industry



- Phil Middleton part of Corporate Call to Action Coalition for US CEOs to address racial and economic disparity in the US
- Support programs to enhance opportunities for non-traditional candidates
- Early signatory to the Women in Finance Charter
- Included in the inaugural Bloomberg 2019 Equality Index
- Peter Harrison recognized as 11 of top 50 Ally CEOs by OutStanding & the Financial Times
- Peter Harrison received a HERoes recognition and ranked 9th of male leaders who support women in business



# Schroder International Alpha (ACWI ex-US) Equities Composite

## Composite disclosures as of: December 31, 2022

**Definition of firm:** The Schroders GIPS Firm is defined as accounts managed by investment management entities that are wholly owned subsidiaries of Schroders plc and located in the US, UK, Switzerland, Singapore, Hong Kong, Japan, Germany and Australia. In particular, the following types of accounts are excluded: (i) accounts managed by the Schroders Capital Private Equity business, which claims GIPS compliance separately; (ii) accounts managed by BlueOrchard; (iii) accounts managed by Greencoat Capital; (iv) accounts managed by Wealth Management entities of the Schroders Group, including Cazenove Capital; (v) accounts managed or advised by our UK-based Schroders Solutions business, including liability driven investment; (vi) fiduciary management, which claims GIPS compliance separately; (vii) accounts that are directly invested in or directly manage real estate assets; (viii) advisory only and execution only accounts; and (ix) sub-funds of the Schroder GAIA fund range for which assets are managed by a third party selected by the Schroders Group. On January 1, 2017, the Schroders GIPS Firm was formed following the merger of independent regional GIPS Firms, defined based predominantly on the location of the investment desk, and held out to clients or prospective clients as the following distinct firms: combined London/New York/Zurich (SIMUK/US & SIMSAG respectively), Singapore (SIMSL), Hong Kong (SIMHK), Australia (SIMAL) and Japan (SIMJP). These firms were merged as a result of the increasingly global nature of the business. Details of previous firm mergers are available upon request.

**Composite definition:** The ACWI ex US Alpha Composite (the "Composite") is comprised of all fully discretionary accounts in the Firm, which seek to achieve returns above the MSCI AC World ex US (NDR) Index or a similar benchmark by providing capital growth through investment in an actively managed portfolio of global equities excluding US stocks. None of the accounts in the Composite use leverage. In June 2012 the name of the composite changed from EAFE Alpha ACWI ex US composite to ACWI ex US Alpha composite. This change does not affect the composite history or the investment strategy.

**Name change:** In August 2018 the name of the composite changed from ACWI ex US Alpha Composite to Schroder International Alpha (ACWI ex-US) Equities Composite. This change does not affect the composite history or the investment strategy.

**Composite details:** The Composite base currency is US Dollar. Composite Inception Date: June 30, 2009. Composite Creation Date: June 15, 2009.

**Withholding tax:** Income and dividends on investments are recognized net of irrecoverable withholding tax. Withholding tax rates may differ between portfolios within the Composite.

**Fee schedule:** Fees Gross returns are net of all foreign withholding taxes. They are presented before the deduction of management fees and are net of transaction costs. Net returns have been calculated using a model fee which has been applied geometrically on a monthly basis. The fee scale applied to the composite is 0.75% p.a.

**Errorcorrection:** The Firm Total Assets for December 31, 2022 was incorrect in reports produced between February 10, 2023 and February 25, 2023, this value has now been corrected.

**Broadly distributed funds fee schedule:** The below list of pooled fund fees represent the highest ongoing charge (OGC)/Total Expense Ratio (TER) and annual management charge (AMC) applicable to funds within the Composite across all share classes. Note that the share class with the highest OGC/TER may differ to the share class with the highest AMC. Schroders International Alpha Portfolio LP - 3C7 Institutional Distribution 0.750% TER per annum, 0.60% AMC per annum. Schroder International Alpha Trust I Distribution 0.55% TER per annum, 0.550% AMC per annum.

**Dispersion:** Internal dispersion is calculated using asset weighted standard deviation of all portfolios included within the Composite for the entire year. In cases where 5 or less portfolios are included in the Composite for the entire year, the number of portfolios and a measure of dispersion will not be shown.

**Leverage and derivatives:** The strategy does not permit the use of leverage or derivatives.

**GIPS compliance and verification:** The Schroders GIPS Firm ("the Firm") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. The Firm has been independently verified for the periods January 1, 1996 to December 31, 2022. The verification report(s) is/are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. A list of descriptions for composites and limited distribution pooled funds is available upon request. A list of broad distribution pooled funds is also available.

**Additional information:** Additional information regarding policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.

**Risk statistics unavailability:** A measure of standard deviation will only be provided where the composite or benchmark has been in existence and active for at least 36 consecutive months.

# Schroder International Alpha (ACWI ex-US) Equities Composite

## Composite disclosures as of: December 31, 2022

Benchmark: MSCI AC World ex US (NDR)  
 Currency: USD  
 Returns as of: December 31, 2022  
 Inception date: June 30, 2009

Year	Gross Composite Return (%)	Net Composite Return (%)	Primary Benchmark Return (%)	3 Year Composite Risk (%) <sup>1</sup>	3 Year Primary Benchmark Risk (%) <sup>1</sup>	Number of Portfolios (throughout period) <sup>2</sup>	Account Dispersion (%) <sup>3</sup>	Market Value at End of Period	Percentage of Firm Assets (%)	Total Firm Assets <sup>4</sup>
2022	-18.56	-19.17	-16.00	20.70	19.53	9 (9)	0.39	6,834,513,247	1.36	504,093,559,568
2021	12.12	11.28	7.82	17.43	17.03	10 (8)	0.14	7,572,797,634	1.16	653,650,198,502
2020	26.44	25.50	10.65	18.96	18.19	8 (8)	0.83	4,609,190,164	0.75	613,960,455,990
2019	27.57	26.62	21.51	12.61	11.50	8 (7)	0.72	2,480,835,514	0.51	487,332,595,542
2018	-12.40	-13.05	-14.20	12.28	11.54	6 (3)	N/A	1,541,281,293	0.40	384,803,377,261
2017	32.66	31.67	27.19	11.90	12.04	< 5	N/A	1,224,313,863	0.27	455,112,000,742
2016	1.24	0.48	4.50	12.06	12.69	< 5	N/A	953,636,298	0.32	302,127,480,639
2015	-2.38	-3.10	-5.66	12.01	12.30	< 5	N/A	927,990,818	0.32	293,397,986,258
2014	-2.08	-2.81	-3.87	13.09	12.99	< 5	N/A	949,471,026	0.34	282,697,291,678
2013	16.74	15.87	15.29	17.94	16.46	< 5	N/A	1,062,011,839	0.42	255,707,099,715

As of Dec-2022	Gross Composite Return (%)	Net Composite Return (%)	Primary Benchmark Return (%)	Composite Risk (%) <sup>1</sup>	Primary Benchmark Risk (%) <sup>1</sup>
Annualized 3 Year	4.91	4.12	0.07	20.70	19.53
Annualized 5 Year	5.23	4.44	0.88	18.39	17.23
Annualized 7 Year	8.17	7.36	4.80	16.52	15.54
Annualized 10 Year	6.82	6.02	3.80	15.27	14.60

Past performance is not indicative of future results.

<sup>1</sup> Annualized standard deviation of gross monthly returns for the composite and monthly returns for the benchmark. N/A for periods with less than 36 months of available returns.

<sup>2</sup> Not available for periods where the composite contains fewer than 5 portfolios.

<sup>3</sup> Asset weighted standard deviation of annual gross returns of accounts that have been in the composite for the entire year. Part periods are not annualized.

Not available for periods where the composite contains fewer than 5 portfolios.

<sup>4</sup> Total Firm Assets incorporate firm mergers as detailed in the Definition of the Firm.

Manager accounts are included in the Total Firm Assets.

N/A - Information is not statistically meaningful due to an insufficient number of portfolios for the entire year.

# Important information

The returns are presented as gross returns, including cash, reinvestment of dividends, interest and other income earned in the period and are calculated on a trade date basis after transaction charges (brokerage commissions), but before taxes and management and custody fees. Performance would have been reduced by such fees and the effect of these fees on performance compounds over time.

As an illustration see the chart below. The value of a \$5,000,000 account would be reduced by the following amounts due to the compound effect of the management fees. (This has been calculated assuming an assumed constant return of 10% per annum<sup>1</sup> and a hypothetical management fee of 0.75% per annum, which has been applied on a simple average of opening and closing annual fund values).

	Gross value	Net value	Compound effect
1 Year	\$5,500,000	\$5,460,625	\$39,375
3 Years	6,655,000	6,513,090	141,910
5 Years	8,052,550	7,768,403	284,147
10 Years	12,968,712	12,069,617	899,095

<sup>1</sup>The assumed 10% return is hypothetical and should not be considered a representation of past or future returns. The actual effect of fees on the value of an account over time will vary with future returns, which cannot be predicted and may be more or less than the amount assumed in this illustration. Actual fees may differ from the assumed rate presented above. Please consult the Firm's Advisory Brochure (ADV Part 2) for a description of the fees.

# Important information

Risks associated with Schroder Global and International Equities: All investments, domestic and foreign, involve risks including the risk of possible loss of principal. The market value of the portfolio may decline as a result of a number of factors, including adverse economic and market conditions, prospects of stocks in the portfolio, changing interest rates, and real or perceived adverse competitive industry conditions. Investing overseas involves special risks including among others, risks related to political or economic instability, foreign currency (such as exchange, valuation and fluctuation) risk, market entry or exit restrictions, illiquidity and taxation. These risks exist to a greater extent in emerging markets than in developed markets.

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The views and forecasts contained herein are those of the Global and International Equity team and are subject to change. The information and opinions contained in this document have been obtained from sources we consider to be reliable. No responsibility can be accepted for errors of facts obtained from third parties. Reliance should not be placed on the views and information in the document when taking individual investment and/or strategic decisions. Schroders has expressed its own views and opinions in this document and these may change.

The opinions stated in this presentation include some forecasted views. We believe that we are basing our expectations and beliefs on reasonable assumptions within the bounds of what we currently know. However, there is no guarantee that any forecasts or opinions will be realized.

Schroder Investment Management North America Inc. ("SIMNA Inc.") is registered as an investment adviser with the US Securities and Exchange Commission and as a Portfolio Manager with the securities regulatory authorities in Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, Quebec and Saskatchewan. It provides asset management products and services to clients in the United States and Canada. Schroder Fund Advisors LLC ("SFA") markets certain investment vehicles for which SIMNA Inc. is an investment adviser. SFA is a wholly-owned subsidiary of SIMNA Inc. and is registered as a limited purpose broker-dealer with the Financial Industry Regulatory Authority and as an Exempt Market Dealer with the securities regulatory authorities in Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec and Saskatchewan. This document does not purport to provide investment advice and the information contained in this material is for informational purposes and not to engage in a trading activities. It does not purport to describe the business or affairs of any issuer and is not being provided for delivery to or review by any prospective purchaser so as to assist the prospective purchaser to make an investment decision in respect of securities being sold in a distribution. SIMNA Inc. and SFA are indirect, wholly-owned subsidiaries of Schroders plc, a UK public company with shares listed on the London Stock Exchange. Further information about Schroders can be found at [www.schroders.com/us](http://www.schroders.com/us) or [www.schroders.com/ca](http://www.schroders.com/ca).

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# Rolling 3 Month Performance and Risk Report

**Portfolio:** MWRA (Fund holding)

**Portfolio 1:** MWRA

**Inception:** 2/2/2012

**Base Curr:** USD

**Report Cu:** USD

**Benchmark:** MACI AC World ex US (NDR)

**Net/Gros:** Gross Performance

**Report St:** 2/2/2012

**Report En:** 8/31/2023

Quarter Start	Start Date	End Date	Portfolio Return	Benchmark Return	Excess Return
Y	3/31/2023	6/30/2023	2.11	2.44	-0.33
Y	12/31/2022	3/31/2023	10.81	6.87	3.95
Y	9/30/2022	12/31/2022	16.82	14.28	2.54
Y	6/30/2022	9/30/2022	-9.73	-9.91	0.17
Y	3/31/2022	6/30/2022	-16.84	-13.73	-3.11
Y	12/31/2021	3/31/2022	-7.14	-5.44	-1.70
Y	9/30/2021	12/31/2021	3.29	1.82	1.47
Y	6/30/2021	9/30/2021	-0.73	-2.99	2.25
Y	3/31/2021	6/30/2021	4.99	5.48	-0.49
Y	12/31/2020	3/31/2021	4.15	3.49	0.65
Y	9/30/2020	12/31/2020	18.81	17.01	1.79
Y	6/30/2020	9/30/2020	9.99	6.25	3.74
Y	3/31/2020	6/30/2020	21.62	16.12	5.50
Y	12/31/2019	3/31/2020	-21.02	-23.36	2.33
Y	9/30/2019	12/31/2019	12.25	8.92	3.33
Y	6/30/2019	9/30/2019	-2.06	-1.80	-0.26
Y	3/31/2019	6/30/2019	3.38	2.98	0.40
Y	12/31/2018	3/31/2019	11.19	10.31	0.88
Y	9/30/2018	12/31/2018	-11.96	-11.46	-0.50
Y	6/30/2018	9/30/2018	1.85	0.71	1.14
Y	3/31/2018	6/30/2018	-0.48	-2.61	2.14
Y	12/31/2017	3/31/2018	-1.54	-1.53	0.00
Y	9/30/2017	12/31/2017	4.08	4.23	-0.15
Y	6/30/2017	9/30/2017	8.43	5.40	3.02
Y	3/31/2017	6/30/2017	6.63	6.12	0.51
Y	12/31/2016	3/31/2017	8.65	7.25	1.40
Y	9/30/2016	12/31/2016	-2.77	-0.71	-2.05
Y	6/30/2016	9/30/2016	7.08	6.43	0.65
Y	3/31/2016	6/30/2016	-1.87	-1.46	-0.41
Y	12/31/2015	3/31/2016	-2.49	-3.01	0.51

Y	9/30/2015	12/31/2015	6.38	4.71	1.67
Y	6/30/2015	9/30/2015	-10.11	-10.23	0.13
Y	3/31/2015	6/30/2015	0.53	0.62	-0.09
Y	12/31/2014	3/31/2015	4.66	4.88	-0.22
Y	9/30/2014	12/31/2014	-3.50	-3.57	0.07
Y	6/30/2014	9/30/2014	-2.78	-5.88	3.09
Y	3/31/2014	6/30/2014	3.51	4.09	-0.58
Y	12/31/2013	3/31/2014	-1.23	0.66	-1.89
Y	9/30/2013	12/31/2013	7.21	5.71	1.50
Y	6/30/2013	9/30/2013	10.49	11.56	-1.07
Y	3/31/2013	6/30/2013	-0.55	-0.98	0.43
Y	12/31/2012	3/31/2013	4.28	5.13	-0.86
Y	9/30/2012	12/31/2012	5.93	6.57	-0.64
Y	6/30/2012	9/30/2012	6.47	6.92	-0.45
Y	3/31/2012	6/30/2012	-7.09	-7.13	0.04
Y	12/31/2011	3/31/2012	N/A	N/A	N/A

# Rolling 1 Year Performance and Risk Report

**Portfolio:** MWRA (Fund holding)

**Portfolio I:** MWRA

**Inception:** 2/2/2012

**Base Curr:** USD

**Report Cu:** USD

**Benchmark:** MACI AC World ex US (NDR)

**Net/Gros:** Gross Performance

**Report St:** 2/2/2012

**Report En:** 8/31/2023

Year Start	Start Date	End Date	Portfolio Return	Benchmark Return	Excess Return
Y	12/31/2021	12/31/2022	-18.57	-16.00	-2.56
Y	12/31/2020	12/31/2021	12.11	7.82	4.28
Y	12/31/2019	12/31/2020	25.52	10.65	14.87
Y	12/31/2018	12/31/2019	26.37	21.51	4.86
Y	12/31/2017	12/31/2018	-12.14	-14.50	2.36
Y	12/31/2016	12/31/2017	30.75	25.03	5.71
Y	12/31/2015	12/31/2016	-0.37	1.00	-1.37
Y	12/31/2014	12/31/2015	0.62	-0.81	1.43
Y	12/31/2013	12/31/2014	-4.09	-4.90	0.81
Y	12/31/2012	12/31/2013	22.86	22.78	0.08



NEPC, LLC

**Firm:** Coho Partners, Ltd.  
**Strategy/Product:** Coho Relative Value Equity  
**Client:** Massachusetts Water Resource Authority Employees Retirement System

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

**1. Have there been any changes in ownership or management in the past year?**

Coho Partners is employee owned via direct ownership and through an Employee Stock Ownership Plan.

Effective January 1, 2023, 12 employees who had been granted equity that would vest over time, became direct owners of the firm. This is part of the planned succession plan to keep Coho independent and employee owned.

**2. List firm AUM, net flows and accounts gained/lost for the past 5 years.**

<b>Year</b>	<b>Firm AUM (in Millions)</b>	<b>Net Flows (in Millions)</b>	<b>Accounts Gained</b>	<b>Accounts Lost</b>
2022	\$6,165.30	(\$118.13)	225	162
2021	\$6,660.64	(\$611.30)	163	138
2020	\$6,102.90	\$363.02	188	166
2019	\$5,194.88	(\$31.25)	158	100
2018	\$4,253.51	(\$143.75)	148	90

**3. Have there been any new or discontinued products in the past year?**

Coho Partners has not added or discontinued any products in the past year.

**4. Are any products capacity constrained?**





We believe \$15 billion is the appropriate level of assets where we would evaluate capacity constraints. Capacity within the strategy would be limited by the least liquid and smallest market capitalization stocks within the portfolio. Currently, we do not have plans to limit growth or close the strategy, but we will monitor asset growth and close the strategy if we believe performance would be negatively impacted.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

Coho Partners does not have any current or pending regulatory, compliance, or litigation issues.

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

Our core values start with a respect for people. Coho is committed to creating and maintaining a work environment in which all people are treated with dignity, decency, and respect. Coho believes in equal opportunity in all aspects of employment, not only to comply with the law, but because it is the right thing to do. All employees are well versed in our equal opportunity policies and have participated in training designed to reinforce tolerance and prevent any type of discrimination.

We embrace the importance of a diverse workforce and recognize that diversity of backgrounds, thoughts, and ideas are integral to our success as a firm.

Please see the attached Diversity, Equity, and Inclusion Policy.

### **Portfolio Management Team**

**1. Have there been any changes in the portfolio management team in the past year?**

In the last year, there has been one departure and two additions to the portfolio management team. Effective July 31, 2022, Nimrit Kang left Coho Partners to pursue other opportunities. We welcomed Tony Michalak and Evan Carpenter as portfolio managers and investment analysts in January 2023 and May 2023, respectively. Their bios are included below.

Tony joined Coho Partners in 2023 to focus on research and portfolio management. In addition, he is a member of the Investment Committee. He has 14 years of experience in the financial industry.

Prior to joining Coho, Tony spent 10 years at Roundwood Asset Management (formerly Allegheny Capital Partners) as Vice President of Public Equity Investment where he was responsible for making key portfolio construction decisions and conducting fundamental industry and company research on publicly traded equity investment ideas for the firm's value-oriented public equity portfolio. Prior to this role, Tony was an Associate and Research Analyst for Public and Private Equity Investment for Allegheny Capital Partners for four years. Roundwood Asset Management was the Public Equity investment group of Allegheny Corporation.



Tony graduated from Lehigh University with a Bachelor of Science degree in finance.

Evan joined Coho Partners in 2023 to focus on research and portfolio management. He is a member of the Investment Committee and has 26 years of experience in the financial industry.

Prior to joining Coho, Evan was a senior equity analyst at Mutual of America Capital Management for 11 years where he was responsible for conducting fundamental research with an emphasis on quality companies at discounted valuations. In addition, he actively collaborated with the portfolio manager for portfolio construction decisions. He also served as a senior research analyst at Lord Abbett for nine years where his focus was on value investing. Evan began his investment career as an equity research analyst at Gabelli & Co.

Evan graduated from Lafayette College with dual Bachelor of Art degrees in economics and business, and mathematics, and he received his MBA from Columbia University Business School. Evan is a Chartered Financial Analyst® charterholder.

**2. Are there any expected changes to the team in the future (planned additions or departures)?**

Coho Partners' succession planning is designed to respond to naturally occurring personnel changes without significant disruption to our business. For more than a dozen years, we have thoughtfully implemented succession plans to ensure the long-term continuity of the investment process and consistency of investment performance within the research team.

Effective January 2022, Chris Leonard, a member of the Investment Team since 2012, was appointed Co-Chief Investment Officer. In this shared role, Chris works alongside Peter Thompson who has served as Coho's Chief Investment Officer since the firm's founding in 1999. Together, they are jointly responsible for maintaining the firm's investment philosophy and process.

Over the next few years, it is expected that Peter will relinquish his Co-CIO responsibilities and Chris will become the sole Chief Investment Officer. Peter intends to continue his efforts as a member of Coho's Investment Team until at least age 70.

## **Process**

**1. Have there been significant changes in any of the areas below in the past year?**

- **Identification of investment ideas**
- **Process for exploring and vetting ideas**
- **Portfolio trading practices including buy/sell rules**
- **Approach to portfolio monitoring and risk management**

There have been no significant changes to any of the above-mentioned areas in the past year.



## Philosophy

### 1. Describe recent changes in investment philosophy, if any.

There have been no changes to the investment philosophy. Coho Partners' investment philosophy has remained the same since the inception of the firm.

## Portfolio

### 1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please refer to the meeting materials and attached attribution for this data.

### 2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

Year	Strategy AUM (in Millions)	Net Flows (in Millions)	Accounts Gained	Accounts Lost
2022	\$4,973.31	(\$307.10)	211	134
2021	\$5,607.20	(\$550.60)	155	88
2020	\$5,160.11	(\$15.80)	149	133
2019	\$4,167.25	\$31.89	106	83
2018	\$3,787.27	\$35.55	102	75

### 3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

As of 2Q23 the investor concentration in the Coho Relative Value Equity strategy is primarily intermediary relationships (50%) and institutional investors (40%).

The top five investors, which exclude our mutual fund, represent 26% of the strategy's assets as of June 30, 2023.

## Performance / Market Outlook

### 1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

We will include this information in the client presentation materials.

### 2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.

Our investment philosophy is designed to protect during challenging periods and stay competitive during the advancing times. Protection so far this year has not been needed like it was last year when this portfolio performed well on a relative basis. However, we have clearly not achieved our desired level of upside capture this year. We believe the pattern of returns that we seek can be achieved if we populate the portfolio with companies that have



the ability to consistently grow their revenues, earnings, cash flows, and dividends, and it assumes we do not overpay for our investments.

We believe the portfolio offers strong risk/return prospects. We fully anticipate that all but two of our holdings will once again increase their dividend this year and the portfolio's overall income growth will be in line with our 20-plus year experience of high single digits. Moreover, we expect the vast majority of our holdings to improve their earnings year-over-year. Thus, we believe the attractiveness of the portfolio has improved materially during this year, and we await a turn in our performance.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

It has been a frustrating year thus far, but we feel good about the positioning of the portfolio and its ability to close the performance gap should the market continue to move higher. We also remain cognizant of the many risks to the market including higher-for-longer interest rates, a historically steep inverted yield curve, the potential for tightening credit and rising delinquencies, and geopolitical concerns to name a few. Should the market correct, the factors that have been a headwind to performance will likely turn to tailwinds.

There has only been one other time in Coho's 23-year history when we trailed both benchmarks over a six-month period at a similar level to what we have experienced in the first half of 2023. That was the middle of 2009 during the rebound coming out of the Great Financial Crisis. We were rewarded then by sticking to our philosophy and process, and we believe we will be again this time.

**4. Could you please include a slide in your presentation that sows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

We will include this information in the client presentation materials.



portfolio review prepared for

# MWRA Employees' Retirement System

October 5, 2023

## Coho Relative Value Equity

QUARTER ENDED JUNE 30, 2023

300 Berwyn Park • 801 Cassatt Road • Suite 100  
Berwyn • PA 19312 • 484.318.7575  
[www.cohopartners.com](http://www.cohopartners.com)

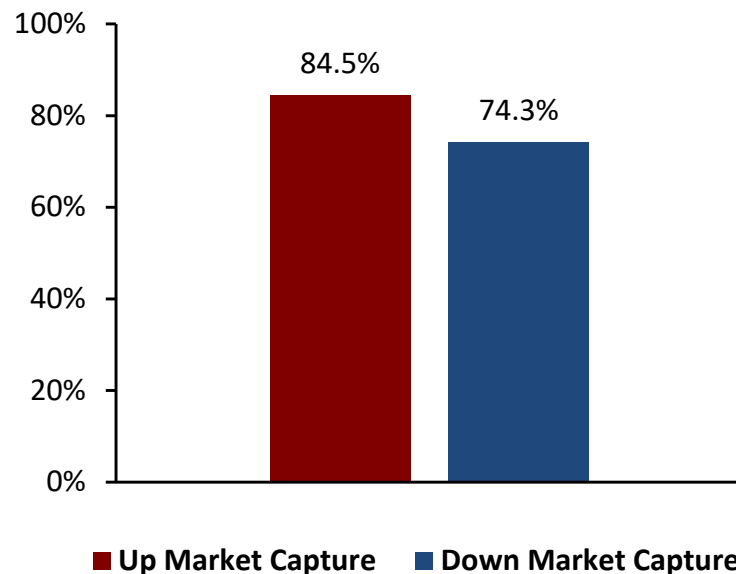
# Where protection and participation meet®



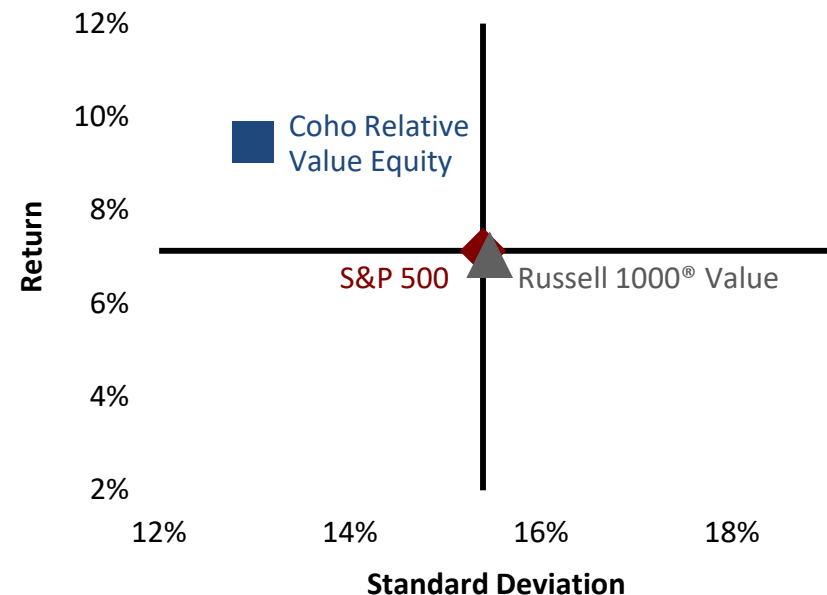
We firmly believe that the best way to create and sustain long-term wealth is to:

- Protect principal in down markets
- Generate competitive returns in all but the most cyclical or speculative up markets

Up/down market capture since inception



Risk/reward comparison since inception

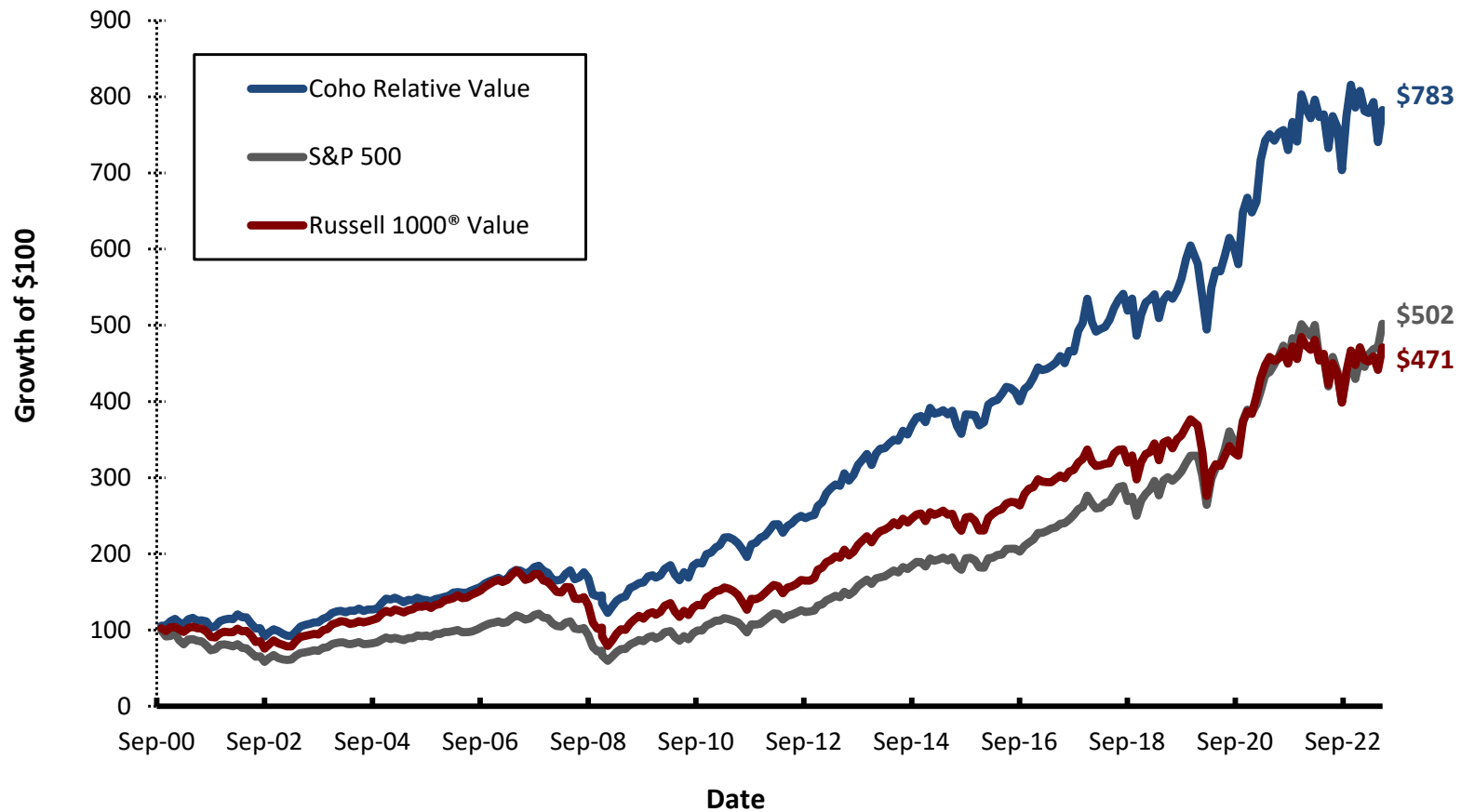


Performance data is presented gross of fees. The Upside/Downside Capture Ratio is calculated by dividing the return of the portfolio during the up (or down) market periods by the return of the market for the same period. Past performance is not indicative of future results. Data (monthly) since inception (10.1.00) through 6.30.23; Source: eVestment. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Market Proxy: S&P 500 Index. Please see Appendix for important disclosure information regarding the use of the Russell 1000® Value Index along with gross and net performance returns.

# The proof is in the pattern



## The power of capital preservation and participation over multiple market cycles



Underlying performance data is gross of fees, cumulative since inception (10.1.00) through 6.30.23. Past performance is not indicative of future results. Source: Advent/Axys. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Please see Appendix for important disclosure information regarding the use of the Russell 1000® Value Index along with gross and net performance returns.

# Portfolio review

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AS OF JUNE 30, 2023





# Portfolio summary as of 6.30.23



## MWRA Employees' Retirement System

Inception date: 3.1.16

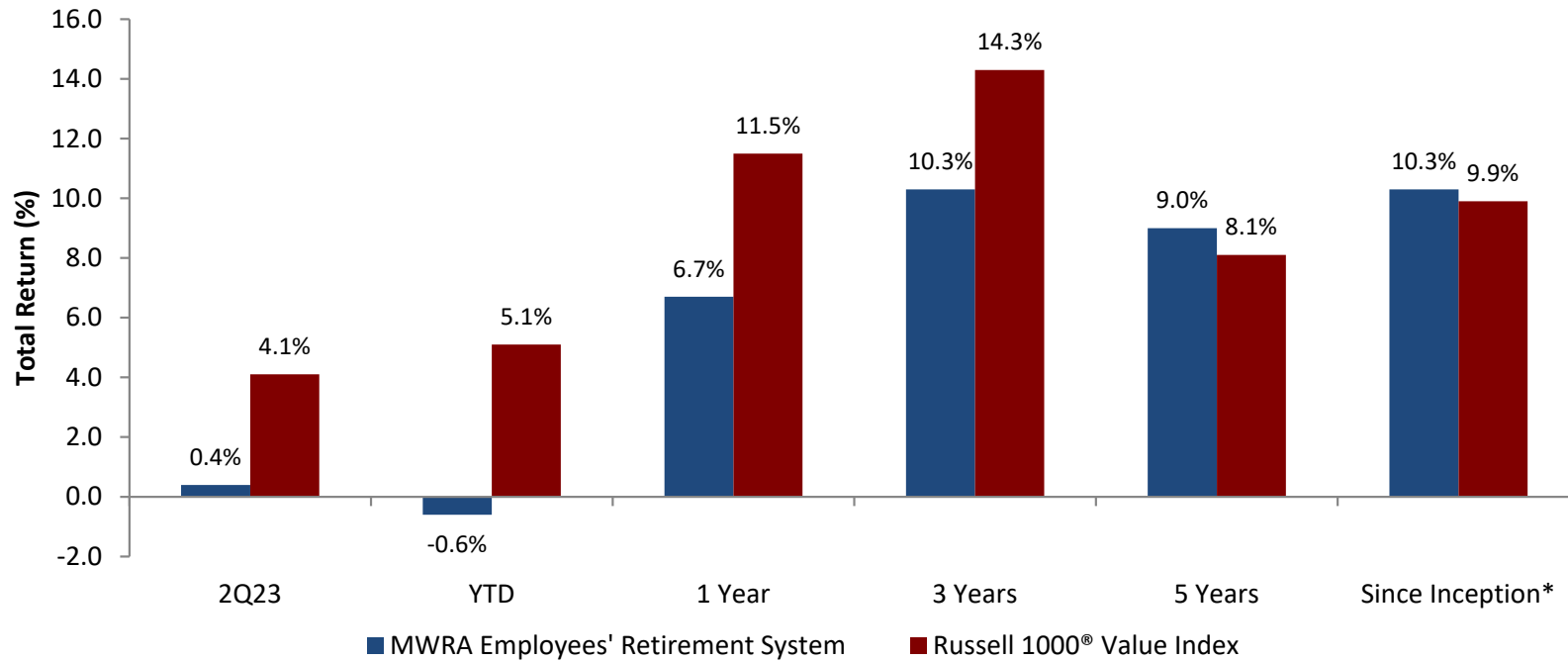
<b>Initial investment</b>	<b>\$19,337,412</b>
Contributions	\$20,800,000
Withdrawals	(\$12,750,000)
Gains/Losses	\$15,880,255
Investment income*	\$5,247,882
<b>Market value as of 6.30.23</b>	<b>\$48,515,549</b>

\*Includes interest and dividends, net of fees

# Performance as of 6.30.23 – gross of fees



## Annualized



	2Q23	YTD	1 Year	3 Years	5 Years	Since Inception*	2022	2021	2020	2019	2018
<b>MWRA Employees' Retirement System</b>	0.4%	-0.6%	6.7%	10.3%	9.0%	10.3%	-3.3%	19.4%	11.2%	24.6%	-0.9%
<b>Russell 1000 Value Index</b>	4.1%	5.1%	11.5%	14.3%	8.1%	9.9%	-7.5%	25.2%	2.8%	26.5%	-8.3%

\*Inception date: 3.1.2016

As of 6.30.23 unless otherwise noted; Source: Advent/Axys. Note: Performance presented is intended for one-on-one presentations only. Past performance is not indicative of future results. Returns presented for periods less than one year are cumulative, returns for periods one year and greater are annualized.

# Attribution detail – YTD 2023



	Avg Port Wt	Port Return	Port Contrib	Avg Bmrk Wt	Bmrk Return	Bmrk Contrib	Alloc Effect	Select Effect	Total Effect
<b>Total Portfolio</b>	<b>100.00</b>	<b>-0.28</b>	<b>-0.28</b>	<b>100.00</b>	<b>5.16</b>	<b>5.16</b>	<b>-1.85</b>	<b>-3.59</b>	<b>-5.44</b>
Communication Services	2.78	2.76	0.05	8.30	33.28	2.36	-1.32	-0.73	-2.05
Information Technology	4.40	28.71	1.09	7.58	22.36	1.65	-0.44	0.22	-0.22
Consumer Discretionary	12.99	1.34	0.31	5.90	13.24	0.70	0.57	-1.45	-0.88
Industrials	8.20	23.90	1.76	10.84	12.89	1.41	-0.22	0.86	0.64
Materials	0.00	0.00	0.00	4.42	6.19	0.29	-0.05	0.00	-0.05
Real Estate	0.00	0.00	0.00	4.66	4.95	0.23	0.00	0.00	0.00
Consumer Staples	23.51	-6.87	-1.70	7.55	1.16	0.11	-0.61	-1.97	-2.58
Financial Services	12.56	-2.91	-0.41	20.82	0.07	-0.14	0.42	-0.36	0.06
Cash & Equivalents	3.27	2.42	0.08	0.00	0.00	0.00	-0.12	0.00	-0.12
Health Care	28.88	-3.95	-1.08	16.44	-4.17	-0.71	-1.19	0.07	-1.12
Energy	3.41	-10.68	-0.38	7.96	-5.29	-0.43	0.48	-0.21	0.27
Utilities	0.00	0.00	0.00	5.53	-5.80	-0.32	0.62	0.00	0.62

Demand Defensive
  Economically Sensitive
  Outperform
  Underperform

Source: FactSet (Holdings Based, Daily). Coho Relative Value Equity vs. Russell 1000® Value 12.31.22 – 6.30.23  
 Base Currency: U S Dollar. Past performance is not indicative of future results.

# Attribution detail – calendar year 2022



	Avg Port Wt	Port Return	Port Contrib	Avg Bmrk Wt	Bmrk Return	Bmrk Contrib	Alloc Effect	Select Effect	Total Effect
<b>Total Portfolio</b>	<b>100.00</b>	<b>-2.11</b>	<b>-2.11</b>	<b>100.00</b>	<b>-7.54</b>	<b>-7.54</b>	<b>1.96</b>	<b>3.47</b>	<b>5.43</b>
Energy	3.47	58.48	1.58	7.57	66.02	3.15	-1.91	-0.10	-2.01
Consumer Staples	21.19	9.69	1.45	7.41	1.61	0.01	1.22	1.51	2.73
Utilities	0.00	0.00	0.00	5.58	1.29	-0.08	-0.44	0.00	-0.44
Health Care	29.44	0.66	0.69	17.38	0.28	0.29	0.93	-0.14	0.79
Cash & Equivalents	2.88	2.00	0.06	0.00	0.00	0.00	0.33	0.00	0.33
Materials	0.00	0.00	0.00	4.09	-7.23	-0.30	-0.02	0.00	-0.02
Industrials	8.86	-16.50	-1.69	10.41	-7.32	-0.76	-0.06	-0.85	-0.90
Financial Services	10.44	-12.49	-1.44	20.44	-10.39	-2.02	0.28	-0.27	0.01
Consumer Discretionary	13.97	-4.14	-0.09	5.62	-19.80	-1.07	-0.92	2.44	1.52
Real Estate	0.00	0.00	0.00	4.69	-26.24	-1.41	1.02	0.00	1.02
Communication Services	1.64	-30.26	-0.78	7.50	-26.44	-2.31	1.29	-0.12	1.17
Information Technology	8.11	-16.95	-1.89	9.31	-28.00	-3.05	0.24	1.00	1.24

Demand Defensive
  Economically Sensitive
  Outperform
  Underperform

Source: FactSet (Holdings Based, Daily). Coho Relative Value Equity vs. Russell 1000® Value 12.31.21 – 12.31.22  
 Base Currency: U S Dollar. Past performance is not indicative of future results.

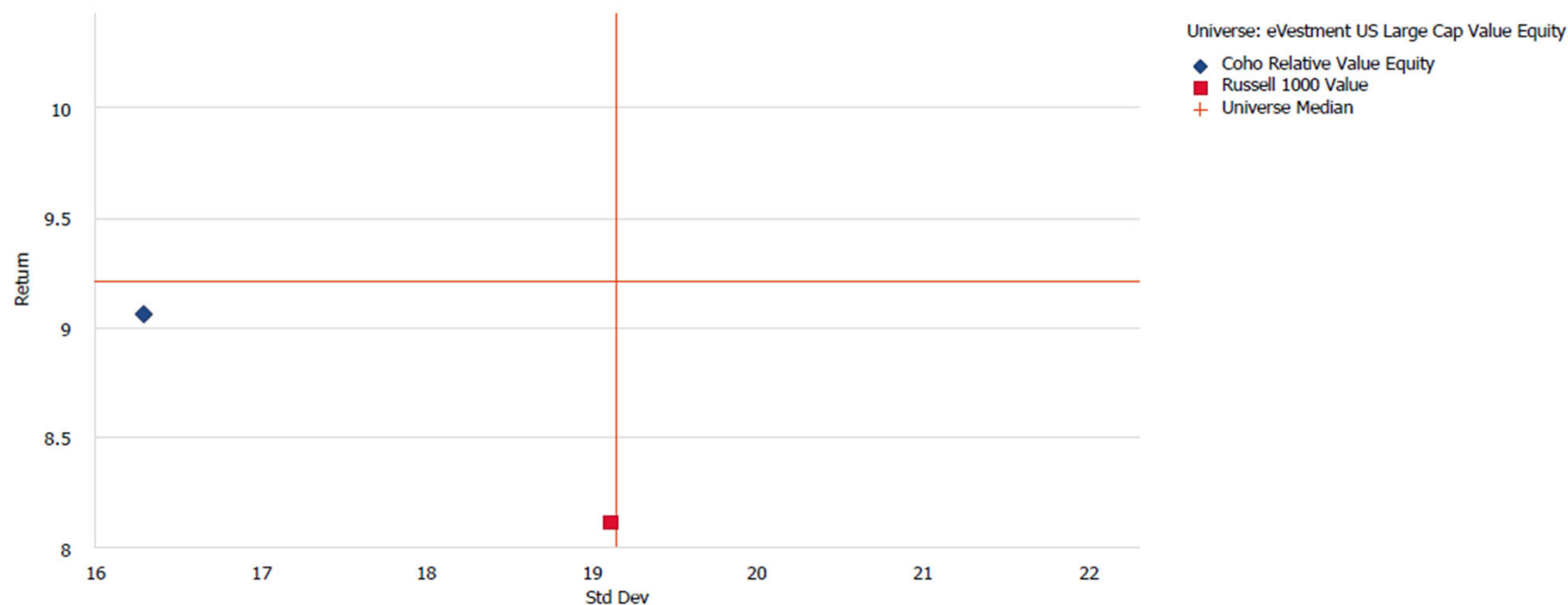
# Risk vs. reward: 5-yr comparison



## Coho Partners, Ltd.: Coho Relative Value Equity



### Risk vs. Reward - 5 Year



### Risk & Regression - 5 Year

Firm Name	Product Name	Standard Deviation 5 Years	Returns 5 Years	Beta 5 Years	R-Squared 5 Years	Sharpe Ratio 5 Years	Tracking Error 5 Years
Coho Partners, Ltd.	Coho Relative Value Equity	16.30	9.06	0.81	0.89	0.46	6.51
Russell Index	Russell 1000 Value	19.12	8.11	1.00	1.00	0.34	0.00

Source: eVestment. Data as of June 30, 2023. eVestment Large Cap Value Universe: 454 products as of June 30, 2023. Past performance is not indicative of future results.

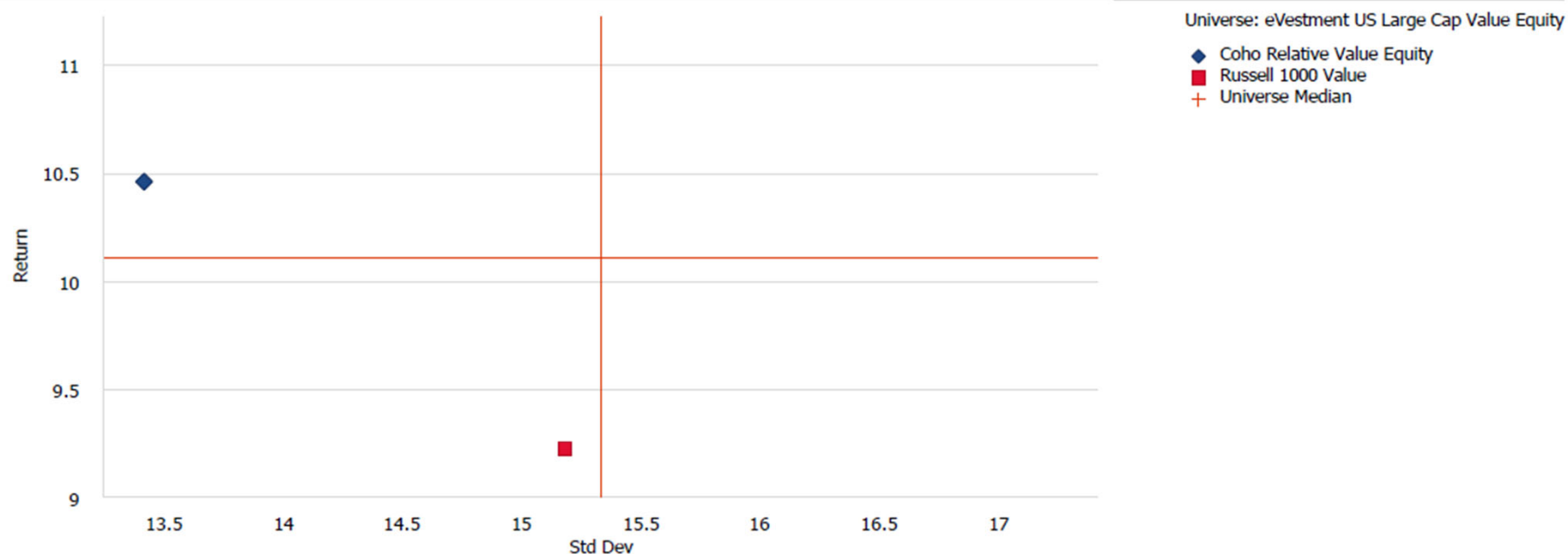
# Risk vs. reward: 10-yr comparison



## Coho Partners, Ltd.: Coho Relative Value Equity



### Risk vs. Reward - 10 Year



### Risk & Regression - 10 Year

Firm Name	Product Name	Standard Deviation 10 Years	Returns 10 Years	Beta 10 Years	R-Squared 10 Years	Sharpe Ratio 10 Years	Tracking Error 10 Years
Coho Partners, Ltd.	Coho Relative Value Equity	13.42	10.46	0.83	0.89	0.71	5.22
Russell Index	Russell 1000 Value	15.18	9.22	1.00	1.00	0.54	0.00

Source: eVestment. Data as of June 30, 2023. eVestment Large Cap Value Universe: 454 products as of June 30, 2023. Past performance is not indicative of future results.

# Portfolio characteristics vs. the S&P 500 & Russell 1000 Value



	Beta 1-yr	Dividend Yield	P/E Ratio		EPS Growth		DPS Growth	
			CY'23E	CY'24E	CY'23E	CY'24E	CY'22A	CY'23E
<b>Coho Relative Value Equity</b>	<b>0.84</b>	<b>2.5%</b>	<b>17.0x</b>	<b>15.4x</b>	<b>4.4%</b>	<b>9.5%</b>	<b>13.2%</b>	<b>7.0%</b>
<b>S&amp;P 500</b>	<b>1.00</b>	<b>1.6%</b>	<b>21.8x</b>	<b>19.8x</b>	<b>1.0%</b>	<b>10.5%</b>	<b>11.6%</b>	<b>3.4%</b>
<b>RLV</b>	<b>0.91</b>	<b>2.4%</b>	<b>16.3x</b>	<b>15.2x</b>	<b>-2.2%</b>	<b>7.6%</b>	<b>9.3%</b>	<b>7.7%</b>

Sources: Company filings, Coho Partners. Data as of June 30, 2023.

# Portfolio holdings



DEMAND DEFENSIVE					ECONOMICALLY SENSITIVE					
Security	Price	Market Value	Pct. Assets	Yield	Security	Price	Market Value	Pct. Assets	Yield	
<b>CONSUMER STAPLES</b>					<b>COMMUNICATION SERVICES</b>					
Coca-Cola Co.	\$ 60.22	\$ 1,548,858	3.2	3.1	Walt Disney Co.	\$ 89.28	\$ 1,229,207	2.5	0.0	
Colgate Palmolive Co.	\$ 77.04	\$ 1,194,659	2.5	2.5			\$ 1,229,207	2.5	0.0	
ConAgra Brands, Inc.	\$ 33.72	\$ 1,375,742	2.8	4.2	<b>CONSUMER DISCRETIONARY</b>					
Dollar General Corp.	\$ 169.78	\$ 1,824,965	3.8	1.4	Lowe's Companies Inc.	\$ 225.70	\$ 2,357,662	4.9	1.9	
Mondelez International Inc.	\$ 72.94	\$ 1,992,283	4.1	2.3	Nike Inc.	\$ 110.37	\$ 1,282,610	2.6	1.2	
Sysco Corp.	\$ 74.20	\$ 1,904,269	3.9	2.7	Ross Stores Inc.	\$ 112.13	\$ 2,099,634	4.3	1.2	
The J. M. Smucker Company	\$ 147.67	\$ 1,818,556	3.7	2.9	Service Corporation International	\$ 64.59	\$ 931,323	1.9	1.8	
		\$ 11,659,333	24.0	2.7			\$ 6,671,229	13.8	1.6	
<b>HEALTH CARE</b>					<b>ENERGY</b>					
AmerisourceBergen Corp.	\$ 192.43	\$ 2,283,759	4.7	1.0	Chevron Corporation	\$ 157.35	\$ 1,252,978	2.6	3.8	
Amgen Inc.	\$ 222.02	\$ 1,082,125	2.2	3.8			\$ 1,252,978	2.6	3.8	
Baxter International Inc.	\$ 45.56	\$ 755,203	1.6	2.5	<b>FINANCIAL SERVICES</b>					
CVS Health Corporation	\$ 69.13	\$ 1,649,580	3.4	3.5	Global Payments Inc.	\$ 98.52	\$ 1,230,121	2.5	1.0	
Johnson & Johnson	\$ 165.52	\$ 2,029,441	4.2	2.9	Marsh & McLennan Company	\$ 188.08	\$ 1,997,974	4.1	1.5	
Medtronic PLC	\$ 88.10	\$ 1,114,553	2.3	3.1	State Street Corporation	\$ 73.18	\$ 1,634,329	3.4	3.8	
Perrigo Company PLC	\$ 33.95	\$ 937,190	1.9	3.2	U.S. Bancorp	\$ 33.04	\$ 1,514,587	3.1	5.8	
Thermo Fisher Scientific Inc.	\$ 521.75	\$ 1,659,165	3.4	0.3			\$ 6,377,010	13.1	3.0	
UnitedHealth Group Inc.	\$ 480.64	\$ 1,947,073	4.0	1.6	<b>INFORMATION TECHNOLOGY</b>					
		\$ 13,458,089	27.7	2.2	Microchip Technology Inc.	\$ 89.59	\$ 2,184,204	4.5	1.8	
							\$ 2,184,204	4.5	1.8	
					<b>INDUSTRIALS</b>					
					United Parcel Service, Inc.	\$ 179.25	\$ 1,800,925	3.7	3.6	
					W. W. Grainger, Inc.	\$ 788.59	\$ 2,261,676	4.7	0.9	
							\$ 4,062,601	8.4	2.1	
					<b>CASH AND EQUIVALENTS</b>					
							\$ 1,620,898	3.3		
<b>TOTAL PORTFOLIO</b>							<b>\$ 48,515,549</b>	<b>100.0</b>	<b>2.2</b>	

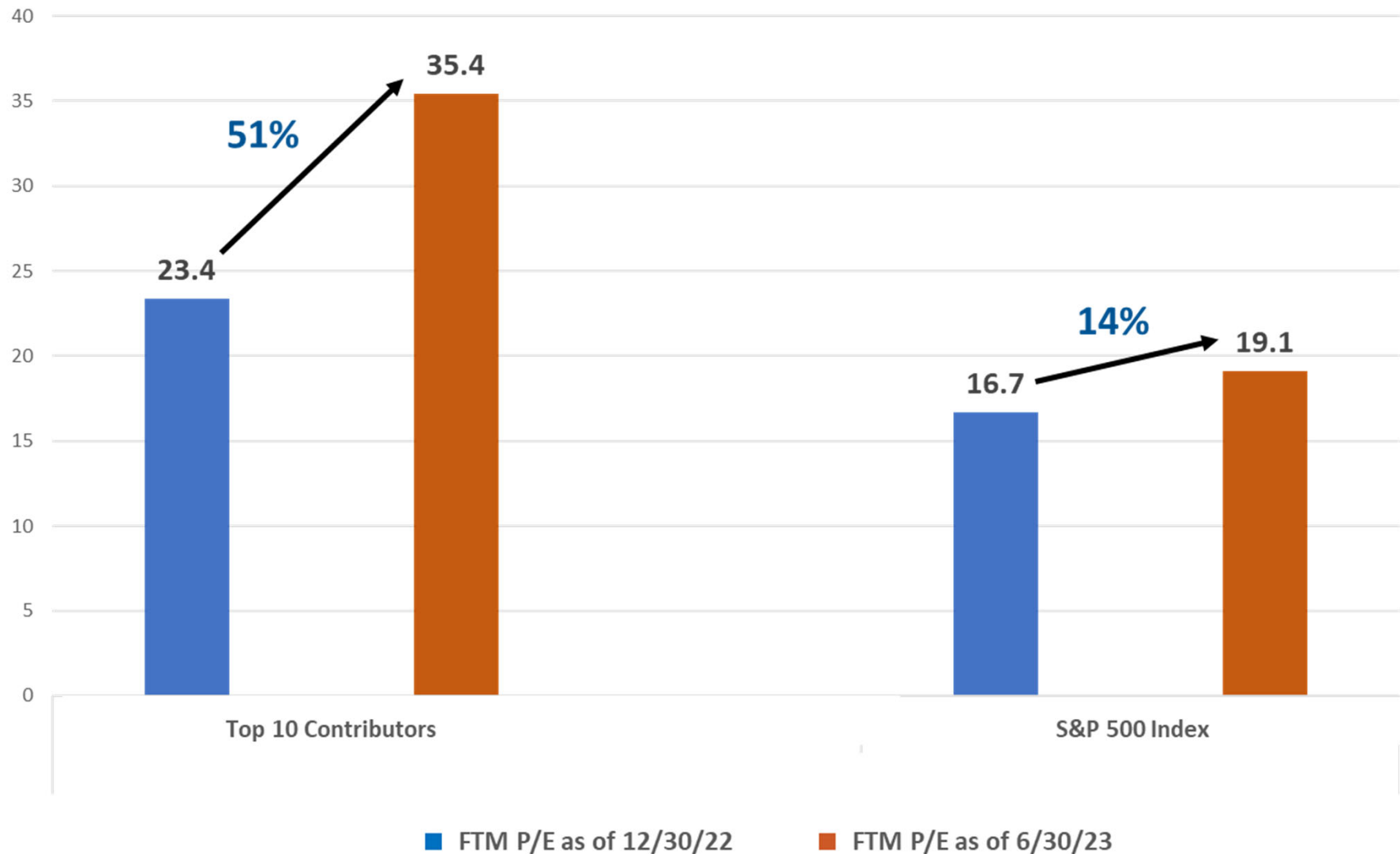
MWRA Employees' Retirement System portfolio as of 6.30.23. Source: Advent/Axys. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of the securities in this list. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Individual holdings may not add up to 100% due to rounding.



# Appendix

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# Multiple expansion for top 10 contributors versus the S&P 500 Index



Source: FactSet. Past performance is not indicative of future results.

# Extreme divergence in returns



## 2023 YTD Returns by Style Russell 1000

R1000 Growth	29.0%
R1000 Value	5.2%

## 2023 YTD Returns by Factors S&P 500

Economically Sensitive	23.2%
Demand Defensive	-1.8%
High Beta	27.4%
Low Beta	1.0%

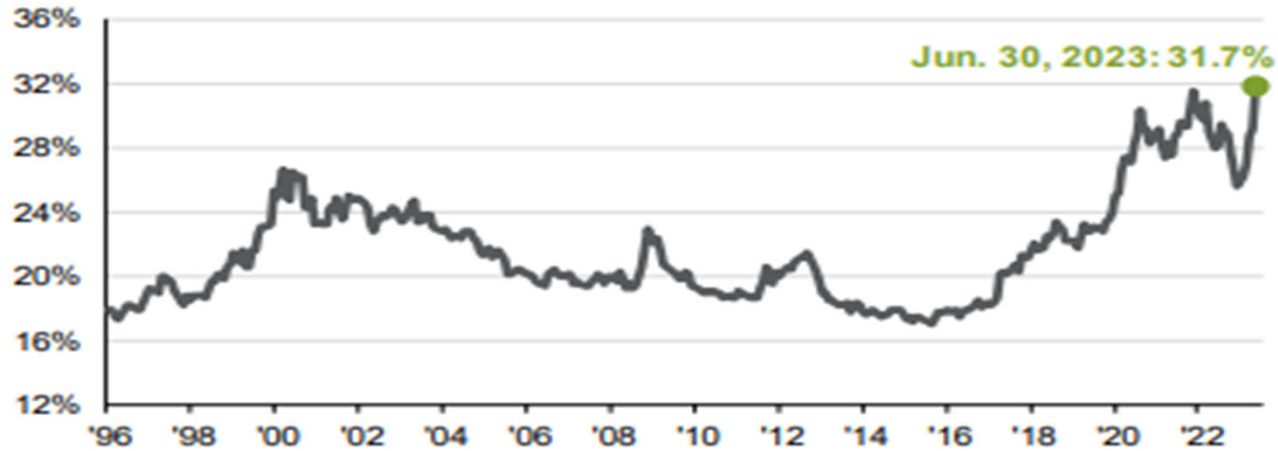
Source: FactSet. Data as of June 30, 2023. Past performance is not indicative of future results.

# Weights and earnings of the S&P 500 Index



## Weight of the top 10 stocks in the S&P 500

% of market capitalization of the S&P 500



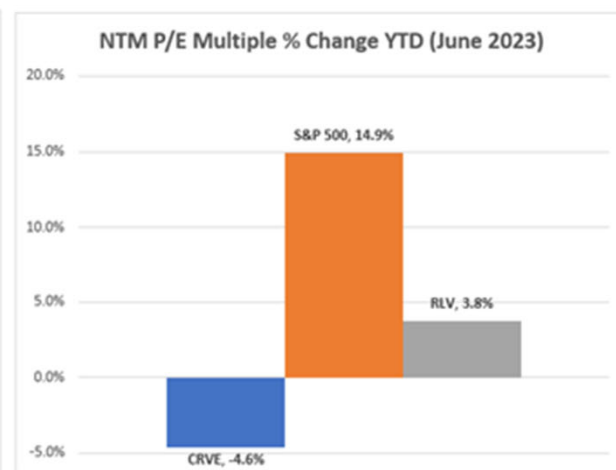
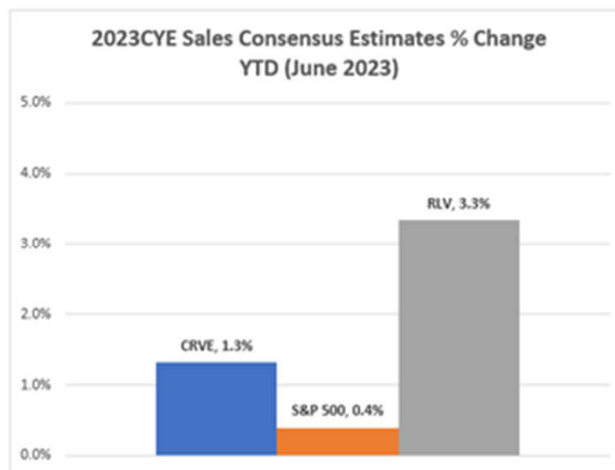
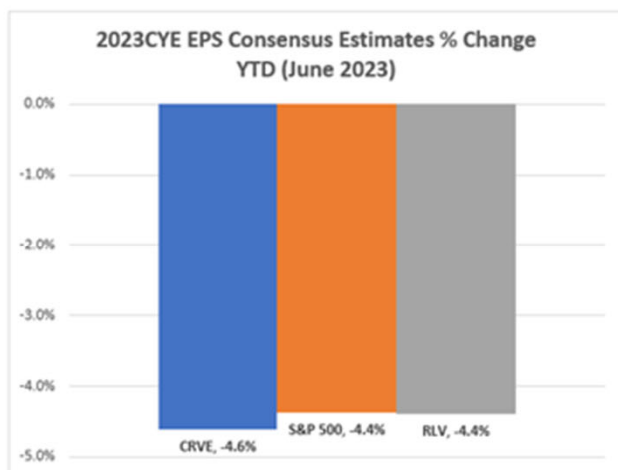
## Earnings contribution of the top 10 in the S&P 500

Based on last 12 months' earnings



Sources: JP Morgan and Coho Partners

# Sales and earnings revisions so far this year



Source: FactSet

# Contributors and detractors – YTD 2023



## Largest contributors by holding

Company Name	Avg Wt	Return	Total Effect
W.W. Grainger, Inc.	4.46	42.53	1.45
Microchip Technology Inc.	4.40	28.71	0.94
AmerisourceBergen Corporation	4.96	16.82	0.55
Lowe's Companies, Inc.	4.60	14.44	0.40
Marsh & McLennan Company	3.64	14.45	0.32
Medtronic PLC	2.51	15.25	0.18
Mondelez International, Inc.	3.84	10.63	0.17
United Parcel Service, Inc.	3.74	5.02	-0.02
Walt Disney Company	2.78	2.76	-0.04
Perrigo Co. PLC	2.17	1.19	-0.08

## Largest detractors by holding

Company Name	Avg Wt	Return	Total Effect
Dollar General Corporation	3.88	-30.87	-1.56
CVS Health Corporation	3.74	-24.69	-1.13
U.S. Bancorp	2.93	-22.09	-0.81
Amgen Inc.	2.81	-13.91	-0.55
ConAgra Brands, Inc.	2.87	-11.31	-0.47
UnitedHealth Group Inc.	3.97	-8.65	-0.46
Ross Stores, Inc.	4.48	-2.77	-0.37
Sysco Corporation	4.42	-1.70	-0.30
Chevron Corporation	3.41	-10.68	-0.29
State Street Corporation	3.29	-4.06	-0.28

Source: FactSet. Calculations are based on daily holdings of the Coho Relative Value Equity portfolio. To obtain additional information on the calculation methodology or to obtain a list showing the contribution of each holding in the portfolio during the measurement period, please contact our Client Relations Team at [clientrelations@cohopartners.com](mailto:clientrelations@cohopartners.com).

Past performance is not indicative of future results.

Coho Relative Value Equity vs. Russell 1000® Value 12.31.22 – 6.30.23 Base Currency: U S Dollar

# Addressing Dollar General and CVS



## DOLLAR GENERAL®

### Dollar General (DG)

- Uncharacteristic EPS misses
- Challenges include supply chain, higher wages and sharper execution from peer
- Management addressing the supply chain and labor issues, with share capture resuming in May and comps turning positive
- Acknowledge higher investment spend in near-term limits share repurchase plans
- Coho conviction in DG investment thesis as evidenced by addition to the position towards the end of Q2



### CVS Health (CVS)

- Near-term EPS headwinds include less favorable reimbursement for a MA plan and dilution from two recent deals to expand CVS value-based care offerings
- Closely monitoring execution risk on deals and believe both small enough to be absorbed with potential to contribute meaningfully to earnings beyond 2024
- Conviction in CVS ability to be one of the few winners in the 'consumerization of health care'
- Dividend growth to continue despite recent deals
- Modest acceleration in earnings could drive meaningful multiple expansion from the current depressed 8x forward EPS

# Average portfolio weights



	Coho Relative Value Equity	S&P 500	Russell 1000® Value
<b>Cyclicality</b>			
Demand Defensive	56%	24%	30%
Economically Sensitive	44%	76%	70%
<b>Quality</b>			
A- and Above	53%	46%	30%
B+ and Below	47%	54%	70%
<b>Volatility</b>			
Lowest 2 Beta Quintiles	65%	39%	53%
Highest 3 Beta Quintiles	35%	61%	47%

Data is for the quarter ending 6.30.23. Sources: Advent/Axys, FactSet, and S&P Global Market Intelligence, Copyright © 2023. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Reference to a quality ranking or any observation concerning an investment that is part of the quality rankings is not a recommendation to buy, sell or hold such investment or security. Quality rankings are statements of opinions and are not statements of fact. Demand Defensive includes Consumer Staples, Health Care, and Utilities. Economically Sensitive includes Communication Services, Consumer Discretionary, Energy, Financial Services, Industrials, Information Technology, Materials, and Real Estate sectors. The average cash weighting for the period of 3.31.23 through 6.30.23 is 3.4% and is included in the 'Demand Defensive' Cyclicality category, 'A- and Above' Quality category and 'Lowest 2 Beta Quintiles' in the Volatility category. Equity securities that are 'Not Rated' by Standard & Poor's are included in the 'B+ and Below' Quality category.



# YTD 2023 portfolio transactions



PURCHASES				SALES			
	<u>Purchases</u>	<u>From:</u>	<u>To:</u>		<u>Sales</u>	<u>From:</u>	<u>To:</u>
<b>1Q23</b>	UnitedHealth Group Inc.	3.45%	4.00%	<b>1Q23</b>	W. W. Grainger, Inc.	5.20%	4.20%
	Service Corporation International	0.00%	2.00%		Microchip Technology Inc.	5.20%	4.20%
<b>2Q23</b>	Dollar General	2.80%	3.50%	<b>2Q23</b>	AmerisourceBergen Corporation	5.50%	5.00%

# Sector weights



	Sector	Coho Relative Value Equity	Range	S&P 500	Russell 1000® Value
Demand Defensive	Health Care	28.5%	10-40%	13.4%	15.8%
	Consumer Staples	23.0%	5-35%	6.7%	8.4%
	Utilities	0.0%	0-10%	2.6%	5.2%
Economically Sensitive	Consumer Discretionary	14.2%	5-20%	10.7%	5.3%
	Financial Services	12.1%	5-20%	12.4%	20.1%
	Industrials	8.5%	0-25%	8.5%	13.5%
	Information Technology	4.5%	0-25%	28.3%	9.0%
	Energy	3.3%	0-25%	4.1%	7.9%
	Communication Services	2.5%	0-20%	8.4%	5.1%
	Materials	0.0%	0-10%	2.5%	4.8%
	Real Estate	0.0%	0-10%	2.5%	4.9%
	Cash and Equivalents	3.5%	0-5%	0.0%	0.0%
	Total	100.0%		100.0%	100.0%

As of 6.30.23. Sources: Advent/Axys, FactSet, and Coho Partners. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Sector weights may not add up to 100% due to rounding. Please see Appendix for important disclosure information regarding the use of the Russell 1000® Value Index.

# Holdings-based characteristics



	Coho Relative Value Equity	S&P 500	Russell 1000® Value
Equity Holdings	29	503	844
3 Year Annualized Turnover	14.9%	N/A	N/A
Dividend Yield	2.2%	1.5%	2.3%
EPS Growth (last 5 yrs)	10.1%	5.1%	5.5%
EPS Growth (next 5 yrs)	9.3%	12.3%	7.7%
P/E (trailing 4 quarters)	15.9x	20.3x	14.2x
P/E (forward 4 quarters)	15.7x	20.0x	14.9x
Price/Book	3.3x	4.1x	2.3x
LT Debt/Capital	56.0%	43.5%	42.1%
Net Debt/EBITDA	2.4	3.4	4.1
5-Year Avg ROE	27.8%	26.3%	15.7%
Weighted Avg Market Cap	\$120.1 B	\$680.8 B	\$137.8 B
Median Market Cap	\$88.4 B	\$31.1 B	\$11.8 B
Beta (last 10 yrs)	0.85	1.05	1.00
Active Share	N/A	91.4%	89.6%

As of 6.30.23; Sources: Advent/Axys, FactSet, and Coho Partners

Please see Appendix for important disclosure information regarding the use of the Russell 1000® Value Index.

# Organizational update



## ▪ **\$9.2 billion in total firm assets**

- \$5.8 billion in discretionary assets
  - Separate accounts: \$4,388.5 million
  - Mutual funds: \$877.2 million
  - UCITS: \$508.4 million
- \$3.4 billion in model-based (UMA) assets

## ▪ **Commitment to independence and employee ownership**

- 36 employees, 22 partners
- We welcomed Evan Carpenter as a portfolio manager/investment analyst on our Investment Team and Jim Gordon on our Operations Team in May 2023 and we recently welcomed Kennedy Walsh as a marketing professional on our Distribution Team.
- We continue to recruit support for our Outreach Team.

## ▪ **Growing interest in our ESG investment approach**

- We recently published an ESG Insights titled, “Global Packaging in the Food and Beverage Industries” which focuses on plastic packaging, the challenges of expanding the circular economy within this category, and how Coho portfolio companies are facing these challenges head on. In addition, our Coho Cares Team recently organized employee participation in a fundraising run/walk for the Main Line Animal Rescue.

Assets are as of 6.30.23. Please refer to the Global Investment Performance Standards (GIPS®) report in the Appendix for additional information and gross and net performance returns. GIPS® is a registered trademark owned by CFA Institute.

# Your Coho team



## Investments

**Evan Carpenter CFA®**

Portfolio Manager & Investment Analyst

**Shirley Chen**

ESG Investment Analyst

**Andrew Hanna, CFA®**

Investment Analyst

**James Klinger**

Partner, Trading

**Ward Kruse, CFA®**

Partner, Portfolio Manager & Investment Analyst

**Chris Leonard, CFA®**

Partner, Co-Chief Investment Officer

**Annie Madden**

Trading

**Tony Michalak**

Portfolio Manager & Investment Analyst

**Ruairi O’Neill, CFA®**

Partner, Portfolio Manager & Investment Analyst

**Peter Thompson**

Partner, Co-Chief Investment Officer

## Client Relations

**Joe Ciavarelli, CFA®**

Client & Consultant Relations

**Glenn Dever**

Partner, President

**Jena Weaver Dietrich**

Partner, Marketing

**John Finnegan**

Partner, Client Relations

**Wayne LeSage, Jr., CFA®, CFP®**

Partner, Client Relations

**Lisa Marlin**

Partner, Client Relations

**Tim McAvoy**

Partner, Client & Consultant Relations

**John Musser**

Partner, Client & Consultant Relations

**Kelly Vaughan**

Client Relations

**Kennedy Walsh**

Marketing

## Operations & Compliance

**Brian Burke**

Investment Operations

**Terry Davis**

Partner, Office Coordination

**Lisa Gentry, IACCP®**

Partner, Chief Compliance Officer

**Brian Gibson, PRM**

Partner, Business Operations

**Jim Gordon**

Investment Operations

**Jennifer Griffith**

Partner, Human Resources

**Pat Hetrick**

Office Management

**Rich Hildebrand, CPA, CIPM®**

Performance Analysis

**Cindy Lewis, CPA**

Partner, Chief Financial Officer

**Joanne Powell**

Partner, Investment Operations

**Mansi Shah**

Information Technology

**Hans Specht**

Partner, Finance

## Private Wealth

**Roseann Dittmar**

Partner, Client Relations

**Eric Hildenbrand, CFA®**

Partner, Portfolio Manager

**Sam McCaffrey, CFA®**

Investment Analyst

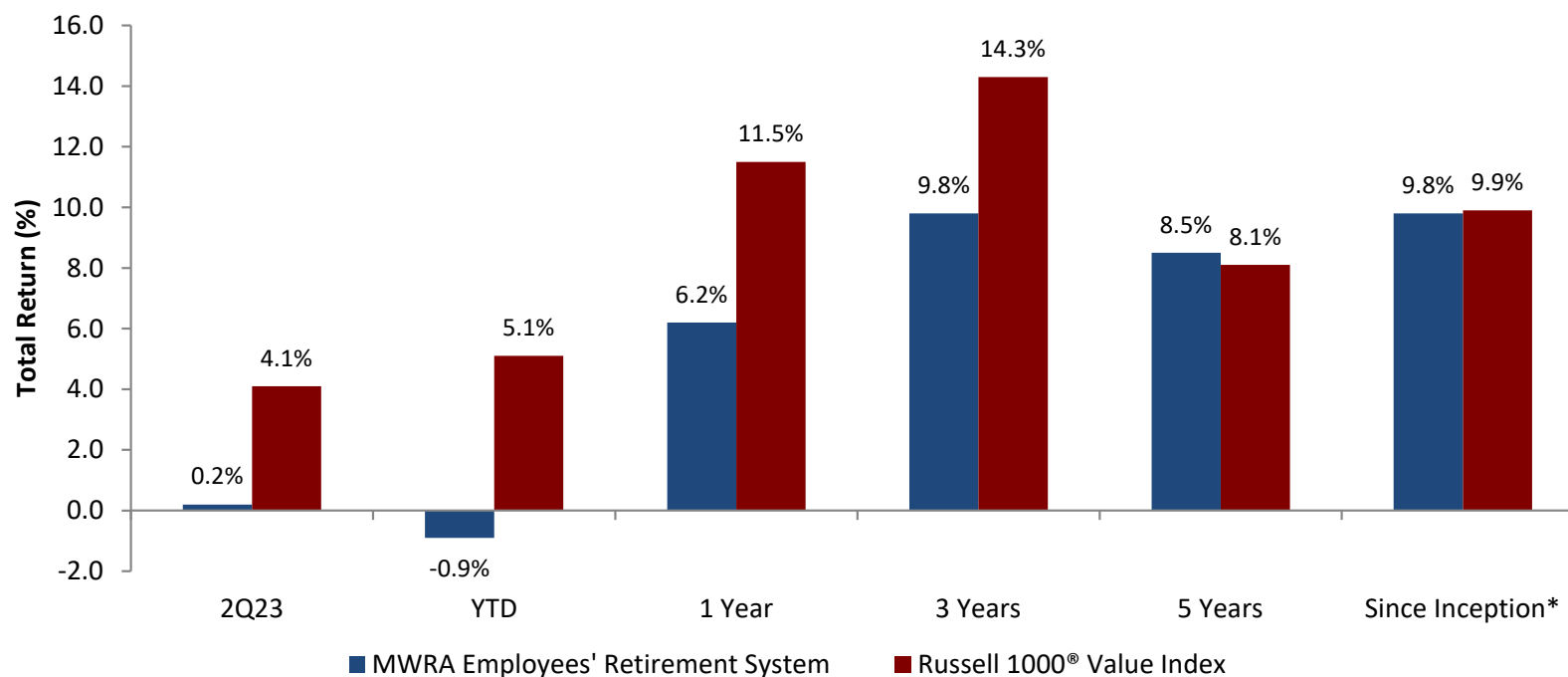
**Steve Mills, JD, CFIP**

Partner, Portfolio Manager



# Performance as of 6.30.23 – net of fees

## Annualized



	2Q23	YTD	1 Year	3 Years	5 Years	Since Inception*	2022	2021	2020	2019	2018
<b>MWRA Employees' Retirement System</b>	0.2%	-0.9%	6.2%	9.8%	8.5%	9.8%	-3.8%	18.8%	10.7%	24.0%	-1.3%
<b>Russell 1000® Value Index</b>	4.1%	5.1%	11.5%	14.3%	8.1%	9.9%	-7.5%	25.2%	2.8%	26.5%	-8.3%

\*Inception date: 3.1.2016

As of 6.30.23 unless otherwise noted; Source: Advent/Axys. Note: Performance presented is intended for one-on-one presentations only. Past performance is not indicative of future results. Returns presented for periods less than one year are cumulative, returns for periods one year and greater are annualized.



# Attribution summary – YTD 2023

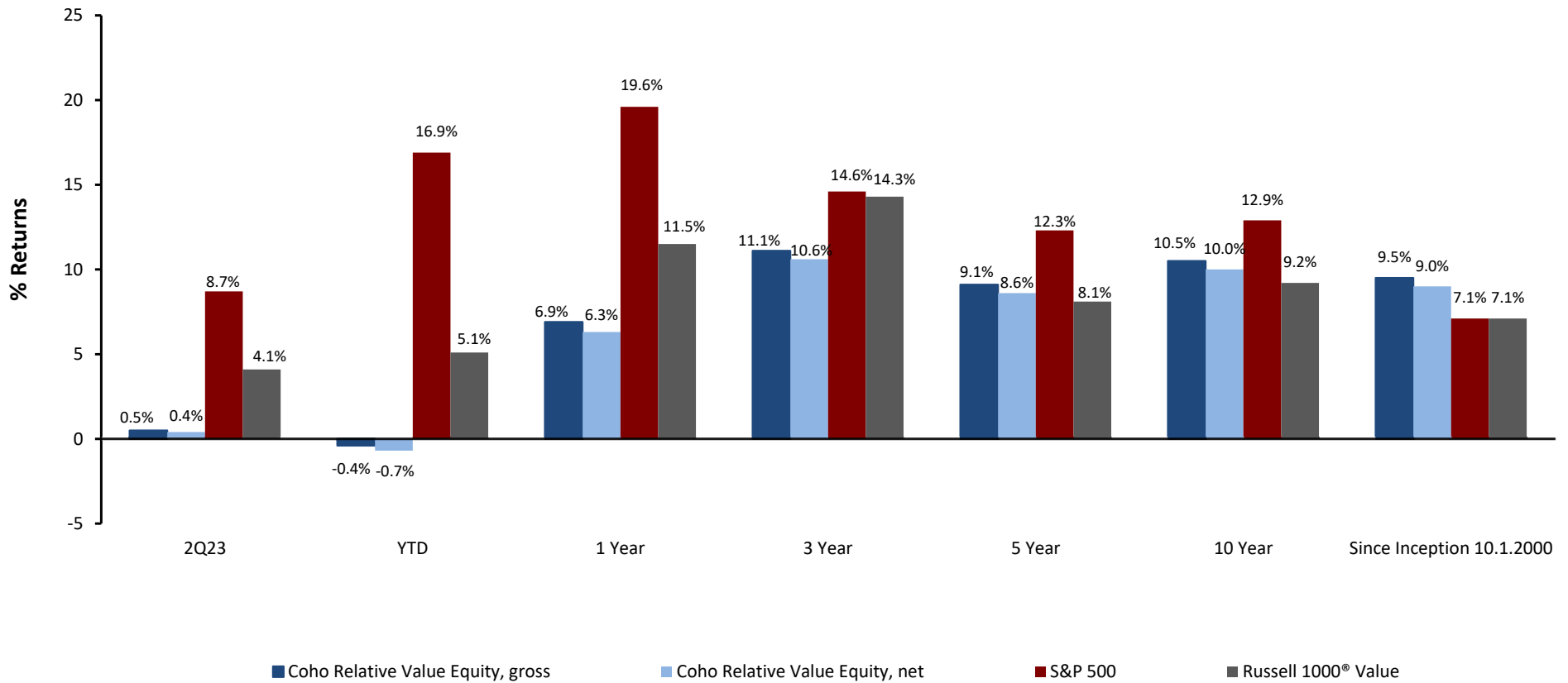
## Despite mixed economic data, the U.S. equity markets had a strong rebound from the 2022 bear market during the first half of 2023

- The divergence of performance has been extreme with concentration of market leadership in a small number of stocks resulting in extreme performance gaps between growth and value
- Given the leadership concentration with higher beta, cyclical stocks the Coho Relative Value Equity portfolio with a return of -0.4% did not capture market participation versus the Russell 1000 Value Index which returned 5.1%
- The variance in sector performance in the first half of the year has been astounding with the Communication Services and Information Technology sectors returning more than 20% followed by the Consumer Discretionary sector
- The Demand Defensive sectors as a group were in negative territory during the first six months with Utilities and Health Care posting negative returns followed by the Consumer Staples sector which had a modest positive return
- While sector allocation did detract from performance the larger detractor to relative performance was from stock selection, including what the portfolio did not own
  - Top five contributors: GWW; MCHP; ABC; LOW; MMC
  - Top five detractors: DG; CVS; USB; AMGN; CAG

# Standardized performance



## Annualized



As of 6.30.23. Source: Advent/Axys. Note: Performance presented is intended for one-on-one presentations only. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Gross of fees performance returns are presented net of actual trading expenses. No other fees are deducted. Net of fees performance returns are calculated net of actual trading expenses and actual management fees. No other fees are deducted. A client's returns will be reduced by the advisory fees and other expenses it may incur in the management of the client account. Returns presented for periods less than one year are cumulative, returns for periods one year and greater are annualized. Please see Appendix for gross and net of fees calendar year returns for the last ten years and gross of fees calendar year returns for the full history of the strategy. Important Disclosure information including Coho's fee structure. Past performance is not indicative of future results.



# Calendar year performance



	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
<b>Coho Relative Value Equity</b>	-2.14	20.34	10.35	24.31	-3.26	19.44	10.18	0.31	15.00	31.89	13.51
<b>S&amp;P 500</b>	-18.11	28.71	18.40	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00
<b>Russell 1000® Value</b>	-7.54	25.16	2.80	26.54	-8.27	13.66	17.34	-3.83	13.45	32.53	17.51

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
<b>Coho Relative Value Equity</b>	10.82	16.03	18.36	-16.97	5.29	17.16	0.50	15.37	23.94	-13.19	1.89
<b>S&amp;P 500</b>	2.11	15.06	26.46	-37.03	5.48	15.80	4.88	10.92	28.68	-22.10	-11.90
<b>Russell 1000® Value</b>	0.39	15.51	19.69	-36.85	-0.17	22.25	7.05	16.49	30.03	-15.52	-5.59

As of 12.31.22. Source: Advent/Axys. Note: Performance presented is intended for one-on-one presentations only. Information presented is derived using currently available data from independent research resources that are believed to be accurate. Calendar year returns are presented gross of fees. Gross of fees performance returns are presented net of actual trading expenses. No other fees are deducted. Please see Important Disclosures for gross and net of fees calendar year returns for the last ten years and information including Coho's fee structure. Net of fee calendar year returns prior to 2012 are available upon request. Past performance is not indicative of future results.

# Important disclosures



The views, opinions, and content presented herein are for informational purposes only. Views are subject to change at any time without notice.

## Use of the Russell 1000® Value Index

Source: London Stock Exchange Group plc and its group undertakings (collectively, the “LSE Group”). © LSE Group 2023.

The Coho Relative Value Equity strategy has been developed solely by Coho Partners, Ltd. The strategy is not in any way connected to or sponsored, endorsed, sold or promoted by the London Stock Exchange Group plc and its group undertakings. FTSE Russell is a trading name of certain of the LSE Group companies.

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The Index is calculated by or on behalf of FTSE International Limited or its affiliate, agent or partner. The LSE Group does not accept any liability whatsoever to any person arising out of (a) the use of, reliance on or any error in the Index or (b) investment in or operation of the Coho Relative Value Equity strategy. The LSE Group makes no claim, prediction, warranty or representation either as to the results to be obtained from the Coho Relative Value Equity strategy or the suitability of the Index for the purpose to which it is being put by Coho Partner, Ltd.

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# Important disclosures



## Coho Relative Value Equity Composite

Coho Partners, Ltd. is an independent, investment manager based in Berwyn, PA that invests in equity securities traded on the major U.S. exchanges. The Firm may also invest in fixed income, mutual funds, ETFs and certain other investments to appropriately diversify certain client portfolios based upon their specific investment guidelines.

The Firm was founded in June 1999, is incorporated in Pennsylvania, and is not affiliated with any parent organization. The Firm is registered with the Securities and Exchange Commission (SEC) as an investment adviser. This registration does not imply a certain level of skill or training. Our clients include institutional employee benefit plans, endowments, foundations, corporations, eleemosynary organizations, high net worth clients, individuals, trusts, estates, and wrap accounts. The Firm provides portfolio allocation and transaction instructions for certain clients ("UMA" or "Model"). These assets are not part of the Firm's total assets when calculating total firm assets for the Global Investment Performance Standards (GIPS®) defined firm; however, these assets may be reported separately in our GIPS Reports.

Coho Partners, Ltd. claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Coho Partners, Ltd. has been independently verified for the periods 10/1/2000 through 12/31/2022.

A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The Coho Relative Value Equity composite has had a performance examination for the periods 10/1/2000 through 12/31/2022. The verification and performance examination reports are available upon request.

GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. Additional information regarding the firm's policies and procedures for valuing investments, calculating performance, and preparing GIPS reports is also available upon request.

The Coho Relative Value Equity composite is comprised of all discretionary, fee-paying, non-wrap, segregated institutional and non-institutional accounts, pooled funds and sub-advised funds. A minimum account size equal to or greater than \$1 million is only applied when initially investing the portfolio. Composite inclusion should be the first full month following account inception, provided all relevant composite inclusion criteria are met. Effective January 1, 2020, the composite was re-defined to include pooled funds and sub-advised funds. The firm determined that operational differences, once perceived to be significant, no longer exist and these funds' investment mandates meet the definition of this composite. Portfolios will be removed from the composite if they experience a reduction in the size of the portfolio below \$750,000 for two consecutive months end. Portfolios may be excluded from the composite due to investment restrictions, frequent cash requirements that take the portfolio off the model, legacy positions, or other situations that may prevent the portfolio from being managed in accordance with the composite strategy. The strategy for all portfolios included in the Coho Relative Value Equity composite is to invest only in selective equity securities while maintaining a diligent focus on preserving capital and maximizing client returns. The Coho Relative Value Equity composite is generally a large cap equity strategy which may also hold mid-cap securities, and which holds approximately 25 – 30 high quality companies exhibiting stable, predictable growth in revenues, earnings and dividends, and selling at reasonable valuations.

The Firm typically relies on our clients to select the benchmark they would like to use for portfolio comparisons. The Firm recognizes the strategy does not fall neatly into a traditional style box; therefore, clients generally choose between the S&P 500 Index for its exposure to a wide breadth of large-cap companies or the Russell 1000® Value Index for its additional "value" style tilt. The S&P 500 Index is an unmanaged market capitalization weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation. The Russell 1000® Value Index is an unmanaged index of those Russell 1000 companies that exhibit value characteristics such as lower price-to-book ratios and lower forecasted growth values. The S&P 500 Value Index is an unmanaged index that measures the performance of those S&P 500 companies that exhibit value characteristics such as lower price-to-book ratios and lower forecasted growth values. One cannot directly invest in an index. Please note the Russell 1000® Value Index and the S&P 500 Value Index are presented as supplemental information.

A change to the Significant Cash Flow (SCF) policy occurred January 1, 2019, so that the SCF policy is triggered by a client request to raise and hold cash in advance of future withdrawal. The amount of cash requested by the client will be transferred to a temporary account which is excluded from the composite. Prior to this, when a client directed us to raise money for a withdrawal but held the cash in the portfolio over the month-end, the portfolio exited the composite by the end of the prior month. Additionally, effective January 1, 2021, when any cash contributions are made that exceed 50% of the client's total assets, measured as of the beginning of the month, the amount of cash contributed will be transferred to a temporary account which is excluded from the composite.

The composite returns reflect the reinvestment of dividends, capital gains, and other earnings when appropriate. Gross of fees performance returns are presented net of actual trading expenses. No other fees are deducted. Net of fees performance returns are calculated net of actual trading expenses and actual management fees, including performance-based fees when applicable. No other fees are deducted. The composite may include portfolios that pay zero commissions. All returns are net withholding taxes. All returns are expressed in U.S. dollars. Standard investment fees are charged at the following rates: Institutional fee schedule – 0.60% on the first \$25 million; 0.50% on the next \$75 million; and 0.40% on assets exceeding \$100 million. Non-institutional fee schedule – 0.95% on first \$2 million; 0.75% on next \$3 million and 0.60% on all assets over \$5 million. The current management fee for the pooled fund, COHOX is 0.70% and the expense ratio is 0.79%. The Firm may, at its discretion, agree to negotiate fees.

The composite's creation and inception date is October 1, 2000. Terminated portfolios are included in the historical performance of the composite through the last full month that each portfolio was under management. A complete list and description of the firm's Composites is available upon request. A list of the Firm's broad distribution pooled funds is available upon request.

# Important disclosures



## Coho Relative Value Equity Composite

Year	Annual Performance Results (%)						Gross 3 Year Annualized Standard Deviation (%)				Composite		Firm
	Composite		S&P 500	Russell 1000® Value	S&P 500 Value	Composite Dispersion	Composite	S&P 500	Russell 1000® Value	S&P 500 Value	Number of Portfolios	Assets (\$M)	Assets (\$M)
	Gross Return TWR	Net Return TWR											
2022	-2.14	-2.63	-18.11	-7.54	-5.22	0.35	17.84	20.87	21.25	20.44	269	3,870.5	6,165.3
2021	20.34	19.81	28.71	25.16	24.90	0.30	15.82	17.17	19.06	18.69	237	4,382.8	6,664.8
2020	10.35	9.83	18.40	2.80	1.36	0.46	16.26	18.53	19.62	19.34	260	4,211.3	6,105.1
2019	24.31	23.75	31.49	26.54	31.93	0.34	11.38	11.93	11.85	12.73	216	2,189.4	5,196.7
2018	-3.26	-3.69	-4.38	-8.27	-8.95	0.33	10.89	10.80	10.82	11.02	204	1,679.6	4,254.0
2017	19.44	18.88	21.83	13.66	15.36	0.45	9.43	9.92	10.20	10.32	197	1,674.1	4,511.7
2016	10.18	9.70	11.96	17.34	17.40	0.40	9.69	10.59	10.77	10.73	171	1,709.4	3,245.3
2015	0.31	-0.13	1.38	-3.83	-3.13	0.44	9.77	10.47	10.68	10.59	130	1,163.1	2,496.8
2014	15.00	14.51	13.69	13.45	12.36	0.34	8.23	8.97	9.20	9.46	122	1,091.1	1,973.4
2013	31.89	31.34	32.39	32.53	31.99	0.54	9.90	11.94	12.70	12.97	83	574.7	1,387.0

Version effective date: 1.1.2023. Source: Advent/Axys.

Gross performance returns are presented net of actual trading expenses. No other fees are deducted. Net performance returns are calculated net of actual trading expenses and actual management fees. No other fees are deducted.

Internal dispersion is calculated using the asset-weighted standard deviation of annual gross returns of those portfolios that were included in the composite for the entire year. The three-year annualized standard deviation measures the variability of the composite gross returns and the benchmark returns over the preceding 36-month period. Past performance is no guarantee of future results.

For more information about the Coho Relative Value Equity composite, please contact a member of our Client & Consultant Relations Team at [distribution@cohopartners.com](mailto:distribution@cohopartners.com).

# Coho Partners, Ltd.

## Diversity, Equity, and Inclusion Policy



2021

### **Diversity, equity, and inclusion make us stronger.**

Diversity, equity, and inclusion are core to our mission of providing exceptional equity investment performance and client service. We believe a culture that values differences and creates a deep sense of belonging and togetherness allows everyone to fully contribute and perform to their highest potential. Diversity, equity, and inclusion enable us to make more informed decisions, manage risks and opportunities more effectively, hire top talent, and increase creativity, innovation, teamwork, and employee engagement. Combined, these factors make us stronger and allow us to achieve greater results for our investment strategy, our business, and ultimately for the clients we are fortunate to serve.

### **Diversity**

Diversity of thought is an important driver of success for our investment strategy and for our business. We believe differences in thought should be nurtured and include the collective sum of an individual's background and life experiences, such as race, color, national origin, religion, gender, sexual orientation, disability, age, citizenship status, veteran or military status, education, upbringing, and industry experience.

We recognize that there are distinct demographic groups that have long been disadvantaged in our country, and we acknowledge that the investment industry struggles with representation that reflects our society. We are committed to education, awareness, and engagement on these topics both inside and outside our organization.

### **Talent**

We are committed to forming a diverse team of talented individuals that considers different perspectives and collaborates to achieve excellence. This means actively seeking new ways to increase diversity in our talent networks and candidate pools, which will ultimately increase diversity in our hiring decisions. Candidates are selected through a comprehensive process that includes meeting with as many people at the firm as possible and evaluating candidates based on skills, experience, and alignment with our core values.

### **Equity**

Diversity, equality, and inclusion are integral to advancing equity across our firm. We aim to provide all employees with equal opportunities, fair compensation, and support to grow, develop, contribute, and reach their full potential. All employees should feel empowered to contribute equally and we strive to optimize outcomes for all people including employees and our clients.

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## **Inclusion**

We strive to create and foster a supportive and collaborative environment in which everyone feels welcome, accepted, and valued. We celebrate independent thinking and encourage varied opinions. We believe in a workplace without barriers, where dialogue is open and free, opinions are solicited, and feedback is encouraged. Sharing information drives innovation and helps us make better decisions. Every voice matters and we want all employees to be their best, most authentic selves.

## **Community**

It is our responsibility to promote positive change in our communities and in our industry. We partner with organizations that serve historically disadvantaged communities in our local area and underrepresented groups in the investment industry. We encourage departments to seek out opportunities to partner with vendors who are active in diversity, equity, and inclusion and to work with minority- or women-owned suppliers where possible.

## **Accountability**

The key to success in our diversity, equity, and inclusion efforts is measuring our impact. We deeply value and consistently seek feedback from our employees and continue to solicit their thoughts and experiences about our efforts through formal surveys and informal discussions. We actively seek out educational opportunities to raise our awareness, evolve our understanding, and engage and collaborate with our employees to regularly refine and update our processes and policies.

We recognize that we may not have all the answers and this effort is a work in progress. We at Coho intend to be an agent for positive change in our industry, our local communities, and in our world.



NEPC, LLC

**Firm: ABS Global Investments**

**Strategy/Product: ABS Emerging Markets Long Only Strategy/ABS Emerging Markets MA Fund**

**Client: MWRA Employees Retirement System**

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

1. Have there been any changes in ownership or management in the past year?

In Q1 2023, four employees purchased equity in the firm, bringing employee ownership to 24 employees.

2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

As of June 30, 2023 AUM was \$6.8 Billion. Net flows for the past 5 years were +\$446 Million. 269 new accounts gained and 272 accounts lost.

3. Have there been any new or discontinued products in the past year?

On January 1, 2023, we launched the ABS EM Local Alpha strategy, a diversified all cap emerging markets core portfolio that pairs fundamental stock selection of our local specialists with a systematic portfolio construction process.

4. Are any products capacity constrained?

No.

5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.

None.

6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.



At ABS, we are committed to attracting, developing, and retaining a diverse workforce and fostering an inclusive culture, which allows us to enhance our ability to execute and deliver on our investment strategy for our clients.

As a global and diverse team, based across geographies and international cultures, we believe in the importance of human capital: from respecting the diversity of our backgrounds, to creating equal opportunities to leverage the advantages of cognitive diversity. Companies need to be constantly innovating, and we believe diversity of thought and skillset is a key ingredient to innovation.

ABS's goal is to be the employer of choice for the best and brightest, from all different backgrounds and cultures. To achieve this goal, we will broadly seek talented individuals from inside and outside of our industry and across a wide array of backgrounds, colleges and universities, including those which may have been historically overlooked. It is important that all our people feel valued, and we strive for an inclusive environment that embraces all our differences.

### **Portfolio Management Team**

1. Have there been any changes in the portfolio management team in the past year?

No.

2. Are there any expected changes to the team in the future (planned additions or departures)?

No.

### **Process**

1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

No.

### **Philosophy**

1. Describe recent changes in investment philosophy, if any.

No changes.

### **Portfolio**





1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Provided in presentation.

2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

As of August 31, 2023, AUM for the strategy was \$1,753M which includes the ABS Emerging Markets MA Fund and the Related Fund, the ABS Emerging Markets Strategic Portfolio. Net flows for 5 years in the strategy was +\$1,437M gaining 62 accounts in the last 5 years.

3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

There are approximately 45 investors invested in the strategy with 44% attributable to the top 5 investors.

### **Performance / Market Outlook**

1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

Provided in presentation.

2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.

The optimal environment for the strategy is one where underlying stock dispersion is high with fundamentals driving stock prices. In this environment, our local specialists should be able to capture alpha in their respective regions, while the high dispersion cancels out some of the top down impact on stock prices. The portfolio is likely to underperform in periods where large, global-oriented index stock are the primary drivers of performance.

3. Describe your market outlook and how strategy positioning is impacted by your views.

In our view, emerging market equities are poised to outperform due to a combination of higher economic growth, reasonable valuations, improved corporate governance, and a structural shift towards local equity ownership. While higher growth rates and cheap valuations have been prevalent across many emerging market economies during the past few decades, headline EM indices have generally lagged other developed markets (primarily US), resulting in a wide valuation gap. However, increased depth of stock ownership and structural reforms ongoing in many countries provide potential for this gap to close.

At a more micro-level, ABS feels the best opportunity within emerging markets is security selection. Many emerging market countries have seen significant increases in equity issuance over the past 20 years, which has created a high level of depth and dispersion,



which are the key building blocks for active managers to deliver alpha. In addition, after nearly 10 years of growth stocks outperforming value stocks (and value outperforming growth in the prior 10 years), predicting the next style factor to lead will be quite challenging as regional and stock specific divergences will make style bets more difficult to execute. Therefore, we believe alpha going forward will be best accessed by specialist managers based in their local markets that can identify unique stock specific opportunities without taking significant style bets. Our global network of managers, scale, internal systems, and SMA platform are ideally suited to build a portfolio that can capture this local alpha over the next 2-5 years relative to our competitors that view emerging markets as a single strategy.

4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.

Provided in presentation.



# ABS GLOBAL INVESTMENTS

## PORTFOLIO UPDATE

MWRA RETIREMENT SYSTEM

October 5, 2023



**FIRM UPDATE**

ABS GLOBAL INVESTMENTS

# ABS Global Investments

## OVERVIEW

ABS specializes in sourcing alpha across global equity markets

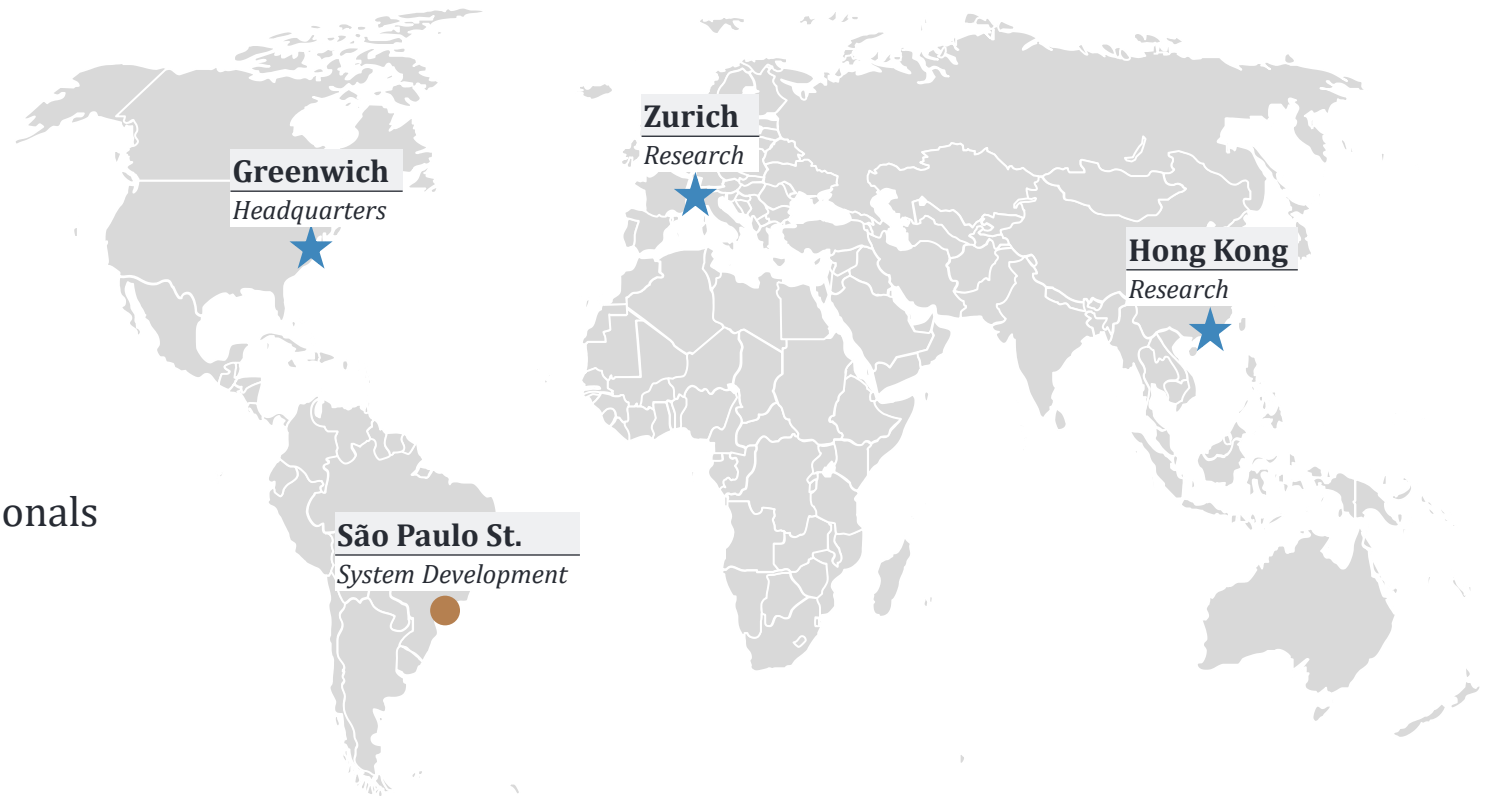
**\$6.8B** AUM

**37** employees

**24** equity partners

**20** investment professionals

**12** nationalities



### ABS Product Evolution

**2003** Global Equity Strategies | **2012** Emerging Markets Strategies | **2021** Crossover Growth Strategy

Firm AUM is approximate as of July 1, 2023 and is subject to change. Personnel information is as of July 1, 2023. The above reflect the opinions of ABS and is subject to change at any time, without notice to investors.

### ABS Organizational Chart

#### Investment Team (20)

Qualitative Analysis / Portfolio Management (11)		Operations / Accounting (10)	Business Development (7)
<p>Guilherme Valle, CFA* <i>Co-Founder / Portfolio Manager</i></p> <p>Laurence Russian, CFA* <i>Co-Founder / Portfolio Manager</i></p> <p>Michael Halper, CFA* <i>Portfolio Manager</i></p>	<p>David Finn, CPA* <i>CFO / CCO</i></p> <p>John Mulfinger, CPA <i>Head of Accounting</i></p> <p>Dayana Khemraj <i>Head of Operations</i></p>	<p>Jon Feinberg* <i>Head of Business Development</i></p> <p>Jestine Roberts <i>Head of Investor Relations</i></p>	
Quantitative Analysis Risk Management (4)	Operational Due Diligence (5)		
<p>Sean White, CFA* <i>Head of Risk/Quant</i></p>	<p>Frank Docimo, CPA <i>Head of Ops Due Diligence</i></p>		

\*ABS Operating Committee Members

#### Investment Experience

**17** Avg years industry experience

**11** Avg years ABS tenure

#### Diversity

**12** Nationalities

**13** Languages spoken

#### Ownership

**24** Equity Holders

**11** Women/minority partners

As of July 1, 2023. Investment experience references investment team only.

# Partnerships

## DIVERSE INVESTOR BASE

### AUM by the Numbers

**\$6.8B**

Assets Under Management

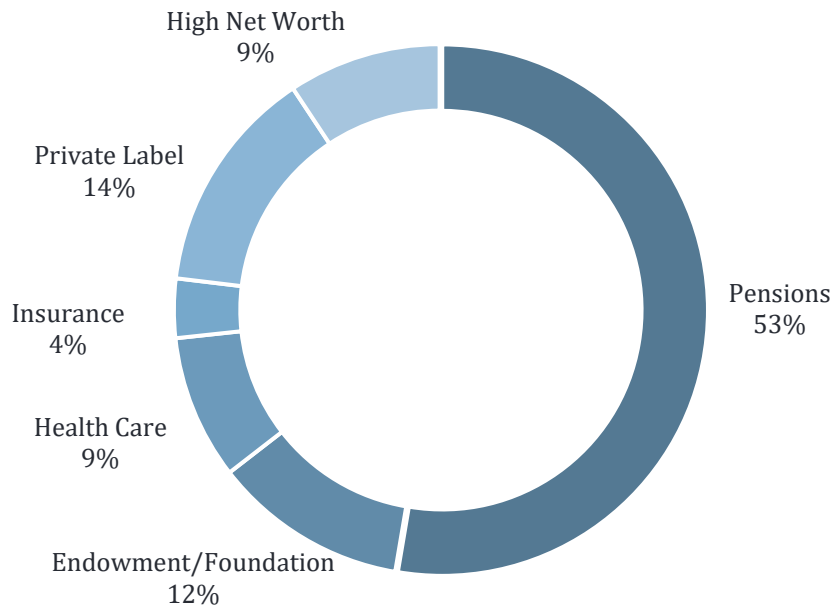
**490**

Client Relationships

**51**

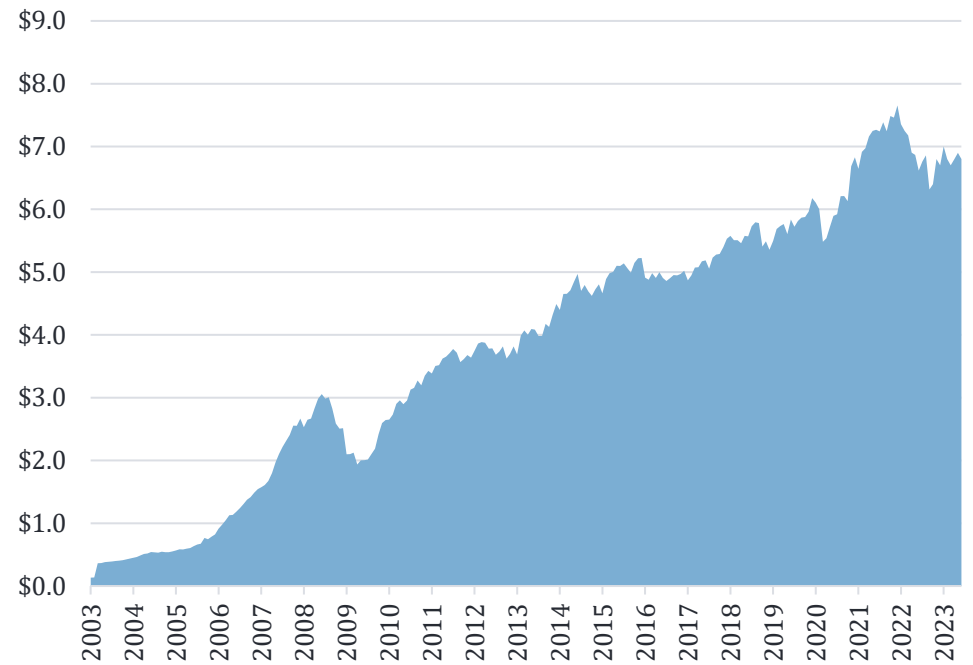
Advisor/Consultant Relationships

### AUM by Client Type



### AUM Growth Since Inception

AUM in USD Billions



AUM data as of July 1, 2023. Client/advisor relationships and AUM by client type as of June 30, 2023.



# 2023 MARKET ENVIRONMENT

## YTD REVIEW

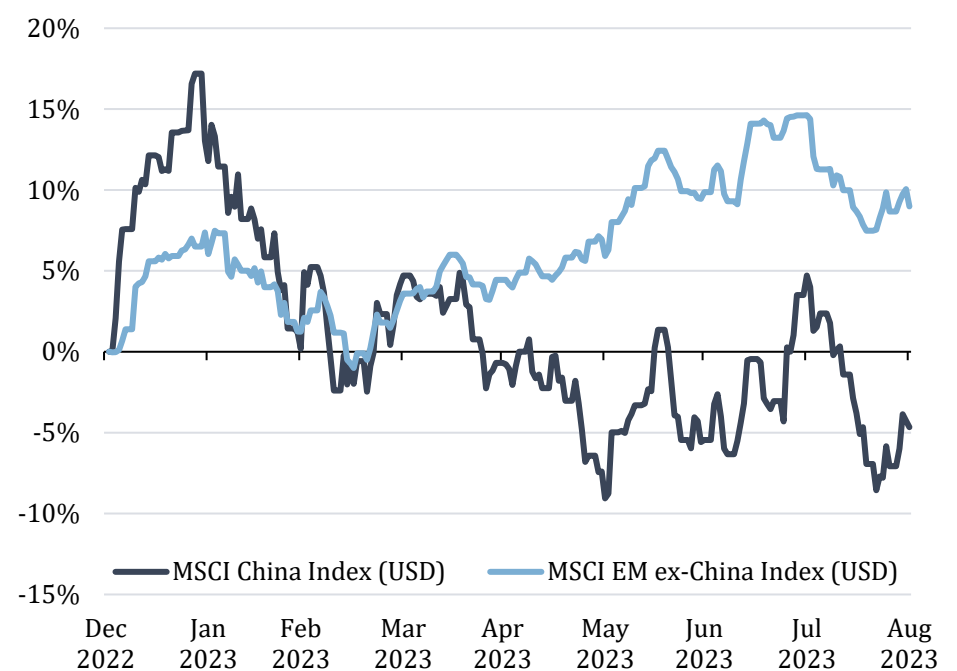
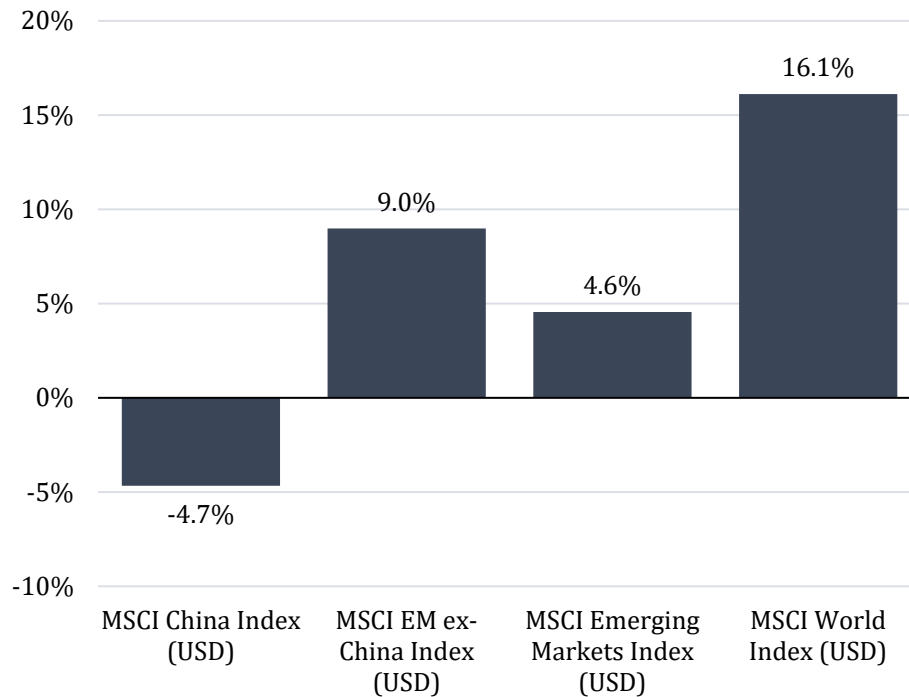


# 2023 Market Environment

## THE EMERGING MARKETS 2023 DICHOTOMY

- Performance for 2023 has been dragged down by the largest country in the index, China.
- Meanwhile emerging markets ex-China delivered robust performance and were up in line with developed markets

### 2023 Performance: China vs Emerging Markets ex-China



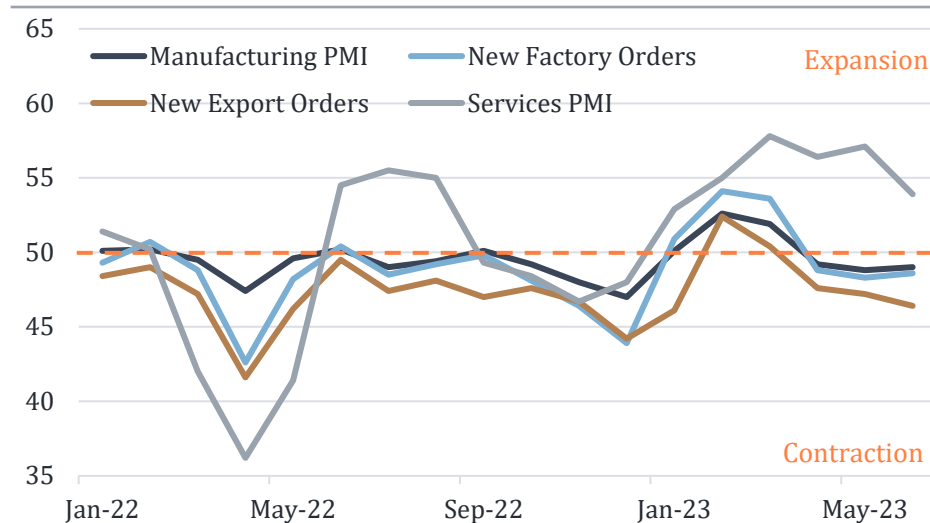
Source: Bloomberg as of August 31, 2023. Past returns are not a guarantee of future results. Graphs are presented for illustration purposes only and should not be relied on to make an investment decision. All statements on this slide are the observations and opinions of ABS and should not be taken as investment advice.

# 2023 Market Environment

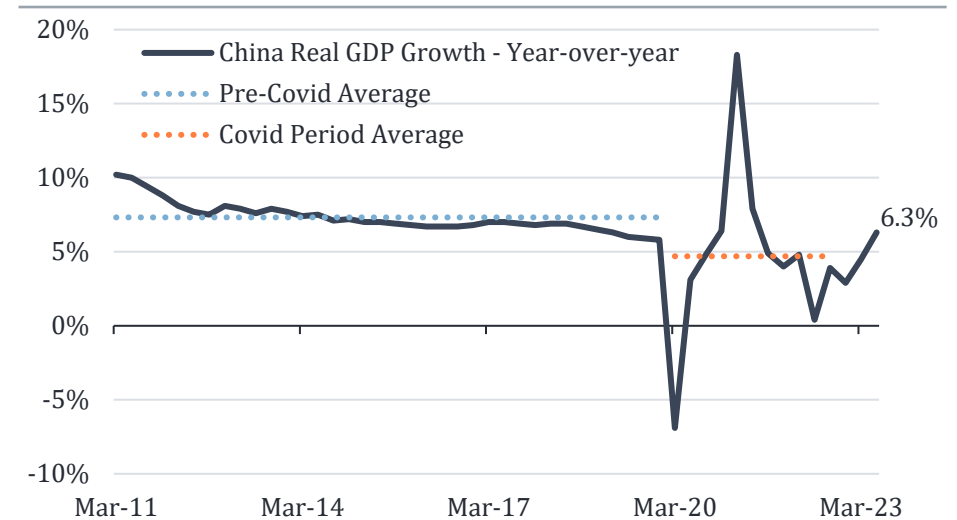
## CHINA: RECOVERY ENTHUSIASM & DISAPPOINTMENT

- The euphoria over China's re-opening following three years of COVID drove upside in late-2022 into early 2023
- By mid-February, this rally began to fade:
  - The anticipated "revenge consumption" after three years of Covid lockdown did not materialize
  - Troubles in the property sector (approx. 1/3 of GDP) remained a drag on top-line growth
  - Government-led stimulus efforts have fallen short of expectations

### China's Recovery Loses Momentum



### China Real GDP Growth



Source: Bloomberg as of June 30., 2023. Past returns are not a guarantee of future results. Graphs are presented for illustration purposes only and should not be relied on to make an investment decision. All statements on this slide are the observations and opinions of ABS and should not be taken as investment advice.

# 2023 Market Environment

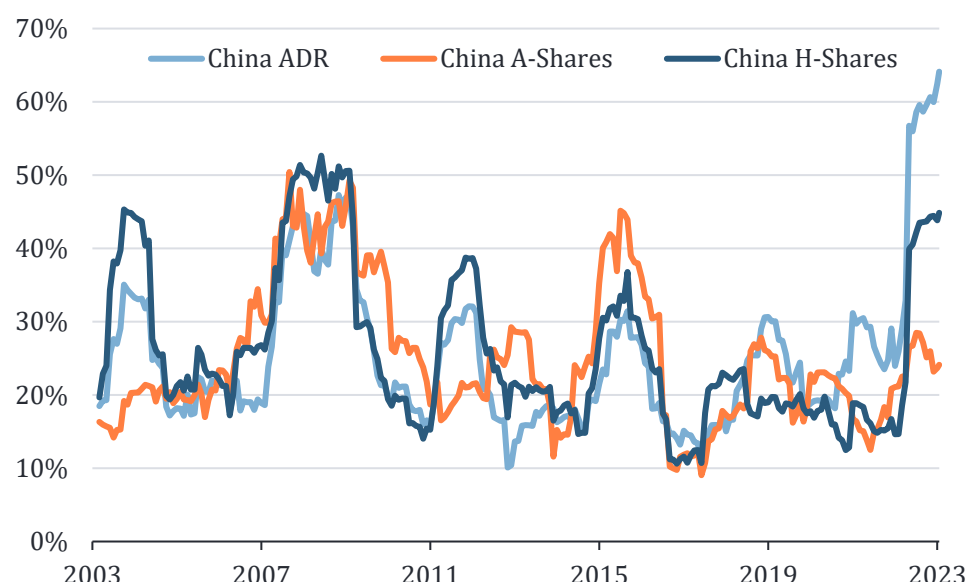
## CHINA: SENTIMENT INCREASES VOLATILITY

- Shifts in investor sentiment have placed pressure on equity prices and have driven the volatility of the Chinese equity market to its highest level since 2008
- However, this trend was concentrated in non-local stocks
  - International investors driving substantial volatility in HK and US-listed Chinese stocks
  - Risk levels on local A-shares have actually declined – but are a smaller part of headline indexes

Rolling 12M Volatility of MSCI China Increases...



...but There are Discrepancies by Share Class Type



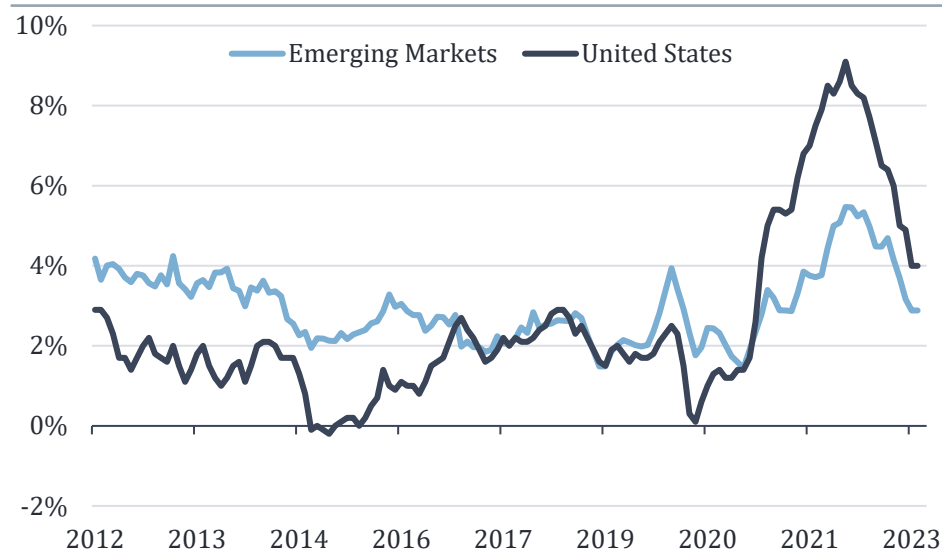
Source: Bloomberg as of July 31., 2023. Past returns are not a guarantee of future results. Graphs are presented for illustration purposes only and should not be relied on to make an investment decision. All statements on this slide are the observations and opinions of ABS and should not be taken as investment advice.

# 2023 Market Environment

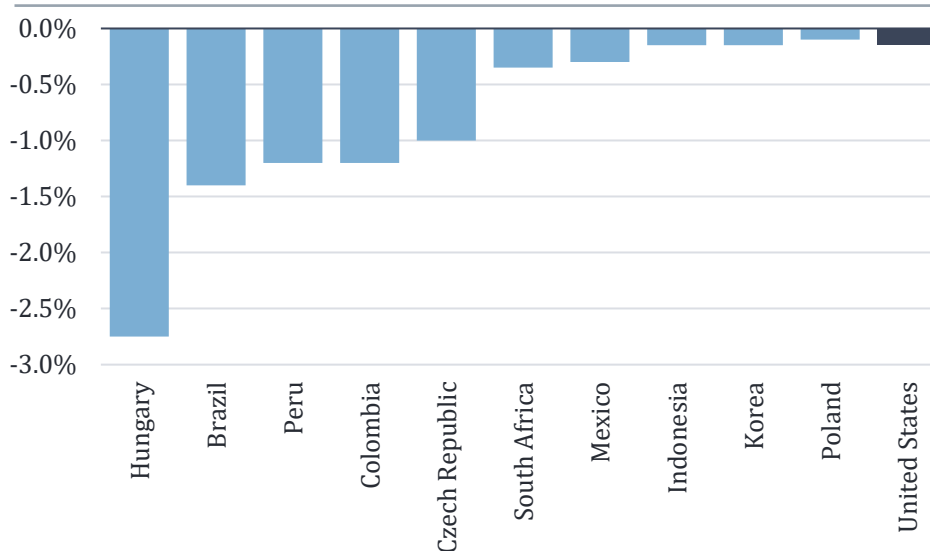
## EX-CHINA: RATES AND AI DRIVING POSITIVE PERFORMANCE

- The outlook outside of China has generally improved driven by two mega trends:
  1. **Expectations for lower interest rates**  
Expected Beneficiaries: Latin America and Eastern Europe
  2. **Rapid expansion of Artificial Intelligence**  
Expected beneficiaries: Tech-heavy markets such as Taiwan and Korea

### Inflation: Emerging Markets vs United States



### Interest Rate Expectations of Select Countries for Q4 2023



Inflation Source: Bloomberg as of June 30, 2023. Inflation statistics depict year over year inflation, Emerging Markets Inflation defined as the weighted average inflation utilizing country weights of the MSCI Emerging Markets Index as of June 30, 2023. Rates Source: Bloomberg. Forecasts reflect Bloomberg forecasts as of July 10, 2022. Graphs are presented for illustration purposes only and should not be relied on to make an investment decision. This material contains forward-looking statements that are subject to risks and uncertainties. These forward-looking statements include information about possible or assumed future results. These forward-looking statements are based on beliefs, assumptions and expectations of its future performance, taking into account all information currently available to source of the forward-looking statements. You should not place undue reliance on these forward-looking statements. These beliefs, assumptions and expectations can change because of many possible events or factors, not all of which are known to ABS, and we cannot guarantee that we will achieve any or all of these expectations. Past returns are not a guarantee of future results. Graphs are presented for illustration purposes only and should not be relied on to make an investment decision.



## **ABS EMERGING MARKETS MA FUND (EM MA)**

# ABS Emerging Markets MA Fund (EM MA)

## PRODUCT DESCRIPTION

<b>Investment Objective</b>	Targets superior returns relative to MSCI Emerging Markets Index over a full market cycle
<b>Fund Launch</b>	November 2021
<b>AUM*</b>	\$116 million (USD)
<b>Target Return</b>	2% - 4% over the index
<b>Target Volatility</b>	Similar to MSCI Emerging Markets Index
<b>Local Specialists</b>	15 - 25
<b>Style</b>	Adaptive (Growth or Value tilts depending on the market)
<b>Market Cap Exposure</b>	All Cap, expected to be overweight mid and small cap
<b>Country Exposure</b>	+/- 5% relative to the index
<b>Sector Exposure</b>	+/- 10% relative to the index
<b>Max Position Size</b>	7.5%

\*AUM figure is estimated as of September 1, 2023. Please see the end of this presentation for important disclosure information

# ABS Emerging Markets MA Fund (EM MA)

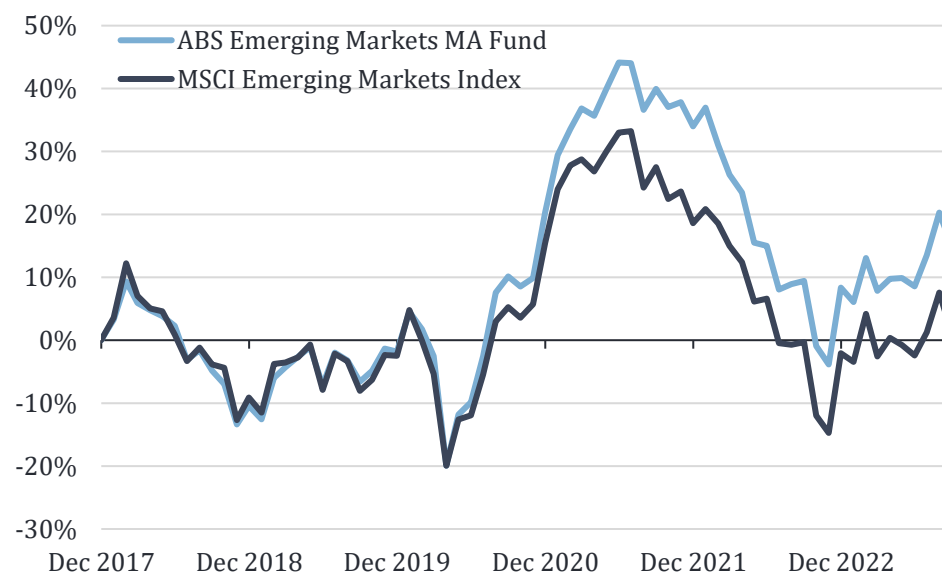
## RETURN & RISK

### Annualized Risk/Return Statistics

December 2017– August 2023

	YTD	Ann. 1-Year	Ann. 3-Year	Ann. 5-Year	Ann. Return Since Inception	Ann. Volatility Since Inception	Cum. Return Since Inception
ABS Emerging Markets MA Fund*	8.3%	4.9%	1.4%	3.8%	2.4%	17.6%	14.8%
MSCI Emerging Markets Index	4.6%	1.3%	-1.4%	1.0%	0.2%	18.6%	1.0%
Excess Returns	3.7%	3.7%	2.8%	2.9%	2.3%		13.9%

### Cumulative Returns



### MWRA Retirement System

**Initial Investment:** \$16M (Dec 2021)  
**Add'l Investments:** \$7M (\$6M Jan 2022, \$1M Oct 2022)

**Current Investment Value (8/31/2023)** **\$19.9M**

**Cumulative Performance Since Initial Investment**

- ABS Emerging Markets MA: -14.3%
- MSCI Emerging Markets Index: -14.9%
- **Excess Cumulative Return: +0.6%**

**Annualized Performance Since Initial Investment**

- ABS Emerging Markets MA: -8.4%
- MSCI Emerging Markets Index: -8.8%
- **Excess Annualized Return: +0.4%**

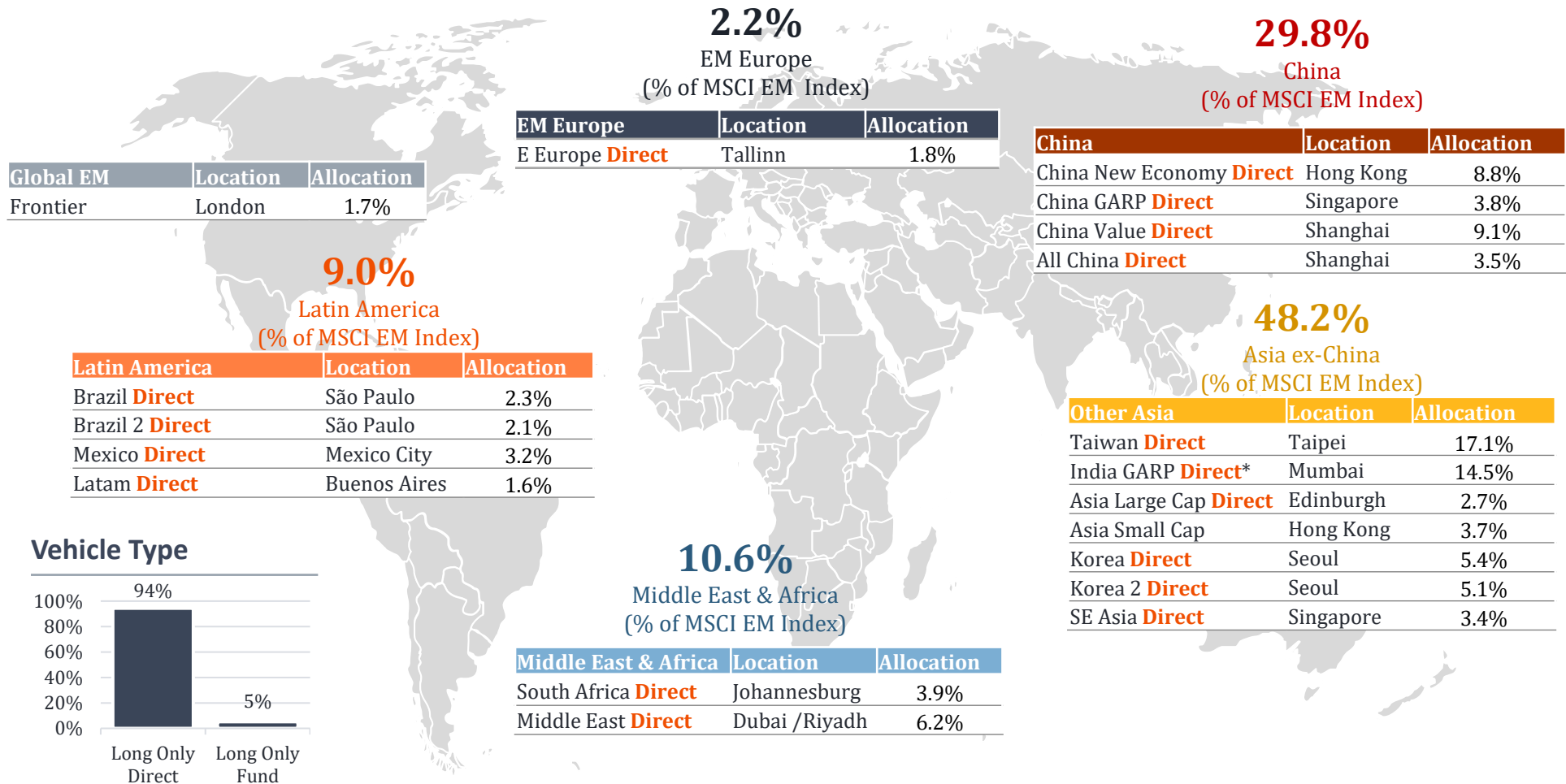
Data updated through August 31, 2023. The MSCI Emerging Markets Index includes the reinvestment of dividends the impact of currency and is net of foreign taxes, symbol NDUEEGF. Performance numbers are estimates, include reinvestment of earnings, are net of a flat 0.75% p.a. management fee and are subject to change. shorter or identical period may be materially lower. Performance numbers are estimates, include reinvestment of earnings, are net of a flat (0.75% p.a.) management fee charged and are subject to change. The Fund commenced operations on November 1, 2021 and has limited performance history. The historical performance information presented from December 2017 through October 2021 is for the ABS Emerging Markets Strategic Portfolio, LP (the "Related Fund"). Return information is calculated by ABS using performance information believed to be reliable and provided by the underlying managers. Such information is provided "as is" and may not be independently verified. ABS assumes no responsibility for the accuracy of this information and undertakes no independent verification of it. Past returns are not a guarantee of future results. Graphs are provided for illustrative purposes only and should not be relied upon to make an investment decision. Please see the end of this presentation for important disclosure information.

# ABS Emerging Markets MA Fund (EM MA)

FOCUS ON LOCAL SPECIALISTS

## ABS Emerging Markets MA Fund Portfolio Breakdown by Region/Manager

as of September 1, 2023



\*These specialists manage both fund and SMA vehicles for ABS. Data updated through September 1, 2023. Graphs are provided for illustrative purposes only and should not be relied upon to make an investment decision. Please see the end of this presentation for important disclosure information.



# ABS Emerging Markets MA Fund (EM MA)

## CURRENT EXPOSURE BY GEOGRAPHY, SECTOR & MARKET CAP

### Portfolio Allocation by Geography

	Portfolio	Index	Relative Exposure
China	26%	30%	-4%
Taiwan	16%	15%	1%
India	15%	15%	1%
Korea	10%	12%	-2%
Thailand	1%	2%	-1%
Indonesia	1%	2%	-1%
Other EM Asia	3%	2%	1%
Mexico	4%	3%	1%
Brazil	5%	5%	-1%
Other Latin America	1%	1%	0%
EM Europe	1%	2%	-1%
Saudi Arabia	3%	4%	-1%
South Africa	4%	3%	0%
Other EMEA	3%	3%	0%
Dev. Markets	3%	-	3%

### Portfolio Allocation by Sector

	Portfolio	Index	Relative Exposure
Comm. Svcs	5%	10%	-5%
Cons. Discre.	14%	14%	0%
Cons. Staples	6%	6%	0%
Energy	3%	5%	-2%
Financial	18%	22%	-4%
Healthcare	5%	4%	1%
Industrial	11%	7%	4%
Materials	7%	8%	-1%
Real Estate	3%	2%	1%
Technology	23%	21%	2%
Utilities	3%	3%	0%

### Portfolio Allocation by Market Cap




















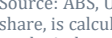
	Portfolio	Index	Relative Exposure
Large Cap	43%	76%	-33%
Mid Cap	37%	24%	13%
Small Cap	16%	0%	16%

Data estimated as of September 1, 2023. Relative exposure is versus the MSCI Emerging Markets Index. Exposure information is calculated by ABS using exposure information believed to be reliable and provided by the underlying managers. Such information is provided "as is" and may not be independently verified. ABS assumes no responsibility for the accuracy of this information and undertakes no independent verification of it. Please see the end of this presentation for important disclosure information.

# ABS Emerging Markets MA Fund (EM MA)

## PORTFOLIO HOLDINGS

### Top and Bottom 10 Relative Allocations by Stock

Stock	Portfolio	Index	Relative Exposure
 Quanta Computer Inc	2.0%	0.3%	1.7%
 China State Constr. - A	1.2%	0.0%	1.2%
 China Merchants Bank A	1.3%	0.1%	1.2%
 Greentown China	1.1%	0.0%	1.1%
 Makalot Industrial Co	0.8%	-	0.8%
 Alchip Technologies	0.8%	-	0.8%
 Kweichow Moutai A	1.0%	0.3%	0.8%
 Bank of Chengdu A	0.7%	0.0%	0.7%
 Elite Material Co	0.7%	-	0.7%
 China Oilfield Srvcs H	0.7%	0.0%	0.7%
 Infosys Ltd	0.3%	0.9%	-0.5%
 Vale SA	0.1%	0.7%	-0.6%
 Ping An Insurance H	-	0.6%	-0.6%
 JD.com Inc A	-	0.6%	-0.6%
 Hon Hai Precision	-	0.6%	-0.6%
 Reliance Industries	0.1%	1.3%	-1.2%
 Samsung Electronics	2.3%	3.6%	-1.3%
 Alibaba Group	0.5%	2.9%	-2.4%
 Tencent Holdings Ltd	0.9%	3.9%	-3.0%
 Taiwan Semiconductor	1.8%	6.4%	-4.6%

### Portfolio Summary

	Portfolio	Index
Total Holdings	592	1,421
Unique Stocks (not in index)	350	-
Active Share	67%	-
Tracking Error	4.0%	
Tracking Error – Underlying Specialist Weighted Average	9.0%	

Source: ABS, Underlying Managers, Bloomberg and MSCI. Data estimated as of September 1, 2023. Tracking error calculated from December 1, 2017 to August 31, 2023. All relative data, including relative exposure, tracking error and active share, is calculated versus the MSCI Emerging Markets Index. Stock exposure information is calculated by ABS using information believed to be reliable and provided by the underlying managers. Such information is provided "as is" and may not be independently verified. ABS assumes no responsibility for the accuracy of this information and undertakes no independent verification of it. Top and bottom 10 holdings inclusion criteria are not performance based. Please see the end of this presentation for important disclosure information.

# ABS Emerging Markets MA Fund (EM MA)

## CONCLUSION

- **ABS** has a global team with **over 25 years of experience** working with local specialists to structure portfolios for institutional investors.
- Our **specialist approach** provides a **unique solution** to take advantage of opportunities across Emerging Market equity markets
  - **Fundamental** stock selection sourced from local investment partners
  - **Diversified** approach covering the entire Emerging Market universe
  - **All-Cap, Core** focused strategy
- ABS funds are **Index-Aware**, but **Alpha-Focused** strategies designed to outperform the Emerging Markets indices through specialized stock selection as opposed to factor bets

The information on this slide is the opinion of ABS and should not be taken as investment advice. Please see the end of this presentation for important disclosure information.

## NOTES & DISCLOSURES

# ABS Emerging Markets MA Fund (EM MA)

## IMPORTANT DISCLOSURES

**ABS Emerging Markets MA Fund:** This presentation was prepared to provide some general background, current statistics and performance returns for the ABS Emerging Markets MA Fund LP (for purposes of this paragraph, the “Fund” or “Portfolio”). Fees are not necessarily representative of any client’s actual returns. Based on the timing of capital contributions or higher performance and /or management fees, the returns achieved by an existing investor over a shorter or identical period may be materially lower. Performance numbers are estimates, include reinvestment of earnings, are net of a flat (0.75% p.a.) management fee charged and are subject to change. The Fund commenced operations on November 1, 2021 and has limited performance history. The historical performance information presented from December 2017 through October 2021 is for the ABS Emerging Markets Strategic Portfolio, LP (the “Related Fund”). It is not that of the Fund and should not be considered a substitute for the Fund’s own performance. The performance of the Related Fund is representative of the long only emerging markets strategy employed by the Fund with substantially the same investment allocations and the same management fee rate. The Related Fund launched on December 1, 2017. Actual returns may vary materially from the estimates shown. Exposure and return information presented under the section entitled “Portfolio Allocation and Exposure” is based on information provided by underlying managers, is subject to change and is not independently verified. The data originate from the underlying managers and ABS believes them to be reliable but has not undertaken any independent verification of these numbers and does not assume responsibility for their accuracy. Past performance is no guarantee of future results.

The MSCI Emerging Markets Index is the Fund’s benchmark, includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol NDUEEGF. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index.

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This presentation shall not constitute an offer to sell or the solicitation of any offer to buy which may only be made at the time a qualified investor receives a final confidential private offering memorandum (the “Fund Documents”) describing the Fund. In the event of any inconsistency between this presentation and the Fund Documents, the Fund Documents will govern. This presentation being provided to a prospective investor does not guarantee an investor’s qualification for an investment in the Fund or the Fund’s capacity for its investment. Such criteria may only be determined upon completion of the Subscription Material for the Fund. This presentation is strictly confidential and is not to be provided to any person without the approval of ABS Investment Management LLC. An investment in the Fund will involve significant risks, including the risk of loss of the amount invested. Although indices used in this presentation have been gathered using public and private sources and data we believe to be reliable, we make no representations as to their accuracy or completeness. The MSCI Emerging Markets TR Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol NDUEEGF; Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. The Fund’s financial statements are audited within 180 days after each year end and thus the prior year’s annual return may be unaudited for up to six months into the current year. The most recent month’s performance return is an internal estimate and has not been calculated by the Fund’s third party administrator. References made to “ABS” herein refer to ABS Investment Management LLC, the investment manager to the Fund, which manages multiple portfolios other than the Fund. The size and nature of the other portfolios has varied since the Fund’s inception and the size of the Fund relative to other ABS portfolios may materially differ at certain points in time. The underlying managers provided data used herein by ABS to calculate annualized returns, but have not reviewed this presentation for accuracy or completeness. The data utilized in the calculation of annualized returns since inception is purported to be net of all underlying manager fees and expenses, but has not necessarily been verified by ABS or an independent party.

# ABS Emerging Markets MA Fund, LP

## IMPORTANT DISCLOSURES

				3 Year Annualized Standard Deviation			
Year	Fund Gross Return (%)	Fund Net Return (%)	Benchmark Return (%)	Fund Gross (%)	Benchmark (%)	Fund Assets (\$M)	Firm Assets (\$M)
2021*	-0.52	-0.64	-2.28	NA	NA	130	7,389
2022	-21.95	-22.56	-20.09	NA	NA	107	6,593

\* Performance for 2021 is for the period November 1, 2021-December 31, 2021

1. ABS Investment Management LLC claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. ABS Investment Management LLC has been independently verified for the periods January 1, 2015 through December 31, 2021. The verification report is available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report.
2. ABS Investment Management LLC is a privately owned investment manager registered with the SEC. The firm is an investment management firm specializing in global equity solutions, with extensive experience in both emerging markets and early stage investing. The firm primarily provides services to a broad array of sophisticated investors from around the world including Pension Plans (Public, Corporate and Taft Hartley), Endowments, Foundations, Insurance Companies and High Net Worth Individuals. ABS manages a family of global equity long/short multi-manager funds along with long-only and long-biased emerging market strategies.
3. The ABS Emerging Markets MA Fund, LP invests in long-only emerging market equity managers. The Fund focuses on country and regional specialists in emerging markets countries as defined by the MSCI global classification standards. In addition, the portfolio has the ability to allocate up to 15% in opportunistic strategies in frontier and/or developed markets. The portfolio aims to be fully invested at all times and seeks to outperform the MSCI Emerging Markets Index over a full market cycle with a similar level of risk. The Fund is valued monthly.
4. The benchmark provided is the MSCI Emerging Markets Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes.
5. Gross fund returns are presented before the deduction of management fees but reflect the deduction of all trading and administrative expenses and underlying fund fees. Net returns reflect the deduction of all management fees, trading and administrative expenses, and underlying fund fees and are calculated using Option E2 actual fees. Fund returns are net of withholding taxes. The total expense ratio for Option E2 was 0.89% as of December 31, 2022. The standard fee schedule for Option E2 is as follows: Management fee is 0.75% per annum, accrued monthly and charged on a quarterly basis for each calendar year. The expected total expense ratio for Option E2 is 0.89%. All returns and assets are presented in US dollars.
6. The Fund inception date is November 1, 2021, which is the date of the first investment. List and description of limited and broad distribution pooled funds is available upon request. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request. The three-year annualized standard deviation measures the variability of the fund and the benchmark returns over the preceding 36-month period. The fund track record does not span three years; therefore, this number is not available. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. The Fund allocates a material amount of its assets to sub-advisors, directly and indirectly. In accordance with U.S. GAAP the Fund uses the net asset value provided by each of the underlying investment funds as its fair value methodology for all non-cash investments.

# MSCI

## IMPORTANT DISCLOSURES

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Although indices used in this presentation have been gathered using public and private sources and data we believe to be reliable, we make no representations as to their accuracy or completeness. The MSCI All Country World Total Return Index (Local) includes the reinvestment of dividends net of foreign taxes, symbol NDLEACWF; it is not the Fund’s benchmark and is provided as we believe it provides a similar geographic exposure to how the Fund’s underlying managers may invest and is for informational purposes only. The HFRI FOF: Strategic Index consists of Fund of Funds exhibiting one or more of the following characteristics: seeks superior returns by primarily investing in funds that generally engage in more opportunistic strategies such as Equity Hedge, Sector Specific and Emerging Markets; exhibits a greater dispersion of returns and higher volatility compared to the HFRI Fund of Funds Composite Index, which possesses a lower risk/reward profile. A fund in the HFRI Fund of Fund Strategic Index tends to outperform the HFRI Fund of Fund Composite Index in up markets and underperform the index in down markets. Bloomberg ticker: HFRIFOFS. This index is being provided for comparative purposes relative to the other strategic Fund of Funds, is not the Fund’s benchmark, and is being provided for informational purposes only.

The MSCI All Country World Total Return Index (Local) includes the reinvestment of dividends net of foreign taxes, symbol NDLEACWF; it is not the Fund’s benchmark and is provided as we believe it provides a similar geographic exposure to how the Fund’s underlying managers may invest and is for informational purposes only.

The MSCI Emerging Markets Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes; it is not the Fund’s benchmark in certain cases and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.

The MSCI Emerging Markets Small Cap Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol MSLUEMRN; it is not the Fund’s benchmark and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.

The MSCI Emerging Markets Mid Cap Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol MMDUEMRN; it is not the Fund’s benchmark and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.

The MSCI Emerging Markets Large Cap Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol MLCUEMRN; it is not the Fund’s benchmark and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.

The MSCI Emerging Markets Growth Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol NGUEGFN; it is not the Fund’s benchmark and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.

The MSCI Emerging Markets Value Index includes the reinvestment of dividends, the impact of currency and is net of foreign taxes, symbol NUVEEMVN; it is not the Fund’s benchmark and is provided for informational purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses.



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NEPC, LLC

**Firm:** AB CarVal Investors, L.P.

**Strategy/Product:** CVI Credit Value Fund IV (“CVF IV” or the “Fund”)

**Client:** MWRA Retirement System

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

1. Have there been any changes in ownership or management in the past year?

In July 2022, AllianceBernstein L.P. (“AB”) acquired 100% of the partnership interests in AB CarVal. AB CarVal is now a wholly owned subsidiary of AllianceBernstein L.P. and is part of AB’s Private Alternatives’ investment platform.

Chris Hedberg became Chief Operating Officer with responsibility for the development and execution of an integrated commercial strategy for the firm that aligns AB CarVal’s investment capabilities, product development strategy, capital formation activities and investor relations efforts to drive business growth and market share. Chris will continue to oversee AB CarVal’s fund operations, capital formation and investor relations teams. Chris’ continued leadership will play a pivotal role in driving AB CarVal to achieve the growth objectives of CarVal ’27. Chris will continue as a member of the Executive Committee and the Portfolio Investment Committee, reporting to Lucas Detor.

Brandy Morris was promoted to Chief Financial Officer, responsible for AB CarVal’s management company oversight and leadership of the global technology function. Brandy is also a key member of the AB CarVal compensation team. Brandy will report to James Ganley and became a member of the Information Security Committee, Audit and Compliance Committee, and the Human Capital and Compensation Committee. Brandy is known for her leadership across the firm, in addition to being a key culture carrier and a deep expert in all aspects of the management company.

Asim Chohan became Head of Global Operations, responsible for leading and overseeing the operational activities of the firm across all global locations, investment strategies and asset classes. Asim became a member of the Valuation Committee. Asim will continue to report to Chris Hedberg.

Jeremiah Gerhardson became Head of U.S. Operations responsible for regional operations and treasury activities. Jeremiah reports to Asim and also became a member of the Counterparty Credit Risk Committee.

2. List firm AUM, net flows and accounts gained/lost for the past 5 years.



As of June 30, 2023, unless otherwise noted. Table only includes assets currently under management by the Firm.

Investment Offering	Vintage	Structure	Stage	Total Commitments (USD millions)	Total Called-to-Date (Percent) <sup>1</sup>	Fee-earning AUM (USD millions)	Fee-eligible AUM (USD millions)	AUM (USD millions) <sup>2</sup>
<b>Commingled Closed-End Credit Funds</b>								
CVI Credit Value Fund V	2021-2024	Drawdown	Closed/Investing	3,582	65%	2,328	1,254	3,582
CVI Credit Value Fund IV	2018-2022	Drawdown	Closed/Harvesting	3,008	90%	2,686	-	2,686
CVI Credit Value Fund III	2015-2018	Drawdown	Closed/Harvesting	3,020	95%	802	-	802
CVI Credit Value Fund II	2013-2016	Drawdown	Closed/Harvesting	2,305	95%	-	-	-
CVI Aviation Income Fund	2020-2023	Drawdown	Closed/Investing	234	88%	204	29	234
CVI Clean Energy Fund II <sup>3</sup>	2023-2026	Drawdown	Open/Investing	1,304	20%	254	1,050	1,304
CVI Clean Energy Fund	2020-2022	Drawdown	Closed/Harvesting	490	92%	402	-	402
CVI Emerging Markets Credit Opportunities Fund	2020-2022	Drawdown	Closed/Harvesting	168	90%	150	-	150
CVI Shipping Opportunities Fund	2015-2017	Drawdown	Closed/Harvesting	256	92%	103	-	103
<b>Commingled Evergreen Credit Funds</b>								
CarVal Global Credit Fund	N/A	Evergreen	Open/Investing	N/A	N/A	291	N/A	291
CVI Emerging Markets Credit Value Fund	N/A	Evergreen	Closed/Distributing	N/A	N/A	45	N/A	45
<b>Single-Investor Funds</b>								
Collective Single-Investor Funds	N/A	Various	Open/Investing	N/A	N/A	2,367	1,559	3,946
<b>Corporate Loans Platform</b>								
CarVal CLO VII-C	2023	CLO-BSL	Reinvestment Period	N/A	N/A	442	N/A	442
CarVal CLO VIII-C	2022	CLO-BSL	Reinvestment Period	N/A	N/A	340	N/A	340
CarVal CLO VI-C	2022	CLO-BSL	Reinvestment Period	N/A	N/A	435	N/A	435
CarVal CLO V-C	2021	CLO-BSL	Reinvestment Period	N/A	N/A	380	N/A	380
CarVal CLO IV	2020	CLO-BSL	Reinvestment Period	N/A	N/A	366	N/A	366
CarVal CLO III	2019	CLO-BSL	Reinvestment Period	N/A	N/A	443	N/A	443
CarVal CLO II	2019	CLO-BSL	Reinvestment Period	N/A	N/A	643	N/A	643
CarVal CLO I	2018	CLO-BSL	Reinvestment Period	N/A	N/A	442	N/A	442
<b>Commingled Closed-End Real Estate Funds<sup>4</sup></b>								
Collective Real Estate Funds	2004-2017	Drawdown	Closed/Harvesting	228	N/A	31	-	31
<b>Total Assets Under Management</b>				<b>\$14,596</b>		<b>13,174</b>	<b>3,892</b>	<b>17,066</b>

<sup>1</sup> Net of Recalable Distributions

<sup>2</sup> AUM is comprised of fee-earning AUM and fee-eligible AUM. Fee-earning AUM includes those assets currently qualified to generate management fees. Fee-eligible AUM includes capital that is committed to an AB CarVal Fund but is currently uncalled or recalable. The number represented here excludes assets under AB CarVal's management that are not generating management fees due to the maturity of the Fund but includes amounts that do not generate management fees solely due to AB CarVal's decision not to charge management fees.

<sup>3</sup> Pending final close

<sup>4</sup> As of December 31, 2022

**CVI Credit Value Fund V (CVF V)** – A fund formed to invest primarily in 2021-2024 vintage whole loan portfolios, corporate securities, structured credit and hard assets globally.

**CVI Credit Value Fund IV (CVF IV)** – A fund formed to invest primarily in 2018-2022 vintage whole loan portfolios, corporate securities, structured credit and hard assets globally.

**CVI Credit Value Fund III (CVF III)** – A fund formed to invest primarily in 2015-2018 vintage whole loan portfolios, corporate securities, structured credit and hard assets globally.

**CVI Credit Value Fund II (CVF II)** – A fund formed to invest primarily in 2013-2016 vintage whole loan portfolios, corporate securities, structured credit and hard assets globally.

**CVI Aviation Income Fund (AIF)** – A fund formed to invest primarily in 2020-2023 leased commercial aircraft and aviation-related securities, focusing on new and early life aircraft, longer-term leases and good credit-quality lessees.

**CVI Clean Energy Fund II (CEF II)** – A fund formed to invest primarily in 2023-2026 investment opportunities in or with a nexus to clean energy, renewable energy or energy usage efficiencies.

**CVI Clean Energy Fund (CEF)** – A fund formed to invest primarily in 2020-2022 investment opportunities in or with a nexus to clean energy, renewable energy or energy usage efficiencies.

**CVI Emerging Markets Credit Opportunities Fund (EMCOF)** – A fund formed to invest primarily in 2020-2022 vintage whole loan portfolios, leveraged credit and corporate restructurings across Asia and Latin America.

**CVI Shipping Opportunities Fund (SOF)** – A fund formed to acquire a portfolio of dry bulk vessels, partnering with GoodBulk Ltd. for sourcing, due diligence and operational expertise.



**CarVal Global Credit Fund (GCF)** – An evergreen fund formed to invest in evolving dislocations and opportunities across credit markets including corporate securities, portfolios of whole loans, structured credit and special opportunities globally.

**CVI Emerging Markets Credit Value Fund (EMCVF)** – An evergreen fund formed to invest in opportunities such as public and private corporate securities, corporate restructurings and other credit opportunities in Emerging Markets. This fund is currently in wind-down.

**Collective Single-Investor Funds** – Funds-of-one formed for investors with multi-strategy or single-strategy investment mandates across loan portfolios, corporate securities, structured credit and hard assets on a regional or global basis.

**Corporate Loans Platform (CLO I-IV and CLO V-VIII C)** – Open market collateralized loan securitization vehicles that closed between 2018-2023, that are managed by a wholly-owned, relying adviser affiliate of AB CarVal. Note, CLO V-C was the first Clean CLO offered by AB CarVal, and all following CLO vehicles will be issued under the clean umbrella. The Clean CLO utilizes a proprietary scoring methodology to quantify ESG risk on an individual and portfolio level. The purpose of this methodology is to lower the cost of capital for ESG-minded companies by creating an independent, auditable, and comparable risk assessment model to create portfolios that are ESG-optimized but do not sacrifice returns.

**Collective Real Estate Funds** – Funds formed to pursue value-added real estate investments across vintages spanning 2004-2017.

### 3. Have there been any new or discontinued products in the past year?

There have not been any discontinued products in the past year.

New products for the year include the following:

- AB CarVal is in the market raising a new flagship closed-end credit value fund approximately every two years. These funds tend to be \$2.5 billion to \$3.5 billion in size. AB CarVal held the final close of CVF V in May 2021 with \$3.6 billion in capital commitments. We began marketing CVF VI in Q2 2023, with a first close expected in Q1 2024. CVF VI is the successor fund to CVF V which is currently 65% called and approximately two years into its three-year investment period as of June 30, 2023.
- AB CarVal is in the market raising a new renewable energy focused closed-end fund approximately every two years. AB CarVal held the final close of CVI Clean Energy Fund II (“CEF II”) in July 2023 with \$1.3 billion in capital commitments. CEF II intends to focus on investment opportunities in or with a nexus to renewable energy, energy usage efficiencies, energy storage, or sustainability.
- AB CarVal is currently premarketing for the AB CarVal Asset-Based Fund (“ABF”) and anticipates having an offering memorandum in the market in H2 2023, with a first close in H1 2024. ABF is an evergreen private credit fund focused on delivering stable performance through cycles, with an emphasis on attractive current income and downside protection. ABF will focus on specialty finance opportunities, consisting of directly originated and privately negotiated credit investments secured by pools of performing financial assets and asset-backed loans.
- AB CarVal closed its seventh CLO in October 2022 (“CLO VIII-C”) and eighth CLO (“CLO VII-C”) in January 2023. AB CarVal has also opened two warehouses, one for its ninth U.S. CLO and one for its first European CLO in the near term. Note that beginning with CLO V-C, all CLOs offered by AB CarVal are Clean CLOs. The Clean CLO utilizes a proprietary scoring methodology to quantify ESG risk on an individual and portfolio level. One of AB CarVal’s goals behind using this methodology is to ultimately lower the cost of capital for ESG-minded companies. The



methodology we created is an independent, auditable, and comparable risk assessment model that we believe will create portfolios that are ESG-optimized but do not sacrifice returns.

4. Are any products capacity constrained?

AB CarVal gives careful thought and consideration to the sizing of each of our funds. We generally attempt to set our fund sizes at a level that allows us to both be a competitive buyer of assets in our markets, while not forcing us to put capital to work. Our typical preference is to raise and harvest smaller funds more frequently to try to generate the best risk-adjusted returns for our investors. To date, AB CarVal-managed funds have varied on whether or not a stated maximum capacity (hard cap) has been outlined in the governing fund documents.

5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.

Because AB CarVal invests in distressed and credit-intensive assets, many transactions throughout our history have resulted in litigation/arbitration. The litigation/arbitration is generally part of the investment strategy and does not have a material impact on the performance of any prior fund.

AB CarVal's general counsel is available to discuss further, if so desired.

6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.

At AB CarVal, we believe peak effectiveness comes from an engaged, talented and diverse workforce. We also believe that a diverse, equitable and inclusive environment will drive idea generation and create better solutions to promote positive and sustainable results in our business. Our approach to diversity, equity and inclusion takes numerous forms. Our AB CarVal '27 strategic plan incorporates goals, ongoing action plans and initiatives which strive to build and reinforce our diversity, equity and inclusion objectives, ensuring we have the right skills, attitudes and behaviors. AB CarVal is committed to diversity, equity and inclusion, valuing the full range of life experiences, skills and qualities of our employees.

AB CarVal's DEI Strategic Objective:

AB CarVal's DEI strategic objective is to increase AB CarVal's long-term engagement of diversity, equity, and inclusion globally, cultivating an internal and external culture where employees feel empowered to share different experiences, backgrounds, and ideas and, ultimately contributes to the growth and performance of the Firm.

AB CarVal's DEI Goals:

The Firm has established four multiyear aspirational goals which include:

1. AB CarVal will demonstrate market leadership (internally and externally) on diversity, equity and inclusion.
2. AB CarVal will commercially align our DEI strategy including demonstrating and executing on DEI opportunities for capital deployment.
3. AB CarVal will monitor DEI standards of external partnerships, vendors and clients as part of the decision and selection process.



4. AB CarVal will become more diverse in the long term with a goal of hiring at least 25% female investment professionals and at least 25% ethnically diverse operations/functions professionals.<sup>1</sup>

The Firm tracks DEI metrics to the extent possible, based on country regulations, applicant and employee self-identification and internal reporting availability.

In 2019, AB CarVal established a Diversity, Equity and Inclusion (“DEI”) Committee to support the executive team and human capital team in progressing AB CarVal’s long-term, global DEI strategy. The intention of the committee is to increase the impact of AB CarVal’s DEI strategy by:

- Broadening organizational ownership of the DEI strategy
- Increasing employee involvement and advocacy of DEI strategy and initiatives
- Better leveraging diverse perspectives that exist within the organization
- Providing career development opportunities for employees
- Increasing visibility to AB CarVal’s commitment to DEI (internally and externally)
- Cultivating a culture of engagement
- Increasing global exposure of DEI strategy and dynamics

AB CarVal’s DEI Areas of Action:

Our DEI Committee Structure includes working groups around six key areas of action within AB CarVal’s global DEI strategy: Human Capital Representation, Education and Training, Inclusive Culture, Business Development Sourcing, Vendors, and Strategic Relationships.

With our strong international footprint, we have been able to leverage our current employee base to build relationships and connect with a network of qualified candidates and partnerships from across the globe. Our recruiting efforts have continued to focus on identifying qualified talent from a wide range of resources, particularly focused on expanding our recruitment marketing to diverse populations by partnering with diversity focus organizations. AB CarVal has provided sponsorship for a variety of charitable events and organizations which are committed to providing support for diverse populations of people.

AB CarVal continues to regularly review its diversity, equity and inclusion initiatives to ensure that we are focused on increasing long-term DEI within our organization. We know that by doing so, we will help create a more successful organization, buoyed by even broader backgrounds and viewpoints and deeper experience. We are proud of what we have accomplished thus far, the partnerships we have forged, and initiatives we have put in place across the globe. We also acknowledge that we have much to learn and more to do on this complex journey.

**Portfolio Management Team**

1. Have there been any changes in the portfolio management team in the past year?

From May 31, 2022 through July 31, 2023, there have been three senior level departures (at the MD level and above). Please see details below.

Year of Departure	Name	Position	Asset Class/Department	Region
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<sup>1</sup> This goal was created to specifically target progress within areas where gender and ethnic representation is the weakest within the Firm.



2023	Nimrod Wei	Managing Director	Emerging Markets	Emerging Markets
2023	Ryan Schulzetenberg	Global Operations Co-Head	Operations	Global
2023	Dan Kersten	Managing Director	Corporate Securities	North America

From May 31, 2022, through July 31, 2023, there have been two senior level additions (at the MD level and above). Please see details below.

Year of Hire	Name	Position	Asset Class/Department	Region
2023	P.J. Collins	Managing Director	Loan Portfolios	North America
2022	Steve Sung	Managing Director	Clean Energy	North America

2. Are there any expected changes to the team in the future (planned additions or departures)?

It was announced in January 2023 that Dave Pelka, Principal, will be leaving AB CarVal at the end of 2023. Jess Dvorak, Managing Director, will now lead the U.S. residential loan portfolio and RMBS strategy, reporting to Jody Gunderson.

It was announced in April 2023 that Justin Bradburn, Principal, will be retiring from AB CarVal at the end of 2023. Greg Belonogoff, Principal, will now co-lead the aviation business with Fred Browne, CEO of Aergo. Jim McManus, Managing Director, and Emily Wilson, Director, will continue in their current roles, managing our aviation investments along with our partner Aergo and their 50+ employees.

AB CarVal continuously reviews the needs of the business and the skills of the team and seeks to add new team members as opportunities warrant. As such, expansion will be organic and opportunistic.

### Process

1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

There have been no significant changes to the above.

### Philosophy

1. Describe recent changes in investment philosophy, if any.

There have been no recent material changes to our investment philosophy.

### Portfolio

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please refer to the enclosure entitled, *CVI Credit Value Fund IV Second Quarter Report June 30, 2023*.



- List strategy AUM, net flows and accounts gained/lost for the past 5 years.

As of June 30, 2023, CVF IV had an AUM of \$2,590m. The Fund's investment period concluded at the end of April 2022, and the Fund has distributed \$1,742m back to investors as of June 30, 2023.

- Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

There are 87 external investors within the Fund, which are diversified across the following investor types and geographies as of June 30, 2023. Excludes internal capital.

Investor Type	% of AUM
Public Sector Pension Fund	27%
Private Sector Pension Fund	18%
Sovereign Wealth Fund	14%
Endowment/Foundation	10%
Fund of Funds	10%
Insurance Company	7%
Corporate Investor	7%
Private Bank	4%
Family Office	3%
High Net Worth	1%

Investor Region	% of AUM
North America	63%
Europe	20%
Asia-Pacific	16%
Latin America	1%
Middle East	1%

The top five investors represent 39% of Fund AUM as of June 30, 2023.

### Performance / Market Outlook

- If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

Trailing net returns for the Fund are below as of June 30, 2023.

Period	Return
YTD 2023	4.1%
2022	6.0%
2021	14.0%
2020	-0.2%
2019	11.0%



2018	4.7%
ITD Net IRR	7.8%

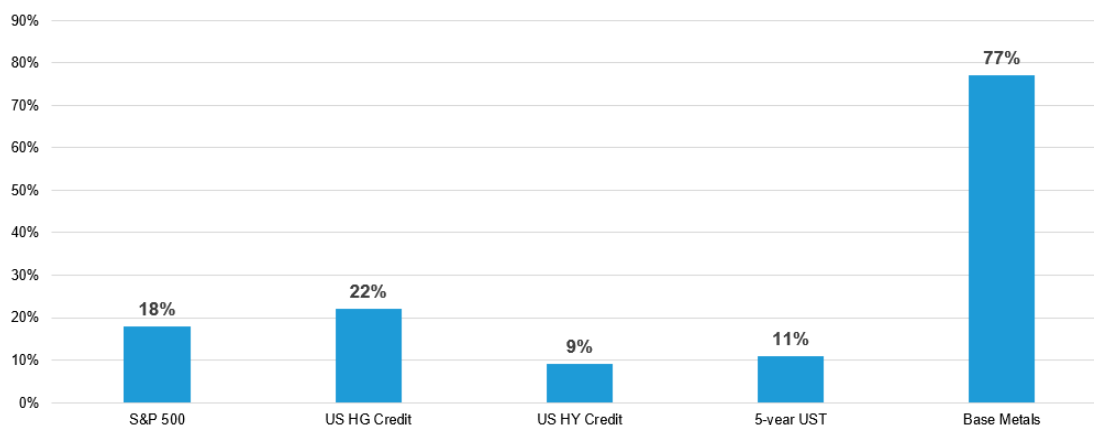
2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.

As has been the norm in recent years, financial markets have been full of surprises in 2023. The regional banking crisis and recession fears stoked volatility in the first quarter, and then abruptly changed in Q2 as markets stabilized and the heavily predicted recession failed to arrive. At AB CarVal, our buys have outweighed our sells in 2023, and our new additions have been dominated by renewable energy and loan portfolio investments. Our deal activity is up, and we expect our robust pipeline to translate into solid deployment this year; but we need to stay nimble. Markets are trending well, and if the trend continues, we will exit positions and rotate our portfolio. However, public market prices reflect a very optimistic outlook and look vulnerable to more surprises in an economic environment that is chock full of them.

3. Describe your market outlook and how strategy positioning is impacted by your views.

Private credit markets offer better returns than public credit markets, but the picture in the public markets is mixed. Corporate credit markets are expensive with the U.S. high yield market implying a 9% probability of recession (see below). As a result, we have further reduced risk in this area. Structured credit markets, which are more interest rate dependent, have recovered slowly and only recently have offered attractive opportunities to refinance and exit investments.

#### Probability of recession priced in across U.S. asset classes based on JPM calculations



Source: JP Morgan, 8/9/23

Our most attractive new opportunities stem from both the regional banking crisis and the massive transition from fossil fuels to clean energy. These two mega-themes are large and systemic and will take years to play out. They also play directly into AB CarVal's strengths and expertise.

In Q2, we saw banks taking their first steps to address the host of challenges to both their balance sheets and their business models. Regional banks are actively reducing risk in stressed sectors like commercial real estate and consumer loans, but also in response to higher capital requirements following the recent crisis. Banks in the U.S. and in Europe are in risk-reduction mode and when banks





sell, they are deliberate and sell in large size. The AB CarVal business was built around buying assets from banks and over our 36-year history, we've bought thousands of assets and have sector expertise in all the key areas. We expect a long runway ahead.

Energy transition is another large-scale, multi-year opportunity that is already underway. Investing in the traditional energy sector has long been a focus for AB CarVal, as it is prone to periods of distress. Today, the opportunity set is even richer, adding the massive transition to cleaner forms of energy. This is where our dedicated renewable energy team is well-established and very active today. Our opportunity will be broad, ranging from the financing of new asset development to investing in the inevitable distress that will accompany such a monumental change.

Today, the U.S. equity markets are priced for reasonable growth, credit markets assume a healthy economy and interest rates are predicted to fall quickly; collectively the market is priced for the best possible outcome. All of this will need to be achieved with inflation falling in an environment of reasonable growth. Debt markets are vulnerable to headwinds as the current stock of debt benefits from very low interest rates. The U.S. Treasury will need to refinance 75% of its debt in the next five years and corporate borrowers will have to replace cheap QE era debt with more expensive debt. While the economy may achieve a soft landing, the QE era of cheap debt and massive fiscal support are in the past. While we can't predict when markets will adjust, we must be wary when expectations become too rosy. While we are cautious on market prices today, we are optimistic about the future of our opportunity set. Our pipeline is large in private markets where we are being paid for uncertainty, and we expect the higher rate regime and tenuous refinancing cycle will offer great opportunities for stressed and distressed debt ahead.

4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.

Yes, this information will be included in the presentation.



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# AB CarVal Fund Update

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MWRA

September 2023

# Presenting Today



**Kerry Fauver**

Ms. Fauver is a managing director for AB CarVal, responsible for global fundraising and investor relations. Prior to joining AB CarVal in 2006, Ms. Fauver was a marketing specialist at HarbourVest Partners in Boston. Ms. Fauver also served as director of marketing and business development for DSFX, a corporate investigations and security firm. Ms. Fauver began her career in consumer marketing for public relations firms Hill & Knowlton and LaForce & Stevens. She earned a B.A. from Hamilton College with honors in American studies.

# AB CarVal: Firm Overview

## Experienced Global Alternative Investment Manager

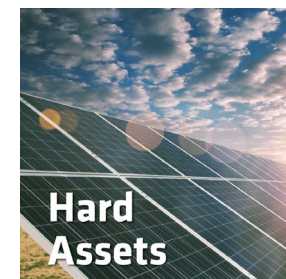
- Approximately \$17 billion in assets under management
- 36-year track record in opportunistic and distressed credit
- Invested \$144 billion in 5,695 transactions in 82 countries

## Targeting Market Dislocations – Focus on Banking Sector

- Approximately 75 investment professionals in the US, Europe and Asia
- Ability to capitalize on traded and private market opportunities across the full credit spectrum
- Proven sourcing and origination capabilities with an estimated 79% of deals completed on a negotiated or lightly competitive basis†

## Stable Capital Base

- Over 250 global institutional investors across a diversified fund platform
- Most recent flagship funds oversubscribed
- AllianceBernstein ownership



**Seek to build portfolios that protect principal and consistently generate strong risk-adjusted returns**

AUM is comprised of fee-earning AUM and fee-eligible AUM. Fee-earning AUM includes those assets currently qualified to generate management fees. Fee-eligible AUM includes capital that is committed to an AB CarVal Fund but is currently uncalled or callable. The number represented here excludes assets under AB CarVal's management that are not generating management fees due to the maturity of the Fund but includes amounts that do not generate management fees solely due to AB CarVal's decision not to charge management fees.

†Measured during the period from January 2020–May 2023. Includes invested equity for hard asset, loan portfolios, and renewable deals.

As of June 30, 2023

# Opportunistic Credit Investor Focused on Four Core Asset Classes



## Corporate Securities

- Corporate Credit
- CLOs
- Bankruptcies and Liquidations



## Loan Portfolios

- Residential Mortgages
- Consumer
- Small Business
- CRE



## Structured Credit

- Buyer of Asset-Backed Securities
- Issuer of Mortgage-Backed Securities, Residential Solar Securities and Aviation Securities



## Hard Assets

- Renewable Energy
- Aviation

**Active management of investments across our four boxes allows AB CarVal the opportunity to achieve a diversified, balanced portfolio and targeted returns with less risk**

AB CarVal's investment strategies may be highly speculative and there can be no assurance that any of the strategies' investment objectives will be achieved. See disclaimer regarding Risk of Loss.

# Deep-sector Expertise Across Core Investment Strategies

Cross-desk collaboration generates a differentiated portfolio

Corporate Loans, Emerging Markets, Hard Assets, Real Estate				US and Europe Corporate Securities	Loan Portfolios, Structured Credit, Clean Energy		
<b>Lucas Detor</b> Managing Principal 27 years				<b>James Ganley</b> Managing Principal 33 years	<b>Jody Gunderson</b> Managing Principal 29 years		
Aviation	Corporate Loans	Emerging Markets Corporate Securities	US CRE Credit	US and Europe Corporate Securities	Loan Portfolios	Structured Credit	Clean Energy
<b>Greg Belonogoff</b> Principal 25 years	<b>Chris Mawn</b> Principal 22 years	<b>Gerardo Bernáldez</b> Principal 34 years	<b>Seth Cohen</b> Principal 23 years  <b>Jess Dvorak</b> Managing Director 17 years  <b>Paul Mullaney</b> Managing Director 36 years  <b>Scott Greenfield</b> Managing Director 19 years	<b>Bryan Simpson</b> Principal 23 years  <b>John Withrow</b> Principal 22 years	<b>Seth Cohen</b> Principal 23 years  <b>Jess Dvorak</b> Managing Director 17 years  <b>James Sackett</b> Principal 29 years  <b>Angie Fenske</b> Principal 23 years	<b>Neil Hepworth</b> Principal 21 years  <b>Shane Huether</b> Executive Adviser 28 years	<b>Angie Fenske</b> Principal 23 years  <b>Jerry Keefe</b> Principal 33 years  <b>Jonathan Hunt</b> Managing Director 21 years
<b>The senior credit investment team averages 24 years investment experience and 11 years with AB CarVal</b>				<b>Risk and Portfolio Management</b>  <b>David Fry</b> Chief Risk Officer 32 years			

Note: Years denote industry experience. This slide does not represent an official AB CarVal organizational chart. As of June 30, 2023

# MWRA: AB CarVal Investment Activity



# MWRA: AB CarVal Investment Activity

Fund	Invested Capital (USD Millions)	NAV (USD Millions)	ITD Distributions (USD Millions)	Expected Distributions (USD Millions)			2023 YTD Net Return (Percent)	Current Net IRR (Percent)	Projected Net Multiple
				2023	2024	2025+			
CVF IV	6.7	4.8	3.9	0.4	2.5	2.7	5.3	8.0	1.42x

As of August 31, 2023 (estimate)

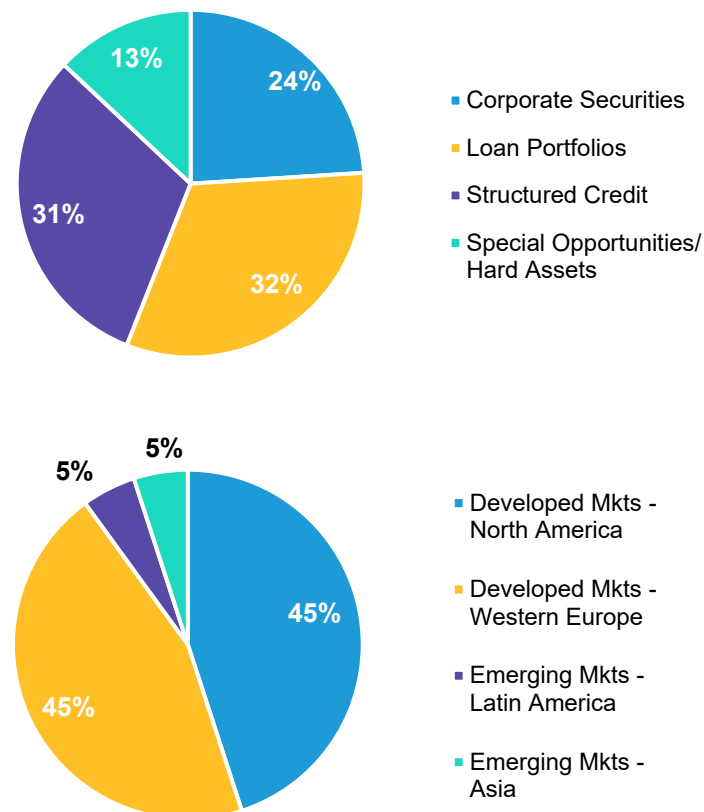
The projections are based on a variety of estimates and assumptions by AB CarVal including, but not limited to, estimates of future operating results, the value of assets and market conditions at the time of disposition and the timing and manner of disposition or other realization events. These estimates and assumptions are inherently uncertain and are subject to business, industry, market, regulatory, geo-political, competitive and financial risks which are outside of the control of AB CarVal. There can be no assurance that the assumptions made will prove accurate and actual results may differ materially, including the possibility that an investor may lose some or all of invested capital. These projections should not be regarded as an indication that AB CarVal considers them to be a reliable prediction of future events and they should not be relied upon as such. AB CarVal has not made any representation to any person regarding these projections and does not intend to update or otherwise revise the projections to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying the projections are later shown to be in error.

# CVI Credit Value Fund IV: Portfolio Composition

## Portfolio Composition

Investment Strategy	Portfolio Composition*	
	USD Millions	Percent
Hard Assets - Aircraft Leasing	\$435.1	13.3%
Structured Credit - RMBS	411.2	12.6%
Commercial Real Estate Debt	318.1	9.8%
European Loan Portfolios - Commercial	317.1	9.7%
Structured Credit - CLO	268.8	8.2%
U.S. Loan Portfolios - Residential	205.2	6.3%
Structured Credit - Consumer ABS	176.1	5.4%
U.S. Corporate Credit - Alternative Energy	128.9	4.0%
European Loan Portfolios - Platform	122.9	3.8%
Emerging Markets Corporate Credit - Transportation (non-auto)	81.4	2.5%
<b>Top 10 Strategies</b>	<b>\$2,464.8</b>	<b>75.6%</b>
Other Strategies	797.5	24.4%
<b>CVF IV Grand Total</b>	<b>\$3,262.3</b>	<b>100.0%</b>

## CVF IV by Asset Class and Region



As of July 31, 2023 (estimate)

\*Figures based on Portfolio Composition which includes carrying value and recourse third-party debt

# Strategies in Focus



**Private Credit**



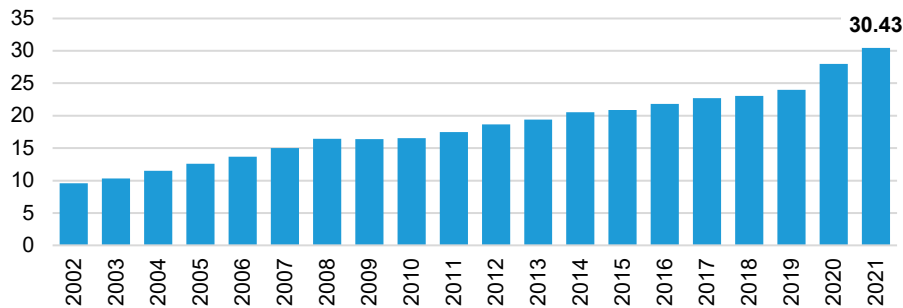
**Stressed Financials**



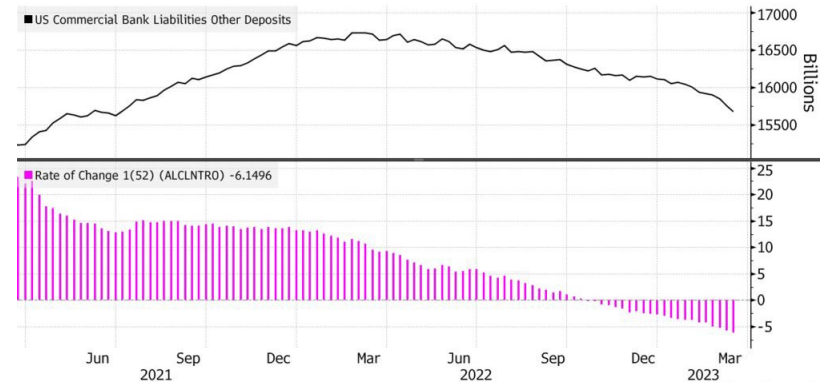
**Energy Transition**

# \$30 Trillion US Banking Market Under Growing Stress

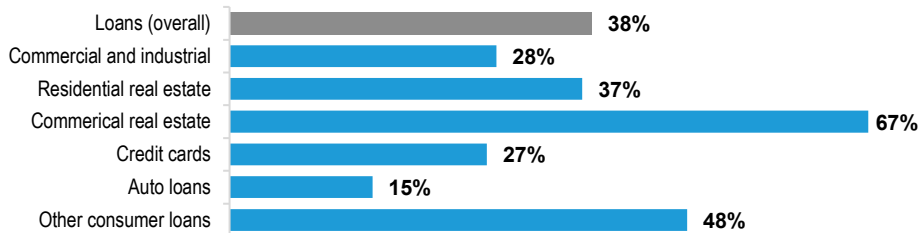
**Total Assets of Banks in the US from 2002-2021**  
(in US Trillions)



**US Bank Deposits Have Seen a Steady Drip Since Last Fall**  
Other deposits, which excludes time-deposits, are down 6%



**Small and Medium-Size banks' share of all outstanding loans by type**



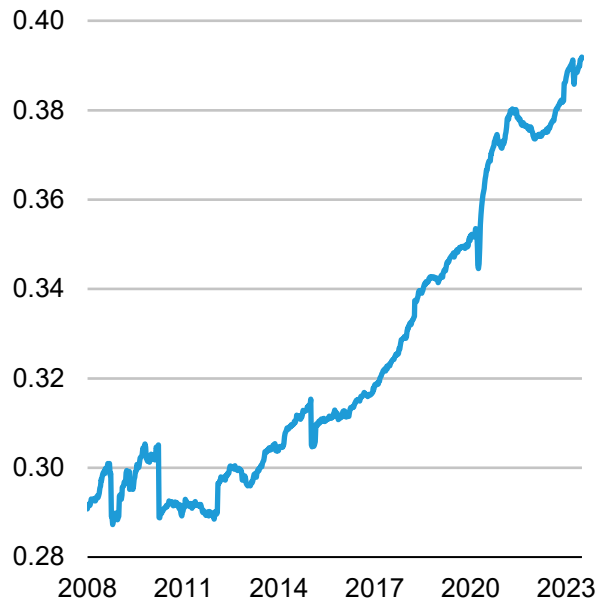
Small and medium-size banks are defined as domestically chartered banks that are smaller than the top 25 US lenders.

**As a buyer of bank and non-bank assets and a lender in capital vacuums, AB CarVal sees attractive opportunities when credit contracts**

Source: Statista Research Department, Jan 4, 2023; Bloomberg, Federal Reserve; Axios, March 21, 2023

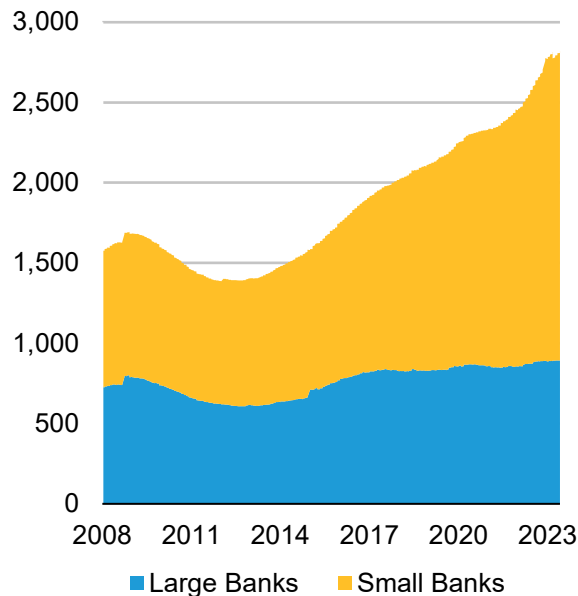
# Small Banks Stepped In to Fill the Demand for Commercial Real Estate and Other Loans

**US Small Bank Shares of Total Loans and Leases (Percent)**



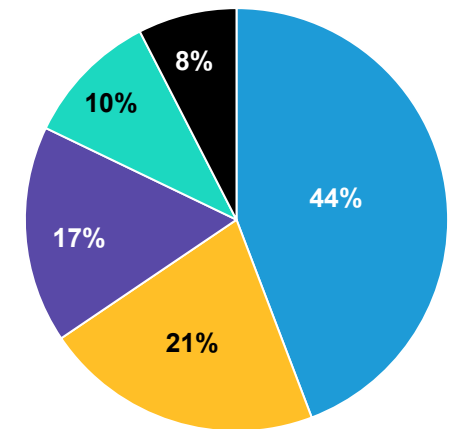
- Regulatory limitations on large banks have caused a decline in lending growth, clearing the way for smaller banks to play a larger role in the economy

**US Commercial Real Estate Loans Held by Banks (USD Billions)**



- The increased share of small bank lending has been largely driven by commercial real estate
- Small banks now make up two-thirds of the commercial real estate lending market

**Commercial Real Estate Loans Are Over 40% of Small Bank Total Loans**



- Commercial Real Estate Loans
- Residential Real Estate Loans
- Commercial and Industrial Loans
- Consumer Loans
- Other

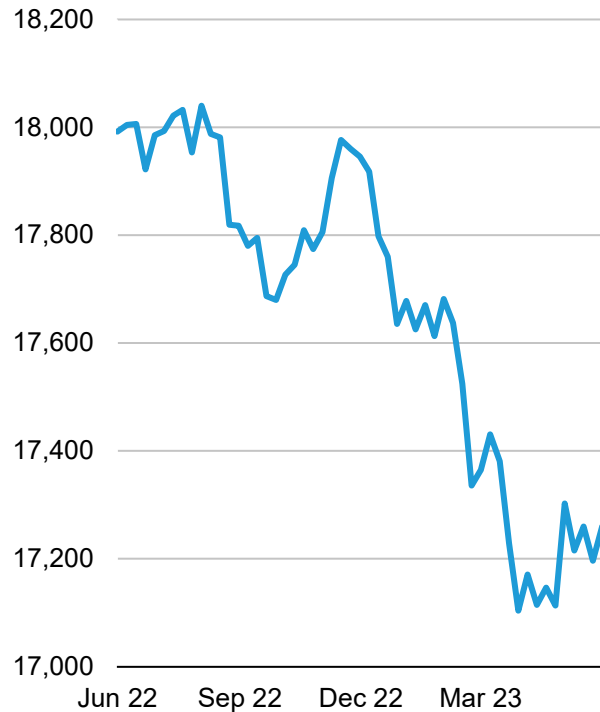
**Current analysis does not guarantee future results.**

As of June 30, 2023

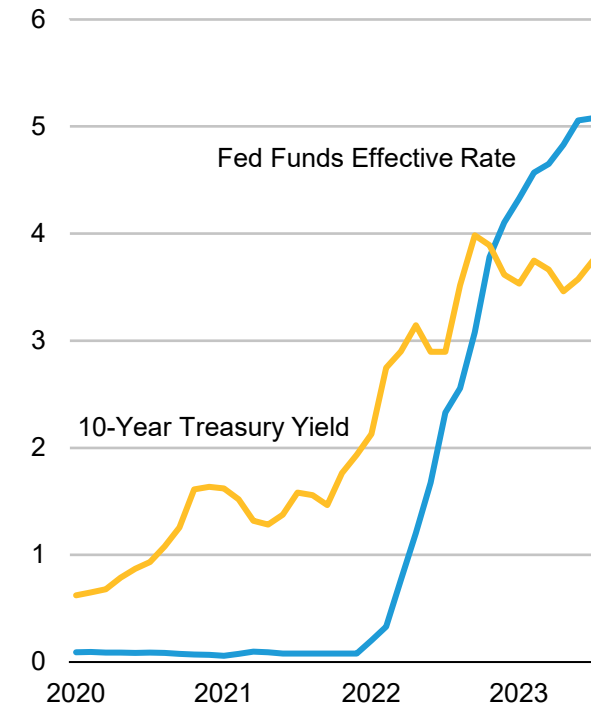
Source: Federal Reserve Bank of St. Louis, Federal Reserve Board and AB

# Deposit Outflows, Duration Mismatch and Commercial Real Estate Values Create Headwinds for Small Banks

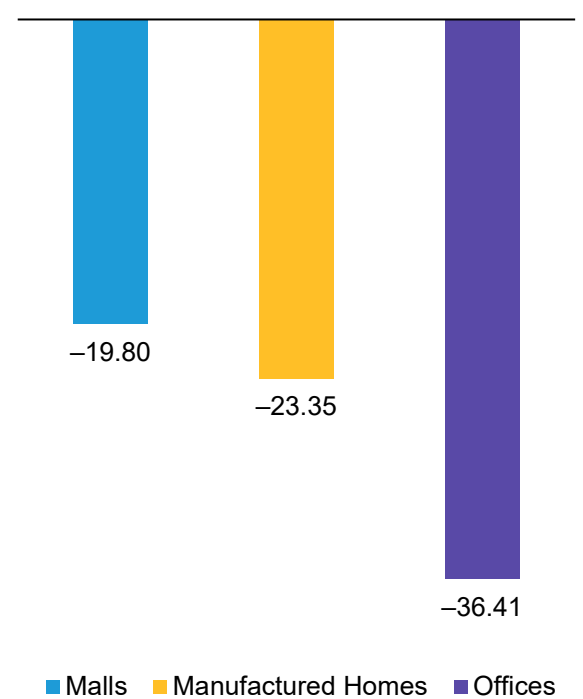
**Total US Bank Deposits (USD Billions)**



**Fed Funds vs. 10-Year Treasury Rate Percent**



**US Property Value 18-Month Changes Percent**



**Current analysis does not guarantee future results.**

As of June 30, 2023

Source: Federal Reserve Bank of St. Louis, Morningstar Direct and AB

# Private Credit

# AB CarVal Private Credit Focus

## Loan Portfolios



- Investments in portfolios of whole loans including consumer receivables, residential mortgages, small business loans, and other commercial and industrial obligations

## Structured Credit



- Investments in asset-backed securities including residential and commercial mortgage-backed securities, CLOs and other asset-backed securities
- AB CarVal is also an active issuer of asset-backed securities across several different strategies including re-performing residential mortgages, aviation assets, residential solar loans and commercial real estate loans

## Commercial Real Estate Lending



- First-lien and mezzanine loans on commercial real estate assets in North America, with a focus on hospitality and multi-family lending
- Strong equity underwriting history and capable asset management partners

See disclaimer regarding Investment Objectives and Risk of Loss.



# AB CarVal Proprietary Sourcing and Asset Management



**US**

- Consumer Finance
- Specialist Residential
- Development Finance



**UK**

- Development Finance
- Specialist Residential
- UK Consumer



**Ireland**

- Specialist Mortgages
- Commercial Real Estate
- Auto Lending



**Spain**

- Specialist Residential
- Auto Lending
- Development Finance



**Portugal**

- Auto Finance
- Specialist Mortgage



**France**

- Commercial Real Estate
- Auto Lending



**Italy**

- Development Finance
- CRE Financing
- Auto Finance



**Greece**

- Consumer Finance

**Quant**



**Nordics**

- Consumer Finance

**intrum**



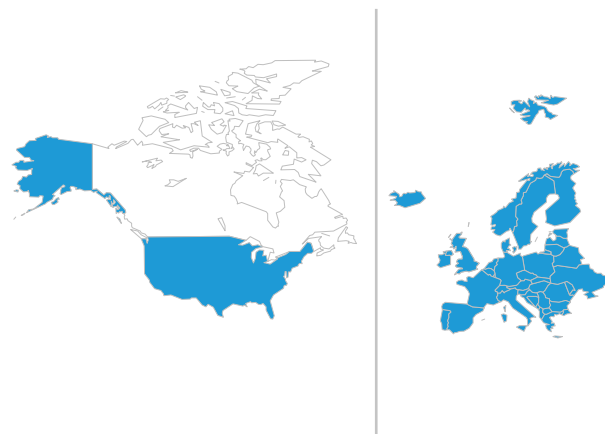
**Netherlands**

- Commercial Real Estate
- Specialist Residential



**Germany**

- Mid Market Lending
- Consumer Finance



Logos represent current and past partnerships and key relationships.

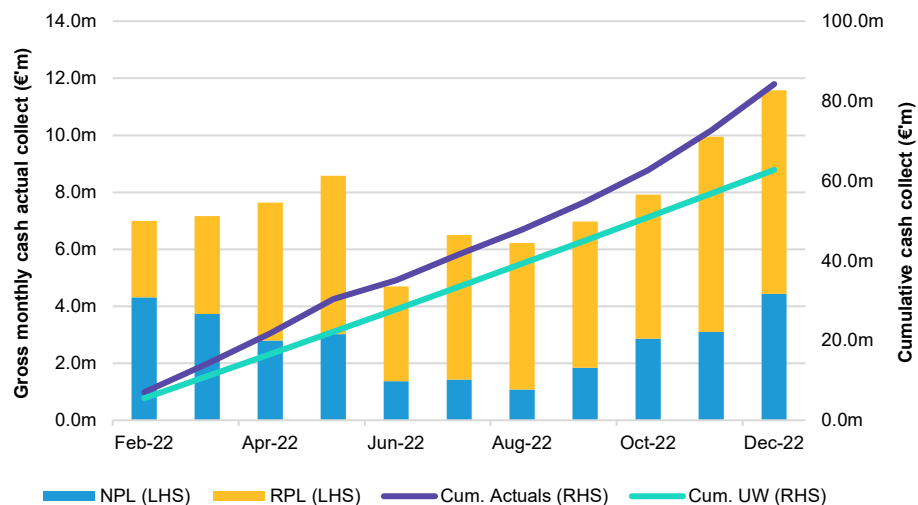
# Case Study: Project Temple



## Temple portfolio split at UW

Segment	Definition	Exit Strategy
RPLs	~€515 million consistent payers	ABS Exit
NPLs	~€551 million non-payer	Getting borrowers to re-perform / Consensual resolution / Foreclosure

## Portfolio performance since close



- Acquisition of a **~€1.1 billion Irish residential mortgage portfolio** from KBC Bank Ireland
- Following **12–18 months of proactive bilateral engagement** we successfully landed this opportunity
- KBC were exiting the Irish market and looking for a clean exit of their book – they went with AB CarVal because of confidence in efficient execution
- Purchase price of **~€610 million** initially funded through a debt warehouse (**~€542 million / 89% of PP**)
- The **acquisition price was attractive** and likely at a discount to what we would pay in competitive process
- We continued to actively manage the portfolio to convert non/sporadic payers into consistent performers through affordable restructures using servicing strategies developed over the last ten years
- Brings together our **credit repair capabilities** with our **structured finance solutions expertise**

See disclaimer regarding Investment Examples and Risk of Loss.

# Commercial Real Estate Debt Strategy

**Macro volatility and rapid rise in interest rates is impacting commercial real estate markets in meaningful ways**

Market dislocation from macro environment and rapid rise in interest rates

Frozen CMBS/CRE CLO markets and expected pullback of regional bank lenders due to the selloff in the broader markets

The current dysfunction has created opportunities for alternative sources of capital

## Objective

- Flexible mandate across the direct lending and securities segments of CRE

## Strategy

- First-lien, mezzanine loans and securities
- Equity-minded underwriting approach to collateral value, sponsorship and business plan
- Collaborate with sector/strategy specific operating partners on sourcing and origination transactions

## AB CarVal Advantage

- Leverage institutional relationships and sourcing opportunities through the various teams
- Strong CRE operating partnership history through the debt and equity businesses
- Shared investment committee over various asset classes and weekly trading calls with business PMs across the firm to compare/contrast risk-adjusted returns

See disclaimers regarding Investment Objectives and Risk of Loss.

# Commercial Real Estate Example: NYC Hotel

Provide low leverage financing on a high-quality, well-located NYC hotel in need of refinancing following the regional bank crisis in Q2 2023

- Funds managed by AB CarVal provided an \$83 million senior loan secured by a five-star, independent flagged hotel located in New York City's SoHo submarket
- The cash-in refinance represents a 39% loan-to-value and the institutional quality sponsor has \$130 million of cash equity subordinate to our loan
- The sponsor placed "certainty of closing" as a priority and chose AB CarVal to refinance a loan from a regional bank under pressure
- The property has 391 guestrooms, over 11,000 square feet of meeting room space, a 12,600 square foot spa and multiple food and beverage outlets including a Michelin-starred restaurant

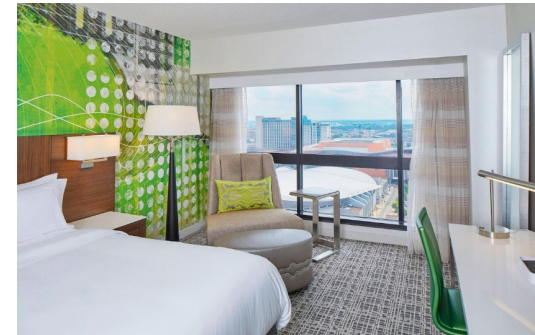


See disclaimer regarding Investment Objectives, Projections and Risk of Loss.

# SASB\* Example: Nashville Hotel

Acquire bonds backed by high quality assets with significant equity support at a material discount due to the volatility in the broader market

- **Investment Thesis:** In May 2022, AB CarVal purchased \$29 million of CCC bonds at ~\$91.5. The bonds are secured by two hotel properties, with 90% of portfolio value being derived from the Renaissance Nashville hotel. AB CarVal is now the controlling holder of the senior mortgage in the transaction.
- **Investment Rationale:** High-quality asset with significant subordinate equity behind the debt. Rapidly improving fundamentals in the Nashville hospitality market.
- **Current Status:** 2022 financials reported \$31 million of NCF, which is higher than the 2019 UW NCF of \$26 million. The sponsor reported on a recent earning call that the Renaissance Nashville had a record-breaking revenue month in June 2022.



\*Single Asset Single Borrower.  
See disclaimer regarding Investment Objectives, Projections and Risk of Loss.

# Case Study: Autoparts Company

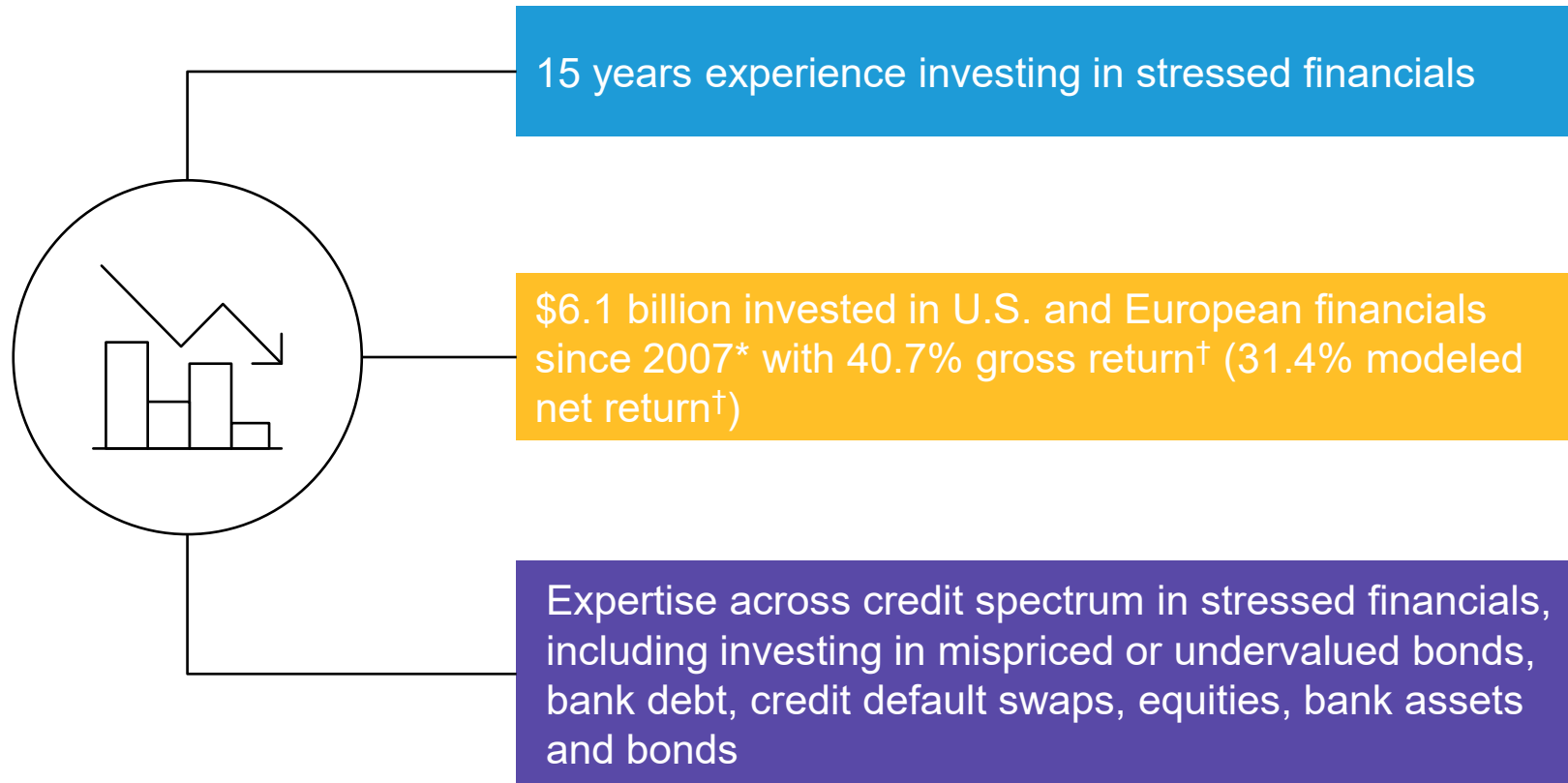
- The Company is an experienced manufacturer of non-discretionary aftermarket automotive products, including replacement brake pads, filters, wipers and other components
  - The Company's brands hold the #1 or #2 market share in all of their product categories
- Special opportunity:
  - The Company cannot place its maquiladora inventory on its US ABL line while it is in Mexico, thus requiring the Company to equity-finance it and hence the need for AB CarVal's financing
- Collateral:
  - 90% advance rate against specific products held at Mexican maquiladora plants in Ciudad Juarez and Matamoros
  - Have both US and Mexican security in place, including on the plants themselves
- Defensive business:
  - Vast majority of revenues come from aftermarket and from parts that are replaced several times during the life-cycle of a vehicle
  - US company pledges to purchase all production from these two plants
- Investment profile:
  - Inventory financing credit facility
- AB CarVal invested \$160 million in two transactions in the summer of 2022
- Collaboration between EM and US Corporate Securities

See disclaimer regarding Investment Objectives and Risk of Loss.

# Stressed Financials

# Experienced Buyer and Lender of Stressed Financials

2023 market dynamics and dislocation highlight cracks and opportunities



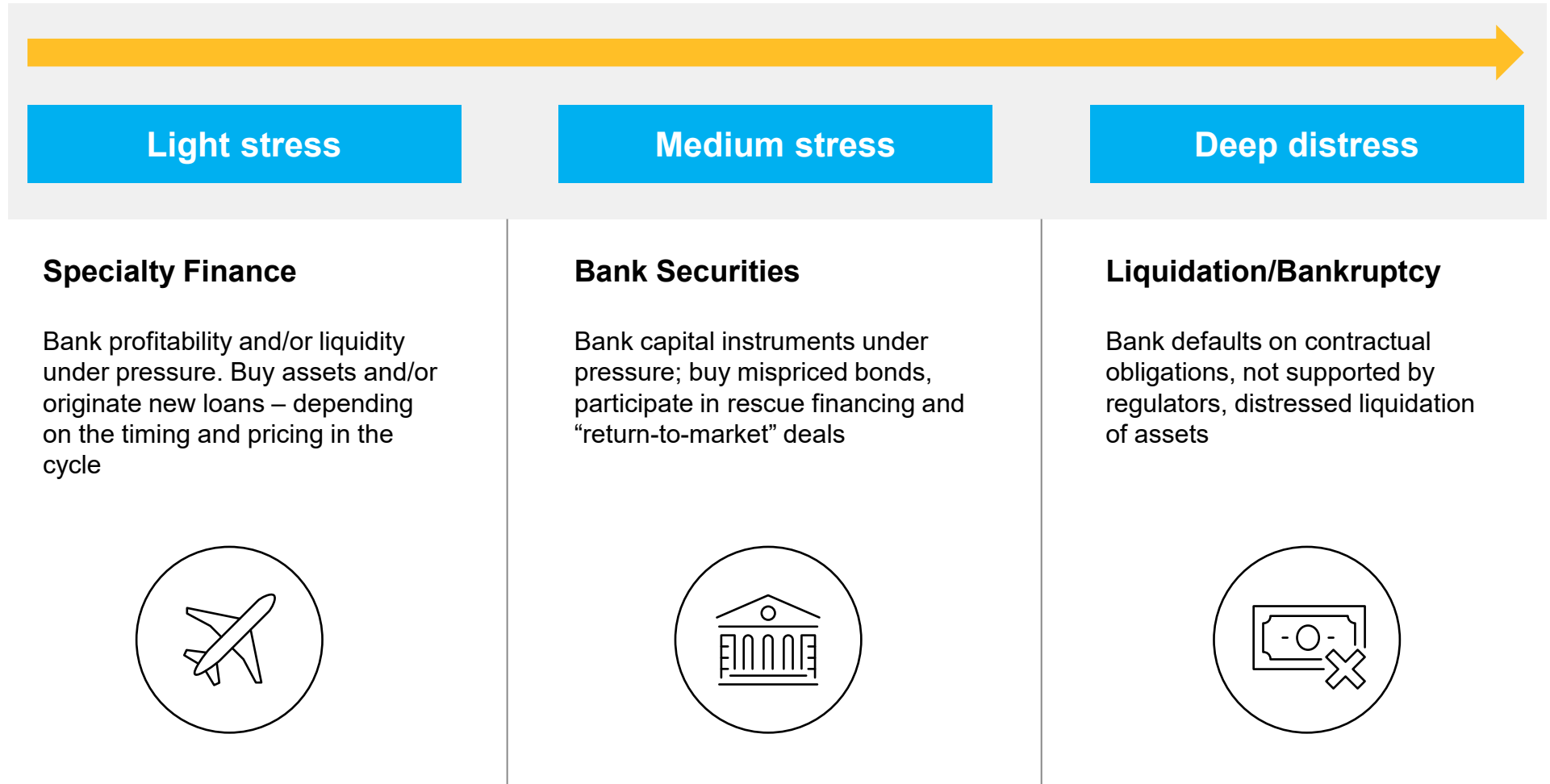
\*As of February 28, 2023. Includes AB CarVal managed corporate security investments related to stressed financial service providers in North America and Europe, including Banks, Insurance providers, Non-Bank Lenders, Asset Managers, Financial Advisors, and other related financial services providers. AB CarVal has managed other asset types that are not included here. The invested capital is the maximum amount of capital that was ever invested in this subset of investments, calculated by creating a cumulative monthly cashflow stream (each month's cashflows plus all previous month's cashflows) and then determining the largest monthly outflow within the cumulative cashflow stream.

†See disclaimer European and North American financials track record



# Financial Sector Stress

AB CarVal's sweet spot



Based on AB CarVal's view of the market and subject to change.

# Investing in US and European Bank and Non-Bank Financials Since GFC

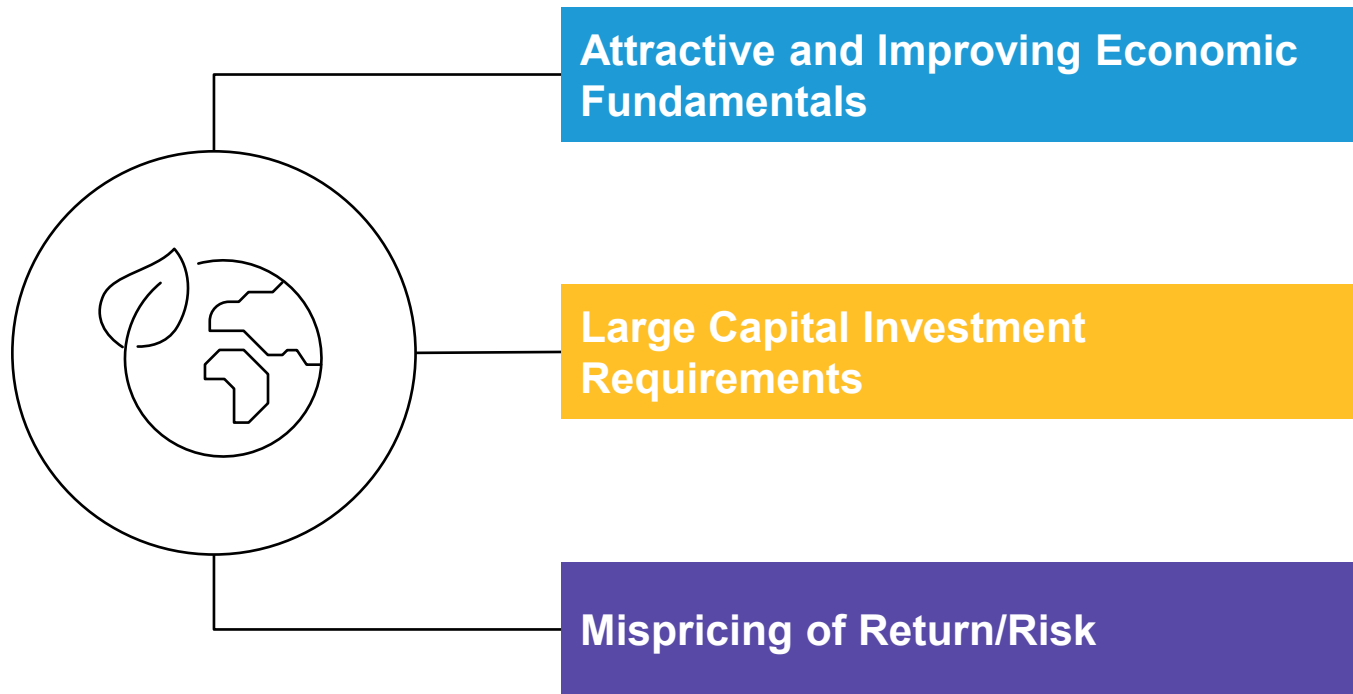
AB CarVal is an experienced global investor in stressed financials



Logos represent current partnerships and key relationships.

# Energy Transition

# Dynamics Creating a Scalable Energy Transition Opportunity



**The UN estimates that \$4 trillion must be invested annually in order to reach net-zero emissions by 2050\***

Source: IEA Flagship report, May 2021

# AB CarVal Energy Transition Strategy

Energy and efficiency projects

## Solar and Storage Hard Assets



Development, acquisition, construction and management of distributed and utility-scale renewable power plants and battery storage assets, or directly held or controlled interests in these underlying assets

## Private Financings



Financings backed by renewable energy, energy efficiency, sustainability, and energy transition projects and platforms.

## Solar Loans/ABS



Newly originated and secondary purchases of loans derived from homeowners installing residential solar and energy storage as well as energy efficiency upgrades. This also includes ABS and structured financings backed by similar assets.

AB CarVal's investment strategies may be speculative and there can be no assurance that any of the strategies' investment objectives will be achieved. See disclaimer regarding Risk of Loss.

# Case Study: Intersect Power



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## Providing a Secured Debt Facility to Allow Intersect Power Rapid Expansion of Solar and Storage Projects

- Intersect Power is a North American developer of utility-scale renewable energy power assets and has an excellent track record of successfully building out utility-scale assets across the US
- AB CarVal and an investment partner provided Intersect with a \$482 million secured debt facility in December 2020
  - Coupon/Yield: 13.5% with 2% OID and exit fees, with minimum MOICs
  - Maturity: notes split between six-month (extendable by six months) and three-year (extendable by one year) maturities
  - Security Package: First lien on all the assets of Intersect Power; additional liens on project SPVs during development
- The main use of funds was to capitalize the construction of 2.4 GW of solar and storage projects across the Southwest United States with an expectation to start delivering power in 2022;
  - The financing for the portfolio which AB CarVal supported and helped structure was awarded “2021 North American ESG Deal of the Year” by Project Finance International
  - The current group of projects may have the ability to produce enough renewable energy to power 460,000 households per year and may offset more than 2.5 million metric tons carbon dioxide emissions annually\*
- The loan was fully repaid in a single transaction in June 2022 and AB CarVal retains its equity interest in the company

\*Estimated impact derived by inputting modeled data (based off of the Portfolio) into the EPA Greenhouse Gas Equivalencies Calculator, [www.epa.gov/energy/green-house-gas-equivalencies-calculator](http://www.epa.gov/energy/green-house-gas-equivalencies-calculator), as of January 21, 2021. Different methodology or assumptions will produce different results.

The opportunity represented here is for illustrative purposes only and does not represent all of the investments purchased, sold, or recommended for advisory clients. AB CarVal makes no representation that any AB CarVal-managed investment vehicle has or will participate in the represented opportunity.

See disclaimer regarding Projections and Risk of Loss.

As of June 30, 2022

# Case Study: Residential Solar

## Background

- GoodLeap (formerly Loanpal) is now the largest residential solar loan originator in the US, having originated \$17.5 billion+ loans to-date
- AB CarVal was one of the first whole-loan buyers on GoodLeap's platform in 2018 and led the first securitization of GoodLeap-originated loans
  - AB CarVal purchased \$500 million+ of loans in a forward-flow relationship from 2018 to 2020
  - AB CarVal purchased \$400 million of loans in a one-off purchase in December 2022
- AB CarVal has a close relationship with the team and worked closely with them as they built out their capital markets, risk and recovery functions in the early days
- While the whole loans became less attractive to us as bank and credit union buyers drove spreads tighter from 2020 to 2022, AB CarVal maintained the relationship and sector expertise which put us in position to capitalize on a sale opportunity when the market moved back toward us

## Opportunity set

- AB CarVal will continue to maintain our relationship with GoodLeap over the coming years, and will seek to transact opportunistically depending on interest rates, asset performance expectations, and market conditions
- AB CarVal's ability to purchase either whole loans or securities, in one-off or forward flow transactions, and to finance through warehouse or capital markets allows us to find opportunities



See disclaimer regarding Investment Objectives and Risk of Loss.

# Appendix



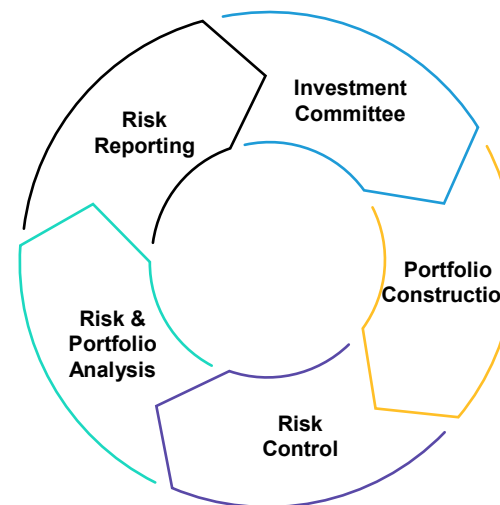
# CVF VI Portfolio Construction and Risk Management

## Model Portfolio Construction

Anticipated Portfolio Parameters	
<b>Strategy Exposure</b>	
Private Credit	50-70%
Energy Transitions	15-20%
Stressed Financials	0-20%
<b>Geographic Exposure</b>	
North America	30-60%
Western Europe	30-60%
Rest of World	0-10%

**Disciplined and risk-managed process  
to achieve fund objectives**

## Risk Management



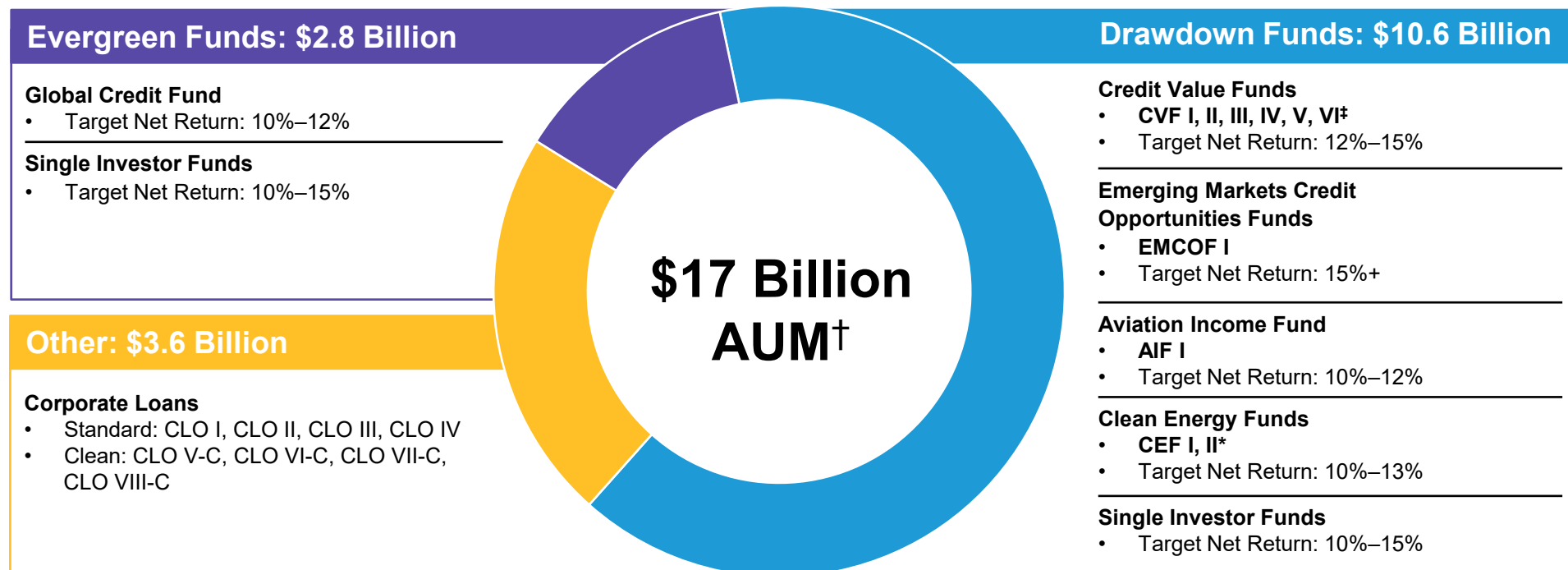
### Key variables monitored by investment and risk teams:

- Credit spreads
- Liquidity
- Leverage
- Interest rates sensitivity
- Sector and single name exposures
- Covenant violations
- ESG risks

The Portfolio Parameters indicated here are soft guidelines that reflect AB CarVal's current strategic approach to constructing the Fund's portfolio. These guidelines are non-binding and are subject to change at any time. More complete disclosures on the terms and conditions relating to fund investments will be contained in the Fund's governing documents.

# AB CarVal Platform

AB CarVal's diverse base of funds allows access to the firm's proprietary global credit platform



\*Open for investment

‡Currently pre-marketing in the EU, open for investment in other jurisdictions.

†AUM is comprised of fee-earning AUM and fee-eligible AUM. Fee-earning AUM includes those assets currently qualified to generate management fees. Fee-eligible AUM includes capital that is committed to an AB CarVal Fund but is currently uncalled or callable. The number represented here excludes assets under AB CarVal's management that are not generating management fees due to the maturity of the Fund but includes amounts that do not generate management fees solely due to AB CarVal's decision not to charge management fees. See disclaimers regarding Risk of Loss and Targeted Returns. As of June 30, 2023

# Responsible Investing Policy

AB CarVal is a member of IFRS Sustainability Alliance and a UNPRI signatory



## Responsible Investing Policy

Last Reviewed: 07/14/2022  
Responsible for Content: Chris Hedberg

### Commitment Statement

AB CarVal Investors, L.P. and its affiliates ("AB CarVal" or the "Company") believe environmental, social and governance factors have the potential to influence investment outcomes. AB CarVal is therefore committed to incorporating these factors into investment decision-making whenever AB CarVal believes they have a significant impact on risk or returns.

As a signatory to the United Nations Principles for Responsible Investment ("UNPRI" or "the Principles"), AB CarVal looks to the Principles for guidance and is committed to adhering to them in a manner that is consistent with AB CarVal's broader fiduciary responsibilities.

### Objectives

The aim of this Policy is to establish a framework for the inclusion of environmental, social & governance factors into investment decision-making, to describe the means by which this Policy will be reviewed and by which the outcomes will be reported.

### Overview

The Policy addresses the key aspects of AB CarVal's commitment to Responsible Investing. These include:

- All CarVal is committed to adhering to the United Nations Principles for Responsible Investment ("UNPRI" and "the Principles") in a manner that is consistent with AB CarVal's broader fiduciary responsibilities. See the Appendix for details of UNPRI.
- Nothing in this policy constitutes a commitment that ESG factors will be utilized in every situation; discretion is retained by the investment team to determine which ESG factors are material to the risk or return of a given investment.
- Nothing in this policy is a commitment that ESG factors will be the primary determinant of any investment decision, simply that they will be considered, as deemed appropriate by the investment team.
- AB CarVal has established a Responsible Investing Committee headed by the Chief Financial Officer and a Managing Principal to monitor the effectiveness and implementation of this policy.

### A. General

#### 1. Responsible Investing Background

Responsible investment is an approach to investing that aims to incorporate environmental, social and governance (ESG) factors into investment decisions, to better manage risk and generate sustainable, long-term returns. Generally, the factors include issues such as:

- Environmental:** Climate change and greenhouse gas emissions; resource depletion; water quality; waste and pollution; deforestation.
- Social:** Working conditions & child labour; local communities including indigenous communities; conflict; health and safety; employee relations and diversity.
- Governance:** Executive pay; bribery & corruption; political lobbying & donations; board structure & diversity; tax strategy.

Responsible Investing Policy

1

- Since the business' origins in 1987, AB CarVal has adhered to strict investment discipline and strong ethics and compliance
- In 2017, AB CarVal built on this discipline by adopting a formal Responsible Investing Policy based on the United Nations Principles for Responsible Investment
- The investment team and the Portfolio Investment Committee incorporate Environmental, Social and Governance (ESG) issues into all investment analysis and decision making. While ESG issues may not be the determinant of an investment decision, they incorporate into investment analysis and are considered by the Portfolio Investment Committee on every investment
- AB CarVal screens and excludes a limited set of industries, including certain types of weapons manufacturing—e.g., nuclear weapons, landmines, cluster munitions and private prisons

## AB CarVal's Responsible Investing Policy in brief:

- We incorporate ESG issues into investment analysis and decision-making process
- AB CarVal looks to the UN Principles for guidance and is committed to adhering to them in a manner that is consistent with AB CarVal's broader fiduciary responsibilities
- AB CarVal has established a Responsible Investing Committee co-headed by a Managing Principal and the Chief Financial Officer to monitor the effectiveness and implementation of this policy



Signatory of:



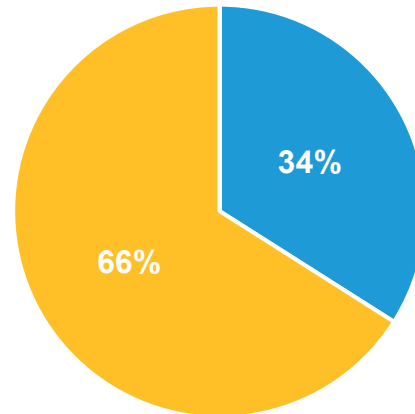
# AB CarVal's Diversity, Equity and Inclusion

## AB CarVal's DEI Goals

- Become more diverse in the long term with a goal of hiring 25% female investment professionals and 25% ethnically diverse operations/function professionals
- Commercially align our DEI strategy including demonstrating and executing on DEI opportunities for capital deployment
- Monitor DEI standards of external partnerships, vendors and clients as part of the decision and selection process
- Key Strategic Partnerships:



## Gender Diversity



■ Female ■ Male ■ Non-Binary

## Cognitive Diversity

- Nationalities: 28
- Languages: 36
- Degrees: 35
- Majors: 89
- Identified Veterans: 6

**AB CarVal has hired 27 female professionals in the last four years**

As of June 30, 2023

# AB CarVal Senior Investment Team



**Lucas Detor**  
Managing Principal

Mr. Detor is a managing principal and member of the Investment Committee for AB CarVal, responsible for leading the firm's investment strategy and management. He also leads the firm's transportation investments and oversees capital formation, emerging markets and real estate investments for the firm. Mr. Detor joined AB CarVal from Morgan Stanley, where he most recently served as managing director and co-head of the global distressed and US leveraged loan business. Mr. Detor has also served the US government as a Special Agent with the United States Secret Service, as well as serving in the US Army Reserves and New York National Guard. Mr. Detor received his M.B.A. from NYU's Stern School of Business and his B.S. in accounting from SUNY Albany and is a Certified Public Accountant (inactive).



**James Ganley**  
Managing Principal

Mr. Ganley is a managing principal and member of the Investment Committee for AB CarVal, responsible for leading the firm's investment strategy and management, as well as distressed corporate credit investments in the US and Europe, and risk and portfolio management across AB CarVal's credit funds and investments globally. Prior to joining AB CarVal in 2009, Mr. Ganley was a managing director for the Special Situations Group at Goldman Sachs in Europe where he focused primarily on corporate credit investments including distressed credit, high-yield credit, event-driven investing and liquidations. Mr. Ganley received his M.B.A. from the University of Chicago and his B.S. in finance and accountancy from Villanova University and is a Certified Public Accountant (inactive).



**Jody Gunderson**  
Managing Principal

Ms. Gunderson is a managing principal and member of the Investment Committee for AB CarVal, responsible for leading the firm's investment strategy and management, as well as its global loan portfolios and clean energy businesses. In addition, Ms. Gunderson manages investments in asset-backed securities globally, including residential mortgage-backed securities, commercial mortgage-backed securities and collateralized loan obligations. Prior to joining AB CarVal in 1994, Ms. Gunderson was a manager in the financial services practice of PricewaterhouseCoopers where she served investment fund, commercial banking and thrift clients. Ms. Gunderson earned her B.S. degree in business from the University of Minnesota and is a Certified Public Accountant (inactive).



**David Fry**  
Chief Risk Officer

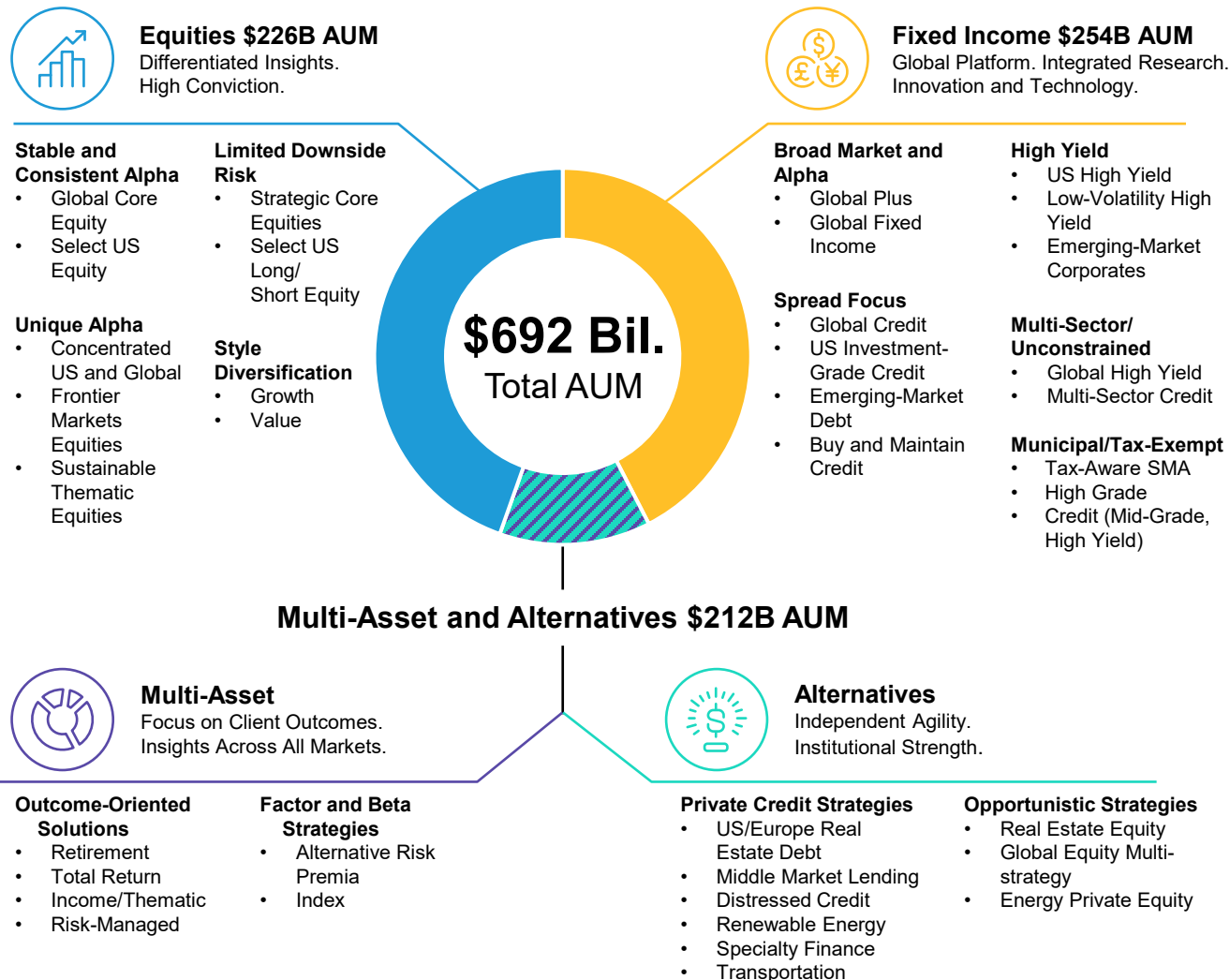
Mr. Fry is the chief risk officer and a member of the Investment Committee for AB CarVal. He is responsible for oversight of the portfolio and identification, quantification and communication of material risks. Prior to joining the firm in 1997, Mr. Fry was with Credit Suisse Financial Products in London in risk measurement, and in the financial risk management practice of Deloitte and Touche. Mr. Fry received his B.Sc. in mathematics, operational research, statistics and economics from the University of Warwick, UK and qualified as a UK Chartered Accountant.

# About AllianceBernstein

A broad range of solutions to improve client outcomes



- AB provides diversified investment management services worldwide to institutional, high-net-worth and retail investors
- Investment services encompass equities, fixed income, multi-asset and alternatives
- AB also provides independent investment research, trading and brokerage-related services to institutional clients through Bernstein Research Services
- Total client assets under management of approximately \$692 billion
- AllianceBernstein Holding L.P. (“AB Holding”) is a publicly traded partnership traded on the NYSE under the ticker symbol AB
- Offices in 52 cities across 26 countries and jurisdictions



Note: AUM breakdown as of June 30, 2023

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**Complete disclosures.** More complete disclosures and the terms and conditions relating to investments in any AB CarVal-managed investment vehicle will be contained in the governing agreements for such AB CarVal-managed investment vehicle.

**Date.** All time sensitive representations and warranties in this summary are made as of July 31, 2023 (estimate), unless stated otherwise.

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**No reliance, no update and use of information.** You may not rely on the Materials as the basis upon which to make an investment decision. To the extent that you rely on the Materials in connection with any investment decision, you do so at your own risk. The Materials do not purport to be complete on any topic addressed. The information in the Materials is provided to you as of the dates indicated and AB CarVal does not intend to update the information after its distribution, even in the event that the information becomes materially inaccurate. Certain information contained in the Materials includes calculations or figures which have been prepared internally and have not been audited or verified by a third party. Use of different methods for preparing, calculating or presenting information may lead to different results and such differences may be material.

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# Disclaimer

**Targeted returns.** The targeted rates of return included in this presentation are hypothetical and are for illustrative purposes only. Accordingly, no assumptions or comparisons should be made based upon these returns. The targeted returns are based on research conducted by AB CarVal and the conclusions are AB CarVal's opinions based on its own independent study. Targeted returns are subject to inherent limitations. One limitation is that the returns cannot take into account the impact that market and economic risks, such as defaults, prepayments and reinvestment rates, may have on actual trading. In addition, targeted returns are subject to risk and uncertainties that may change at any time and, therefore, actual results may differ materially from those expected. In no circumstances should the targeted returns be regarded as a representation, warranty or prediction that any future AB CarVal-managed investment vehicle will reflect any particular performance or that it will achieve or is likely to achieve any particular result or that investors will be able to avoid losses, including total losses of their investment. Inherent in any investment is the potential for loss. While AB CarVal believes its assumptions are reasonable, it is very difficult to predict the impact of known factors and it is impossible to anticipate all factors that could affect actual results.

**Projections.** "Projections" (including targeted returns, opinions, predictions or expectations about any future event) contained in the Materials are based on a variety of estimates and assumptions by AB CarVal including, but not limited to, estimates of future operating results, the value of assets and market conditions at the time of disposition and the timing and manner of disposition or other realization events. These estimates and assumptions are inherently uncertain and are subject to business, industry, market, regulatory, geo-political, competitive and financial risks which are outside of the control of AB CarVal. There can be no assurance that the assumptions made will prove accurate and actual results may differ materially, including the possibility that an investor may lose some or all of invested capital. The inclusion of the Projections herein should not be regarded as an indication that AB CarVal considers the Projections to be a reliable prediction of future events and the Projections should not be relied upon as such. AB CarVal has not made any representation to any person regarding the Projections and does not intend to update or otherwise revise the Projections to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying the Projections are later shown to be in error.

**Alternative investments** involve a high degree of risk and are designed for investors who understand and are willing to accept these risks. There can be no assurance that any alternative investment strategy will achieve its investment objectives. Prospective investors should consider the following factors when determining if an investment in a fund is suitable. A more detailed discussion of risk factors can be found in the applicable offering document(s), which you should read carefully before you decide to invest.

**Investment and Trading Risks.** The proposed Fund may engage in speculative investment practices, which could include investments in illiquid assets, foreign markets, and non-US securities and currencies and the use of leverage, short sales, and derivatives, which may increase the risk of investment loss. Fund performance may be volatile, and an investor could lose all or a substantial portion of his or her investment.

**European and North American Financials track record:** The track record for AB CarVal European and North American Investments in Financial Services spans multiple investment pools ("funds"), each with its own separate compensation and expense structures. This track record includes AB CarVal's Corporate Securities investments, that are not liquidation claims, related to financial services companies within the European and North American region. The funds have also invested in other asset types and regions that are not represented here. The Fund-specific returns are expected to differ from those shown here, and such differences may be material. The returns shown above do not represent the actual investment return experienced by any investor. Annualized Gross IRR is calculated as  $(1 + \text{IRRm})^{12-1}$  where "IRRm" is the monthly internal rate of return based upon the actual monthly cashflows from the investments together with the Unrealized Value as of the reporting month added to the actual cashflow for that period. Annualized returns are compounded by 12 months regardless of the number of months the deal held an investment balance. Gross Returns are not reduced by (i) management fees, (ii) any carried interest distributions or accruals, (iii) administrative costs and expenses, and (iv) other similar costs and expenses; however, direct deal costs and expenses are deducted. As a result, the actual performance that an investor may experience if the Master Funds were to conduct the historical investment program of CEF or any other AB CarVal-managed fund would differ because, among other things, the actual performance figures for the Master Funds will be calculated net of the management fee, any carried interest distribution, associated administrative costs and expenses and other similar costs and expenses. The track record for AB CarVal European and North American Investments in Financial Services is a model net internal rate of return ("Model Net IRR") from the first investment in 2007 to the current reporting period and does not represent the experience of any one investor in any AB CarVal-managed investment vehicle. To calculate the Model Net IRR we grouped investments into a series of discrete hypothetical funds comprising investments initiated within each calendar year, each with an annual 1.5% management fee, an estimate for annual operating expenses, and an 80/20 split of profits between the investor and AB CarVal provided a 8% preferred return (compounded annually) is achieved. The Annualized Model Net IRR is the internal rate of return of the aggregated net cash flows on a 12-month annualized basis regardless of the number of months included in the aggregate of deals. The Model Net IRR reflects the use of debt at the investment level, including through the use of prime brokerage accounts, but not fund-level leverage. The Model Net IRR does not include the performance of investments in other asset classes that are or have been held in the funds.



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\*Notice to investors in Singapore: Please direct all inquiries to CarVal Investors Pte. Ltd.

# CVI Credit Value Fund IV

## Second Quarter Report

### Highlights

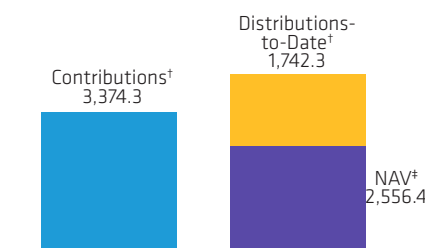
- The CVI Credit Value Fund IV ("the Fund") produced a net return of 1.81% for the quarter and 4.09% year to date. Net profits of \$37.4 million were driven by financial services, consumer loan portfolios and commercial real estate loans, partially offset by building and construction products and commercial loan portfolios.
- The Fund made two distributions for \$200.8 million during the quarter and has returned 52% of contributions to date. AB CarVal continues to manage the Fund's investments with a focus on enhancing returns, creating a higher equity multiple and providing liquidity to investors.
- The Fund ended the quarter with 200 investments in 573 instruments and a total net asset value of \$2.6 billion. Western European assets represented 46% of portfolio value with the majority of the remaining assets in North America (44%). The largest position was in aviation leasing. The Fund ended the quarter with a debt-to-assets ratio of 27% and approximately \$122.8 million in cash and cash equivalents.

### Fund Performance

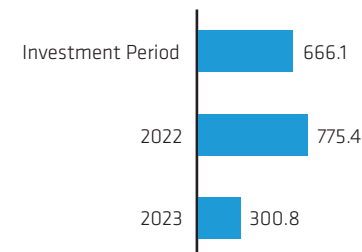
Second Quarter Net Returns by Month* (Percent):	
April 2023	0.63
May 2023	0.53
June 2023	0.64
<b>Quarter-to-Date</b>	<b>1.81</b>
<b>Year-to-Date</b>	<b>4.09</b>
<b>Net IRR</b>	<b>7.82</b>

Return Metrics	
<b>Net TVPI</b>	<b>1.27</b>
<b>Net RVPI</b>	<b>0.75</b>
<b>Net DPI</b>	<b>0.52</b>

### Fund Capitalization & Distributions\* (USD Millions)



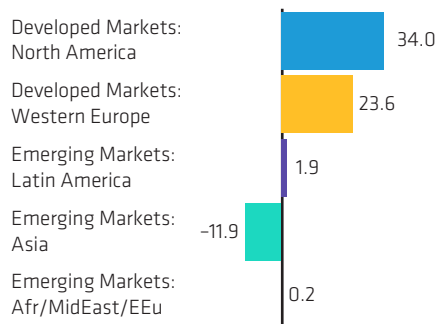
### Total Distributions (USD Millions)



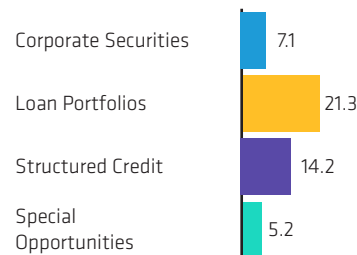
### Profit & Loss

- \$961.3 million of net profits since the Fund's inception
- \$37.4 million of net profits during the quarter
- Top positive contributors for the quarter were financial services, consumer loan portfolios and commercial real estate loans
- Top negative contributors for the quarter were building and construction products and commercial loan portfolios

### QTD P&L\* by Region (USD Millions)



### QTD P&L\* by Asset Class (USD Millions)



\* Returns include accrual for performance fees.

† Contributions and Distributions are inclusive of all recallable capital activity which occurred during the investment period.

‡ NAV includes accrual for performance fees.

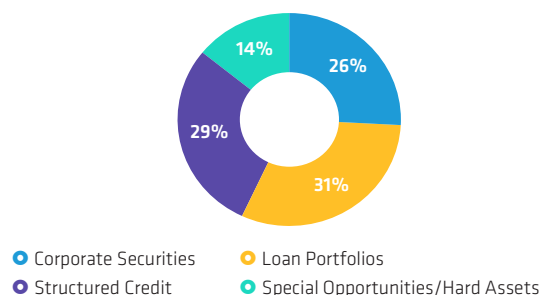
§ Remaining P&L includes other fund expenses.

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### Portfolio Composition

- \$3.4 billion portfolio value
- Invested in 22 countries
- 90% of investments held in developed markets
  - Assets concentrated in Western Europe (46%) and North America (44%)
- 200 investments representing 573 instruments

### Portfolio<sup>II</sup> by Asset Class



### Corporate Securities

- Corporate Securities gross profits totaled \$7.1 million
- \$876.4 million portfolio value
  - Assets concentrated in North America (38%) and Western Europe (27%)
- Largest positions were in alternative energy and financial services

### Loan Portfolios

- Loan Portfolios gross profits totaled \$21.3 million
- Profits were driven by consumer loan portfolios (\$13.1 million), commercial real estate loans (\$9.0 million) and alternative energy (\$4.3 million)
- 138 investments in the portfolio with a value of \$1.0 billion

### Structured Credit

- Structured Credit gross profits totaled \$14.2 million
- \$989.6 million portfolio value
- Portfolio consists of residential mortgage-backed securities (42%), consumer asset-backed securities (18%) and collateralized loan obligations (18%)
- Mill City and Mill City Solar positions make up approximately 20% of the total structured credit portfolio value

### Special Opportunities

- Special Opportunities gross profits totaled \$5.2 million
- \$452.1 million portfolio value consisting of aviation investments

<sup>II</sup> Portfolio composition includes carrying value and recourse third-party debt.

#### Contact

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 +44 20 7292 7700 (U.K.)  
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NEPC, LLC

**Firm: Park Square Capital, LLP**

**Strategy/Product: Credit Opportunities III (USD)**

**Client: MWRA**

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

1. Have there been any changes in ownership or management in the past year?  
There has been no change in ownership or management in the past year and there are no current or pending plans for future changes.
2. List firm AUM, net flows and accounts gained/lost for the past 5 years.  
As of 20<sup>th</sup> September 2023, Park Square has an AUM of \$13.8bn, of which \$5.8bn was in the Junior debt strategy, \$3.9bn in the large-size senior debt strategy, and \$4.2bn in our mid-market direct lending strategy. These strategies comprise of various closed funds with terms of 6-10 years, and one open-ended fund. Our LP base has evolved over the past 5 years as these funds have been raised and wound down as is normal course of business with closed-ended structures. In addition, we have a number of evergreen managed accounts that invest alongside our senior-focused funds and co-investment vehicles.
3. Have there been any new or discontinued products in the past year?  
No, there has been no new or discontinued product offerings in the past year at Park Square.
4. Are any products capacity constrained?  
None of our products are capacity constrained.
5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.  
To the best of the Firm's knowledge, there are no regulatory, compliance or litigation issues impacting Park Square.



6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.

Park Square believes in the importance of a diverse and inclusive workplace and is a signatory of the ILPA Diversity in Action Initiative. Park Square reports GP-level diversity statistics to LPs upon request. In addition, hiring and promotion statistics are reviewed at least annually by the Head of Human Resources and shared with the Executive Committee.

The firm has a long-held internal diversity, inclusion and equal opportunities policy that is accessible via the staff handbook, available to all staff and publishes a statement regarding DEI strategy on its website.

Across the firm, Park Square has 27 nationalities represented and 40% women. Park Square largely focuses its recruitment efforts on hiring talented graduates directly from universities, which provides a more diverse pool of candidates than experienced hires. Annually, Park Square runs a private debt investing webinar, marketed to female undergraduates in order to broaden their knowledge and encourage the consideration of a career in investing. Park Square runs a one-year undergraduate placement program aimed at non-investment professionals, where individuals without extensive financial services experience, spend a year working at Park Square across a range of business areas. This approach has enabled the team to target and hire diverse candidates into the Firm. The Firm has typically focused on universities that have established undergraduate schemes in place, including: Bath, Loughborough and Exeter.

### **Portfolio Management Team**

1. Have there been any changes in the portfolio management team in the past year?  
After 16 years at the firm, Jacob Ucar decided to take some time, and officially stepped away from Park Square in April 2023. He has no immediate plans to take on another role. Matthias, who has been with the firm for 15 years, focused on Credit Opportunities for the last 10 years, and led the strategy with Jacob for the last three, has seamlessly stepped up to the lead Portfolio Manager role, supported by Tucker Bryan who is a partner in our US office.
2. Are there any expected changes to the team in the future (planned additions or departures)?  
There are no planned additions or departures in the portfolio management team.

### **Process**

1. Have there been significant changes in any of the areas below in the past year?
  - Identification of investment ideas
  - Process for exploring and vetting ideas



- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

There have been no significant changes to any of the above areas over the past year.

### Philosophy

1. Describe recent changes in investment philosophy, if any.  
There have been no changes to the investment philosophy since the inception of the Fund.

### Portfolio

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).  
Please refer to pg.7 of the attached presentation.
2. List strategy AUM, net flows and accounts gained/lost for the past 5 years  
The Credit Opportunities program totals \$3.9bn of AUM across a series of commingled funds and SMAs. Credit Opps III (USD) is a closed-ended fund that had \$830m of equity commitments at fund close in June 2018. The fund also employs term leverage (~1:1) that takes total investable capital to \$1.56bn.
3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.  
The LP base of Credit Opps III (USD) is well-diversified across commitment size, geography, and type.

### Performance / Market Outlook

1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.  
Please refer to pg. 8 of the presentation materials.
2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.  
Credit Opps III (USD)'s investment strategy employs a "cauldron" approach which consists of four components: 1) anchor commitments to large-sized companies, 2) direct loans to larger mid-market companies, 3) hung syndications and secondary purchases and 4) junior debt. The Fund can invest opportunistically across the various buckets depending on where we identify the most attractive risk/return (though no more than 25% of the portfolio can be in junior debt). We believe this approach positions the fund to succeed in any market condition, as it can be active in the primary market across both



larger, more liquid syndicated loans as well as smaller, more liquid direct loans, but can also take advantage of dislocation when the opportunity presents itself. Furthermore, the Fund's focus on defensive sectors and on larger companies, with stable and predictable cash flows, is an important part of the strategy as we believe these businesses are well placed to weather the macro-economic conditions likely to be faced in the context of turbulent credit markets.

We are very pleased with the investment pace and performance of the Fund to date, having built a robust and diversified portfolio as illustrated on pg. 6 of the presentation.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

Global financial markets continued to stabilise in the second quarter of 2023, as concerns around the health of the banking system subsided following emergency measures implemented by central banks who continue to face a battle to combat stubbornly high inflation rates. However, in May 2023, inflation and interest rates were temporarily second page news, as headlines were dominated by an impending US debt ceiling crisis, with negotiations between the Republican and Democratic parties concluding only days before a potentially catastrophic US default. The S&P 500 was up 8.3% on the quarter, buoyed by a continuing resurgence in the Technology sector, up 16.9% on the quarter, whilst volatility remained dampened, with the iTraxx Crossover closing the quarter at 400bps, down from a peak of 670bps in September 2022.

In terms of value, the syndicated loan markets, which are a natural benchmark for our funds, have continued to make a steady recovery through the second quarter. This recovery was driven by 10-year lows on the supply side with very quiet M&A activity, set against a stable demand side, largely driven by reduced but steady activity in the CLO market. The average bid for the Credit Suisse Western Europe LLI ("WELLI") peaked at 95.1 in June, rising above 95 for the first time since the second quarter of 2022, and ended the quarter at 94.7 (Q1 2023: 93.4). The United States LLI ("USLLI") has shown a similar recovery, ending the quarter at 93.5 (Q1 2023: 92.7). Park Square has continued to capitalise on these market dynamics, and selectively deployed \$291.0 million in Q2 2023, across the three strategies in both primary and secondary investments into high quality names well known to the Firm.

The European leveraged loan primary markets remain subdued due to quieter M&A activity, although we see signs that this is changing and expect a much busier second half of 2023. However, with private equity dry powder remaining elevated, and many public companies trading at depressed values, we have also seen a significant uptick in public to private activity, alongside record extension activity with 'amend-and-extends' accounting for €25.7 billion of paper in the first half of 2023. Although extensions of existing facilities do not typically offer significant opportunities for new money, we are seeing a c.15-20%



'drop rate' as CLOs and other investors are constrained by restrictive tests or end of reinvestment periods, providing managers with an opportunity to invest in existing deals at attractive returns with typically tighter documentation. The focus of this extension activity has been maturities in 2024 and 2025, with 'maturity walls' dropping by 60% and 40% for these years, respectively. Given the expected recovery in M&A and still significant refinancing requirements on the horizon, we believe there is a sizeable opportunity for providers of private credit to further gain market share from banks.

With European private credit currently a 'lenders market', we have seen new transactions coming with improved pricing, a reduction in leverage on new issuance to accommodate the increased cost of debt, and tightened loan documentation. In the current market environment of longer-term inflationary pressures and strong equity capitalisations, we believe that private credit, with its floating interest rate, priority in the capital structure and sizeable equity cushions, offers extremely attractive relative and absolute value versus many other asset classes.

4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.

Please refer to pg. 6 and 10 of the presentation materials.



# Park Square Capital

Presentation to  
MWRA Retirement  
System

September 2023



**Private Debt  
Investor**  
DECADE AWARD

Lender of the Decade: Europe

**Private Debt  
Investor**  
DECADE AWARD

Junior Lender of the Decade:  
Europe

# Executive Summary

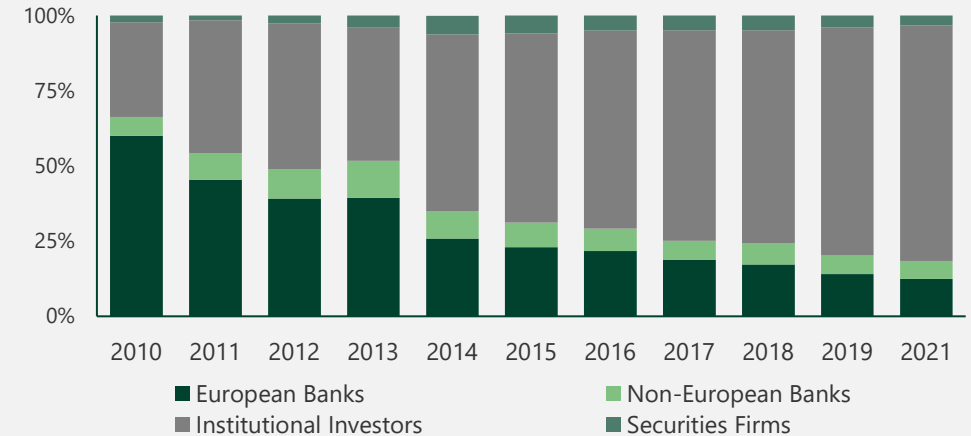
- Park Square Credit Opportunities is a \$3.9bn business investing in:
  - Anchor loans to Large-sized companies
  - Opportunistic secondary positions
  - Direct loans to larger middle market companies
  - Higher yielding debt
- MWRA has a \$3 million position in Credit Opps III (USD)
- The portfolio is well positioned for wind-down following the end of the reinvestment period in June 2022
- We are very pleased with the overall quality of the portfolio and the diversification by company, sector and geography
- The underlying assets are mainly floating rate and are benefiting from the higher interest rate environment
- The portfolio continues to outperform the benchmark leveraged loan indices by 270 bps p.a.
- Credit Opps III is performing well with a net IRR of 8.2%<sup>1</sup>, is fully invested and generating a steady cash yield

Notes: AUM based on current investable capital for funds in the investment period and Q2 2023 Fair Value for funds post investment period. Includes co-investment vehicles. FX as at commitment date. (1) Gross/Net IRRs for the Credit Opps III funds and ELP have benefitted from the use of a short-term subscription facility, the impact of which will decrease over time as the facility is repaid.

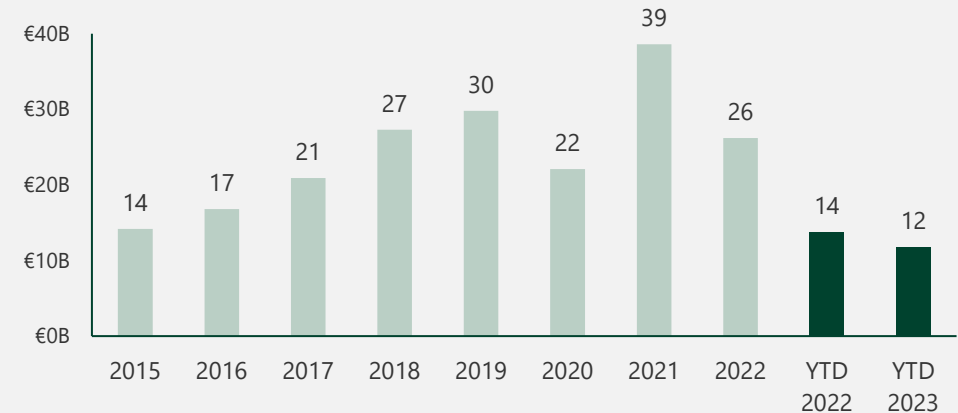
# Market Update

1. Bank's market share continues to decline and CLOs (the largest loan market investor) are under pressure
2. Given limited new issue supply, pricing in the secondary loan market has moved up materially with most quality names trading at par, and value has shifted to the primary market
3. After nearly 18 months of dislocation the syndicated loan new issue market has re-opened for high-quality borrowers
4. Capital remains scarce for large transactions and sponsors are turning to direct lending clubs to finance even larger deals
5. It continues to be a lenders market with improvements in terms, structure and pricing
6. A major emerging theme is refinancing transactions where sponsors need creative junior capital to reduce cash interest burdens on existing portfolio companies

Primary Market by Broad Investor Type<sup>1</sup>



Annual CLO Issuance<sup>2</sup>



Notes: Notes: (1) Source: LCD's Quarterly European Leveraged Lending Review 1Q23 2023 (2) Source: BofA Global Research, June 2023.

# Park Square At A Glance



## Leading independent credit provider<sup>1</sup> in Europe and US - \$13.8bn AUM<sup>2</sup>

Sole focus on private debt markets since 2004, with \$24.2bn invested across 204 companies



## Outstanding team with deep credit culture

114<sup>3</sup> staff across 8 offices, including 43<sup>3</sup> investment professionals. Partners have worked together at Park Square on average for 13 years.



## Strong, cycle-tested track record<sup>1</sup> with minimal loss rate

Bias towards high-quality credits combined with deep restructuring experience. Firmwide annualised loss rate of 0.07%<sup>4</sup>, tested through the GFC



## “High-touch” investment approach, focus on high-quality borrowers in defensive sectors

Rigorous PE style due diligence process



## Proven opportunistic strategy investing across market cycles

Strong track record investing across primary and secondary markets since 2004. Established ability to capitalise on market dislocation

## Key Competitive Advantages

- Unmatched discipline and rigor in diligence
- Sole focus on private credit with no conflicts
- Independent firm, majority owned by Partners
- Early mover in credit with track record since 2004
- Very low loss rates across market cycles
- Substantial cross-platform synergies with multi-product capability

# Credit Opportunities

Credit Opps III  
(USD) Update



# Fund Update

## COPS III (USD) Fund Statistics

- COPS III (USD) is well diversified across 49 investments
- W.A. EBITDA of \$244.9 million
- W.A. enterprise value of \$4.1 billion

## MWRA Position<sup>1</sup>

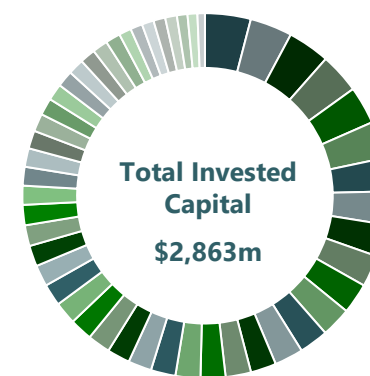
- Commitment amount \$3,000,000
- First Distribution: November 2018
- First Capital call: February 2018

Commitment amount	3,000,000
Capital Contribution	(2,700,021)
Distribution	692,156
Undrawn Capital Commitment	501,321
NAV (current value)	2,879,910
Net profit since inception	910,484

# COF III (USD) Q2'23 Overview

## Portfolio Valuation and Statistics

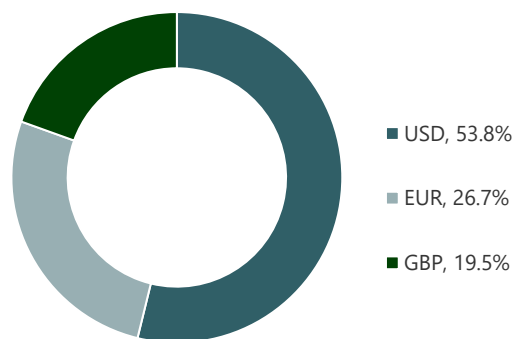
Number of Investments	49
Average size of investment (\$m)	26.7
W.A. cost	98.4%
Senior/Junior split	79.6% / 20.4%
W.A. EBITDA (\$m)	244.9
W.A. Enterprise Value (\$m)	4,069.2
W.A. equity cushion (%)	55.1%
W.A. Debt/EBITDA <sup>1</sup>	6.0x
W.A. YT3C	10.4%
Asset IRR	6.4%
Net IRR	8.2%



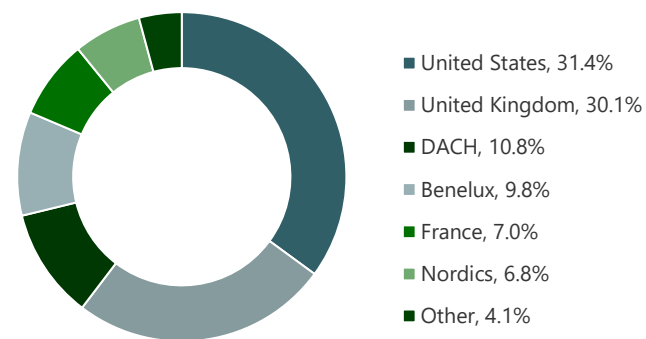
### Top 10 Deals:

- LGC
- Barentz
- Terreal
- Applied Systems
- Corialis
- Convergint
- Iris
- Ultimate Software
- Galderma
- IVC

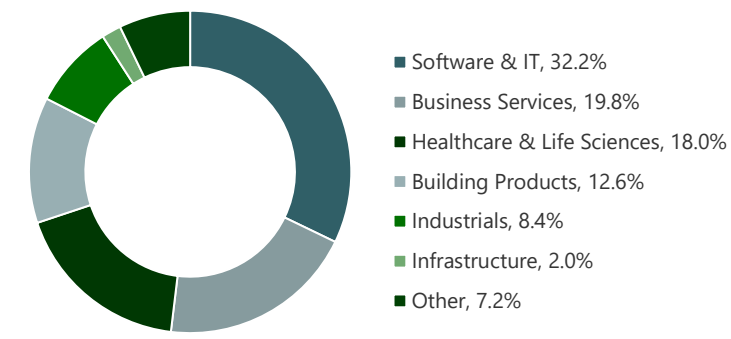
### Portfolio by Currency



### Portfolio by Country<sup>2</sup>



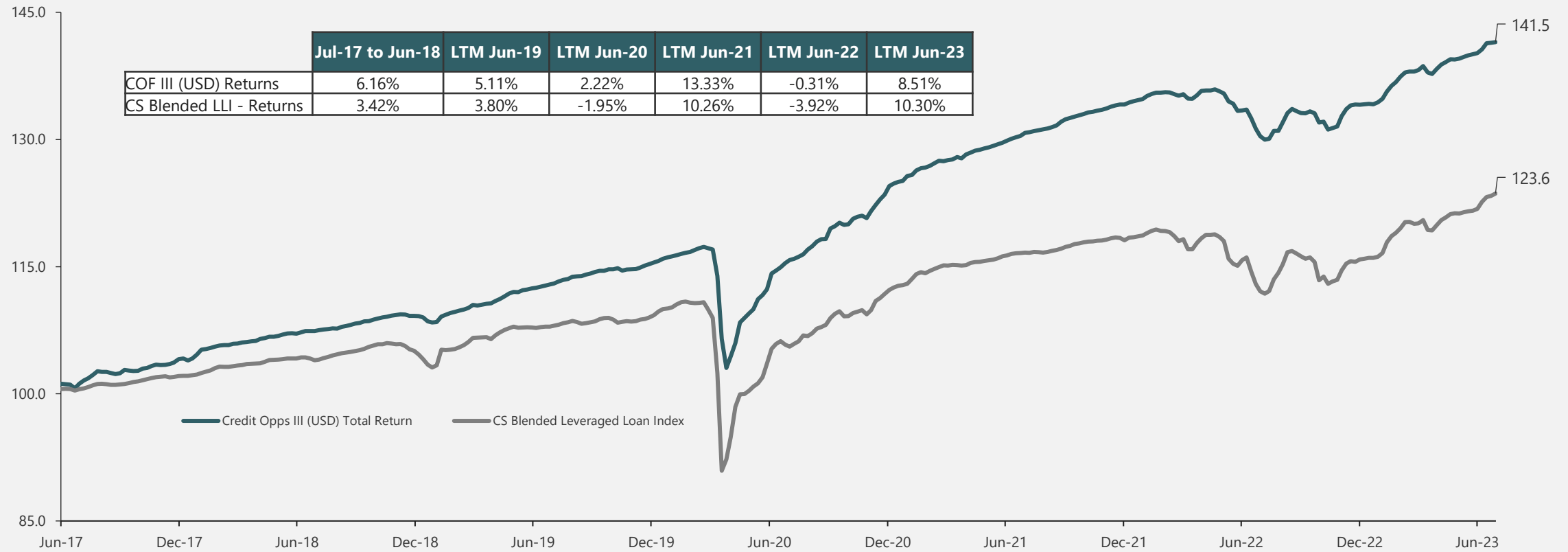
### Portfolio by Sector



Notes: Past performance does not predict future returns. Portfolio statistics as at 30 June 2023. (1) Leverage through tranche. (2) Based on company headquarters.

# Credit Opportunities III (USD)

Outperforming the CS Indices



Total returns as at 30 June 2023. Past performance does not predict future returns. The Blended LLI index reflects a 50% Western Europe LLI and 50% US LLI. The CS LLI exhibits similar characteristics as the Credit Opps return index.



# Appendix

APPENDIX

01

# MWRA Commitment Overview

## Massachusetts Water Resources Authority (MWRA) Employees Retirement System

Total Commitment: 3,000,000

Ending Unfunded Commitment: 501,321

Date of cash flow	Capital Contributions \$	True-up Interest \$	Distributions \$	Net asset value (NAV) \$	Cash flows and NAV \$
27/02/2018	(431,406)	-	-	-	(431,406)
13/07/2018	(345)	345	-	-	-
05/11/2018	(361,350)	-	-	-	(361,350)
08/11/2018	-	-	14,346	-	14,346
01/02/2019	-	-	21,515	-	21,515
04/03/2019	(361,350)	-	-	-	(361,350)
16/05/2019	-	-	17,929	-	17,929
01/07/2019	(198,742)	-	-	-	(198,742)
29/07/2019	-	-	25,818	-	25,818
30/08/2019	(325,227)	-	-	-	(325,227)
03/10/2019	(289,080)	-	-	-	(289,080)
04/11/2019	-	-	26,893	-	26,893
05/02/2020	-	-	32,272	-	32,272
25/03/2020	(289,080)	-	-	-	(289,080)
13/07/2020	(180,675)	-	-	-	(180,675)
03/08/2020	-	-	25,100	-	25,100
30/09/2020	(74,220)	-	-	-	(74,220)
16/11/2020	-	-	35,856	-	35,856
05/02/2021	-	-	39,083	-	39,083
17/05/2021	-	-	69,340	-	69,340
05/08/2021	-	-	36,937	-	36,937
03/11/2021	-	-	45,185	-	45,185
09/02/2022	(1,629)	-	58,975	-	57,346
04/03/2022	(186,917)	-	-	-	(186,917)
18/05/2022	-	-	38,216	-	38,216
09/08/2022	-	-	59,152	-	59,152
16/11/2022	-	-	40,867	-	40,867
14/02/2023	-	-	40,149	-	40,149
17/05/2023	-	-	64,523	-	64,523
30/06/2023	-	-	-	2,879,910	2,879,910
Total	(2,700,021)	345	692,156	2,879,910	

Notes: Cash flow schedule table for the quarter ended 30 June 2023.

Trade Secret and Strictly Confidential

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Park Square Capital, LLP is an authorised representative (number 001302431) of BK Consulting (Aust) Pty Ltd ACN 134 397 087 AFSL 334 906.



# Park Square Capital

September 2023



**Private Debt  
Investor**  
DECADE AWARD

Lender of the Decade: Europe

**Private Debt  
Investor**  
DECADE AWARD

Junior Lender of the Decade:  
Europe



September 2023

# **Cerberus Capital Management, L.P.**

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Provided at the specific request of:  
**New England Pension Consultants (“NEPC”)**

**Trade Secret and Proprietary and Confidential Business Information**



**Firm:** Cerberus Capital Management, L.P. (“Cerberus” or the “Firm”)

**Strategy/Product:** Cerberus Institutional Real Estate Partners III, L.P. (“CIREP III” or the “Fund”)

**Client:** MWRA Retirement System

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

**1. Have there been any changes in ownership or management in the past year?**

There has been no change in Firm ownership in the last year. The voting control and equity ownership of Cerberus Capital Management, L.P. is held by Stephen A. Feinberg directly and through controlled entities.

The Firm has made two senior-level hires in the past year. In April 2023, Isabelle Gold joined the Firm as the Deputy Chief Compliance Officer. In July 2023, Deirdre O’Connor joined the Firm as Chief Financial Officer (“CFO”); Jeff Lomasky (former CFO and 28-year veteran of the Firm) transitioned to the role of Vice Chairman.

**2. List firm AUM, net flows and accounts gained/lost for the past 5 years.**

The Firm’s AUM is approximately \$65 billion as of 6/30/23.<sup>1</sup> Historical AUM is outlined below, and we would be pleased to discuss further.

- 6/30/22: \$60 billion
- 6/30/21: \$56 billion
- 6/30/20: \$48 billion
- 6/30/19: \$42 billion

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<sup>1</sup> The Firm’s assets under management (“AUM”) is as of each respective quarter included herein. The AUM referenced herein represents the total Cerberus Funds AUM, excluding co-investments, but, depending on the type of fund, the AUM calculation would vary. For unlevered commitment funds in their investment period, AUM represents equity commitments, and during those funds’ post-investment period AUM represents, either adjusted cost or NAV, depending on the fund. The AUM of each multi-strategy fund is assigned across the relevant strategies in proportion to the percent of market value of the investments in the various strategies. For commitment funds with fund level leverage, AUM during the funds’ investment period is calculated based on equity commitments plus outstanding leverage and in the post-investment period based on NAV plus outstanding leverage. Outstanding leverage excludes subscription facilities. For evergreen funds, AUM represents NAV. For more information on the AUM calculations please reference the Cerberus AUM Chart, which may be provided upon request and is available on the Firm’s Intralinks datasite.



**3. Have there been any new or discontinued products in the past year?**

Cerberus continues to raise capital for new and existing products across the Firm's various strategies, and none of Cerberus' investment strategies have been discontinued in the past year. Cerberus' real estate platform is currently fundraising for the following funds:

- Cerberus Institutional Real Estate Partners VI, L.P.
- Cerberus Global NPL Fund II, L.P.

**4. Are any products capacity constrained?**

We do not believe any products across Cerberus' investment strategies are capacity constrained. Cerberus will continue to raise, and may look to raise, additional capital as needed, so that the Firm has an appropriate amount of capital to take advantage of market opportunities as they arise.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

As of June 30, 2023, neither the Firm, its affiliate entities nor any of its management personnel is (or has been) the subject of any pending litigation or investigation, other than those that have arisen in the ordinary course of the Firm's business, all of which, both individually and in the aggregate, if decided adversely to the Firm, would not have a material adverse effect on the Firm or any Cerberus Fund. A list of pending litigation can be viewed via Intralinks upon request.

***Current Regulatory Matters***

SEC Investigation

In October 2022, the SEC informed Cerberus that it is conducting a non-public, fact-finding investigation concerning investment adviser practices. Specifically, Cerberus was contacted with respect to the use of electronic communications by its employees for business purposes, including compliance with certain recordkeeping requirements. The SEC has stated that the existence of this matter should not be construed as an indication that any violation of law has occurred. The SEC sweep into employee electronic communication practices is on-going. Cerberus continues to cooperate with the SEC and to provide responses to the SEC's iterative requests. No claims are currently pending or threatened against Cerberus.

California Department of Financial Protection and Innovation Exam

In or around October 2021, the California Department of Financial Protection and Innovation commenced a routine examination of two of Cerberus Business Finance's ("CBF") entities licensed under the California Financing Law. One exam was closed with findings in June 2022, while the other remains open. The exam letter, as well as the Firm's response may be made available for viewing on Intralinks upon request. Additionally, in July 2022, the California Department of Financial Protection and Innovation initiated a routine examination of one of CBF's entities licensed under the California Financing Law. The exam remains open.

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

Cerberus has a DEI mission statement, which states, "We are committed to cultivating an authentically diverse and inclusive workplace where people of all backgrounds, identities, and perspectives can thrive equitably and feel a genuine sense of belonging. This commitment to diversity, equity, and inclusion is rooted in our appreciation of the unique set of perspectives and lived experiences our employees bring to Cerberus that enrich our culture, strengthen our community, and enhance our business. A fulfilled, engaged and thriving workforce, bringing a broad range of talents and viewpoints is the key ingredient to strong performance for our investors. Good culture and good citizenship are good business."



Please also see below our Commitment to Inclusion and Diversity and Equal Employment Opportunity statements, found in our Employee Handbook, which is available on the Firm's Intralinks datasite.

### **Commitment to Inclusion and Diversity**

The Firm is committed to creating and sustaining an inclusive and diverse work environment. Our inclusion and diversity initiatives are designed to attract, develop and advance the most talented individuals regardless of their race, gender, sexual orientation, religion, age, disability status or any other dimension of diversity and to further ensure that we create, foster and maintain a culture of inclusion, in which all of our employees feel welcome, respected and valued. All Employees have a responsibility to uphold these values. The Firm is committed to creating and sustaining an inclusive and diverse work environment. Our inclusion and diversity initiatives are designed to attract, develop and advance the most talented individuals regardless of their race, gender, sexual orientation, religion, age, disability status or any other dimension of diversity and to further ensure that we create, foster and maintain a culture of inclusion, in which all of our employees feel welcome, respected and valued. All Employees have a responsibility to uphold these values.

### **Equal Employment Opportunity**

The Firm is strongly committed to providing equal employment opportunities to all Employees and applicants for employment. The Firm will make all employment decisions for Employees and applicants without regard to race, creed, color, national origin, religion, gender, age, disability, marital status, sex (including pregnancy, gender identity and sexual orientation), alienage, citizenship, status as a Vietnam-era or special disabled veteran, or any other characteristic protected under any applicable federal law. In addition, the Firm complies with applicable state and local laws governing nondiscrimination in employment. This policy applies to all terms and conditions of employment, including, but not limited to, recruiting, hiring, placement, compensation, training and development, benefits, promotion, demotion, transfer, leaves of absence, discipline, termination, lay-off, or recall. All Employees, regardless of position, are required to adhere to the spirit as well as the letter of these practices.

The Firm's DEI Advisory Committee and the Operating/Management Advisory Committee supervise diversity, equity and inclusion efforts, both internally and externally, to ensure the steady and consistent progress across investment, operations and administrative teams. The Firm's DEI Advisory Committee is specifically comprised of a diverse group of senior leaders across Cerberus to oversee diversity initiatives and partnerships. The Firm instated a Head of Diversity, Equity, and Inclusion to lead these initiatives in January 2021.

Cerberus has professional development and career coaching for all employees including options for underrepresented talent. The Firm recently joined the Dyal x Mindr GP Mentorship Program, a cross-industry mentorship program for women. Women @ Cerberus provides workshops, networking, and resources for women across the Firm's global platform to aid in their career advancement. The Firm has also re-launched a leadership coaching program in 2023 that connects executive leadership coaches to women at the Firm for a six-month program aimed at women in the mid-levels of the Firm. The program builds off the coaching program we had previously launched in 2021 for women promoted to the Vice President level across our global offices.

The Firm also has the following affinity groups for further programming to support diverse professionals and junior talent at the Firm:

- Black @ Cerberus
- Hispanic or Latinx @ Cerberus
- Asian @ Cerberus
- Veterans @ Cerberus





- PRIDE @ Cerberus
- NextGen (30 and under) @ Cerberus

Additionally, Cerberus has established partnerships with organizations including, but not limited to, National Association of Securities Professionals (“NASP”), the Robert Toigo Foundation, Florida A&M University, Pension Real Estate Association Foundation (“PREA”), Sponsor for Educational Opportunities (“SEO”), Women Executives in Real Estate, St. Francis College, Wharton Veterans Club, 51 Vets, and Opportunity Network, to name a few examples. In addition, Cerberus is proud to partner with Wall Street Finance and Scholastic (“FAST”) Track Program for NASP-NY Chapter. Cerberus is also a Founding sponsor for NASP-NorCal chapter and is launching a partnership with NASP-SoCal. For more detail on these diverse pipeline partnerships, please see pages 10-15 of the 2022 DEI and CSR Annual Report.

The Firm has a variety of partnerships and programs dedicated to supporting diverse communities, students from low-income backgrounds, and supporting underrepresented groups in financial services. Cerberus partners with organizations including, but not limited to, City Harvest, GO Project, Guiding Eyes for the Blind, Challenge Day, Volunteers of America-GNY, and Make-a-Wish. For additional information on the Firm’s community engagement initiatives, please see pages 20-24 of the 2022 DEI and CSR Annual Report, available on the Firm’s Intralinks datasite. We would be pleased to discuss further at your convenience.

### Portfolio Management Team

#### 1. Have there been any changes in the portfolio management team in the past year?

Please see below for senior additions and departures (Managing Director and above) to Cerberus’ real estate investment team (the “Real Estate Team”) between 8/1/2022 and 8/1/2023:<sup>2,3</sup>

##### Additions – Managing Director and Above:

Name	Corporate Title	Reporting Location	Hire Date
Mike Keough	Managing Director	San Francisco	10/24/2022
Milan Arandelovic	Managing Director	Amsterdam	9/1/2022

##### Departures – Managing Director and Above:

Name	Corporate Title	Reporting Location	Departure Date
Chris Daniello	Managing Director	New York	12/31/2022
Glen Abbott	Managing Director	Chicago	9/16/2022

#### 2. Are there any expected changes to the team in the future (planned additions or departures)?

No material changes are expected at this time. As Cerberus continues to grow its business and expand its platforms, the Firm will hire additional staff on an as-needed-basis.

<sup>2</sup> Employee information is as of August 1, 2023 and is subject to change without notice. There can be no assurance that any of these professionals will remain with the Firm.

<sup>3</sup> Does not include employees that hold/held the corporate title of Director, Senior Vice President, Vice President, Assistant Vice President, Senior Associate, Associate or Analyst.



## Process

### 1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

There have been no material changes in the past year.

## Philosophy

### 1. Describe recent changes in investment philosophy, if any.

There have been no material changes to investment philosophy in the past year.

## Portfolio

### 1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please reference the attached 6/30/2023 CIREP III transparency report.

### 2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

Cerberus' real estate AUM is approximately \$17.5 billion as of 6/30/23.<sup>4,5</sup> Historical real estate AUM is outlined below, and we would be pleased to discuss further.

- 6/30/22: \$12.4 billion
- 6/30/21: \$13.5 billion
- 6/30/20: \$11.2 billion
- 6/30/19: \$10.8 billion

### 3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

Please reference the "Investor Profile" page of the attached 6/30/2023 CIREP III transparency report for a full limited partner breakdown for the Fund. The top five largest investors to CIREP III represent approximately 45% of aggregate capital commitments.<sup>6</sup>

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<sup>4</sup> Cerberus' real estate AUM is as of each respective quarter included herein. The AUM referenced herein represents the AUM of all direct real estate, real estate debt, commercial mortgage backed securities and assets, and NPL investments (including real estate NPLs, unsecured consumer and small/medium sized enterprise loans) held as of June 30, 2023 excluding co-investments but, depending on the type of fund, the AUM calculation may or may not account for unfunded commitments, leverage or NAV. The AUM calculation may vary if the fund is a commitment or evergreen fund, is in its liquidation period or investment period, and if there is fund level leverage (excluding the subscription facility balances). For unlevered commitment funds in their investment period, AUM represents equity commitments, and during those funds' post-investment period AUM represents either adjusted cost or NAV, depending on the fund. For commitment funds with fund level leverage, AUM during the funds' investment period is calculated based on equity commitments plus outstanding leverage and in the post investment period based on NAV plus outstanding leverage. Outstanding leverage excludes subscription facilities. For evergreen funds, AUM represents NAV. For more information on the AUM calculations please reference the Cerberus AUM Chart, which may be provided upon request and is available in the Cerberus Intralinks datasite.

<sup>5</sup> For Q2 2023, Real Estate AUM includes the percent of AUM attributable to the current market value of the multi-strategy vehicles that are not dedicated to real estate, but have an allocation to the real estate strategies.

<sup>6</sup> Aggregate capital commitments includes capital committed to the Fund by limited partners, the general partner and affiliates of the general partner.



### **Performance / Market Outlook**

- 1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

To be discussed on your meeting with the team on October 5, 2023.

- 2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

To be discussed on your meeting with the team on October 5, 2023.

- 3. Describe your market outlook and how strategy positioning is impacted by your views.**

To be discussed on your meeting with the team on October 5, 2023.

- 4. Could you please include a slide in your presentation that sows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

This will be included for your meeting with the team on October 5, 2023.



## IMPORTANT NOTICE

Cerberus Capital Management, L.P. Cerberus Capital Management, L.P. (“Cerberus Capital Management” and, together with affiliated management/general partner entities, operations companies and loan servicing companies, collectively, the “Firm” or “Cerberus”) is a global investment advisory firm that, among other things, provides investment advisory services to and manages private funds and accounts (each, individually, a “Cerberus Fund” and, collectively, the “Cerberus Funds”). Cerberus Capital Management is an investment adviser registered with the United States Securities and Exchange Commission under the Investment Advisers Act of 1940, as amended. The information contained herein does not constitute a complete description of the Firm’s investments or investment strategies and is for informational purposes only. A copy of the Firm’s Part 2A of Form ADV, which provides information about the Firm’s advisory services and fees, and Part 2B is available for review.

Purpose of Questionnaire. This questionnaire (the “Questionnaire”) has been prepared solely for the purposes of providing general background and other summary information regarding the Firm, Cerberus Institutional Real Estate Partners III, L.P. (“CIREP III” or the “Fund”) and the Cerberus Funds.

No Offer or Solicitation. The information contained herein is not, and should not be construed as, an offer to sell or the solicitation of an offer to buy any securities (including, without limitation, an interest in, or shares of, any of the Cerberus Funds). Any such offer or solicitation may be made only by means of the Confidential Private Placement Memorandum (the “PPM”) for the relevant Cerberus Fund. A PPM, which will be furnished upon request, contains important information about investing in the applicable Cerberus Fund, including risk factors associated with making such an investment. A PPM, if requested and furnished, should be read carefully by all investors.

The information contained herein is provided for informational purposes only, is not complete, and does not contain certain material information about Cerberus and Cerberus Funds, including important disclosures and risk factors, and is subject to change without notice. This document is not intended to be, nor should it be construed or used as marketing material or an offer to sell, or a solicitation of any offer to buy an interest in any entity, which offer may only be made at the time a qualified offeree receives a confidential private offering memorandum describing an offering (a “memorandum”). In the event of any conflict between information contained herein and information contained in a memorandum, the information in the memorandum will control and supersede the information contained herein. Terms used but not defined herein will have the meaning set forth in the memorandum.

Confidentiality; Use. Any reproduction or distribution of this Questionnaire or a PPM, in whole or in part, or the disclosure of the contents hereof or of a PPM, or the use of these materials for any other purposes other than those described above, without the prior written consent of the Firm, is prohibited.

Summary Information Only; Not Intended to be Complete. The Cerberus Funds have varying investment objectives and strategies and limitations on investment. This Questionnaire presents only summary



information with respect to the Firm and the Cerberus Funds and is not intended to be a complete presentation of the information that would be required to be evaluated by a prospective investor in any Cerberus Fund. The information contained herein does not purport to present a complete picture of the financial position, activities, results, actions and/or plans of the Firm or any Cerberus Fund. There are numerous factors related to the markets in general or to the implementation of any specific investment program which cannot be fully accounted for in the preparation of the summaries presented herein. No conclusion of any type or kind should be drawn regarding the future performance of any Cerberus Fund based on the information presented herein.

Source of Information; No Obligation to Update. Factual information set forth herein is based on information reasonably available to the Firm as of the date of this Questionnaire, unless otherwise indicated. The delivery of this Questionnaire shall not, under any circumstances, create any implication that the information contained herein is correct, including as of any time subsequent to the date of this Questionnaire. Further, the Firm does not undertake an obligation to update such information at any time after such date. Unless otherwise stated herein, information is current as of September 2023.

Delineated Categories. The various categories and classifications noted herein were determined in the opinion of the Firm based on the best information available to the Firm as of the time of preparation of this Questionnaire. The categories and classifications represent the opinion of the Firm and could be materially different from other third-party classification systems.

Characteristics of the Cerberus Funds. This Questionnaire sets forth certain expected characteristics of the Cerberus Funds. All information is for illustrative purposes only. Material changes may be made to the terms and general parameters of the Cerberus Funds. The actual structure of the Cerberus Funds, including assets to be acquired and the composition of each Cerberus Fund's portfolio, will be determined based on market conditions and other factors applicable over time. The actual composition of each Cerberus Fund's portfolio may therefore be materially different from the parameters presented in this Questionnaire and may change over time. There are no loss limits and generally no diversification requirements imposed on any Cerberus Fund except as may be expressly set forth in each Cerberus Fund's organizational documents and, if applicable, PPM.

Ability to Alter Strategies Employed by Firm. Notwithstanding the information presented in this Questionnaire, investors should understand that the Firm is not limited with respect to the types of investment strategies it may employ or the markets or instruments in which it may invest, except as may be expressly set forth in the terms of the offering and governance documents of any given Cerberus Fund, including each Cerberus Fund's organizational documents and, if applicable, PPM. Over time, markets change and the Firm seeks to capitalize on attractive opportunities wherever they might exist. Depending on conditions and trends in the capital markets and the economy generally, the Firm may pursue objectives or employ techniques it considers appropriate and in the best interest of the Cerberus Funds, which may differ from the objectives, techniques or investments presented in this Questionnaire. In addition, no strategy (or breadth of available resources) can guarantee future results.



Forward-Looking Statements. This Questionnaire contains certain forward-looking statements, which may be identified by the use of such words as “believe,” “expect,” “anticipate,” “should,” “planned,” “estimated,” “potential,” “outlook,” “forecast,” “plan” and other similar terms. Examples of forward-looking statements include, but are not limited to, estimates with respect to financial condition, results of operations and success or lack of success of the Firm’s investment strategies. All are subject to various factors, including, but not limited to, general and local economic conditions, changing levels of competition within certain industries and markets, changes in interest rates, changes in legislation or regulation and other economic, competitive, governmental, regulatory and technological factors affecting the Firm’s operations, and the Cerberus Funds’ operations, any or all of which could cause actual results to differ materially from projected results. The information herein is not intended to provide, and should not be relied upon for, accounting, legal or tax advice or investment recommendations.

Risk of Investment. An investment in the Fund, or any Cerberus Fund, is speculative and involves a significant degree of risk. The Cerberus Funds are designed for sophisticated investors who are able to bear a substantial loss of capital and for whom any one of the Cerberus Funds, including the Fund, is not a complete investment program. There is no assurance that the Fund’s, or any Cerberus Fund’s objectives will be achieved. Potential investors are urged to read the statement of risks associated with an investment in a Cerberus Fund set forth in the fund PPM for a description of certain factors that may affect the performance of the Cerberus Funds and that should be considered before making an investment in any Cerberus Fund. The Fund’s PPM has been (or will be) made available to you and can be provided upon request.

Market Conditions. The capital markets have experienced great volatility and financial turmoil. Moreover, governmental measures undertaken in response to such turmoil (whether regulatory or financial in nature) may have a negative effect on market conditions. General fluctuations in the market prices of securities and economic conditions generally may reduce the availability of attractive investment opportunities for the Fund (or any Cerberus Fund) and may affect the Fund’s ability to make investments. Instability in the securities markets and economic conditions generally (including a slow-down in economic growth and/or changes in interest rates or foreign exchange rates) may also increase the risks inherent in the Fund’s investments and could have a negative impact on the performance and/or valuation of the portfolio companies. The Fund’s performance can also be affected by deterioration in the capital markets and by market events, which, among other things, can impact the public market comparable earnings multiples used to value privately held portfolio companies and investors’ risk-free rate of return. Movements in foreign exchange rates may adversely affect the value of investments in portfolio companies and the Fund’s performance. Volatility and illiquidity in the financial sector may have an adverse effect on the ability of the Fund to sell and/or partially dispose of its portfolio company investments. Such adverse effects may include the requirement of the Fund to pay break-up, termination or other fees and expenses in the event the Fund is not able to close a transaction (whether due to the lenders’ unwillingness to provide previously committed financing or otherwise) and/or the inability of the Fund to dispose of investments at prices that Cerberus believes reflect the fair value of such investments. The impact of market and other economic events may also affect the Fund’s (or any Cerberus Fund’s) ability to raise funding to support its investment objective.



For further detail on Cerberus' privacy policy please refer to <https://www.cerberus.com/privacy-policy/>.

*Commitment Facilities.* The use of commitment facilities can distort Fund performance. Delays in calling capital from investors will enhance the gross IRR of the Fund and create interest and other expenses for investors. These expenses may nullify any positive leverage impact on the performance of the Fund if the deals included do not perform well. Had the Fund not used a commitment facility, the gross IRR would have been lower. Incentive fees can be accelerated by the use of commitment facilities, which would decrease returns to investors.

Some deals cannot be completed using the commitment facility given tax considerations for certain investors. Tax considerations will therefore limit the effectiveness of the commitment facility for the manager's intended use for investment and cash management purposes. The use of commitment facilities may also pose legal risks for investors, including transfer restrictions, documentation requests, other requirements of lenders, amongst others.

**cerberus**

# **Quarterly Financial Overview**

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

**June 30, 2023**





## DISCLOSURE

*Cerberus Capital Management, L.P.* Cerberus Capital Management, L.P. (together with its investment management, general partner affiliates and the Cerberus Operations and Advisory Company, LLC (“COAC”) “Cerberus” or the “Firm”) is an investment adviser registered with the Securities and Exchange Commission under the Investment Advisers Act of 1940. The Firm, among other things, provides investment advisory services to and manages private funds and accounts (collectively, the “Funds and Accounts”), including Cerberus Institutional Real Estate Partners III, L.P. (the “Fund”).

*Distribution of Financial Overview.* This Report is being furnished on a confidential basis to existing investors in one or more of the Funds and Accounts in order to provide investors with increased information and transparency with respect to some of the investment activities of the Funds and Accounts, and may also from time to time be provided to qualified potential investors in the Funds and Accounts. [Where applicable, reports are provided to potential investors only for illustrative purposes. This Report includes confidential, proprietary and trade secret information. By accepting this Report, each recipient agrees that (i) no portion of this Report may be reproduced or distributed in any format without the prior express written consent of Cerberus, (ii) it will not copy, reproduce or distribute this Report, in whole or in part, to any person or party, and (iii) it will keep confidential all information contained herein that is not already public.]

*Confidentiality and Purpose.* Any reproduction or distribution of this Report, as a whole or in part, or the disclosure of the contents hereof, without the prior written consent of the Firm, is prohibited. By accepting receipt of this Report, the recipient agrees that it will limit access to this Report to only those of the recipient’s employees, agents, consultants or third party advisors having a need to know the information contained herein and who are bound by confidentiality obligations at least as restrictive as those stated herein. By accepting receipt of this Report, the recipient further agrees to (i) protect the information contained herein from misuse of any kind and (ii) immediately notify the Firm in writing upon discovery of any unauthorized disclosure by the recipient of the information contained herein.

The information contained herein is provided for informational purposes only, is not complete, and does not contain certain material information about Cerberus, the Funds or certain Funds and Accounts, including important disclosures and risk factors associated with an investment in the Fund, and is subject to change without notice. Information set forth herein is based upon information reasonably available to Cerberus as of the date of these materials. The delivery of this information shall not, under any circumstances, create any implication that the information contained herein is correct in all respects, including as of any time subsequent to the date hereof, and Cerberus does not undertake any obligation to update such information at any time after such date. Opinions, estimates and information expressed herein are as of the date of this Presentation (or as of such other date noted herein) and are subject to change without notice. This Report does not constitute a comprehensive report on the status and prospects of the Fund.

Nothing contained herein should be construed as tax, accounting or legal advice or an investment recommendation. Each recipient of this document (and each of the employees, representatives or other agents of such recipient) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transactions contemplated by these materials and other related materials (including opinions or other tax analyses) that are provided to such recipient relating to such tax treatment and structure. For this purpose, the tax treatment of a transaction is the purported or claimed U.S. federal income tax treatment of the transaction and the tax structure of a transaction is any fact that may be relevant to understanding the purported or claimed U.S. federal income tax treatment of the transaction.

*Advisory Services of the Firm.* The information contained herein does not constitute a complete description of the Firm’s investments or investment strategies and is for informational purposes only. A copy of the Firm’s current written disclosure statement regarding its advisory services and fees is available for investor review upon request through the Firm’s secure website.

*No Offer or Solicitation.* The Report is not intended to be, nor should it be construed or used as investment advice or an offer to sell, or a solicitation of any offer to buy, an interest in any entity, which are only made to qualified investors pursuant to the applicable offering materials and organizational documents (the “Offering Documents”) of a Fund. Any indications of interest from recipients in response to the Report involve no obligation or commitment of any kind. This Report is qualified in its entirety by the more detailed information in the Offering Documents of each Fund. The Offering Documents include the private placement memorandum of the Fund (and any applicable supplements thereto), which includes important information about the risks of an investment in the Fund.

*Fund Performance Information.* IRR (“IRR”) is the annualized internal rate of return by reference to the daily cash flows to and from the Funds in respect of every security acquired by the Fund (or the applicable series thereof) and associated currency hedges, credit default swaps and margin account interest. IRRs since inception include returns that are determined on a realized basis, and with respect to the investments that have not been realized, on a mark-to-market basis. Generally, investments are marked-to-market based on the Firm’s determination of fair value and consistent with its policy and procedures governing valuation. Kroll and Houlihan Lokey review the valuation of a substantial number of the Fund and Accounts’ private investments twice a year. The actual realized return on the unrealized investments will depend, among other factors, on the value of the investments at the time of disposition, any related transaction costs and manner of disposition. All performance data herein includes the reinvestment of dividends and other earnings.

The investment performance as it relates to the Funds and Accounts summarized herein is historic and reflects an investment for a limited period of time. The performance results do not reflect an investment in the Funds and Accounts (unless expressly stated otherwise herein). Past performance is not necessarily indicative of future results. Portfolio Gross IRR has not been reduced for Fund and Account level expenses, management fees and performance-based compensation. Accordingly, if the Funds and Accounts or any single Fund or Account achieves the same gross performance as shown herein, investors’ returns will be lower as a result of the application of such expenses, management fees and performance-based compensation. Net performance data herein has been reduced for application of Fund and Account level expenses, management fees and performance-based compensation attributable to fee-paying Limited Partners (based on the actual expenses, fees and performance compensation applicable to fee-paying Limited Partners). Given the variability of fee rates between Limited Partners, such “blended” net performance figures are not reflective of the highest management fee and performance-based compensation applicable for the Fund, which would further reduce net returns reflected herein. Net performance data, therefore, does not represent the actual results of any particular investor, which will likely materially differ from the net performance figures herein due to a number of factors, including, without limitation, timing differences between subscriptions, participation in investments and the actual management fees, performance compensation and expenses payable in respect of such investor.

*Fund Financial Information.* This Report presents unaudited financial information, including but not limited to the Statement of Assets, Liabilities and Partners’ Capital, the basis of presentation for investments based upon Generally Accepted Accounting Principles (“GAAP”), and certain information describing the increase in Partners’ Capital from operations. This information is subject to change and could change materially based upon a number of factors.

## DISCLOSURE

**Exposure Analysis.** This Report presents exposure analysis in various ways including geography, strategy, asset class, sector, industry and industry segment. The geographic characterization has been determined based upon the location in which the reference security was issued or other relevant factors determined by the Firm in its reasonable discretion based upon the best information available to the Firm as of the time of this Report. This could be materially different from the underlying geographic exposure of the security and other third-party classification systems may assign a different geographic classification. The strategy, trading desk and asset class categories have been determined based upon the best information available to the Firm as of the time of this Report. The sector, industry and industry segment categories have been determined by the Firm based upon the Global Industry Classification Standard (“GICS”) developed by Morgan Stanley Capital International and Standard & Poors. These classifications represent the opinion of the Firm and could be materially different from other third-party classification systems. Certain securities owned by the Firm are not classified under the GICS system and have been indicated as such in the body of this Report.

**Portfolio Investments of the Funds and Accounts.** This Report presents summary information with respect to the performance, activities and operating results of many of the investments of one or more Funds and Accounts. Not all of the Funds and Accounts, however, have an interest in each of the investments included in this Report. The Firm advises multiple Funds and Accounts, which have varying investment objectives and strategies and limitations on investment.

**Certain Investments Excluded.** Investments made by one or more of the Funds and Accounts with a fair value in any individual fund (determined in accordance with the Firm’s valuation policies and procedures) as of the date of this Report of less than \$10 million are excluded from this Report. Investments may not necessarily have a fair value of \$10 million in the Fund covered by this report.

**Public Companies Excluded.** Investments of one or more of the Funds and Accounts in companies that have a class of equity securities registered under the Securities Exchange Act of 1934, as amended, or which are the subject of a pending registration statement filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended, are excluded from certain sections of this Report.

**No Express or Implied Nexus between Portfolio Companies and the Funds and Accounts.** The portfolio companies identified herein represent different types of securities and instruments, and represent a wide variety of the respective issuer’s or company’s capital structure. In addition, the securities and instruments of the portfolio companies identified herein are often held by the Funds and Accounts through one or more special purpose vehicles. As a result, no conclusion should be drawn with respect to any specific legal or ownership nexus between one or more Funds and Accounts and any of the issuers or companies included in this Report.

**Risks of Investing.** Different types of investments (including investments in different types of securities and different parts of the capital structure of an issuer or company) involve varying degrees of risk. Investors should clearly understand the significant degree of risk involved with investing in any alternative investment strategies, such as those employed by the Firm on behalf of the Funds and Accounts. Alternative investment strategies are available only to qualified investors who have reviewed detailed information concerning investment terms and risks.

**Ability to Alter Strategies Employed by the Firm.** Notwithstanding the information presented in this Report, investors should understand that the Firm is not limited with respect to the types of investment strategies it may employ or the markets or instruments in which it may invest (subject to the terms of the offering and governance documents of any given Fund or Account). Over time, markets change and the Firm seeks to capitalize on attractive opportunities wherever they might exist.

Depending on conditions and trends in the capital markets and the economy generally, the Firm may pursue objectives or employ techniques it considers appropriate and in the best interest of the Funds and Accounts, which may differ from the objectives, techniques or investments presented in this Report.

**Forward-Looking Statements.** Statements contained in this Report that are not historical facts are based on current expectations, estimates, projections, opinions, and/or beliefs of Cerberus. Projected, target or underwritten performance is not necessarily indicative, or a guarantee, of future results, and there can be no assurance that Cerberus will be able to implement its investment strategy or achieve its investment objectives or that the returns achieved by any Fund or investment will equal or exceed any projected returns presented herein. Any projected, target, underwritten or other estimated future returns set forth herein (the “Projections”) are hypothetical, have been prepared and are set out for illustrative purposes only, and do not constitute a forecast. They have been prepared based on Cerberus’ current view in relation to future events and various estimations and assumptions made by Cerberus or its affiliates, including estimations and assumptions about events that have not yet occurred. Such estimations and assumptions may require modification as additional information becomes available and as economic and market developments warrant. Any such modification could be either favorable or adverse. While the Projections are based on assumptions that Cerberus believes are reasonable under the circumstances, they are subject to uncertainties, changes (including changes in economic, operational, political, legal, tax and other circumstances) and other risks, including, but not limited to, broad trends in business and finance, tax and other legislation affecting the investments, monetary and fiscal policies, interest rates, inflation, market conditions, the level and volatility of trading markets, the availability and cost of short-term or long-term funding and capital, all of which are beyond Cerberus’ control and any of which may cause the relevant actual, financial and other results to be materially different from the results expressed or implied by such Projections. Industry experts may disagree with the estimations and assumptions used in preparing the Projections.

In addition, no representation or warranty is made with respect to the reasonableness of any estimates, forecasts, illustrations, prospects, or returns, which should be regarded as illustrative only, or that any profits will be realized. Certain information contained in this Report constitutes “forward looking statements” that can be identified by the use of forward-looking terminology such as “may,” “will,” “should,” “expect,” “anticipate,” “estimate,” “intend,” “continue,” or “believe” or the negatives thereof or other variations thereon or comparable terminology. Any forward-looking statements included herein are based on Cerberus’ current opinions, assumptions, expectations, beliefs, intentions, estimates or strategies regarding future events, are subject to risks and uncertainties, and are provided for informational purposes only. Actual and future results and trends could differ materially, positively or negatively, from those described or contemplated in such forward-looking statements. Moreover, actual events are difficult to project and often depend upon factors that are beyond the control of Cerberus. Given these uncertainties, no reliance should be placed on such forward-looking statements. No forward-looking statements contained in this Report constitute a guarantee, promise, projection, forecast or prediction of, or representation as to, the future and actual events may differ materially. Cerberus neither (i) assumes responsibility for the accuracy or completeness of any forward-looking statements, nor (ii) undertakes any obligation to update or revise any forward-looking statements for any reason after the date of this Report. Neither the delivery of this Report at any time nor any sale of interests in a Fund shall under any circumstances create an implication that the information contained herein is correct as of any time after the earlier of the relevant date specified herein and the date of this Report. As of the date of this Report, COVID-19 continues to affect global commercial activity. The ultimate impact of COVID-19 is not yet certain and remains difficult to assess. As a result, the investment opportunities and returns that may be achieved by Cerberus and/or the Funds may be materially different than those available and/or achievable prior to COVID-19.

## DISCLOSURE

The prior investments referenced in this Report are provided for illustrative purposes only it should not be assumed that investments made for any other Funds or Accounts will be comparable in quality, terms, strategy, or performance to the investments described herein. The investment performance herein is historic and reflects an investment program for a limited period of time. The performance data set forth herein, includes the reinvestment of dividends and other earnings, and the net figures reflect the deduction of all applicable expenses, including management fees and incentive allocations. Such performance results have not all been audited or realized and should not be relied upon as such. The valuations of unrealized investments are determined on a fair value basis in accordance with the Cerberus valuation policies and procedures. There can be no assurance that unrealized investments will be realized at the valuations used to calculate the performance information contained herein, as actual realized returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations used to calculate the performance information contained herein are based. The performance data presented herein, if any, represents interim Fund-level returns, and is not an estimate of any specific investor's actual performance, which will likely be materially different from such performance, due to, among other things, timing differences between capital activity, the actual management fees and incentive allocations, and other expenses payable in respect of such investor.

**Source of Information; No Obligation to Update or Continue Reports.** Certain of the information contained herein, particularly in respect of market data, has been obtained from third-party sources. While Cerberus believes such sources to be reliable, it has not updated any such information through the date hereof or undertaken any independent review of information provided by third parties. None of Cerberus or their respective affiliates makes any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness, or completeness of any of the information contained herein (including but not limited to economic, market, or other information) obtained from third parties, and each expressly disclaims any responsibility or liability therefor.

**Performance Overview.** The information contained in the performance overview is for your use only and does not purport to present a complete picture of the financial position, activities, results, strategies and/or plans of the Fund. There are numerous factors related to the markets in general or to the implementation of any specific investment program which cannot be fully accounted for in the preparation of the brief summary presented in the performance overview. The information contained in the performance overview contains views and opinions of certain market conditions and is subject to change without notice. No conclusion of any type or kind should be drawn regarding the future performance of the Fund based upon the information presented in the performance overview. It should not be assumed that any of the holdings, transactions or strategies discussed in the performance overview, or that the specific investments of the Fund will be profitable, either individually or in the aggregate.

**Summary Information Only.** The information contained herein does not purport to present a complete picture of the financial position, activities, results, actions and/or plans of the portfolio companies identified herein, the Firm or the Funds and Accounts. There are numerous factors related to the markets in general or to the implementation of any specific investment program which cannot be fully accounted for in the preparation of the portfolio company summaries presented herein. Moreover, the investments described herein do not represent the complete portfolios of any Fund or Account as of the date of this Report or at any other time. Because the portfolio companies described herein do not represent the complete portfolios of any Fund or Account, the performance information does not represent actual returns of any one Fund or Account or all Funds and Accounts (unless expressly stated otherwise herein). No conclusion of any type or kind should be drawn regarding the performance of any Fund or Account based upon the information presented herein.

**Past Performance Not Indicative of Future Results or Results of the Funds and Accounts.** It should not be assumed that any of the holdings/transactions discussed herein were or will be profitable, or that the investment decisions the Firm makes in the future will be profitable or will equal the investment performance of the investments discussed herein. Past performance is not indicative of and not a guarantee of future results. The performance information presented is not necessarily comparable to, indicative of, or a guarantee of the future results of the Funds and Accounts or any single Fund or Account. No representation is being made that any Fund or Account has, will or is likely to achieve profits or losses similar to those shown for the portfolio companies identified herein. In fact, there will be differences between the performance results indicated herein and the actual results achieved by any particular Fund or Account.

**Unaudited and Unrealized Returns.** The investment performance as it relates to the Funds and Accounts includes unaudited valuations with respect to investments that have not been realized. The valuations of unrealized investments are determined on a fair value basis in accordance with the Firm's valuation policies and procedures. There can be no assurance that unrealized investments will be realized at the valuations used to calculate the performance information contained herein, as actual realized returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations used to calculate the performance information contained herein are based.

**No Investment Advice.** The assessments and commentary expressed herein represent the opinions of the Firm as of the date of this Report in the context of the Firm's investment thesis and are for general information only. The assessments (as well as the other information) presented herein are not intended to provide specific advice or recommendations but rather, a summary of the Firm's opinions from which strategies are built or implemented, taking into account the specific objectives of each Fund and Account.

**Outlooks.** The outlooks expressed herein represent the opinion of the Firm and are based upon information reasonably available to the Firm as of the date of this Report and are for general information only. The outlooks expressed herein have been obtained from sources that the Firm believes to be reliable; however, these sources cannot be guaranteed as to their accuracy or completeness. The outlooks expressed herein also constitute forward-looking statements.

**Comparables.** Comparable companies are included in this presentation only as a context reflecting general market results during the depicted period or as of the specified date. The comparison of any portfolio company to a single other issuer/company may be inappropriate because the portfolio company's operations may materially vary from the comparable company or market as a whole.

**Allocations Among Funds and Accounts.** The allocations among the Funds and Accounts represent the allocation by fair value (calculated in accordance with the Firm's valuation policies and procedures) as of the date of this Report and are subject to change. The allocations are for illustrative purposes only and are not necessarily indicative of the particular allocations/strategies employed across the Funds and Accounts for all or any given investment or strategy at any given time. The tables titled "Cerberus Fund Allocation" or "Investment Allocation" contain abbreviations describing each fund as follows:

Cerberus 17 RM Fund, L.P.: C17R  
 Cerberus 1776 Fund, L.P.: C1776  
 Cerberus 20 RM Fund, L.P.: 20RM  
 Cerberus 2112 Loan Opportunities Fund, L.P.: C2112  
 Cerberus 9990 Levered Loan Opportunities Master Fund, L.P.: 9990M  
 Cerberus ACDC Partners, L.P.: ACDC  
 Cerberus AD Partners, L.P.: CADP  
 Cerberus AEN Partners, L.P.: CAEN  
 Cerberus All-Weather Credit Opportunities Fund, L.P.: CAWCO  
 Cerberus AMIST Levered Loan Opportunities Master Fund, L.P.: CAMM  
 Cerberus AN Master Fund, L.P.: CANM  
 Cerberus AOX Loan Opportunities Fund, L.P.: AOXF  
 Cerberus AUS Levered Loan Opportunities Fund, Ltd.: AUS  
 Cerberus AUS SA Levered Loan Opportunities Master Fund, L.P.: AUSOSA  
 Cerberus C-1 Levered Loan Opportunities Master Fund, L.P.: C1CM  
 Cerberus CAL II Partners, L.P.: CAL2  
 Cerberus CAL III Partners, L.P.: CAL3  
 Cerberus Cavaliers Credit Master Fund, L.P.: CCMF  
 Cerberus CC Dislocation Master Fund, L.P.: CCDMF  
 Cerberus CDP IC Partners, L.P.: CDP  
 Cerberus Centerpiece GNPL Fund II, L.P.: CENT2  
 Cerberus CMBS Opportunities Fund B, L.P.: CCOFB  
 Cerberus CMBS Opportunities Fund, L.P.: CCOF  
 Cerberus CMBS Parallel Fund, L.P.: CCPF  
 Cerberus CMBS-1 Master Fund, L.P.: CMBS-1  
 Cerberus Cornerstone Homes Fund, L.P.: CCHF  
 Cerberus Corporate Credit Fund, L.P.: CCCMF  
 Cerberus Corporate Credit Solutions Fund II, L.P.: CCSF2  
 Cerberus Corporate Credit Solutions Fund, L.P.: CCSF

## DISCLOSURE

Cerberus CP Partners, L.P.: C CCP  
 Cerberus CT Partners, L.P.: CCTP  
 Cerberus DH Partners, L.P.: CDHP  
 Cerberus EUF 1 Fund, L.P.: CEUF1F  
 Cerberus FSBA Corporate Credit Fund, L.P.: CFCC  
 Cerberus FSBA Levered Loan Opportunities Fund, L.P.: FSBA  
 Cerberus Global NPL Fund II, L.P.: GNPL2  
 Cerberus Global NPL Fund, L.P.: GNPL  
 Cerberus Global Private Equity Partners, L.P.: CGPE  
 Cerberus Global Residential Loan Strategy Fund, L.P.: GRSF  
 Cerberus Global Residential Mortgage Opportunity Fund, L.P.: RMBS  
 Cerberus GOHL Fund, L.P.: GOHL  
 Cerberus GSI Europe Partners, L.P.: CGSI  
 Cerberus HH Partners, L.P.: CHHP  
 Cerberus IC NPL Fund, L.P.: CINF  
 Cerberus ICQ Levered Loan Opportunities Fund, L.P.: ICQ  
 Cerberus ICQ Offshore Loan Opportunities Fund, L.P.: CICQM  
 Cerberus Income Levered Loan Opportunities Master Fund, L.P.: CILM  
 Cerberus Institutional Partners (International), L.P. – Series 1: CIPI  
 Cerberus Institutional Partners V, L.P.: CIP-5  
 Cerberus Institutional Partners VI, L.P.: CIP-6  
 Cerberus Institutional Partners VII, L.P.: CIP-7  
 Cerberus Institutional Partners, L.P. – Series 4: CIP-4  
 Cerberus Institutional Real Estate Partners III, L.P.: CIREP-3  
 Cerberus Institutional Real Estate Partners IV, L.P.: CIREP-4  
 Cerberus Institutional Real Estate Partners V, L.P.: CIREP-5  
 Cerberus Institutional Real Estate Partners VI, L.P.: CIREP-6  
 Cerberus Institutional Real Estate Partners, L.P. – Series 2: CIREP-2  
 Cerberus International II, L.P.: CI2  
 Cerberus International, Ltd. and Cerberus International SPV, Ltd. combined: CI  
 Cerberus KRS Levered Loan Opportunities Fund, L.P.: CKRS  
 Cerberus Levered Loan Opportunities Fund II, L.P. (Onshore): CLL Onshore 2  
 Cerberus Levered Loan Opportunities Fund III, L.P. (Onshore): CLL Onshore 3  
 Cerberus Levered Loan Opportunities Fund IV, L.P.: CLL4  
 Cerberus Levered Loan Opportunities Fund V, L.P.: CLL5  
 Cerberus MA Partners, L.P.: CMAP  
 Cerberus Manitou Residential Loan Fund, L.P.: CMAN  
 Cerberus MG Fund, L.P.: CMGF  
 Cerberus NB Levered Loan Opportunities Master Fund I, L.P.: CNBM  
 Cerberus ND Private Credit Fund, LLC: NDPC  
 Cerberus NJ Credit Opportunities Fund L.P.: CNJ Credit  
 Cerberus Offshore Levered Loan Opportunities Fund II, Ltd.: CLL Offshore 2  
 Cerberus Offshore Levered Loan Opportunities Fund III, L.P.: CLL Offshore 3  
 Cerberus Offshore Levered Loan Opportunities Master Fund IV, L.P.: LO4M  
 Cerberus Offshore Unlevered Loan Opportunities Master Fund IV, L.P.: UO4M  
 Cerberus Offshore Unlevered Loan Opportunities Master Fund V, L.P.: UO5M  
 Cerberus OT Partners II, L.P.: COT2  
 Cerberus OT Partners, L.P.: COTP  
 Cerberus Partners II, L.P.: CP2  
 Cerberus Partners, L.P. and Cerberus SPV, LLC combined: CP  
 Cerberus PEM NPL Fund, L.P.: CPEM  
 Cerberus PNC Senior Loan Fund, L.P.: CPNC  
 Cerberus PSERS Levered Loan Opportunities Fund, L.P.: PSERS  
 Cerberus PW Partners, L.P.: CPWP  
 Cerberus Real Estate Debt Fund II, LP: CREDF2

Cerberus Real Estate Debt Fund, LP: CREDF  
 Cerberus Redwood Levered Loan Opportunities Fund A, L.P.: CRLA  
 Cerberus Redwood Levered Loan Opportunities Fund B, L.P.: CRLB  
 Cerberus Residential Income Fund, L.P.: CRIFL  
 Cerberus Residential Opportunity Fund, L.P.: CROF  
 Cerberus RM Fund, L.P.: RMFL  
 Cerberus RR Levered Loan Opportunities Master Fund, L.P.: CRRLLM  
 Cerberus SC Parters III, L.P.: CSC3  
 Cerberus SC Partners II, L.P.: CSC2  
 Cerberus SC Partners, L.P.: CSCP  
 Cerberus SFR Opportunistic Partners, L.P.: CSOP  
 Cerberus SFR Opportunistic QF Partners, L.P.: CSOQ  
 Cerberus SFR Series of SALI Multi-Series Fund, L.P.: CSFRID  
 Cerberus Siguler Guff NPL Fund, L.P.: CSGN  
 Cerberus SMRS Partners, L.P.: SMRS  
 Cerberus Sonoran NPL Fund, L.P.: SNPL  
 Cerberus StepStone Credit Fund, LLC: STEP  
 Cerberus Strategic Mortgage Opportunities Fund, L.P.: CSMOF  
 Cerberus Supply Chain Fund, L.P.: CSCF  
 Cerberus Supply Chain Opportunities, L.P.: CSCOP  
 Cerberus SWC Levered Loan Opportunities Fund, Ltd.: CSWC  
 Cerberus SWC Loan Opportunities Master Fund II, L.P.: SWCM2  
 Cinnabar 2021 Direct Lending Cell 1 PC: C21DLPC  
 CIP VII European Holdings, L.P.: CIP-7E  
 CIREP Centre Street II, L.P.: C5CS2  
 CIREP Centre Street, L.P.: C5CS  
 Delphi MA: DELPHI  
 Kaamanen Fund, L.P.: KAAM  
 Sevetti Fund L.P.: SFLP  
 SFR CM, L.P.: SFRCL  
 SFR Delos Partners, L.P.: SFRDP  
 Sonoran Private Credit Opportunities Fund, LLC: ASRS  
 Styx International, Ltd.: SI

Top Income and Loss Drivers. The tables titled, in part, “Top Income Drivers” and “Top Loss Drivers”, represent portfolio investments that have contributed to profits or losses, or have a market (or fair) value, equal to or above the stated dollar threshold, up to the stated number in each category presented.

LTM Revenue and EBITDA. The tables titled “LTM Revenue and EBITDA” present the identified company’s rolling last twelve months revenue and earnings before interest, taxes, depreciation and amortization from the date of this Report.

Historical Performance. The tables titled “Historical Performance” present certain actual past and estimated future operating information of the identified portfolio company for the specified period. The information described in the tables has been obtained from sources that the Firm believes to be reliable; however, these sources cannot be guaranteed as to their accuracy or completeness. The compound annual growth rate, otherwise known as the “CAGR” is not the actual rate of increase of (i) revenue and (ii) earnings before, interest, taxes depreciation and amortization over the period. It is a formulaic number that describes the rate at which they would have grown if it grew at a steady rate.

Additional Information. For additional information with respect to performance, investment selection, and the investment objectives and strategies presented herein, please contact the Firm.

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# Fund Overview



## Letter to the Investors

### Dear Investors:

We are pleased to present the management report for Cerberus Institutional Real Estate Partners III, L.P. ("CIREP III", the "Fund" or the "Partnership"). This 2012 vintage fund, through June 30, 2023, has called and recalled \$1,788.0 million (including \$1,426.4 million of capital commitments and \$361.6 million of recallable capital) and distributed \$2,490.1 million resulting in a net position of \$702.1 million. We have returned 174.6% of committed capital and 139.3% of contributed capital, producing a Fund Level Limited Partner Gross IRR<sup>1</sup> of 14.0% and a Fund Level Limited Partner Net IRR of 12.1%. CIREP III has a remaining Fund NAV of \$688.6 million as we are working diligently to monetize the remaining positions.

As of June 30, 2023, CIREP III has invested in 67 investments for a total of \$1,828.6 million, which have returned approximately \$2,806.7 million, including FX activity and post-closing financing, for a net position of \$978.1 million. Additionally, as of June 30, 2023, there was \$85.5 million of cash and cash equivalents on CIREP III's balance sheet earmarked for asset level reserves, liquidity and general fund level reserves. As of quarter-end, 47 investments have been fully realized for a profit of \$406.8 million, a 1.4x Deal Level Gross Equity Multiple and a Deal Level Gross IRR of 17.0%.

Additional information about CIREP III's portfolio investments is available in the Portfolio Overview section of this report.

### Administrative Overview

As of June 30, 2023, Cerberus had \$64.8 billion of assets under management, including \$26.4 billion in private equity, distressed and public debt funds, \$23.2 billion in middle market lending funds and \$15.2 billion in real estate funds. Cerberus has a staff of approximately 975 persons, including approximately 260 investment professionals and approximately 95 operating professionals and 45 technology professionals who provide due diligence expertise and support across the portfolio investment lifecycle. Cerberus has 99 senior executives or managing directors that have been with the Firm for 10 years or more, and 23 who have been with the Firm for 20 years or more<sup>2</sup>.

Please contact Lee Millstein, Tom Wagner, or Chris Schiermbock for portfolio specific inquiries and Investor Relations (investor-relations@cerberus.com) for administrative and general fund matters. Listed below is each person's contact information:

Name	Email Address	Phone Number
Lee Millstein	lmillstein@cerberus.com	+1(646) 885-3598
Tom Wagner	twagner@cerberus.com	+1(212) 891-2158
Chris Schiermbock	cschiermbock@cerberus.com	+1(212) 909-1403

We appreciate your commitment to CIREP III, and we encourage you to call us with your questions and thoughts.

Sincerely,

By:

Lee Millstein

Tom Wagner

Chris Schiermbock

*(1) Past performance is not a guarantee of future results. It is possible no investor experienced the results described herein. There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein. Please see the Fund Profile section for the footnote detail.*

*(2) Employment information is as of the date hereof and subject to change without notice.*

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**Fund Profile****Fund Objective:**

The investment strategy of Cerberus Institutional Real Estate Partners III, L.P. (the "Partnership") is to invest in and manage a diversified portfolio of distressed and undervalued real estate investments, including investments secured by real estate. The investment strategy includes identifying acquisitions from the universe of domestic and foreign financial institutions, corporations, developers, insurance companies and other owners or operators of real estate. Many of the Partnership's acquisitions will be distressed in nature or comprise value-added investments made in conjunction with proven operators. Furthermore, it intends to pursue opportunities on a privately negotiated or limited competition basis. The Partnership may invest in other securities, including mortgage backed securities, collateralized mortgage obligations, and asset backed securities.

Fund Statistics <sup>(a)</sup>		LP Statistics <sup>(b)</sup>		Portfolio Performance <sup>(c)</sup>	
Fund Inception <sup>(1)</sup>	Jul-12	Capital Contributed	\$ 1,762.1	Invested	\$ (1,828.6)
Final Closing <sup>(2)</sup>	Oct-13	Recallable Distributions	719.9	Returned	2,618.8
Investment Period End <sup>(1)</sup>	Jul-16	Non-Recallable Distributions	1,691.9	FX Hedge Profit/ (Loss)	187.9
Fund Scheduled Termination Date	Jul-24	NAV <sup>(4)</sup>	451.7	Net Investment	978.1
Fund Size <sup>(3)</sup>	\$ 1,426.4	Fund Net Multiple <sup>(6,10)</sup>	1.9x	Portfolio Market Value	586.1
Gross Capital Contributed	1,788.0	Net 2Q 2023 Return	3.9%	Hedge Mark to Market	(5.1)
Recallable Distributions	730.6	Net YTD 2023 Return	2.4%	Financing Market Value	(0.2)
Net Capital Contributed <sup>(11)</sup>	1,057.4	Fund Gross IRR <sup>(8)</sup>	14.0%	Total Market Value	580.8
% Net Contributed	74.1%	Fund Net IRR <sup>(5,6)</sup>	12.1%	Accrued Interest	0.1
Non-Recallable Distributions	1,759.5			Total Investment Gain/(Loss)	1,559.0
Number of Investments <sup>(9)</sup>	67			Other Income/Expenses	34.0
Realized	47			Total Gain/(Loss)	1,593.0
Active	20				
Fund NAV (in millions) <sup>(7)</sup>	\$ 688.6				

**Past performance is not a guarantee of future results.** It is possible no investor experienced the results described herein. There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein. Please see the following page for the footnote detail.



**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.****As of 06/30/2023**

### Fund Profile Footnotes

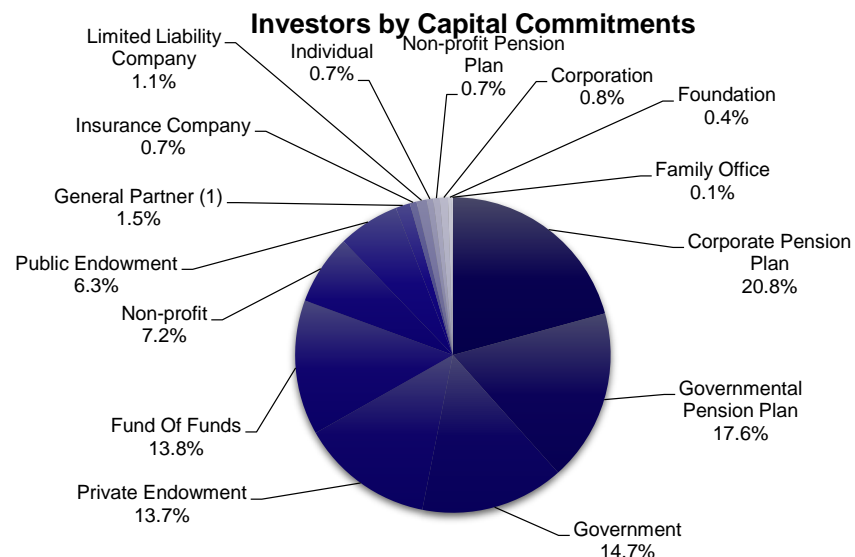
- (a) Represents activity at the Fund Level (General Partner & Limited Partner). Combined with CIREP III AIV, L.P.
- (b) Represents activity and performance at the Limited Partner Level. Combined with CIREP III AIV, L.P. **Past performance is not a guarantee of future results.** It is possible that no individual investor experienced the results described herein. There can be no assurance that any other Cerberus fund or investment will achieve results similar to those described herein.
- (c) Represents underlying deal level investment activity, including recycling, and performance at the portfolio level. Combined with CIREP III AIV, L.P.
- (1) CIREP III has a four year investment period commencing on the Fund Inception date.
- (2) CIREP III final closing took place on October 8, 2013.
- (3) Represents capital committed to the Fund.
- (4) Represents the Limited Partners' net asset value of the current assets of the series, determined on a mark-to-market basis for investments that have a readily ascertainable market value and are based on the General Partner's determination of value for those investments.
- (5) Net IRR is the annualized internal rate of return based upon capital contributions by, and distributions to, fee paying Limited Partners based on actual dates of each such Limited Partner's respective capital activity transactions (except for the initial contribution associated with the subscription of each Limited Partner admitted after the Fund's initial closing) on an aggregate, fund-level basis. For the initial capital call attributable to each Limited Partner admitted after the Fund's initial closing, the contribution amount included a catch-up for capital calls prior to the date of the subscription. For purposes of calculating the Net IRR, the amounts contributed for the catch-up (excluding the Interest Equivalent Amount, if any) were applied to the original call dates. Net performance data herein has been reduced for application of Fund level expenses, management fees and performance-based compensation attributable to fee-paying Limited Partners (based on the actual expenses, fees and performance compensation applicable to such fee paying Limited Partners). Note that General Partner and Limited Partner returns will differ due to the fact that the General Partner is not subject to management fees and performance-based compensation and actual Limited Partner fees will vary from standard terms. As such, "LP Statistics" are provided to show Limited Partner-level information that is not inclusive of General Partner activity and performance, and given the variability of fee rates between Limited Partners, such "blended" net performance figures are not reflective of the highest management fee and performance-based compensation applicable for the Fund, which would further reduce returns from those shown. An individual investor's performance will likely materially differ from the Net IRR results set forth herein due to a number of factors, including, without limitation, transaction dates of capital activity, individual investment limitations or opt outs, the inclusion of the Interest Equivalent Amount, if any, into the capital contributions and distributions, and the actual management fee and performance compensation and other expenses payable in respect of such individual investor.
- (6) Net of management fees and net of performance-based compensation.
- (7) Represents total of Limited Partners' and General Partners' capital of the current assets of the series, determined on a mark-to-market basis for investments that have a readily ascertainable market value and are based on the General Partner's determination of value for those investments for which there is no readily ascertainable market value.
- (8) Gross IRR is IRR before management fees and performance-based compensation. Generally, investments are marked-to-market based on the General Partner's determination of fair value. Kroll and Houlihan Lokey valuation service provides positive assurance review of the valuation of a substantial number of the Partnership's private investments twice a year. The actual realized return on the unrealized investments will depend, among other factors, on the value of the investments at the time of disposition, any related transaction costs and manner of disposition. **Past performance is not indicative of future results.**
- (9) Excludes US Treasury Bills/Portfolio Hedges, European Distressed Hedges, and CIREP Lending Company, LLC.
- (10) The basis of the net multiple is the maximum capital contributed during the investment period which is defined as the maximum of the daily cumulative total of capital contributions less recallable distributions that have been recalled. Previously, the basis of the net multiple was calculated as total contributions without netting recalled distributions.
- (11) Net Capital Contributed is Gross Capital Contributed less Recallable Distributions.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

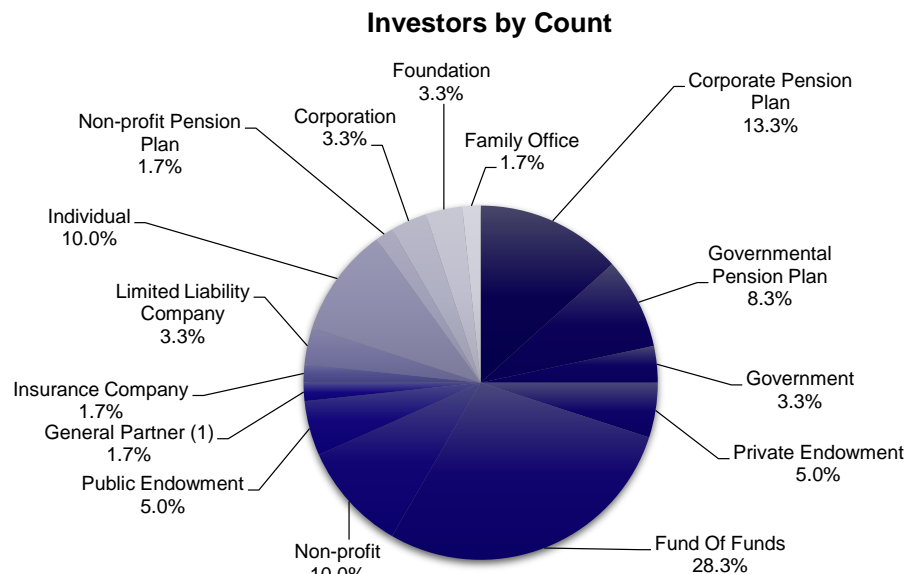
As of 06/30/2023

**cerberus****Investor Profile**

Investor Type <sup>(2)</sup>	Capital Commitments	% of Capital
Corporate Pension Plan	\$ 296.0	20.8%
Governmental Pension Plan	251.5	17.6%
Government	210.0	14.7%
Private Endowment	195.0	13.7%
Fund Of Funds	197.4	13.8%
Non-profit	102.5	7.2%
Public Endowment	90.0	6.3%
General Partner <sup>(1)</sup>	21.1	1.5%
Insurance Company	10.0	0.7%
Limited Liability Company	15.0	1.1%
Individual	9.4	0.7%
Non-profit Pension Plan	9.5	0.7%
Corporation	12.0	0.8%
Foundation	5.5	0.4%
Family Office	1.5	0.1%
<b>Total</b>	<b>\$ 1,426.4</b>	<b>100.0%</b>



Investor Type <sup>(2)</sup>	Number of Investors	% of Investors
Corporate Pension Plan	8	13.3%
Governmental Pension Plan	5	8.3%
Government	2	3.3%
Private Endowment	3	5.0%
Fund Of Funds	17	28.3%
Non-profit	6	10.0%
Public Endowment	3	5.0%
General Partner <sup>(1)</sup>	1	1.7%
Insurance Company	1	1.7%
Limited Liability Company	2	3.3%
Individual	6	10.0%
Non-profit Pension Plan	1	1.7%
Corporation	2	3.3%
Foundation	2	3.3%
Family Office	1	1.7%
<b>Total</b>	<b>60</b>	<b>100.0%</b>



(1) General Partner capital includes limited partner interests that are owned or controlled by members of the General Partner and/or do not pay fees.

(2) Investors are grouped into stated categories as determined in the opinion of Cerberus based on the best information available to Cerberus as of the time hereof, including, without limitation, information provided to Cerberus by investors when subscribing for interests or shares in the Fund.

# Balance Sheet & Investment Exposure Analysis

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023



<b>Balance Sheet</b>
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**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P. <sup>(1)</sup>**  
**Consolidated Statement of Assets, Liabilities and Partners' Capital - Unaudited**  
**June 30, 2023**

**Assets**

Cash and cash equivalents	\$ 85,471,836
Investments, at fair value	586,096,770
Derivative assets, at fair value <sup>(2)</sup>	23,857
Collateral receivable from counterparties	15,232,386
Due from broker	296,292
Interest receivable	31,427
Receivable from affiliates	3,048,599
Other assets	72,717

**Liabilities and Partners' Capital**

Investments sold under agreements to repurchase	\$ 209,000
Collateral payable to counterparties	32
Due to broker	20,004
Payable to affiliates	1,408,506

<b>Total Liabilities</b>	<b>\$ 1,637,542</b>
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<b>Partners' Capital</b>	<b>\$ 688,636,342</b>
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<b>Total Assets</b>	<b>\$ 690,273,884</b>
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<b>Total Liabilities and Partners' Capital</b>	<b>\$ 690,273,884</b>
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<sup>(1)</sup> Combined with CIREP III AIV, L.P.

<sup>(2)</sup> Derivative assets, at fair value are net of collateral of \$5,021,528.

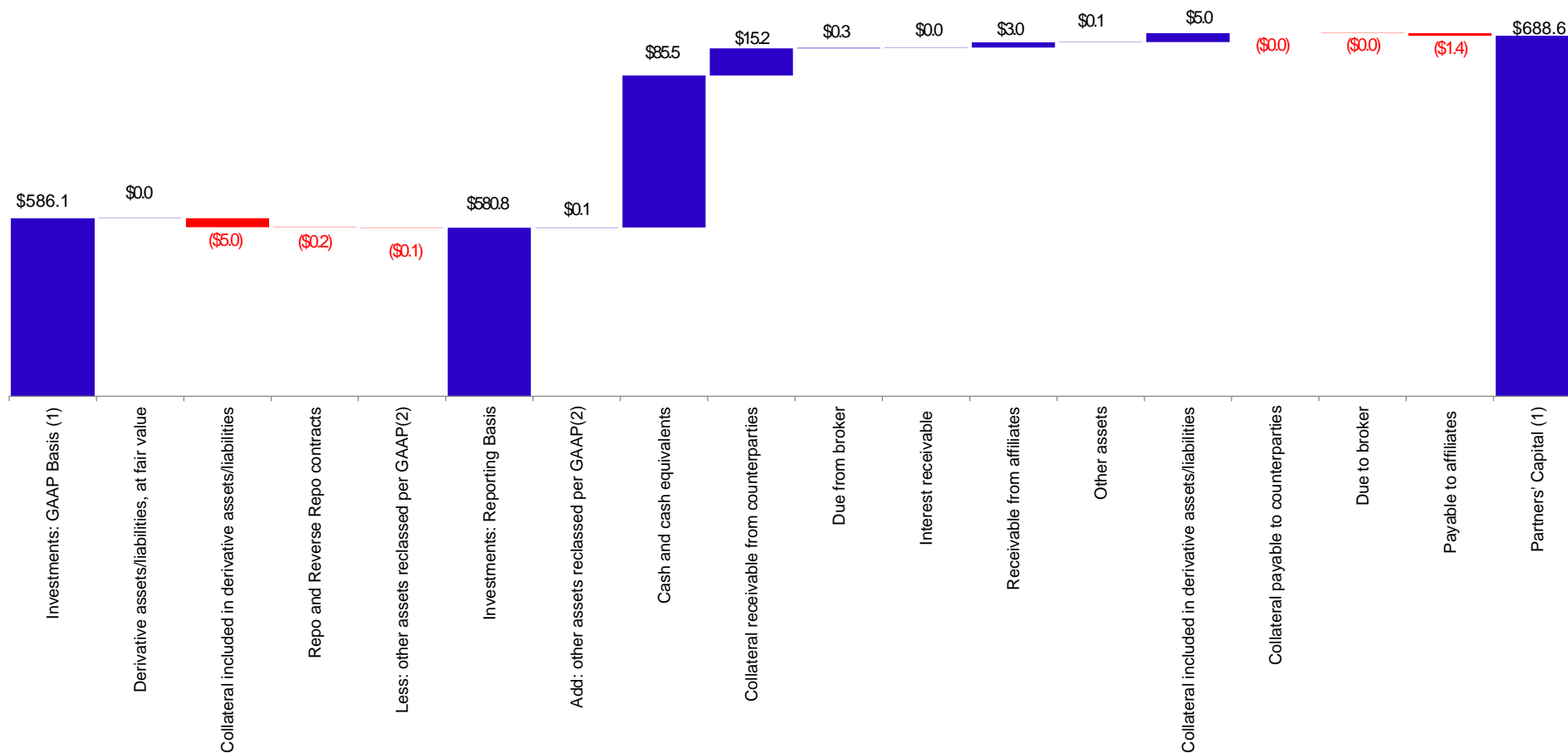
**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**GAAP - Reporting Basis Bridge**

Certain assets and liabilities of the Fund are not classified on the GAAP Balance Sheet in "Investments at Fair Value". For reporting purposes, certain of these assets and liabilities are classified as investments. This chart illustrates the differences between the GAAP basis and reporting basis of the presentation.

USD in Millions



(1) Graph is not drawn to scale.

(2) Includes swap accruals and financing P&L on positions that are linked to an investment as per FASB 140-3.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**ASC 820<sup>(1)</sup> Levels**

	Level 1	Level 2	Level 3	Total
Investments, at fair value <sup>(2)</sup>	\$ -	\$ 465,062,201	\$ 121,034,569	\$ 586,096,770
Derivative assets/liabilities, at fair value:				
Swap contracts, at fair value	-	(458,340)	-	(458,340)
Options, at fair value	-	379	-	379
Unrealized appreciation on forward currency contracts	-	96,849	-	96,849
Unrealized depreciation on futures contracts	(4,636,559)	-	-	(4,636,559)
<b>Total GAAP ASC 820 Levels</b>	<b>\$ (4,636,545)</b>	<b>\$ 464,701,075</b>	<b>\$ 121,034,569</b>	<b>\$ 581,099,099</b>
Repo and Reverse Repo contracts			\$	(209,000)
Other assets that are not subject to ASC 820				(106,106)
<b>Total Reporting Basis</b>			<b>\$</b>	<b>580,783,993</b>

(1) The ASC 820 table provides leveling information for investments and derivatives only; it does not include other assets and liabilities that are leveled and appear in the audited financial statements.

ASC 820 was formerly known as FAS 157.

(2) Includes US T-Bills that have a maturity of greater than 3 months.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**Debt Maturity Schedule**

Asset / Property Name	Asset Type	Outstanding Debt Amount	Maturity Date <sup>(1)</sup>		
			2023	2024	2025+
<b>\$ in 000s</b>					
<b><u>Transaction specific debt</u> <sup>(2)</sup></b>					
Albertson's	Operating Company	\$7,825,000	<b>See Footnote 5</b>		
Project Plataforma	Operating Company	381,358			
Project Neptune	Residential	182,970			
Project Maple Leaf (Fortis Hotels)	Lodging	176,972			
Manhattan Beach Marriott	Lodging	100,000			
Project Lansdowne	Residential	76,375			
Project Vantage	Residential	26,728			
Project Oyster	Mixed Use	19,922			
Project Monza	Mixed Use	16,633			
Project Please	Mixed Use	14,737			
Project Finn	Mixed Use	3,391			
<b>Total Debt</b>		<b>\$8,824,087</b>	<b>\$597,806</b>	<b>\$19,922</b>	<b>\$8,206,358</b>
<i>% of Total Debt</i>		<i>100%</i>	<i>6.8%</i>	<i>0.2%</i>	<i>93.0%</i>
<b><u>Allocated debt</u> <sup>(3),(4)</sup></b>					
CMBS Strategy	Commercial	209	<b>See Footnote 5</b>		
RMBS Strategy	Residential	18			
<b>Total Debt</b>		<b>\$227</b>	<b>\$227</b>	<b>\$0</b>	<b>\$0</b>
<i>% of Total Debt</i>		<i>100%</i>	<i>100.0%</i>	<i>0.0%</i>	<i>0.0%</i>

## Notes:

(1) Maturity includes all extension options for which Cerberus expects to qualify. The information herein presents the years that the identified company's debt is scheduled to mature as of the date of this Report.

(2) Outstanding debt amounts for CIREP III investments represent aggregate asset-level debt, specifically, the debt shown is not limited to Cerberus' allocated portion.

(3) These transactions are subject to repo and secured borrowing financing with various maturities and CIREP III (or its subsidiary) is liable for its pro rata share of recourse.

(4) Outstanding debt amounts represent the CIREP III allocable share and include allocable share of SPV debt.

(5) Position-level debt maturity detail is available for review in Cerberus offices.

## CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.

As of 06/30/2023

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## Active Investments

Investment <sup>(1)</sup>	Vintage Date	Type of Exposure			% of Invested Capital	Dollars		FX Hedge Profit / (Loss) <sup>(3)</sup>	Actual Net Investment
		Investment Type	Geographic	Asset Type		Invested <sup>(1)</sup>	Returned <sup>(2)</sup>		
<b>\$ in 000s</b>									
<b>Active Deals</b>									
1 Albertson's <sup>(9)</sup>	Mar-13	Real Estate Private Equity	Multi Region US	Operating Company	8.5%	(\$154,991)	\$622,468	\$0	\$467,477
2 Project Maple Leaf (Fortis Hotels)	Jul-15	Direct Equity - Portfolio	Canada	Lodging	3.0%	(54,977)	42,044	2,013	(10,920)
3 Manhattan Beach Marriott	Mar-16	Direct Equity - Single Asset	Pacific	Lodging	1.4%	(25,593)	10,710	-	(14,883)
4 Crossroads	May-14	Direct Equity - Single Asset	Pacific	Mixed Use	1.1%	(20,122)	84,257	-	64,136
5 Project Monza	Jun-14	Direct Equity - Portfolio	Italy	Mixed Use	1.8%	(32,105)	26,208	5,626	(271)
6 Project Oyster	Oct-16	Distressed Debt	Ireland	Mixed Use	1.0%	(17,687)	19,558	801	2,672
7 Project Neptune	Nov-15	Distressed Debt	UK	Residential	2.9%	(52,467)	73,735	9,649	30,916
8 Project Aran	Dec-14	Distressed Debt	Multi Region Europe	Mixed Use	2.4%	(44,137)	50,721	10,768	17,352
9 Project Vantage	May-15	Distressed Debt	UK	Residential	1.3%	(23,515)	21,692	6,299	4,476
10 RMBS Strategy	Aug-12	Distressed Debt	Multi Region US	Residential	8.9%	(162,369)	203,879	-	41,510
11 Project Lansdowne	Mar-15	Distressed Debt	UK	Residential	1.1%	(19,820)	31,279	5,854	17,313
12 Project Cuba	Aug-15	Direct Equity - Portfolio	UK	Health Care	0.2%	(4,101)	1,150	1,257	(1,695)
13 Project Arrow	Oct-15	Distressed Debt	Ireland	Mixed Use	1.8%	(32,590)	36,454	395	4,259
14 Project Levia	Oct-14	Real Estate Owned (REO)	Italy	Mixed Use	0.5%	(8,410)	6,131	1,187	(1,091)
15 Project Finn	Jul-15	Distressed Debt	Multi Region Europe	Mixed Use	0.8%	(13,723)	9,857	351	(3,514)
16 Project Alloro	Jun-15	Real Estate Owned (REO)	Italy	Mixed Use	0.8%	(14,924)	13,713	1,625	415
17 CMBS Strategy	Aug-12	Distressed Debt	Multi Region US	Commercial	1.3%	(23,362)	27,254	-	3,892
18 Project Pluto	Aug-16	Distressed Debt	Ireland	Residential	0.3%	(4,603)	4,651	564	612
19 Project Please	Dec-16	Distressed Debt	Italy	Mixed Use	0.1%	(1,756)	1,878	(97)	26
20 Project Plataforma	Sep-13	Real Estate Private Equity	Spain	Operating Company	2.6%	(48,094)	59,359	12,495	23,761
21 US Treasury/Portfolio Hedges	Oct-12	NA	NA	NA	4.6%	(84,769)	13,456	(3,379)	(74,693)
<b>Total Active Deals</b>					<b>46.2%</b>	<b>(\$844,115)</b>	<b>\$1,360,456</b>	<b>\$55,408</b>	<b>\$571,749</b>



## CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.

As of 06/30/2023

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## Active Investments (continued)

Investment <sup>(11)</sup>	Vintage Date	Asset Market Value	Hedge Market Value <sup>(4)</sup>	Financing Market Value <sup>(4)</sup>	Total Market Value <sup>(5)</sup>	% of Total Active Market Value	Accruals <sup>(6)</sup>	Gross P&L	Gross Deal IRR <sup>(7) (10)</sup>	Gross Deal Equity Multiple <sup>(8) (10)</sup>
<b>\$ in 000s</b>										
<b>Active Deals</b>										
1 Albertson's <sup>(9)</sup>	Mar-13	\$447,115	(\$1,439)	\$0	\$445,676	76.8%	\$111	\$913,264	34.3%	6.9
2 Project Maple Leaf (Fortis Hotels)	Jul-15	41,462	(84)	-	41,378	7.1%	-	30,457	8.8%	1.6
3 Manhattan Beach Marriott	Mar-16	24,217	-	-	24,217	4.2%	-	9,334	7.2%	1.4
4 Crossroads	May-14	22,150	-	-	22,150	3.8%	19	86,305	41.8%	5.3
5 Project Monza	Jun-14	9,562	223	-	9,785	1.7%	-	9,514	6.7%	1.3
6 Project Oyster	Oct-16	9,132	467	-	9,598	1.7%	-	12,270	12.4%	1.7
7 Project Neptune	Nov-15	6,914	23	-	6,937	1.2%	(0)	37,853	30.0%	1.7
8 Project Aran	Dec-14	5,253	(95)	-	5,158	0.9%	-	22,509	14.2%	1.5
9 Project Vantage	May-15	4,451	(155)	-	4,296	0.7%	0	8,772	13.8%	1.4
10 RMBS Strategy	Aug-12	2,897	872	(0)	3,769	0.6%	5	45,284	9.6%	1.3
11 Project Lansdowne	Mar-15	3,036	(159)	-	2,878	0.5%	-	20,190	39.5%	2.0
12 Project Cuba	Aug-15	2,668	(98)	-	2,570	0.4%	-	875	3.8%	1.2
13 Project Arrow	Oct-15	2,245	4	-	2,249	0.4%	-	6,508	5.9%	1.2
14 Project Levia	Oct-14	1,544	2	-	1,547	0.3%	-	455	1.3%	1.1
15 Project Finn	Jul-15	1,266	(55)	-	1,211	0.2%	-	(2,303)	-7.5%	0.8
16 Project Alloro	Jun-15	650	(21)	-	629	0.1%	-	1,044	1.7%	1.1
17 CMBS Strategy	Aug-12	692	3	(209)	486	0.1%	2	4,379	15.1%	1.2
18 Project Pluto	Aug-16	187	39	-	226	0.0%	-	838	4.3%	1.2
19 Project Please	Dec-16	178	17	-	195	0.0%	-	221	4.5%	1.1
20 Project Plataforma	Sep-13	15	(0)	-	15	0.0%	-	23,776	17.0%	1.5
21 US Treasury/Portfolio Hedges	Oct-12	-	(4,637)	-	(4,637)	-0.8%	0	(79,329)	N/M	0.1
<b>Total Active Deals</b>		<b>\$585,633</b>	<b>(\$5,093)</b>	<b>(\$209)</b>	<b>\$580,331</b>	<b>100%</b>	<b>\$137</b>	<b>\$1,152,217</b>	<b>21.0%</b>	<b>2.4</b>

Fund Net IRR <sup>(12)</sup> 12.1%

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.****As of 06/30/2023**

### Active Investments (footnotes)

**Notes:**

- (1) "Dollars Invested" is calculated on a "Peak Equity" basis, which is defined as follows; the maximum amount of capital outstanding (i.e., capital invested net of capital previously returned), as of any date, over the term of the investment. For the avoidance of doubt, if, at anytime, additional monies are invested such that the capital outstanding exceeds the then-current Peak Equity mark, a new Peak Equity mark shall be established, and "Dollars Invested" shall thereafter be calculated from and after such point (i.e., all capital returned through the date the new Peak Equity mark is established will not be considered in the calculation of subsequent Dollars Returned). "Dollars Invested" has been adjusted for financing that was expected at acquisition and occurred within 120 days of the vintage date.
- (2) "Dollars Returned" is calculated as follows: once Peak Equity is determined, all cash outflows and inflows occurring after the date Peak Equity is established are netted to calculate the then-current Dollars Returned.
- (3) Includes the realized P&L of forward currency contracts used to hedge the currency exposure of foreign investments.
- (4) Represents market value of financial obligations for which there is recourse to the fund.
- (5) Represents the market value of investments on a reporting basis. Market value does not include approximately \$0.5 million from certain realized investments that have remaining market value attributable to cash in the SPV bank accounts, remaining immaterial investment holdings or unrealized FX Hedge Profit/ (Loss).
- (6) Accruals are included in portfolio income, but excluded from dollars returned as it is on a non-cash basis.
- (7) Portfolio Gross Deal IRR is the annualized internal rate of return by reference to the daily cash flows to and from the Fund in respect of every security acquired and associated currency hedges, swaps and margin account interest. The Portfolio Gross IRR includes returns that are determined on a realized basis, and with respect to investments that have not been realized, on a mark-to-market basis. Generally, investments are marked-to-market based on the General Partner's determination of fair value. Kroll and Houlihan Lokey valuation service provides positive assurance review of the valuation of a substantial number of the Partnership's private investments twice a year. The actual realized return on the unrealized investments will depend, among other factors, on the value of the investments at the time of disposition, any related transaction costs and manner of disposition. The Portfolio Gross Deal IRR does not include cash flows attributable to Fund and Account level expenses (professional fees) and consequently will differ from the Fund Net IRR provided herein, which does reflect such fees. Portfolio Gross IRR also does not account for the timing of any capital contributions by, and distributions to or from, investors, and does not reflect the impact of subscription financing facilities or cash drag. "Net" performance figures associated with Portfolio Gross Deal IRR are not expected to materially differ from the Fund Net IRR provided herein, which reflects the net performance of the Fund, as further described below. The General Partner views Portfolio "Net" IRR as comparatively less meaningful than Fund Net IRR as it does not approximate an investor's experience in the Fund, and consequently is not shown here. Certain differences between Fund Net IRR and Portfolio "Net" IRR will exist due to, among others, the following: timing between investment activity at the Fund level and capital contributions by and distributions to investors, the use of subscription financing facilities, and cash drag.
- (8) Equity Multiple is calculated as  $(\text{Total Market Value} + \text{Returned} + \text{FX Hedge Profit/ (Loss)}) / (\text{Invested})$ .
- (9) Due to public listing the investment is not included in the Quarterly Portfolio Overview.
- (10) For information regarding Net performance, please refer to the Fund Net IRR and Fund Net Multiple found in the "Fund Profile" section.
- (11) Includes all active investments as of 6/30/23. **Past performance is not a guarantee of future results.** There can be no assurance that any other Cerberus investment will achieve results similar to those described herein.
- (12) Please see the "Fund Profile" section for further detail on the Fund Net IRR calculation.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**  
**As of 06/30/2023**

**Realized Investments**

Investment	Vintage Date	Investment Type	Geographic	Asset Type	Type of Exposure		% of Invested Capital	Dollars					Gross Profit / (Loss)	Gross Deal IRR <sup>(6)</sup> (7)	Gross Deal Equity Multiple <sup>(6)</sup> (7)	Exit Date
					Invested <sup>(1)</sup>	Returned <sup>(2)</sup>		FX Hedge P&L <sup>(3)</sup>	Actual Net Investment	Market Value <sup>(4)</sup>						
<b>\$ in 000s</b>																
<b>Realized Deals</b>																
1 Multi-Cedulas	Aug-12	Distressed Debt	Spain	Residential	0.2%	(\$3,118)	\$7,074	(\$71)	\$3,885	\$0	\$3,885	971.7%	2.2	Sep-13		
2 IVG Immobilien AG	Apr-13	Distressed Debt	Germany	Operating Company	1.6%	(28,513)	34,916	291	6,694	-	6,694	19.5%	1.2	Mar-15		
3 Deluxe	Dec-13	Direct Equity - Single Asset	Pacific	Mixed Use	0.7%	(12,850)	28,129	-	15,278	-	15,278	60.7%	2.2	Sep-15		
4 Project Thames	May-13	Distressed Debt	UK	Commercial	1.2%	(22,403)	36,470	(1,225)	12,842	-	12,842	39.5%	1.6	Dec-15		
5 Project East	Dec-13	Distressed Debt	UK	Lodging	0.5%	(10,056)	12,342	(43)	2,243	-	2,243	20.8%	1.2	Dec-15		
6 Residence Inn Torrance CA	Jan-13	Direct Equity - Single Asset	Pacific	Lodging	0.8%	(14,080)	33,148	-	19,068	-	19,068	38.5%	2.4	Jan-16		
7 Project Forest	Jan-14	Direct Equity - Portfolio	UK	Retail	0.9%	(16,536)	32,961	5,211	21,637	-	21,637	33.2%	2.3	Dec-16		
8 Project Grove	Aug-14	Direct Equity - Portfolio	UK	Retail	0.5%	(9,253)	14,931	2,428	8,106	-	8,106	40.4%	1.9	Dec-16		
9 Project Egido	Oct-14	Direct Equity - Portfolio	Spain	Residential	0.8%	(13,763)	11,658	3,101	995	-	995	3.6%	1.1	Mar-17		
10 Project Indie	Sep-13	Distressed Debt	Germany	Commercial	1.3%	(23,959)	35,633	5,763	17,437	-	17,437	26.9%	1.7	Mar-17		
11 Tesco Plc	Mar-15	First Mortgage Bridge	UK	Retail	1.0%	(17,634)	16,711	836	(88)	-	(88)	-1.0%	1.0	Apr-17		
12 Sammamish Parkplace	Dec-14	Direct Equity - Portfolio	Pacific	Office	2.3%	(41,221)	57,739	-	16,519	-	16,519	15.0%	1.4	Jun-17		
13 Seibu	Mar-13	Special Situations	Japan	Operating Company	2.7%	(50,126)	48,153	6,179	4,206	-	4,206	6.3%	1.1	Sep-17		
14 Admiral Taverns	Dec-12	Real Estate Private Equity	UK	Retail	2.4%	(44,221)	62,168	5,837	23,783	-	23,783	21.5%	1.5	Nov-17		
15 CIREP Lending Company, LLC	Aug-16	NA	NA	NA	0.0%	(35)	-	-	(35)	-	(35)	N/M	0.0	Jan-18		
16 European Corporate Distressed Hedges	Dec-12	NA	NA	NA	0.2%	(4,132)	97	3,460	(576)	-	(576)	N/M	0.9	Feb-18		
17 Project Hampton	Dec-13	Distressed Debt	Multi Region Europe	Commercial	2.4%	(44,025)	55,340	9,485	20,800	-	20,800	18.9%	1.5	Jun-18		
18 Project Klimt	Oct-15	Direct Equity - Portfolio	Italy	Office	0.2%	(3,666)	6,134	34	2,503	-	2,503	31.0%	1.7	Jun-18		
19 Project Resimac	Oct-17	Distressed Debt	UK	Residential	0.1%	(1,002)	1,812	(126)	683	-	683	217.8%	1.7	Apr-18		
20 Project Avon	Jun-14	Distressed Debt	UK	Commercial	1.3%	(23,210)	27,844	3,098	7,733	-	7,733	23.4%	1.3	Jun-18		
21 Project Aurora	Nov-15	Real Estate Owned (REO)	Germany	Commercial	0.3%	(5,826)	12,881	(644)	6,411	-	6,411	47.2%	2.1	Sep-18		
22 Project Beetle	Nov-15	Special Situations	Global	Lodging	0.5%	(9,785)	14,756	-	4,971	-	4,971	15.6%	1.5	Sep-18		
23 SE Hotel	Oct-14	Direct Equity - Portfolio	Southeast	Lodging	1.1%	(19,294)	36,704	-	17,410	-	17,410	20.4%	1.9	Dec-18		
24 Project Sling	Nov-17	Direct Equity - Portfolio	Multi Region Europe	Mixed Use	0.8%	(14,457)	12,568	575	(1,314)	-	(1,314)	-11.8%	0.9	Feb-19		
25 Project Mermaid	Apr-15	Distressed Debt	Multi Region Europe	Mixed Use	1.4%	(26,232)	44,496	(306)	17,958	(0)	17,958	56.1%	1.7	Feb-19		
26 Project Moonsoon	Jul-13	Direct Equity - Portfolio	Germany	Retail	0.9%	(17,124)	29,360	6,401	18,636	0	18,637	24.0%	2.1	Feb-19		
27 Hampton Roads Office Portfolio	May-15	Direct Equity - Portfolio	Southeast	Office	1.7%	(30,968)	67,904	-	36,936	-	36,936	28.0%	2.2	Mar-19		
28 Project Samba	Mar-16	Distressed Debt	Germany	Mixed Use	0.3%	(4,598)	6,904	206	2,512	-	2,512	23.9%	1.5	May-19		
29 Project Shift	Feb-14	Real Estate Owned (REO)	Germany	Retail	0.2%	(4,343)	6,229	1,373	3,259	-	3,259	18.3%	1.8	Jun-19		
30 Max Maxim	Dec-12	Distressed Debt	UK	Commercial	0.9%	(16,239)	18,920	2,573	5,254	-	5,254	13.5%	1.3	Nov-19		
31 Project Clyde	Feb-15	Direct Equity - Single Asset	UK	Retail	0.6%	(10,659)	968	2,624	(7,066)	-	(7,066)	-73.5%	0.3	Dec-19		
32 Project Oak	Jun-16	Distressed Debt	UK	Mixed Use	0.2%	(3,631)	4,975	849	2,193	19	2,212	28.9%	1.6	Jul-20		
33 Project Caballo	Nov-14	Direct Equity - Portfolio	Spain	Mixed Use	2.6%	(48,375)	38,798	10,979	1,402	-	1,402	0.8%	1.0	Sep-20		
34 First Key Holdings, LLC	Feb-13	Real Estate Private Equity	Multi Region US	Operating Company	1.1%	(20,915)	24,659	-	3,744	-	3,744	5.4%	1.2	Jan-21		
35 Project Motherwell	Jun-15	Direct Equity - Single Asset	UK	Retail	0.4%	(7,141)	739	1,808	(4,594)	-	(4,594)	N/M	0.4	Mar-21		
36 Project Silk	Mar-15	Direct Equity - Portfolio	UK	Lodging	1.9%	(35,210)	4,856	7,259	(23,095)	-	(23,095)	-31.5%	0.3	May-21		
37 Project Redcar	Feb-15	Direct Equity - Single Asset	UK	Retail	0.1%	(2,432)	1,591	586	(255)	-	(255)	-2.6%	0.9	Sep-21		
38 Brea Office Campus	Sep-14	Direct Equity - Single Asset	Pacific	Office	1.6%	(29,374)	104,021	-	74,646	-	74,646	31.1%	3.5	Oct-21		
39 Project Carlisle	Dec-14	Distressed Debt	UK	Commercial	1.6%	(29,870)	33,193	4,207	7,530	17	7,546	13.7%	1.3	Dec-21		
40 Project Phoenix	Jul-13	Distressed Debt	Germany	Retail	0.4%	(7,151)	8,164	2,042	3,054	24	3,078	10.0%	1.4	Dec-21		
41 Project Leopard	Aug-14	Direct Equity - Portfolio	UK	Retail	0.5%	(10,003)	222	2,690	(7,092)	-	(7,092)	-37.8%	0.3	Sep-22		
42 Project Lucas	Aug-15	Distressed Debt	Netherlands	Mixed Use	1.5%	(26,862)	28,325	169	1,631	30	1,661	5.2%	1.1	Sep-22		
43 Project Chestnut	Jul-14	Distressed Debt	UK	Mixed Use	1.3%	(23,897)	25,935	4,331	6,369	20	6,389	9.7%	1.3	Nov-22		
44 Project Raphael	Dec-15	Distressed Debt	Italy	Mixed Use	0.2%	(3,797)	4,620	108	931	64	995	9.3%	1.3	Nov-22		
45 Project Ram	May-15	Distressed Debt	UK	Mixed Use	1.7%	(31,054)	41,074	4,063	14,083	-	14,083	38.3%	1.5	Dec-22		
46 Project Meridian	Dec-14	Distressed Debt	Spain	Lodging	1.0%	(17,423)	15,683	2,295	554	-	554	2.3%	1.0	Dec-22		
47 Project Eagle	Jun-14	Distressed Debt	Multi Region Europe	Commercial	6.4%	(116,160)	113,121	28,425	25,386	119	25,505	11.0%	1.2	Dec-22		
48 Project Ram III	Jul-16	Distressed Debt	UK	Mixed Use	0.1%	(2,614)	2,375	250	12	54	65	0.7%	1.0	Feb-23		
49 Project Henrico	Dec-14	Distressed Debt	UK	Mixed Use	1.4%	(25,206)	31,028	5,345	11,167	107	11,274	18.1%	1.4	Feb-23		
<b>Total Realized Deals</b>							<b>53.8%</b>	<b>(\$984,442)</b>	<b>\$1,258,323</b>	<b>\$132,466</b>	<b>\$406,346</b>	<b>\$453</b>	<b>\$406,799</b>	<b>17.0%</b>	<b>1.4</b>	

**Fund Net IRR<sup>(8)</sup> 12.1%**
**Notes:**

- (1) "Dollars Invested" is calculated on a "Peak Equity" basis, which is defined as follows; the maximum amount of capital outstanding (i.e., capital invested net of capital previously returned), as of any date, over the term of the investment. For the avoidance of doubt, if, at anytime, additional monies are invested such that the capital outstanding exceeds the then-current Peak Equity mark, a new Peak Equity mark shall be established, and "Dollars Invested" shall thereafter be calculated from and after such point (i.e., all capital returned through the date the new Peak Equity mark is established will not be considered in the calculation of subsequent Dollars Returned).
- (2) "Dollars Returned" is calculated as follows: once Peak Equity is determined, all cash outflows and inflows occurring after the date Peak Equity is established are netted to calculate the then-current Dollars Returned.
- (3) Includes the realized P&L of forward currency contracts used to hedge the currency exposure of foreign investments.
- (4) Remaining market value attributable to cash held in SPV bank accounts or remaining immaterial investment holdings.
- (5) Portfolio Gross Deal IRR is the annualized internal rate of return by reference to the daily cash flows to and from the Fund in respect of every security acquired and associated currency hedges, swaps and margin account interest. The Portfolio Gross IRR includes returns that are determined on a realized basis, and with respect to investments that have not been realized, on a mark-to-market basis. Generally, investments are marked-to-market based on the General Partner's determination of fair value. Kroll and Houlihan Lokey valuation services provides positive assurance review of the valuation of a substantial number of the Partnership's private investments twice a year. The actual realized return on the unrealized investments will depend, among other factors, on the value of the investments at the time of disposition, any related transaction costs and manner of disposition. The Portfolio Gross Deal IRR does not include cash flows attributable to Fund and Account level expenses (professional fees) and consequently will differ from the Fund Net IRR provided herein, which does reflect such fees. Portfolio Gross IRR also does not account for the timing of any capital contributions by, and distributions to or from, investors, and does not reflect the impact of subscription financing facilities or cash drag. "Net" performance figures associated with Portfolio Gross Deal IRR are not expected to materially differ from the Fund Net IRR provided herein, which reflects the net performance of the Fund, as further described below. The General Partner views Portfolio "Net" IRR as comparatively less meaningful than Fund Net IRR as it does not approximate an investor's experience in the Fund, and consequently is not shown here. Certain differences between Fund Net IRR and Portfolio "Net" IRR will exist due to, among others, the following: timing between investment activity at the Fund level and capital contributions by and distributions to investors, the use of subscription financing facilities, and cash drag. Past performance is not indicative of future results.
- (6) Equity Multiple is calculated as (Total MV + Returned + FX Hedge Profit/ (Loss))/ (Invested).
- (7) For information regarding Net performance, please refer to the Fund Net IRR and Fund Net Multiple found in the "Fund Profile" section.
- (8) Please see the "Fund Profile" section for further detail on the Fund Net IRR calculation.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.****As of 06/30/2023****cerberus****Active and Realized Investments Summary**

Deals	% of Invested Capital	Dollars		FX Hedge P&L	Total Market Value	Accruals	Gross P&L	Gross Deal IRR <sup>(1)(3)</sup>	Gross Deal Equity Multiple <sup>(2)(3)</sup>
		Invested	Returned						
<b>\$ in 000s</b>									
Active Deals	46.2%	(\$844,115)	\$1,360,456	\$55,408	\$580,331	\$137	\$1,152,217	21.0%	2.4
Realized Deals	53.8%	(\$984,442)	\$1,258,323	\$132,466	\$453	\$0	\$406,799	17.0%	1.4
<b>Total Deals</b>	<b>100.0%</b>	<b>(\$1,828,557)</b>	<b>\$2,618,779</b>	<b>\$187,874</b>	<b>\$580,784</b>	<b>\$137</b>	<b>\$1,559,017</b>	<b>19.5%</b>	<b>1.9</b>

<b>Fund Net IRR <sup>(4)</sup></b>	<b>12.1%</b>
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(1) Portfolio Gross Deal IRR is the annualized internal rate of return by reference to the daily cash flows to and from the Fund in respect of every security acquired and associated currency hedges, swaps and margin account interest. The Portfolio Gross IRR includes returns that are determined on a realized basis, and with respect to investments that have not been realized, on a mark-to-market basis. Generally, investments are marked-to-market based on the General Partner's determination of fair value. Kroll and Houlihan Lokey valuation service provides positive assurance review of the valuation of a substantial number of the Partnership's private investments twice a year. The actual realized return on the unrealized investments will depend, among other factors, on the value of the investments at the time of disposition, any related transaction costs and manner of disposition. The Portfolio Gross Deal IRR does not include cash flows attributable to Fund and Account level expenses (professional fees) and consequently will differ from the Fund Net IRR provided herein, which does reflect such fees. Portfolio Gross IRR also does not account for the timing of any capital contributions by, and distributions to or from, investors, and does not reflect the impact of subscription financing facilities or cash drag. "Net" performance figures associated with Portfolio Gross Deal IRR are not expected to materially differ from the Fund Net IRR provided herein, which reflects the net performance of the Fund, as further described below. The General Partner views Portfolio "Net" IRR as comparatively less meaningful than Fund Net IRR as it does not approximate an investor's experience in the Fund, and consequently is not shown here. Certain differences between Fund Net IRR and Portfolio "Net" IRR will exist due to, among others, the following: timing between investment activity at the Fund level and capital contributions by and distributions to investors, the use of subscription financing facilities, and cash drag. Past performance is not indicative of future results.

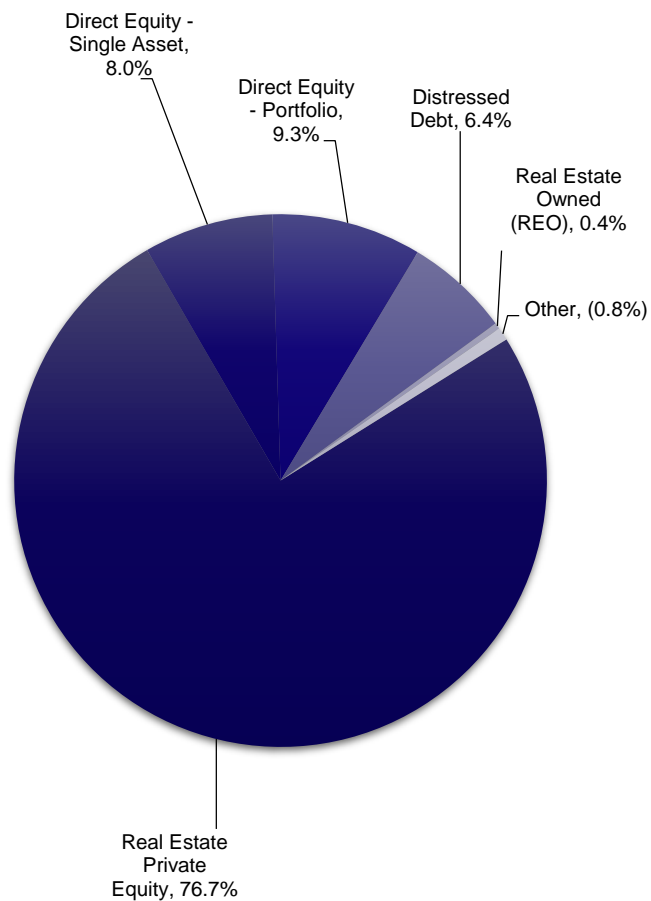
(2) Gross Deal Equity Multiple is calculated as (Total Market Value + Returned + FX Hedge Profit/ (Loss))/ (Invested).

(3) For information regarding Net performance, please refer to the Fund Net IRR and Fund Net Multiple found in the "Fund Profile" section.

(4) Please see the "Fund Profile" section for further detail on the Fund Net IRR calculation.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

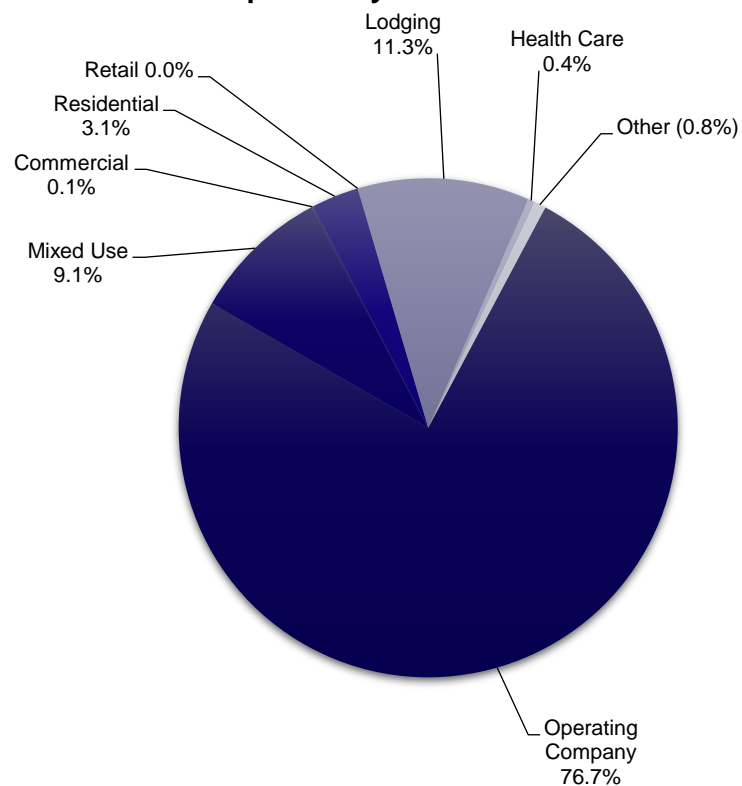
**cerberus****Exposure by Investment Type**Market Value on a Reporting Basis<sup>(1)</sup>**Exposure by Investment Type**

Category	Number of deals	Market Value	% of Market Value
Real Estate Private Equity	2	\$ 445,690,895	76.7%
Direct Equity - Single Asset	2	46,366,885	8.0%
Direct Equity - Portfolio	4	53,732,316	9.3%
Distressed Debt	21	37,454,796	6.4%
Real Estate Owned (REO)	2	2,175,660	0.4%
Other	NA	(4,636,559)	(0.8%)
<b>Total</b>	<b>31</b>	<b>\$ 580,783,993</b>	<b>100.0%</b>

(1) Please refer to the "GAAP - Reporting Basis Bridge" for the explanation of the Reporting Basis of the Market Value of Investments.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

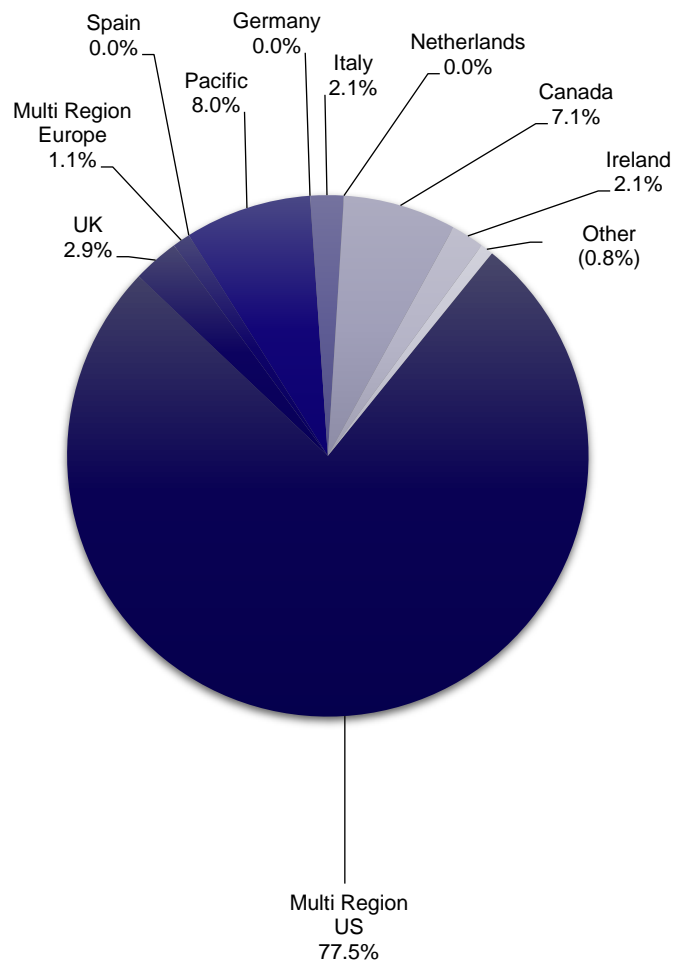
**Exposure by Asset Type**Market Value on a Reporting Basis<sup>(1)</sup>**Exposure by Asset Class**

Category	Number of deals	Market Value	% of Market Value
Operating Company	2	\$ 445,690,895	76.7%
Mixed Use	16	52,814,217	9.1%
Commercial	3	620,951	0.1%
Residential	5	18,105,609	3.1%
Retail	2	24,623	0.0%
Lodging	2	65,594,611	11.3%
Health Care	1	2,569,647	0.4%
Other	NA	(4,636,559)	(0.8%)
<b>Total</b>	<b>31</b>	<b>\$ 580,783,993</b>	<b>100.0%</b>

(1) Please refer to the "GAAP - Reporting Basis Bridge" for the explanation of the Reporting Basis of the Market Value of Investments.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**Exposure by Geography**Market Value on a Reporting Basis<sup>(1)</sup>**Geographical Exposure**

Location	Number of deals	Market Value	% of Market Value
Multi Region US	3	\$ 449,930,752	77.5%
UK	9	16,896,534	2.9%
Multi Region Europe	4	6,487,127	1.1%
Spain	1	14,957	0.0%
Pacific	2	46,366,885	8.0%
Germany	2	24,623	0.0%
Italy	5	12,219,484	2.1%
Netherlands	1	29,545	0.0%
Canada	1	41,377,564	7.1%
Ireland	3	12,073,081	2.1%
Other	NA	(4,636,559)	(0.8%)
<b>Total</b>	<b>31</b>	<b>\$ 580,783,993</b>	<b>100.0%</b>

(1) Please refer to the "GAAP - Reporting Basis Bridge" for the explanation of the Reporting Basis of the Market Value of Investments.

# **Income Statement & Performance Attribution Analysis**

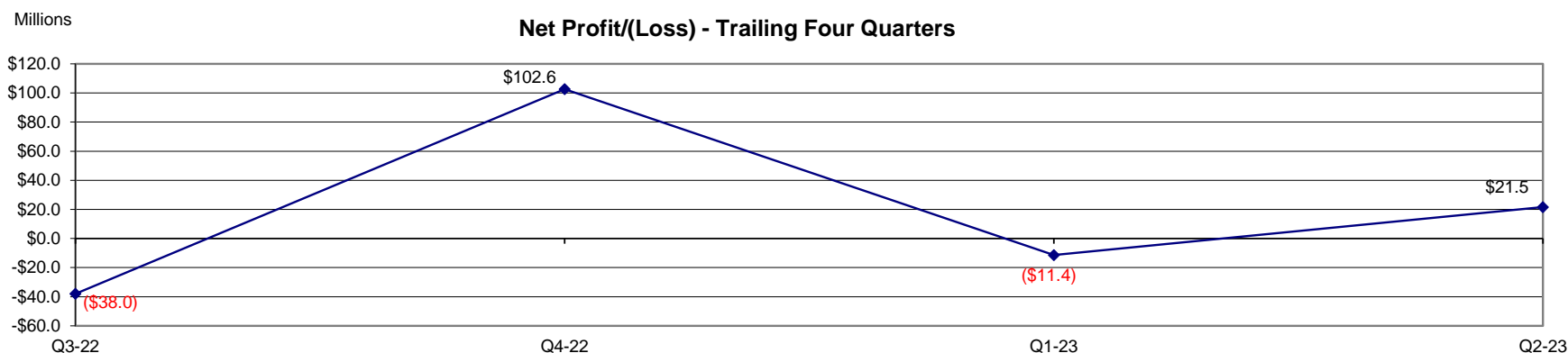


**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**Fund Income Summary**

CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P. <sup>(1)</sup>			
	Q1 2023	Q2 2023	YTD
Realized Profit/ (Loss)	\$ 112,143,676	\$ 1,404,672	\$ 113,548,348
Unrealized Profit/ (Loss)	(123,797,910)	19,813,976	(103,983,934)
Portfolio Income	1,178,457	1,362,408	2,540,865
<b>Trading Profit/ (Loss)</b>	<b>\$ (10,475,777)</b>	<b>\$ 22,581,056</b>	<b>\$ 12,105,279</b>
Management fees	(245,464)	(246,300)	(491,764)
Affiliated service providers cost	(195,586)	(240,230)	(435,816)
Professional fees and other	(520,062)	(544,979)	(1,065,041)
<b>Total Expenses</b>	<b>\$ (961,112)</b>	<b>\$ (1,031,509)</b>	<b>\$ (1,992,621)</b>
<b>Net Profit / (Loss)</b>	<b>\$ (11,436,889)</b>	<b>\$ 21,549,547</b>	<b>\$ 10,112,658</b>
% Return Gross <sup>(2)</sup>	-1.94%	4.85%	2.82%
% Return Net <sup>(3)</sup>	-1.43%	3.91%	2.43%

<sup>(1)</sup> Combined with CIREP III AIV, L.P.<sup>(2)</sup> % Return Gross is calculated as profit after management fees but before incentive fees. The gross return represents the return for the Limited Partners and does not necessarily represent the return of an individual investor.<sup>(3)</sup> % Return Net is calculated as profit after management fees and incentive fees. The net return represents the return for the Limited Partners and does not necessarily represent the return of an individual investor. **Past performance is not a guarantee of future results.** There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**cerberus****Affiliated Service Providers & Fee Offsets**

	Offsetable Against Performance or Management Fees	Included on Statement of Operations <sup>(1)</sup>	Included within Fair Value of Related Investments	Total
<b>YTD</b>				
Cerberus Operations & Advisory Company, LLC and Portfolio Consulting Advisory Company, LLC <sup>(2)</sup>	No	\$ 346,089	\$ N/A	\$ 346,089
Cerberus Global Investment Advisors, LLC <sup>(6)</sup>	No	(716)	N/A	(716)
FirstKey Mortgage, LLC	No	421	1,790	2,212
Cerberus Technology Solutions, LLC <sup>(2)</sup>	No	89,033	N/A	89,033
Cerberus European Servicing, Ltd.	No	N/A	199,098	199,098
Capital Home Loans Limited	No	N/A	136,257	136,257
Landmark Mortgages Limited	No	N/A	68,728	68,728
Promontoria Servicing Ireland Ltd <sup>(5)</sup>	No	N/A	44,753	44,753
Dutch Asset Management Expenses <sup>(3)</sup>	No	989	251,523	252,511
<b>Total YTD</b>		<b>\$ 435,816</b>	<b>\$ 702,149</b>	<b>\$ 1,137,965</b>

<b>Top 5 Active COAC Issuers</b>	<b>YTD<sup>(2)</sup></b>
Albertson's	\$ 281,491
Crossroads	22,425
Manhattan Beach Marriott	17,159
Project Maple Leaf (Fortis Hotels)	12,080
Project Silk	9,711
<b>Total</b>	<b>\$ 342,866</b>

<b>Management Fee Offsets</b>	<b>Gross Management Fee</b>	<b>Offsets<sup>(4)</sup></b>	<b>Net Management Fee</b>
Q1	\$ 254,606	\$ 9,142	\$ 245,464
Q2	228,559	(17,741)	246,300
<b>YTD</b>	<b>\$ 483,165</b>	<b>\$(8,599)</b>	<b>\$ 491,764</b>

<sup>(1)</sup> Represents the components of the "Affiliated Service Providers Cost" line item on the Statement of Operations.

<sup>(2)</sup> Cerberus Operations & Advisory Company, LLC and Portfolio Consulting Advisory Company, LLC and Cerberus Technology Solutions, LLC fees are net of reimbursements.

<sup>(3)</sup> Represents the fund's proportionate allocation of Cerberus' Dutch office costs and expenses associated with investments structured through the Netherlands (which includes the costs of employees working in the Netherlands who devote their time to the formation, organization, structure, administration, operation, accounting and reporting of the Dutch companies and their investments).

<sup>(4)</sup> Adjustments are related to management fees received from Albertson's and Cerberus Technology Solutions, LLC.

<sup>(5)</sup> This is the Fund's proportionate allocation of Promontoria Servicing Ireland Limited ("PSIL") costs and expenses associated with the oversight and management of certain non-performing loans in Ireland (which includes the costs of employees working in Ireland who devote their time to such activities), plus a margin of 10%. PSIL is operated on a near-cost basis, with the intention of generating minimum profits as required by the tax laws and/or regulations of Ireland.

<sup>(6)</sup> Cerberus Global Investment Advisors, LLC expenses includes the fees of certain consultants who provide services to the Cerberus Funds and/or their portfolio companies and are, accordingly, allocated to specific projects, strategies and/or portfolio companies as appropriate.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**cerberus****Inception to Date P&L by Issuer and Investment Type <sup>(1)</sup>**

Issuer/ Strategy	Investment Type	Total P&L	Issuer/ Strategy	Investment Type	Total P&L
Project Beetle	Sp. Situations	\$ 4,970,817	Project Aurora	Real Estate Owned (REO)	6,410,834
Seibu	Sp. Situations	4,205,653	Project Shift	Real Estate Owned (REO)	3,258,791
<b>Sp. Situations Total</b>		<b>9,176,470</b>	Project Alloro	Real Estate Owned (REO)	1,043,606
			Project Levia	Real Estate Owned (REO)	455,250
RMBS Strategy	Distressed Debt	45,284,448	<b>Real Estate Owned (REO) Total</b>		<b>11,168,481</b>
Project Neptune	Distressed Debt	37,853,288	Hampton Roads Office Portfolio	Direct Equity - Portfolio	36,935,999
Project Eagle	Distressed Debt	25,504,757	Project Maple Leaf (Fortis Hotels)	Direct Equity - Portfolio	30,457,439
Project Aran	Distressed Debt	22,509,125	Project Forest	Direct Equity - Portfolio	21,636,612
Project Hampton	Distressed Debt	20,799,685	Project Monsoon	Direct Equity - Portfolio	18,636,791
Project Lansdowne	Distressed Debt	20,190,411	SE Hotel	Direct Equity - Portfolio	17,409,860
Project Mermaid	Distressed Debt	17,957,765	Sammamish Parkplace	Direct Equity - Portfolio	16,518,681
Project Indie	Distressed Debt	17,436,523	Project Monza	Direct Equity - Portfolio	9,513,752
Project Ram	Distressed Debt	14,082,955	Project Grove	Direct Equity - Portfolio	8,105,618
Project Thames	Distressed Debt	12,842,251	Project Klimt	Direct Equity - Portfolio	2,502,706
Project Oyster	Distressed Debt	12,270,439	Project Caballo	Direct Equity - Portfolio	1,402,227
Project Henrico	Distressed Debt	11,273,973	Project Egido	Direct Equity - Portfolio	995,426
Project Vantage	Distressed Debt	8,772,046	Project Cuba	Direct Equity - Portfolio	874,930
Project Avon	Distressed Debt	7,732,676	Project Sling	Direct Equity - Portfolio	(1,314,456)
Project Carlisle	Distressed Debt	7,546,251	Project Leopard	Direct Equity - Portfolio	(7,091,516)
IVG Immobilien AG	Distressed Debt	6,694,341	Project Silk	Direct Equity - Portfolio	(23,094,807)
Project Arrow	Distressed Debt	6,508,131	<b>Direct Equity - Portfolio Total</b>		<b>133,489,263</b>
Project Chestnut	Distressed Debt	6,389,207	Crossroads	Direct Equity - Single Asset	86,304,966
Max Maxim	Distressed Debt	5,254,332	Brea Office Campus	Direct Equity - Single Asset	74,646,310
CMBS Strategy	Distressed Debt	4,379,188	Residence Inn Torrance CA	Direct Equity - Single Asset	19,068,391
Multi-Cedulas	Distressed Debt	3,885,410	Deluxe	Direct Equity - Single Asset	15,278,456
Project Phoenix	Distressed Debt	3,078,236	Manhattan Beach Marriott	Direct Equity - Single Asset	9,334,104
Project Samba	Distressed Debt	2,511,734	Project Redcar	Direct Equity - Single Asset	(255,136)
Project East	Distressed Debt	2,242,909	Project Motherwell	Direct Equity - Single Asset	(4,593,932)
Project Oak	Distressed Debt	2,211,938	Project Clyde	Direct Equity - Single Asset	(7,066,442)
Project Lucas	Distressed Debt	1,660,938	<b>Direct Equity - Single Asset Total</b>		<b>192,716,718</b>
Project Raphael	Distressed Debt	995,252	Tesco PLC	First Mort./Bridge	(87,530)
Project Pluto	Distressed Debt	837,837	<b>First Mort./Bridge Total</b>		<b>(87,530)</b>
Project Resimac	Distressed Debt	683,360	Other Income/ Expenses	Other	33,987,710
Project Meridian	Distressed Debt	554,085	CIREP Lending Company, LLC	Other	(34,950)
Project Please	Distressed Debt	220,683	European Corporate Distressed Hedge: Other		(576,017)
Project Ram III	Distressed Debt	65,389	US Treasury/Portfolio Hedges	Other	(79,329,370)
Project Finn	Distressed Debt	(2,303,046)	<b>Other Total</b>		<b>(45,952,627)</b>
<b>Distressed Debt Total</b>		<b>327,926,517</b>	<b>Total</b>	<b>\$</b>	<b>1,593,004,325</b>
Albertson's	Real Estate Private Equity	913,264,395			
Admiral Taverns	Real Estate Private Equity	23,783,059			
Project Plataforma	Real Estate Private Equity	23,775,620			
First Key Holdings, LLC	Real Estate Private Equity	3,743,960			
<b>Real Estate Private Equity Total</b>		<b>964,567,033</b>	<b>Fund Net IRR <sup>(2)</sup></b>		<b>12.1%</b>

(1) **Past performance is not a guarantee of future results.** It is possible no investor experienced the results described herein.

There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein.

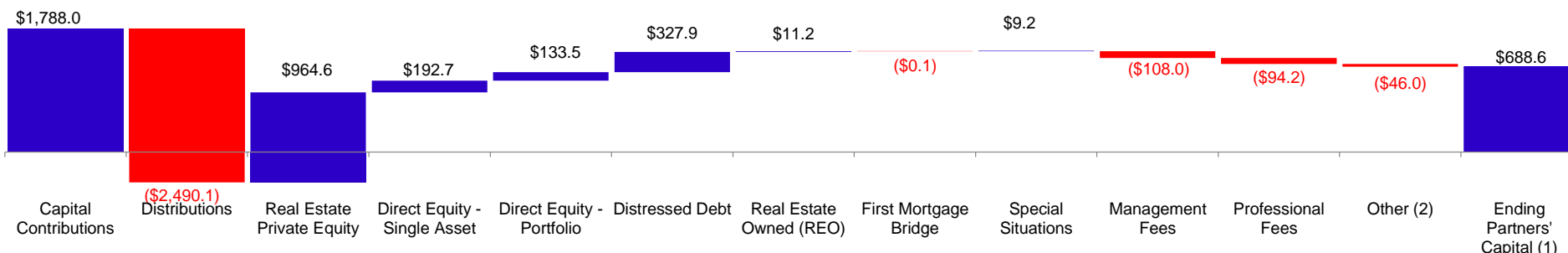
(2) Please see the "Fund Profile" section for further detail on the Fund Net IRR calculation.

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

As of 06/30/2023

**cerberus****Inception to Date P&L by Investment Type <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup>**

USD in Millions



Top Income Drivers							
Real Estate Private Equity		Distressed Debt		Direct Equity - Single Asset		Other Investment Types	
Albertson's	\$ 913.3	RMBS Strategy	\$ 45.3	Crossroads	\$ 86.3	Direct Equity - Portfolio	\$ 133.5
Admiral Taverns	23.8	Project Neptune	37.9	Brea Office Campus	74.6	Real Estate Owned (REO)	11.2
Project Plataforma	23.8	Project Eagle	25.5	Residence Inn Torrance CA	19.1	Sp. Situations	9.2
First Key Holdings, LLC	3.7	Project Aran	22.5	Deluxe	15.3		
		Project Hampton	20.8	Manhattan Beach Marriott	9.3		
Other Gains	-	Other Gains	178.3	Other Gains	-	Other Gains	-
<b>Total Gains</b>	<b>\$ 964.6</b>	<b>Total Gains</b>	<b>\$ 330.2</b>	<b>Total Gains</b>	<b>\$ 204.6</b>	<b>Total Gains</b>	<b>\$ 153.8</b>
Top Loss Drivers							
Real Estate Private Equity		Distressed Debt		Direct Equity - Single Asset		Other Investment Types	
None	\$ -	Project Finn	\$ (2.3)	Project Clyde	\$ (7.1)	Other	\$ (46.0)
				Project Motherwell	(4.6)	First Mort./Bridge	(0.1)
				Project Redcar	(0.3)		
Other Losses	-	Other Losses	-	Other Losses	-	Other Losses	-
<b>Total Losses</b>	<b>\$ -</b>	<b>Total Losses</b>	<b>\$ (2.3)</b>	<b>Total Losses</b>	<b>\$ (11.9)</b>	<b>Total Losses</b>	<b>\$ (46.0)</b>
<b>NET TOTAL</b>	<b>\$ 964.6</b>		<b>\$ 327.9</b>		<b>\$ 192.7</b>		<b>\$ 107.8</b>

<sup>(1)</sup> Graph is not drawn to scale.<sup>(2)</sup> Includes Margin Interest, Cash FX P&L, US Treasury/Portfolio Hedges, European Distressed Hedges and Other Income/ Expenses.<sup>(3)</sup> **Past performance is not a guarantee of future results.** It is possible no investor experienced the results described herein.

There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein.

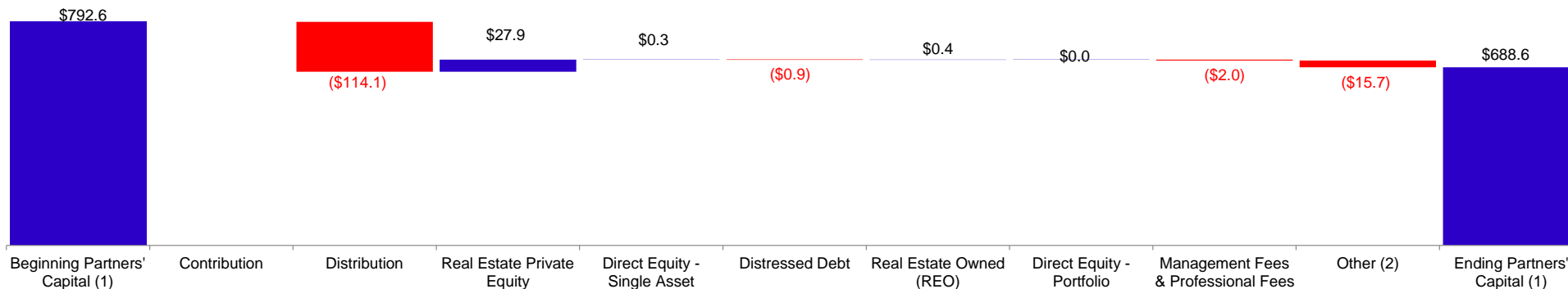
<sup>(4)</sup> Please see the "Fund Profile" section for further detail on the Fund Net IRR calculation.**Fund Net IRR <sup>(4)</sup> 12.1%**

**CERBERUS INSTITUTIONAL REAL ESTATE PARTNERS III, L.P.**

Performance period: 1/01/2023 - 6/30/2023

**cerberus****Year to Date Performance by Investment Type <sup>(1)(2)(3)</sup>**

USD in Millions

**Top Income Drivers**

Real Estate Private Equity	Real Estate Owned (REO)	Distressed Debt	Other
Albertson's	\$ 27.9	\$ 0.2	\$ 0.3
Project Plataforma	0.0	0.2	0.2
	Project Levia	0.0	0.2
	Project Alloro		0.0
	Project Aurora		0.0
			0.0
			0.0
Other Gains	-	-	0.0
Total Gains	\$ 27.9	\$ 0.4	\$ 0.7

**Top Loss Drivers**

Real Estate Private Equity	Real Estate Owned (REO)	Distressed Debt	Other
None	None	\$ -	\$ (15.7)
			Project Neptune
			Project Arrow
			Project Lansdowne
			Project Oyster
			Project Aran
Other Losses	-	-	(0.4)
Total Losses	\$ -	\$ -	\$ (1.6)

<b>NET TOTAL</b>	<b>\$ 27.9</b>	<b>\$ 0.4</b>	<b>\$ (0.9)</b>	<b>\$ (15.3)</b>
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(1) Graph is not drawn to scale.

(2) Includes Margin Interest, Cash FX P&amp;L, US Treasury/Portfolio Hedges, European Distressed Hedges and Other Income/ Expenses.

(3) **Past performance is not a guarantee of future results.** It is possible no investor experienced the results described herein.

There can be no assurance that any other Cerberus Fund or investment will achieve results similar to those described herein.

(4) Please see the "Fund Profile" section for further detail on the Fund Net Return calculation.

<b>Net YTD 2023 Return <sup>(4)</sup></b>	<b>2.4%</b>
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# Portfolio Overview

Cerberus Institutional FYU'9ghUY'Partners III, L.P.  
June 30, 2023



# Crossroads

## As of 6/30/2023

### Executive Summary

#### INVESTMENT SUMMARY

In May 2014, Cerberus, along with JV partner Harridge Development Group ("Harridge"), entered into a 4- year option (the "Option") to entitle a 6.6+ acre prime infill site (the "Property") in Hollywood, CA. The Option counterparty is the land owner (the "Landlord") who has owned the Property since 1977 and desires to see the Property developed into a large scale mixed-use project. The property was declared a historical cultural monument of Los Angeles in 1974. Due to the infill location and size of the property, we consider it to be a trophy asset which is primed for development of multi-family residential, retail, hotel or a combination of various asset types.

The Property was zoned for more restrictive residential and commercial uses, and required a 4+ year process to receive discretionary approvals for the projected entitlements of ~1,000 multifamily units, ~200k SF of retail, and a hotel.

The cost of the Option was \$500k per year for the first three years and then \$1.0 million for the fourth and final year (if needed), plus entitlement, processing, legal, and G&A costs. The JV could terminate the Option at any time, without any penalty, other than forfeiture of the Option payments made up until the time of termination.

#### ASSET SUMMARY

Date of Investment:	May-14
Investment Type:	Real Estate
Geography	Pacific
Property Location:	Hollywood, CA
Asset Type	Mixed Use
Asset/Collateral:	6.6+ prime infill acres
Investment Professionals:	Tom Wagner, Tyler Rothenberg

#### ACTIONS TO DATE & CURRENT PERFORMANCE

On January 15th, 2019, the Los Angeles City Council (the "City") voted unanimously to approve the entitlements for the Project, successfully culminating a 4+ year entitlement effort.

Cerberus exercised the option agreement to acquire the leasehold and then subsequently sold Phase 1 for \$155 million in proceeds.

To date, Cerberus invested \$20.1mm and returned \$68.9mm for a \$48.8mm realized profit.

### Valuation History

Date	Quarterly Net Cashflows	Mark
06/30/2023	\$ 15,344,000	\$ 22,149,839
03/31/2023	-	37,167,461
12/31/2022	-	37,167,461
09/30/2022	-	36,298,309
06/30/2022	-	36,298,309
03/31/2022	-	36,298,309
12/31/2021	68,913,253	36,298,309
09/30/2021	(393,750)	63,785,368
06/30/2021	(1,218,750)	63,391,618
03/31/2021	-	58,681,591
12/31/2020	(2,250,000)	56,897,482
09/30/2020	-	52,563,649
06/30/2020	-	52,563,649
03/31/2020	-	50,291,243
12/31/2019	(2,700,000)	50,291,243
09/30/2019	-	43,919,252
06/30/2019	(1,687,500)	13,076,036
03/31/2019	(1,500,000)	11,652,377

#### Cash Flow Summary (1)

Cerberus cash invested to date (gross outflows):	\$	(20,121,524)
Cerberus cash returned to date (gross inflows):		84,257,253
Net Cerberus cash position as of 6/30/2023	\$	64,135,728

### Cerberus Fund Allocation

Total Cerberus Ownership: 75.0%

Fund	Market Value	% of Total
CIREP-3	\$ 22,149,839	100.0%
<b>Cerberus Total</b>	<b>22,149,839</b>	<b>100.0%</b>



(1) Gross cash flows may vary from peak invested equity as defined on Active Investments schedule, however, the net cash position will be consistent.

# Manhattan Beach Marriott

## As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In May 2016, Cerberus Real Estate ("Cerberus"), along with JV Partner Westmont Hospitality Group ("Westmont"), acquired the leasehold interest in a 385-key full service hotel with 32,000 sf of meeting/event space (the "Hotel", or the "Property") located on 26 acres in the South Bay of Los Angeles, CA.

The Property was acquired for \$78.0 million (\$203k per key, 8.6% cap rate on TTM NOI). The business plan called for the completion of a comprehensive renovation to reposition and turnaround the Property.

The investment presented an attractive opportunity to buy an underperforming infill asset at 50% of replacement cost with potential upside in ADR through a renovation while improving operating efficiencies through third-party management. Cerberus was able to secure financing at closing for \$73.2 million (67% LTC).

#### ASSET SUMMARY

Date of Investment:	May-16
Investment Type:	Equity
Geography:	Pacific
Property Location:	South Bay, CA
Asset Type:	Hotel
Asset/Collateral:	Leasehold interest in 392-key full service hotel
Investment Professionals:	Tom Wagner, Tyler Rothenberg, James Wallace

#### ACTIONS TO DATE & CURRENT PERFORMANCE

Cerberus closed this transaction in May 2016. During the renovation design process, Cerberus increased the scope of the renovation to provide attractive ROI opportunities through increased ADR, meetings, catering, and other F&B opportunities.

The renovation program began during Q3 2017 and was completed in Q2 2018. The Property is now known as Westdrift, an Autograph Collection hotel, with Westmont as the hotel manager under a new management agreement. The fully renovated hotel began operations in May 2018 and was completing its ramp prior to the COVID-19 pandemic.

In July 2018, Cerberus closed on a loan refinance with Barings. The refinance enabled Cerberus to return \$19.5 million, representing 54% of Cerberus' equity.

In Sep-20, CRE negotiated a loan modification that provides untested term through Sep-23 in exchange for a \$2mm paydown in Sep-20 and a \$3mm paydown in Sep-21. Both paydowns have been made and we continue to focus on our post-COVID operation recovery.

We are currently in the market to refinancing the loan.

2Q23 achieved RevPAR of \$202 and NOI of \$2.0mm which is 9% ahead of 2019.

### Valuation History (1)

Date	Quarterly Net Cashflows	Mark
06/30/2023	\$ -	\$ 34,386,858
03/31/2023	2,000,000	34,386,858
12/31/2022	(2,000,000)	34,386,858
09/30/2022	-	32,386,858
06/30/2022	-	31,265,807
03/31/2022	-	30,087,442
12/31/2021	-	30,087,442
09/30/2021	(2,762,500)	30,087,442
06/30/2021	-	26,505,824
03/31/2021	-	25,565,016
12/31/2020	(3,825,000)	24,915,486
09/30/2020	(2,635,000)	20,228,051
06/30/2020	-	19,169,232
03/31/2020	-	19,169,232
12/31/2019	5,525,000	25,046,742
09/30/2019	-	30,571,742

#### Cash Flow Summary (2)

Cerberus cash invested to date (gross outflows):	\$ (47,592,626)
Cerberus cash returned to date (gross inflows):	28,459,678
Net Cerberus cash position as of 6/30/2023	\$ (19,132,949)

### Cerberus Fund Allocation

Total Cerberus Ownership: 85.0%

Fund	Market Value	% of Total
CIREP-4	\$ 10,169,812	29.6%
CIREP-3	24,217,047	70.4%
<b>Cerberus Total</b>	<b>34,386,858</b>	<b>100.0%</b>



(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cashflows and marks may not represent full history of investment.



# Project Alloro

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
In June and September 2015, Cerberus closed on the acquisition of a portfolio of 112 commercial and industrial assets held by Allianz S.p.A. in Italy for a purchase price of €115.0 million and an all-in-cost of €122.8 million, with no leverage.	
The assets have a gross lettable area of 186,660 sqm and, excluding land of 59,350 sqm, an occupancy at closing of 50% with a weighted average unexpired lease term of 3.8 yrs., gross rent of €4.9 million (4.0% yield) and NOI of €2.6 million (2.1% yield). The portfolio is mixed and includes office, residential, retail and land, mainly located in northern Italy.	
46 (mainly residential and office) of the 112 assets are located in the province of Trieste, representing 57% of the purchase price. In addition, 50 assets (prevalently office use) are spread across the rest of Northern Italy, representing 40% of the purchase price. The remaining 16 assets (3% of purchase price) are spread throughout the rest of Italy.	
In Q4 2016, Cerberus completed a refinancing with Deutsche Bank for senior financing at a 55.0% loan-to-cost. A total of €58.6 million in refinancing proceeds was distributed to Cerberus' funds. In 2Q 2019, Cerberus renegotiated the current facility agreement to allow for the financing (at 100% LTC) of the capex on the Turin Alfieri asset.	
<b>ASSET SUMMARY</b>	
Date of Investment:	June-15
Investment Type:	REO
Geography:	Italy
Asset/Collateral - At Acquisition:	27 Assets
Asset/Collateral - Current:	9 Assets
Investment Professionals:	Lee Millstein, Emanuele Rosetti Zannoni

Valuation History (1)		
Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ 2,665,430	\$ 5,701,068
03/31/2023	4,831,123	7,252,961
12/31/2022	998,385	11,321,973
09/30/2022	3,092,770	18,457,745
06/30/2022	10,861,825	21,171,090
03/31/2022	991,829	31,134,043
12/31/2021	14,350,068	31,143,060
09/30/2021	18,396,662	43,664,075
06/30/2021	10,166,678	62,129,878
03/31/2021	(375,824)	70,755,081
12/31/2020	(2,578,081)	68,873,604
09/30/2020	(946,512)	66,026,808
06/30/2020	(1,396,930)	67,154,695
03/31/2020	7,626,258	66,693,416
12/31/2019	-	79,609,770
09/30/2019	4,029,360	79,447,932
06/30/2019	388,698	83,652,031
03/31/2019	-	83,681,382
12/31/2018	-	83,185,355
09/30/2018	-	83,910,597
06/30/2018	156,564	83,090,309
03/31/2018	(5,323,944)	81,745,459
12/31/2017	1,338,736	75,080,896
09/30/2017	2,195,612	74,627,671
06/30/2017	133,679	77,547,989
03/31/2017	-	79,691,356
12/31/2016	62,072,086	79,580,270
09/30/2016	4,229,030	135,684,131
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(152,946,075)
Cerberus cash returned to date (inflows):		156,701,317
Net Cerberus cash position as of 6/30/2023	\$	3,755,242

Cerberus Fund Allocation			
Total Cerberus Ownership: 99.7%			
Fund	Market Value (2)	% of Total (2)	
CIP-5	\$ 1,036,420	18.2%	
CDP	926,087	16.2%	
CIREP-3	629,024	11.0%	
CANM	490,385	8.6%	
CCTP	440,994	7.7%	
CSCP	363,732	6.4%	
CGSI	264,596	4.6%	
CADP	264,596	4.6%	
CI-2	250,156	4.4%	
CSC2	177,053	3.1%	
COTP	154,348	2.7%	
CHHP	135,385	2.4%	
CMAP	134,283	2.4%	
CP-2	106,790	1.9%	
SMRS	88,199	1.5%	
CSGN	88,199	1.5%	
CPWP	88,199	1.5%	
CPem	26,461	0.5%	
CEUF1F	22,050	0.4%	
CMGF	14,112	0.2%	
<b>Cerberus Total</b>	<b>5,701,068</b>	<b>100.0%</b>	

Investment Updates
At acquisition the portfolio has been bucketed into three main clusters:
- 6 top assets that needed a specific strategy to be implemented directly by the asset management team (real estate development; lease up/lease renegotiation and sale).
- Trieste portfolio: 46 residential buildings. A local asset manager (with specific focus on sales) has been appointed. The required fractional activities have now been completed, with unit by unit and block sales being explored.
- Trading portfolio: 60 retail and office commercial properties spread across Italy. Brokers have been appointed for the sale and marketing activities have been launched.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Aran

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
<p>In December 2014, Cerberus acquired Project Aran, a portfolio of non-performing loans secured by real estate located primarily in the Republic of Ireland (85.8%), Northern Ireland (13.0%), England &amp; Wales (0.9%), and Scotland (0.3%) from the Royal Bank of Scotland ("RBS"). The purchase price for Project Aran, €1.4 billion equated to 25.6% of Royal Bank of Scotland's total claim. At pricing, the portfolio was comprised of 1,287 connections and 2,799 borrowers secured by 5,363 assets and an unpaid principal balance ("UPB") of €5,638.3 million. Project Aran is a granular portfolio, 4% of value was concentrated in the top 10 properties at pricing.</p>	
<b>ASSET SUMMARY</b>	
Date of Investment:	December-14
Investment Type:	NPL
Geography:	Ireland & United Kingdom
Asset/Collateral - At Acquisition:	1,902 NPL
Asset/Collateral - Current:	1,554 NPL; 320 Properties: 124 Housing (51.0%); 89 Land (24.0%); 35 Apartments (6.0%); 20 Retail (6.0%); 13 Mixed Use (4.0%); 7 Office (3.0%); 7 Other (2.0%); 15 Development (2.0%); 10 Industrial (2.0%)
(% based on estimated market value)	
Investment Professionals:	Lee Millstein, Daniel Dejanovic

Valuation History (1)		
Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ 421,895	\$ 48,861,838
03/31/2023	(2,363,322)	49,114,774
12/31/2022	6,491,762	48,170,794
09/30/2022	-	54,990,373
06/30/2022	5,840,515	54,252,054
03/31/2022	54,617,622	60,241,492
12/31/2021	4,683,578	141,075,049
09/30/2021	(617,976)	162,651,212
06/30/2021	(1,186,099)	187,429,166
03/31/2021	1,051,840	190,806,518
12/31/2020	(2,838,341)	195,614,325
09/30/2020	598,497	199,093,163
06/30/2020	(2,874,864)	201,225,311
03/31/2020	3,480,558	200,490,757
12/31/2019	5,764,208	224,048,845
09/30/2019	332,428	240,967,206
06/30/2019	973,003	242,277,467
03/31/2019	4,926,578	240,682,822
12/31/2018	900,820	241,693,602
09/30/2018	15,356,257	240,514,312
06/30/2018	7,597,297	252,752,175
03/31/2018	238,048,189	241,447,395
12/31/2017	(28,576,233)	470,585,503
09/30/2017	10,464,365	440,998,146
06/30/2017	17,372,285	440,633,823
03/31/2017	29,210,444	452,676,054
12/31/2016	116,840,578	460,247,728
09/30/2016	31,588,318	547,609,489
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(522,852,544)
Cerberus cash returned to date (inflows):		684,813,485
Net Cerberus cash position as of 6/30/2023	\$	161,960,941

Cerberus Fund Allocation			
Total Cerberus Ownership: 100.0%			
Fund	Market Value (2)	% of Total (2)	
CIP-5	\$ 8,497,970	17.4%	
CDP	7,593,308	15.5%	
RMBS Opp	5,812,610	11.9%	
CIREP-3	5,157,590	10.6%	
CCTP	3,615,861	7.4%	
CSCP	2,982,362	6.1%	
CCPP	2,629,454	5.4%	
CGSI	2,169,516	4.4%	
SVLP	2,136,877	4.4%	
COTP	1,265,551	2.6%	
CHHP	1,110,069	2.3%	
CMAP	1,101,029	2.3%	
CADP	1,084,758	2.2%	
CSMOF	1,021,899	2.1%	
CPWP	723,172	1.5%	
CSGN	723,172	1.5%	
SMRS	723,172	1.5%	
CPPEM	216,959	0.4%	
CEUF1F	180,793	0.4%	
CMGF	115,713	0.2%	
<b>Cerberus Total</b>	<b>48,861,838</b>	<b>100.0%</b>	

Investment Updates
<p>The migration of 50% of the portfolio was completed in April 2015, and a further 25% of the portfolio was migrated in May 2015. The remaining pool of sub-participated loans migrated in April 2016.</p> <p>As of 2Q23, 977 Connections are Resolved and the portfolio is ~95% Collected.</p>

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Arrow

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
In December 2015, Cerberus acquired Project Arrow, a portfolio of non-performing loans secured by real estate located primarily in the Republic of Ireland (84.0%) and Great Britain (6.7%) from the National Asset Management Agency ("NAMA"). At pricing, the portfolio comprised of 302 connections; 1,151 borrowers; 1,906 assets and an unpaid principal balance ("UPB") of €6.2 billion with 10% of value concentrated in the top 10 properties.	
The purchase price for Project Arrow, €768 million, equated to 12.4% of the total claim. Total all in cost, after adjustments for interim activity, was €757.2 million. The acquisition was financed with a facility of €481.2 million.	
The portfolio was refinanced in March 2018 with an additional €139.5 million advanced by the lenders.	
<b>ASSET SUMMARY</b>	
Date of Investment:	December-15
Investment Type:	NPL
Geography:	Ireland & United Kingdom
Asset/Collateral - At Acquisition:	914 NPL
Asset/Collateral - Current:	412 NPL; 50 Properties: 26 Residential (68.0%); 17 Land (22.0%); 3 Other (5.9%); 3 Mixed Use (3.9%); 1 Industrial (0.2%); Office (0.0%); Retail (0.0%)
Investment Professionals:	Lee Millstein, Daniel Dejanovic

Valuation History (1)		
Date	Quarterly Net Cash	
	Flows (2)	Mark (2)
06/30/2023	\$ 339,567	\$ 20,894,810
03/31/2023	703,920	22,910,088
12/31/2022	(141,800)	24,298,902
09/30/2022	1,204,876	24,507,260
06/30/2022	4,437,605	26,888,360
03/31/2022	2,297,741	32,017,467
12/31/2021	2,621,790	45,198,082
09/30/2021	512,597	57,559,920
06/30/2021	4,944,266	73,849,958
03/31/2021	1,468,117	81,673,794
12/31/2020	1,097,067	86,737,548
09/30/2020	762,759	88,986,446
06/30/2020	55,006,766	89,144,351
03/31/2020	9,675,929	143,483,070
12/31/2019	916,259	166,000,032
09/30/2019	5,067,740	168,811,610
06/30/2019	14,849,987	175,439,179
03/31/2019	8,237,711	190,381,177
12/31/2018	(3,755,643)	199,423,590
09/30/2018	10,434,500	193,968,367
06/30/2018	180,463,988	202,755,829
03/31/2018	18,535,975	374,961,099
12/31/2017	894,972	373,957,693
09/30/2017	14,033,340	354,166,562
06/30/2017	40,125	359,237,829
03/31/2017	2,028,000	353,054,646
12/31/2016	4,385,264	334,340,297
09/30/2016	-	319,207,770
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(334,412,687)
Cerberus cash returned to date (inflows):		373,989,895
Net Cerberus cash position as of 6/30/2023	\$	39,577,208

Cerberus Fund Allocation		
Total Cerberus Ownership: 100.0%		
Fund	Market Value (2)	% of Total (2)
CIP-5	\$ 3,705,240	17.7%
CDP	3,310,794	15.8%
CIREP-3	2,248,785	10.8%
CCTP	1,576,569	7.5%
CIP-6	1,548,600	7.4%
CSCP	1,300,354	6.2%
CCPP	1,146,481	5.5%
CGSI	945,941	4.5%
CADP	945,941	4.5%
CIREP-4	847,445	4.1%
CSC2	632,970	3.0%
COTP	551,799	2.6%
CHHP	484,007	2.3%
CMAF	480,065	2.3%
CSGN	315,314	1.5%
SMRS	315,314	1.5%
CPWP	315,314	1.5%
CPEM	94,597	0.5%
CEUF1F	78,828	0.4%
CMGF	50,453	0.2%
<b>Cerberus Total</b>	<b>20,894,810</b>	<b>100.0%</b>

Investment Updates
As of Q2 2023, 220 of the acquired connections have been fully resolved. In addition, 3 connections were cancelled prior to migration (comprising of 10 borrowers, 23 loans and secured by 17 assets).

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

**Project Cuba**  
As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In August 2015, Cerberus acquired a portfolio of specialist care facilities located in the UK for approximately £27.0 million. The portfolio consists of 10 units leased to the specialist care division of Four Seasons Healthcare, The Huntercombe Group. Four Seasons is the largest operator of care homes in the UK, while Huntercombe is the fourth largest operator of specialist care facilities. The freehold properties are leased on long-term, triple net leases with RPI linked rental uplifts, and benefit from a rent guarantee from a key operating entity within the Four Seasons group.

The properties were formerly part of an operating platform known as Care Principles Group and served as security for LBO financing in connection with Three Delta's £275 million buyout of Care Principles in 2007. Following operating and financial difficulties at Care Principles, the lender took control of the group in 2009 and leased the properties to Four Seasons in 2011.

#### ASSET SUMMARY

Date of Investment: August-15  
Investment Type: Equity  
Geography: United Kingdom  
Asset/Collateral - At Acquisition: 5 Care Homes  
Asset/Collateral - Current: 5 Care Homes; 5 Properties: 5 Care home (100.0%)

Investment Professionals: Lee Millstein, Allen Ukritnukun

### Valuation History (1)

Date	Quarterly Net Cash		Mark (2)
	Flows (2)		
06/30/2023	\$	(1,667,500)	\$ 26,460,910
03/31/2023		207,771	24,774,377
12/31/2022		4,735,576	24,950,760
09/30/2022		1,582,882	29,839,012
06/30/2022		754,375	31,177,180
03/31/2022		381,767	30,736,859
12/31/2021		(90,106)	30,106,422
09/30/2021		(224,076)	29,157,828
06/30/2021		(809,736)	27,923,184
03/31/2021		(279,142)	26,423,692
12/31/2020		(40,639)	25,182,719
09/30/2020		-	24,381,897
06/30/2020		(115,669)	24,043,145
03/31/2020		(1,369,554)	23,924,525
12/31/2019		-	22,736,171
09/30/2019		2,492,048	28,496,695
06/30/2019		-	32,471,331
03/31/2019		862,965	38,529,397
12/31/2018		992,740	37,991,793
09/30/2018		271,532	38,581,147
06/30/2018		(83,013)	38,673,112
03/31/2018		752,411	37,628,588
12/31/2017		448,492	38,363,890
09/30/2017		1,122,328	38,785,581
06/30/2017		9,558,961	38,452,335
03/31/2017		842,267	46,575,498
12/31/2016		1,318,844	45,861,910
09/30/2016		947,771	45,574,543

#### Cash Flow Summary

Cerberus cash invested to date (outflows):	\$	(48,755,016)
Cerberus cash returned to date (inflows):		31,303,978
Net Cerberus cash position as of 6/30/2023	\$	(17,451,038)

### Cerberus Fund Allocation

Total Cerberus Ownership: 100.0%

Fund	Market Value (2)	% of Total (2)
CIP-5	\$ 4,233,910	16.0%
CDP	3,783,185	14.3%
CIREP-3	2,569,647	9.7%
CANM	2,003,284	7.6%
CCTP	1,801,513	6.8%
CIP-6	1,769,556	6.7%
CSCP	1,485,889	5.6%
CCPP	1,310,056	5.0%
CI-2	1,089,309	4.1%
CADP	1,080,905	4.1%
CGSI	1,080,905	4.1%
CSCC	723,283	2.7%
COTP	630,531	2.4%
CHHP	553,061	2.1%
CMAP	548,565	2.1%
CP-2	460,588	1.7%
CPWP	360,301	1.4%
CSGN	360,301	1.4%
SMRS	360,301	1.4%
CPEM	108,089	0.4%
CEUF1F	90,072	0.3%
CMGF	57,657	0.2%
<b>Cerberus Total</b>	<b>26,460,910</b>	<b>100.0%</b>

### Investment Updates

Cerberus European Servicing is managing the portfolio in conjunction with a third party asset manager, Elevation Advisors, who started work in April 2020.

The portfolio is comprised of five open homes and one closed home. Four closed homes were sold in 2020 for a total of £3.4 million, ahead of BP in terms of time and price. The remaining closed home is being marketed for sale.

Following a consensual agreement between Four Seasons, CareTech and Promontoria, the operational business for the five open homes was transitioned from Four Seasons to CareTech in November 2020. The transaction is a great achievement for the portfolio as it replaces a tenant that is in administration with a large, well known, financially sound and listed operator. The existing leases are extended to 35 years term with a 16-year CareTech Plc guarantee.

Last remaining home sold for £1.525m.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Finn

## As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In July 2015, Cerberus acquired Project Finn, a portfolio of non-performing real estate loans secured by property located in the Republic of Ireland from the Royal Bank of Scotland ("RBS").

At pricing, the portfolio comprised of 1,242 connections; 1,460 borrowers; 1,930 assets and an unpaid principal balance ("UPB") of €742.3 million.

Project Finn is a granular portfolio, 22.4% of value was concentrated in the top 55 properties at pricing.

The purchase price for Project Finn of €322.4 million equated to 43.4% of the total claim. Total all in cost was €312.0 million. The acquisition was financed with a facility of €216.0 million.

#### ASSET SUMMARY

Date of Investment:	July-15
Investment Type:	NPL
Geography:	Ireland
Asset/Collateral - At Acquisition:	512 NPL
Asset/Collateral - Current:	339 NPL; 107 Properties: 100 Residential (97.0%); 3 Commercial (2.8%); 4 Development & Other (0.2%)
(% based on estimated market value)	

Investment Professionals: Lee Millstein, Daniel Dejanovic

### Valuation History (1)

Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ 587,360	\$ 10,650,725
03/31/2023	309,076	10,504,632
12/31/2022	3,344,212	9,773,652
09/30/2022	(11,443,580)	12,037,685
06/30/2022	-	333,420
03/31/2022	(190,369)	198,551
12/31/2021	(150,161)	1,508,044
09/30/2021	(150,382)	1,339,271
06/30/2021	(342,524)	8,648,621
03/31/2021	3,781,719	10,925,117
12/31/2020	(261,364)	16,532,830
09/30/2020	45,712	19,279,436
06/30/2020	(984,446)	22,217,309
03/31/2020	(126,240)	28,826,652
12/31/2019	(24,489)	48,060,153
09/30/2019	(97,650)	53,530,655
06/30/2019	-	58,437,402
03/31/2019	(2,982,879)	61,303,183
12/31/2018	-	60,432,418
09/30/2018	814,199	67,582,696
06/30/2018	3,952,307	67,828,309
03/31/2018	3,085,250	70,771,853
12/31/2017	692,999	71,729,574
09/30/2017	84,059,060	65,273,684
06/30/2017	-	135,222,270
03/31/2017	4,144,767	136,426,352
12/31/2016	-	129,871,244
09/30/2016	263,836	132,196,344

#### Cash Flow Summary

Cerberus cash invested to date (outflows):	\$	(141,694,953)
Cerberus cash returned to date (inflows):		110,789,655
Net Cerberus cash position as of 6/30/2023	\$	(30,905,298)

### Cerberus Fund Allocation

Total Cerberus Ownership: 100.0%

Fund	Market Value (2)	% of Total (2)
CIP-5	\$ 1,995,476	18.7%
CDP	1,783,045	16.7%
CIREP-3	1,211,095	11.4%
CCTP	849,069	8.0%
CSCP	700,312	6.6%
CCPP	617,443	5.8%
CGSI	509,442	4.8%
CADP	509,442	4.8%
CI-2	482,380	4.5%
CSC2	340,889	3.2%
COTP	297,174	2.8%
CHHP	260,664	2.4%
CMAF	258,542	2.4%
CP-2	205,739	1.9%
SMRS	169,814	1.6%
CSGN	169,814	1.6%
CPWP	169,814	1.6%
CPFM	50,946	0.5%
CEUF1F	42,453	0.4%
CMGF	27,172	0.3%
<b>Cerberus Total</b>	<b>10,650,725</b>	<b>100.0%</b>

### Investment Updates

As of Q2 2023, 1,115 connections have been resolved.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Lansdowne

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
In June 2015, Cerberus acquired a portfolio of UK residential buy-to-let ("BTL") mortgages and the servicing entity Capital Home Loans, Limited ("CHL") from PTSB Ireland for £1.8 billion as part of PTSB's recapitalization required under the deleveraging commitment it has to the ECB.	
As part of the transaction, Cerberus acquired a £2.0 billion portfolio of UK residential buy-to-let mortgages from PTSB (out of a total portfolio of £5.0 billion), two publicly issued securitization vehicles with £500 million of assets that will remain in place (Auburns 4 and 5), and the servicing entity CHL. CHL will continue to service the entire portfolio of £5.0 billion.	
The acquired loan portfolio was comprised of 15,617 UK residential loans, with the majority being BTL, and the rest being owner-occupied. The assets were all located in England and Wales, with no exposure to Scotland or Northern Ireland. This pool was very seasoned, with a weighted average of 99 months since origination. Loans have a weighted-average mortgage rate of 2.07%, and none were delinquent as of the cut-off date of December 31, 2014.	
<b>ASSET SUMMARY</b>	
Date of Investment:	March-15
Investment Type:	NPL
Geography:	United Kingdom
Asset/Collateral - At Acquisition:	£ 1.088 billion of unpaid principal balance; 7,909 primary loan accounts
Asset/Collateral - Current:	£ 1.088 billion of unpaid principal balance; 7,909 primary loan accounts
Investment Professionals:	Lee Millstein, David Teitelbaum, Josh Weintraub, Brendan Garvey

Valuation History (1)		
Date	Quarterly Net Cash	
	Flows (2)	Mark (2)
06/30/2023	\$ 1,058,927	\$ 24,628,108
03/31/2023	(1,889,951)	23,752,810
12/31/2022	75,024	24,929,533
09/30/2022	2,029,621	27,583,487
06/30/2022	(89,590)	34,489,850
03/31/2022	628	39,274,525
12/31/2021	241,870	40,256,200
09/30/2021	12,262,251	41,719,596
06/30/2021	2,185,264	55,091,106
03/31/2021	418,897	57,284,446
12/31/2020	77,923,947	57,510,578
09/30/2020	(7,193,267)	131,569,171
06/30/2020	16,000,779	119,550,816
03/31/2020	(33,548,629)	128,019,947
12/31/2019	121,877,862	50,901,257
09/30/2019	(49,108,902)	196,747,001
06/30/2019	678,853	146,641,390
03/31/2019	419,436	138,610,281
12/31/2018	69,285,996	132,767,901
09/30/2018	1,254,522	216,649,965
06/30/2018	328,761	223,126,809
03/31/2018	(441,457)	221,589,228
12/31/2017	1,216,317	209,911,070
09/30/2017	37,921,845	142,974,817
06/30/2017	568,417	176,737,948
03/31/2017	12,544,799	165,165,418
12/31/2016	230,207,640	165,139,537
09/30/2016	5,594,622	371,395,713
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(582,652,871)
Cerberus cash returned to date (inflows):		866,177,279
Net Cerberus cash position	\$	283,524,408
as of 6/30/2023		

Cerberus Fund Allocation		
Total Cerberus Ownership: 100.0%		
Fund	Market Value (2)	% of Total (2)
GRSF	\$ 8,060,807	32.7%
CIP-5	2,800,884	11.4%
CDP	2,502,712	10.2%
RMBS Opp	2,214,828	9.0%
CIREP-3	1,699,913	6.9%
CSCP	982,970	4.0%
CCPP	866,654	3.5%
CRIFL	769,955	3.1%
CMAN	755,558	3.1%
CGSI	715,062	2.9%
CSC2	478,479	1.9%
CHHP	365,872	1.5%
CADP	357,531	1.5%
CSC3	324,420	1.3%
CP-2	280,709	1.1%
SMRS	238,353	1.0%
CPWP	238,353	1.0%
CSGN	238,353	1.0%
GNPL	214,910	0.9%
CIREP-4	86,646	0.4%
RMFL	84,044	0.3%
C17R	79,900	0.3%
CPEM	71,509	0.3%
CEUF1F	59,588	0.2%
CI-2	50,517	0.2%
SNPL	26,433	0.1%
CRMF	19,150	0.1%
CINF	16,636	0.1%
COT2	15,870	0.1%
GOHL	5,334	0.0%
CCMF	2,767	0.0%
CDHP	2,337	0.0%
CMGF	1,056	0.0%
<b>Cerberus Total</b>	<b>24,628,109</b>	<b>100.0%</b>

Investment Updates
The portfolio, comprising the assets purchased by Cerberus in July 2015 (CHL 1.0) excluded loans sold to Metro Bank on March 1, 2018. On October 17, 2019, Cerberus called securitization TPFM 2016-Auburn 10 from Project Lansdowne, and together with the buy-to-let loan portfolio from Project Silvergate, issued a new securitization: TPFM 2019-Auburn 13 ("Aub13").
Prior to December 2020, Aub13 non-hedged securities were split between the originating issuers and was represented as an SPV investment whereas Aub13 hedged securities were directly held in Projects Lansdowne and Silvergate.
In December 2020, the Aub13 SPV investment was re-allocated directly to various funds with a small fraction remaining as SPV investments within Projects Lansdowne and Silvergate.
The remainder of the assets ultimately beneficially owned by Cerberus are those loans now held within the TPFM 2019 - Auburn 13 PLC (previously Auburn 10), TPFM - Auburn 12 (previously Auburn 9) and CHL retained loans (unencumbered). No issues of concern identified. The TPFM - Auburn 12 and the TPFM 2019 - Auburn 13 securitisations are callable on any interest payment date and will be refinanced when the securitisation spreads tighten.
The portfolio is performing in line with expected trends and tolerance levels.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Levia

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
In June 2015, Cerberus closed on the acquisition of a portfolio of 37 repossessed real estate assets deriving from resolved leasing contracts issued by UniCredit Leasing SpA and Mediocredito Italiano SpA in Italy. The assets were acquired for a purchase price of €108.0 million and an all-in-cost of €109.4 million.	
Most of the assets are located in Northern Italy, with the remaining evenly split between South and Central Italy. The assets' main uses are office, retail, hotel and industrial (representing 44%, 23%, 23% and 9% of the purchase price, respectively).	
Vendor financing of approximately 46.5% of the purchase price, including a capex facility of €11.6 million, was secured at closing.	
<b>ASSET SUMMARY</b>	
Date of Investment:	June-15
Investment Type:	REO
Geography:	Italy
Asset/Collateral - At Acquisition:	6 Assets
Asset/Collateral - Current:	3 Assets; 3 Properties: 2 Retail (68.5%); 1 Office (31.5%); Hotel (0.0%)
Investment Professionals:	Lee Millstein, Emanuele Rosetti Zannoni

Valuation History (1)		
Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ (234,128)	\$ 12,192,045
03/31/2023	(47,261)	10,436,002
12/31/2022	1,863,036	10,103,921
09/30/2022	-	13,665,704
06/30/2022	408,915	13,440,013
03/31/2022	-	14,144,915
12/31/2021	4,521,124	13,956,382
09/30/2021	-	18,479,631
06/30/2021	(683,685)	20,827,464
03/31/2021	-	20,275,804
12/31/2020	(206,163)	22,774,416
09/30/2020	-	24,667,584
06/30/2020	186,455	27,655,800
03/31/2020	(166,004)	30,243,775
12/31/2019	2,084,936	31,186,362
09/30/2019	7,203,250	34,805,539
06/30/2019	(91,655)	42,194,054
03/31/2019	15,137,076	41,792,357
12/31/2018	8,036,175	56,402,113
09/30/2018	-	62,621,902
06/30/2018	-	61,433,028
03/31/2018	-	60,268,442
12/31/2017	10,508,577	58,866,542
09/30/2017	-	68,108,668
06/30/2017	976,833	67,294,040
03/31/2017	-	67,761,888
12/31/2016	5,965,989	65,158,526
09/30/2016	-	73,413,683
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(70,088,636)
Cerberus cash returned to date (inflows):		61,485,304
Net Cerberus cash position as of 6/30/2023	\$	(8,603,332)

Cerberus Fund Allocation		
Total Cerberus Ownership: 99.5%		
Fund	Market Value (2)	% of Total (2)
CIP-5	\$ 2,548,333	20.9%
CDP	2,277,048	18.7%
CIREP-3	1,546,635	12.7%
CCTP	1,084,308	8.9%
CSCP	894,338	7.3%
CCPP	788,509	6.5%
CANM	663,597	5.4%
CADP	650,585	5.3%
COTP	379,508	3.1%
CMAP	330,172	2.7%
CHHP	224,452	1.8%
CSGN	216,862	1.8%
SMRS	216,862	1.8%
CPWP	216,862	1.8%
CPEM	65,061	0.5%
CEUF1F	54,215	0.4%
CMGF	34,700	0.3%
<b>Cerberus Total</b>	<b>12,192,045</b>	<b>100.0%</b>

Investment Updates
As of 2Q23, 35 assets have been sold to date for a value of €129.6m. In 2Q23 Carciano (Office in Rome) closed for €9.4m.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Maple Leaf (Fortis Hotels)

## As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In October 2015, Cerberus Real Estate ("Cerberus"), along with JV partner Westmont Hospitality Group ("Westmont"), acquired a 22 property, 4,176-key hotel portfolio (the "Portfolio") located across Canada for approximately C\$365.0 million (C\$87k per key, 9.9% cap rate on TTM NOI). The Portfolio was acquired from a subsidiary of Fortis Inc., ("Fortis"), one of Canada's largest utility companies. The Portfolio consists of flags including Delta (Marriott), Sheraton, Hilton Suites, Holiday Inn, Holiday Inn Express, Four Points by Sheraton, Best Western Plus, Ramada Plaza, and independent affiliations.

#### ASSET SUMMARY

Date of Investment:	Jul '15 Deposit, Oct '15 Close
Investment Type:	Equity
Geography:	Canada
Property Location:	Canada
Asset Type:	Hotel
Asset/Collateral:	11 Hotels
Investment Professionals:	Tom Wagner, Stephen Pozatek, Andrew Jacobson

#### ACTIONS TO DATE & CURRENT PERFORMANCE

The business plan called for C\$58.2 million (C\$18k per key) which began in Q4 2016. As of Q4 2018, 100% of total projected capital spend for non-disposition assets has been completed at underwritten cost.

In Q3 2016, two non-core hotels were sold and during 2018, Cerberus sold an additional four assets. Aggregate hotel sale pricing was above underwriting projections.

In Q3 2018, Cerberus closed on a loan refinance with Aareal which enabled Cerberus to return \$30.8 million.

During Q4 2019, the JV sold 5 additional assets for approximately C\$70.0 million in sale proceeds which was above underwriting exit values. The sale proceeds were used to payoff existing financing.

The COVID-19 crisis had a substantial impact to the operating performance of the hotels with a sharp decline in occupancy rates, driven by the strict COVID-19 protocols put into place in Canada. Asset management initiatives were implemented to reduce operating expenses to the extent possible. The JV successfully negotiated a loan modification with its lender which resulted in 6 months of interest deferrals and covenant relief through (and including) Q2 2022. The loan matures in 4Q23 and we are in discussions with our existing lender on an extension of term.

Canada's recovery continues to outperform expectations as 2Q23 RevPAR of \$123 exceeded budget by 16% and above 2019 by 19%. Strength is stemming from both occupancy (+4% vs budget) and rate (+11% vs budget). NOI of \$11.8mm also outperformed budget (+67% or \$4.8mm) and 2019 (+69%).

(1) Figures include hedge amounts.

(2) Gross cash flows may vary from peak invested equity as defined on Active Investments schedule, however, the net cash position will be consistent.

### Valuation History

Date	Quarterly Net Cashflows (1)	Mark (1)
06/30/2023	\$ (747,098)	\$ 41,377,564
03/31/2023	-	40,671,193
12/31/2022	1,967,239	40,664,454
09/30/2022	-	40,036,649
06/30/2022	-	39,481,584
03/31/2022	(219,351)	39,300,400
12/31/2021	(365,600)	39,293,452
09/30/2021	-	37,111,431
06/30/2021	(35,943)	36,469,026
03/31/2021	(217,921)	35,748,442
12/31/2020	(1,376,399)	34,631,383

#### Cash Flow Summary (2)

Cerberus cash invested to date (gross outflows):	\$	(66,703,615)
Cerberus cash returned to date (gross inflows):		55,783,490
Net Cerberus cash position as of 6/30/2023	\$	(10,920,125)

### Cerberus Fund Allocation

Total Cerberus Ownership: 67.0%

Fund	Market Value (1)	% of Total
CIREP-3	\$ 41,377,564	100.0%
<b>Cerberus Total</b>	<b>41,377,564</b>	<b>100.0%</b>





# Project Monza

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
<p>In November 2017, Cerberus refinanced and merged Project Calvino, Project Patrimonio and Project Piazza Affari, combining them into a single investment. The transaction allowed Cerberus to refinance the resulting combined portfolio at a higher LTV and on more attractive economic terms than would have been possible on an individual portfolio basis, as well as extending the respective loan maturities to minimize future financing risks. The total purchase price for Project Calvino, Project Patrimonio, and Project Piazza Affari was €149.5 million, €90.0 million, and €272.0 million, respectively.</p> <p>The new lender, Nomura, provided €335.3 million of new debt on the combined portfolio, representing a 66.9% LTV. As a result of the refinancing, a total of €35.9 million in proceeds was distributed to Cerberus' funds.</p> <p>The portfolio at the date of the merger consisted of 20 assets located in Italy: six offices, four barracks and two military academy assets fully let to Agenzia del Demanio, the Italian Government Real Estate Agency, through long term lease agreements; seven multitenant offices with an average occupancy of 76.7%; and one telecom exchange asset 100% occupied on a long lease term.</p>	
<b>ASSET SUMMARY</b>	
Date of Investment:	November-17
Investment Type:	REO
Geography:	Italy
Asset/Collateral - At Acquisition:	4 Assets
Asset/Collateral - Current:	4 Assets
Investment Professionals:	Lee Millstein, Emanuele Rosetti Zannoni

Valuation History (1)		
Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ (666,576)	\$ 80,047,002
03/31/2023	3,285,338	79,032,161
12/31/2022	1,890,924	82,844,600
09/30/2022	(438,743)	86,287,434
06/30/2022	58,275	84,628,821
03/31/2022	(130,290)	83,537,502
12/31/2021	7,982,348	82,770,368
09/30/2021	2,519,432	89,437,247
06/30/2021	(4,087,092)	94,500,198
03/31/2021	-	90,077,708
12/31/2020	3,070,032	95,553,418
09/30/2020	4,443,879	102,230,231
06/30/2020	2,644,300	109,942,844
03/31/2020	9,436,302	109,537,020
12/31/2019	-	114,473,115
09/30/2019	917,969	123,204,798
06/30/2019	(2,540,774)	123,275,748
03/31/2019	(111,704)	115,756,003
12/31/2018	6,875,069	111,400,769
09/30/2018	601,513	112,222,358
06/30/2018	(3,171,418)	109,743,813
03/31/2018	63,039,781	98,962,405
12/31/2017	76,628,119	157,936,497
09/30/2017	134,514	227,153,694
06/30/2017	6,682,230	227,505,474
03/31/2017	299,619	246,347,150
12/31/2016	5,704,328	244,208,694
09/30/2016	20,682,834	238,804,384
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(295,032,443)
Cerberus cash returned to date (inflows):		294,249,133
Net Cerberus cash position as of 6/30/2023	\$	(783,310)

Cerberus Fund Allocation			
Total Cerberus Ownership: 99.4%			
Fund	Market Value (2)	% of Total (2)	
CDP	\$ 13,091,499	13.09%	16.4%
CIP-5	12,853,683	12.85%	16.1%
CIREP-3	9,784,718	9.78%	12.2%
CCTP	6,859,829	6.86%	8.6%
CANM	6,063,677	6.06%	7.6%
CSCP	5,657,986	5.66%	7.1%
CCPP	4,988,467	4.99%	6.2%
CADP	2,996,620	2.99%	3.7%
CIPI	2,432,005	2.43%	3.0%
COTP	2,400,940	2.40%	3.0%
CGSI	2,147,625	2.15%	2.7%
CMAP	2,088,817	2.09%	2.6%
CHHP	1,793,076	1.79%	2.2%
CI-2	1,382,748	1.38%	1.7%
CSGN	1,371,966	1.37%	1.7%
SMRS	1,371,966	1.37%	1.7%
CPWP	1,215,520	1.22%	1.5%
CP-2	571,742	0.57%	0.7%
CPEM	411,604	0.41%	0.5%
CEUF1F	342,991	0.34%	0.4%
CMGF	219,526	0.22%	0.3%
<b>Cerberus Total</b>	<b>80,047,002</b>	<b>100.00%</b>	<b>100.0%</b>

Investment Updates
<p>In Q2 2018, the Ivrea asset was sold for €16.9 million and in Q4 2018, the Genova and Bari assets were sold for a total combined value of €43.3 million, inclusive of €7.3 million of potential future earn out, to the same buyer of Project Sling.</p> <p>In Q2 2019, the Milan viale Sarca asset was fully stabilized. During the quarter, the refurbishment works for a new facade were completed. From a leasing perspective, two new 7+6 years lease agreements were signed over 3,797 square meters (total headline rent of €787k per annum) increasing the occupancy from 47.5% to 99.5%.</p> <p>In Q3 2019 the asset was sold for a gross disposal price of €27.1 million.</p> <p>In Q4 2019, the Agrate asset was sold for €17.7 million to the same buyer of Project Sling and leases over ca. 2,000 sqm (€140/sm) were signed on Assago asset, increasing the occupancy from 72% to 85%.</p> <p>In Q2 2021, the Treviso asset was sold for €3.0 million.</p> <p>As of Q2 2023 the lease up of the remaining vacancy is progressing, with site visits ongoing.</p>

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Neptune

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
Project Neptune is the acquisition of NRAM plc ("NRAM") together with a £13 billion portfolio of UK residential mortgages, the largest European residential mortgage portfolio sale since the start of the financial crisis. Cerberus won the transaction as part of the UK government's announced strategy for de-leveraging nationalized assets.	
The portfolio included £12 billion of loans within the Granite securitization vehicle, plus a further £1 billion of non-Granite assets, representing about 230,000 customers. As part of the transaction, Cerberus also agreed to sell approximately £5.3 billion of the assets to two banking partners.	
The Granite portfolio is a residential mortgage backed securitization program established by Northern Rock in 2001. The portfolio is well seasoned, geographically diversified within the UK, and comprised of "prime" loans.	
A key consideration for UKAR in selecting the successful bidder was the continued fair treatment of customers. Cerberus intends that the management of the assets will remain with the mortgage servicing arm of UKAR, ensuring continuity in service for borrowers.	
<b>ASSET SUMMARY</b>	
Date of Investment:	November-15
Investment Type:	Companies & Assets, Mortgage
Geography:	United Kingdom
Asset/Collateral - At Acquisition:	63,776 primary loan accounts
Asset/Collateral - Current:	63,776 primary loan accounts
Investment Professionals:	Lee Millstein, David Teitelbaum, Josh Weintraub, Brendan Garvey

Valuation History (1)		
Date	Quarterly Net Cash	
	Flows (2)	Mark (2)
06/30/2023	\$ 2,488,796	\$ 154,916,917
03/31/2023	(605,441)	162,557,617
12/31/2022	(5,728,743)	166,686,332
09/30/2022	(11,517,119)	176,775,133
06/30/2022	8,695,842	177,381,987
03/31/2022	(25,281,983)	189,312,274
12/31/2021	211,670,060	172,367,682
09/30/2021	(741,078)	373,571,358
06/30/2021	(3,220,337)	365,366,211
03/31/2021	2,462,513	355,649,582
12/31/2020	4,488,144	356,112,356
09/30/2020	(24,499,891)	342,221,100
06/30/2020	29,036,396	291,073,902
03/31/2020	(57,978,676)	279,310,088
12/31/2019	45,220,409	281,828,861
09/30/2019	717,064	310,634,478
06/30/2019	370,023,385	304,957,209
03/31/2019	25,741,315	629,846,329
12/31/2018	23,188,932	635,958,946
09/30/2018	38,135,311	672,919,130
06/30/2018	21,069,843	693,059,637
03/31/2018	29,098,945	689,141,692
12/31/2017	79,291,971	703,092,072
09/30/2017	(605,798)	683,452,752
06/30/2017	107,404,634	652,515,156
03/31/2017	17,183,611	717,375,263
12/31/2016	189,595,004	707,301,142
09/30/2016	36,520,727	837,201,954
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(2,419,397,476)
Cerberus cash returned to date (inflows):		2,993,087,085
Net Cerberus cash position	\$	573,689,609
as of 6/30/2023		

Cerberus Fund Allocation		
Total Cerberus Ownership: 100.0%		
Fund	Market Value (2)	% of Total (2)
RMBS Opp	\$ 66,252,980	42.8%
CIP-5	12,700,085	8.2%
CSMOF	12,462,827	8.0%
SVLP	12,216,228	7.9%
CIREP-3	6,937,070	4.5%
CSCP	5,896,196	3.8%
CIP-6	5,308,437	3.4%
CGSI	4,289,605	2.8%
CADP	4,289,605	2.8%
CSC2	2,867,396	1.9%
CAEN	2,858,219	1.8%
CCPP	2,768,584	1.8%
CIREP-4	2,645,614	1.7%
COTP	2,502,680	1.6%
CHHP	2,196,130	1.4%
CDP	2,098,329	1.4%
SMRS	1,431,330	0.9%
CPWP	1,431,330	0.9%
CSGN	1,431,330	0.9%
CCTP	1,322,711	0.9%
CPEM	427,626	0.3%
CEUF1F	355,661	0.2%
CMGF	226,942	0.1%
<b>Cerberus Total</b>	<b>154,916,917</b>	<b>100.0%</b>

Investment Updates
Cerberus owned assets comprise - TPMF Granite 4 (secured) and TPMF Granite 5 (unsecured), all of which are publicly placed securitization transactions.
The portfolio is performing in line with expected trends and tolerance levels.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Plataforma

## As of 6/30/2023



Executive Summary	
<b>INVESTMENT SUMMARY</b>	
In 2013, Cerberus acquired 100% of Plataforma, renamed Haya Real Estate ("Haya"), the carved-out REO and developer loan servicing unit from Bankia, along with a 10-year servicing contract.	
Over the course of the following years, Haya acquired other bank's internal servicing units and long-term servicing contracts (including Cajamar, Sareb, Liberbank, BBVA) and pursued selected bolt-on acquisitions to enhance specialized capabilities (e.g. valuation and data analytics).	
Project Plataforma also comprised the acquisition in 2013 of a minority 40% stake in a small independent servicer (Hipoges), divested in 2018.	
In May 2023, sale of Haya Real Estate to Intrum was agreed (closing estimated in Q3'23, following antitrust approval and other CPs)	
<b>ASSET SUMMARY</b>	
Date of Investment:	September-13
Investment Type:	Companies & Assets, Servicing Platform
Geography:	Spain
Asset/Collateral - At Acquisition:	Servicing platform, c.30 Bn AuM and 830 employees, no RE/NPL asset ownership
Asset/Collateral - Current:	Servicing platform, c.11 Bn AuM and 600 employees, no RE/NPL asset ownership
Investment Professionals:	Lee Millstein, David Teitelbaum, Charles Dunlap

Valuation History (1)		
Date	Quarterly Net Cash Flows (2)	Mark (2)
06/30/2023	\$ -	\$ 97,115
03/31/2023	-	96,752
12/31/2022	21,255	96,099
09/30/2022	-	116,806
06/30/2022	-	116,080
03/31/2022	3,966,994	115,863
12/31/2021	-	4,051,902
09/30/2021	-	9,376,979
06/30/2021	-	9,370,155
03/31/2021	-	9,354,324
12/31/2020	-	9,350,257
09/30/2020	-	10,703,981
06/30/2020	295,218	10,625,546
03/31/2020	10,018,674	69,143,267
12/31/2019	(147,546)	90,114,676
09/30/2019	2,078,647	90,812,988
06/30/2019	-	86,485,566
03/31/2019	4,656,208	84,691,618
12/31/2018	107,917	82,361,297
09/30/2018	7,261,528	76,008,038
06/30/2018	(157,862)	69,700,761
03/31/2018	-	60,965,373
12/31/2017	290,754,231	48,073,172
09/30/2017	(99,607,575)	295,554,403
06/30/2017	26,942,854	170,900,853
03/31/2017	17,844,390	193,193,478
12/31/2016	(10,869,551)	204,479,115
09/30/2016	54,116,933	181,894,114
<b>Cash Flow Summary</b>		
Cerberus cash invested to date (outflows):	\$	(454,241,166)
Cerberus cash returned to date (inflows):		607,649,013
Net Cerberus cash position as of 6/30/2023	\$	153,407,847

Cerberus Fund Allocation			
Total Cerberus Ownership: 72.5%			
Fund	Market Value (2)	% of Total (2)	
CDP	\$ 17,616	17.616	18.1%
CIREP-3	14,957	14.957	15.4%
CIP-5	13,691	13.691	14.1%
CIPI	9,003	9.003	9.3%
CCPP	7,625	7.625	7.9%
CSCP	5,992	5.992	6.2%
CCTP	4,540	4.540	4.7%
COTP	3,670	3.670	3.8%
CI-2	3,490	3.490	3.6%
CMAF	3,193	3.193	3.3%
CANM	2,778	2.778	2.9%
CADP	2,724	2.724	2.8%
SMRS	2,097	2.097	2.2%
CHHP	1,863	1.863	1.9%
CP-2	1,420	1.420	1.5%
CSGN	908	0.908	0.9%
CPWP	681	0.681	0.7%
CEUF1F	450	0.450	0.5%
CPEM	272	0.272	0.3%
CMGF	145	0.145	0.1%
<b>Cerberus Total</b>	<b>97,115</b>	<b>97.115</b>	<b>100.0%</b>

Investment Updates
In May 2023 sale of company was agreed to Intrum together with a restructuring agreement with majority of bondholders (95% current levels of support) in order to implement the transaction. Closing expected by September 2023.
Company activity and financials heavily impacted by COVID-19. Recovery trend observed but potential market & macro worsening conditions being closely monitored.
Several operational initiatives launched and continued cost adjustment program, new business lines fostering. Cash preservation/generation as key priority given financial overleverage and debt service requirements.
In June 2022 Company completed the restructuring of its debt through an English Scheme of arrangement with the support of over 95% of its bondholder base. Aside from 3y extension of maturity and increased coupon, they acquired 27.5% stake of Haya as part of the restructuring (no additional capital contributed from Cerberus).
Company completed in 2022 labor restructuring program derived from Sareb and Unicaja contracts termination reducing headcount in c.250 FTEs YoY.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Raphael

## As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In December 2015, Cerberus acquired a portfolio of non-performing loans from Unicredit SpA in Italy. At pricing, the portfolio had a total unpaid principal balance ("UPB") of €97.3 million. Cerberus acquired the portfolio for a headline purchase price of €34.7 million, equivalent to a 64.0% discount to the UPB.

The portfolio was comprised of 37 loans secured by 44 real estate properties in Italy, with a total collateral value of €49.1 million at acquisition, and a total lettable area of 90,765 sqm. The underlying assets were a mix of hotel, residential and commercial properties, including one nursing home, and were located primarily in Northern Italy (50%) and Central Italy (33%). Illimity provided portfolio financing in June 2019 with a €14.1 million senior facility and a €0.3 million junior facility at 51% loan-to-value ("LTV").

#### ASSET SUMMARY

Date of Investment:	December-15
Investment Type:	NPL
Geography:	Italy
Asset/Collateral - At Acquisition:	3 NPL
Asset/Collateral - Current:	2 NPL; 2 Properties: 1 Hotel (69.0%); 1 Commercial (31.0%); Commercial/Hotel (0.0%); Nursing Home (0.0%)
Investment Professionals:	Lee Millstein, Emanuele Rosetti Zannoni

### Valuation History (1)

Date	Quarterly Net Cash		Mark (2)
	Flows (2)		
06/30/2023	\$	(19,297)	\$ 655,351
03/31/2023		9,714	658,336
12/31/2022		612,437	1,314,481
09/30/2022		-	1,934,944
06/30/2022		43,611	1,901,962
03/31/2022		(419,800)	4,156,881
12/31/2021		246,348	3,754,548
09/30/2021		(522,411)	3,995,038
06/30/2021		(420,699)	4,225,118
03/31/2021		(163,451)	4,534,354
12/31/2020		(700,755)	4,379,245
09/30/2020		(116,317)	3,657,100
06/30/2020		(138,853)	4,397,028
03/31/2020		115,879	4,938,774
12/31/2019		1,878,469	5,691,095
09/30/2019		18,334,638	7,247,417
06/30/2019		-	24,848,744
03/31/2019		3,547,246	22,913,637
12/31/2018		2,265,074	25,388,650
09/30/2018		2,015,927	27,268,027
06/30/2018		1,180,268	28,571,979
03/31/2018		2,533,774	27,981,336
12/31/2017		2,187,007	30,551,758
09/30/2017		852,393	32,059,279
06/30/2017		677,335	32,308,376
03/31/2017		3,222,830	31,909,685
12/31/2016		5,160,674	33,790,594
09/30/2016		2,932,705	37,130,818

#### Cash Flow Summary

Cerberus cash invested to date (outflows):	\$	(45,688,715)
Cerberus cash returned to date (inflows):		53,643,812
Net Cerberus cash position as of 6/30/2023	\$	7,955,097

### Cerberus Fund Allocation

Total Cerberus Ownership: 99.0%

Fund	Market Value (2)	% of Total (2)
CIP-5	\$ 105,852	16.2%
CDP	94,584	14.4%
CIP-6	65,160	9.9%
CIREP-3	64,244	9.8%
CANM	56,801	8.7%
CSCP	37,149	5.7%
CCPP	32,753	5.0%
CIREP-4	27,457	4.2%
CGSI	27,024	4.1%
CADP	27,024	4.1%
CAEN	20,088	3.1%
CSCC	18,083	2.8%
COTP	15,764	2.4%
CHHP	13,827	2.1%
CMAP	13,715	2.1%
SMRS	10,216	1.6%
CSGN	9,523	1.5%
CPWP	9,008	1.4%
CPEM	3,065	0.5%
CEUF1F	2,381	0.4%
CMGF	1,635	0.2%
<b>Cerberus Total</b>	<b>655,351</b>	<b>100.0%</b>

### Investment Updates

As of Q2 2023, 35 connections have been resolved and the Portfolio is 98% collected.

(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

# Project Vantage

## As of 6/30/2023



### Executive Summary

#### INVESTMENT SUMMARY

In May 2015, Cerberus acquired a portfolio of UK residential non-conforming mortgages from GE Money UK for £816 million. The face value of the pool of mortgages was £935 million.

The acquired loan portfolio is comprised of 8,378 UK residential loans. This pool was chosen by selecting all accounts that, at some point, had been >180 days in arrears, but many accounts had re-performed. At cut-off, 21% of the portfolio was performing, 36% re-performing, 36% sub-performing and 7% non-performing, and payment velocity was over 100% at pricing.

Cerberus believes the portfolio has high quality collateral exhibiting strong and improving cash flows and we expect that more active special servicing will accelerate re-performance of the portfolio.

#### ASSET SUMMARY

Date of Investment:	May-15
Investment Type:	NPL / Mortgages
Geography:	United Kingdom
Asset/Collateral - At Acquisition:	Portfolio balance of £583 million consisting of 5,639 accounts
Asset/Collateral - Current:	Portfolio balance of £583 million consisting of 5,639 accounts

Investment Professionals:	Lee Millstein, David Teitelbaum, Josh Weintraub, Brendan Garvey
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### Valuation History (1)

Date	Quarterly Net Cash		Mark (2)
	Flows (2)		
06/30/2023	\$	(258,013)	\$ 59,741,910
03/31/2023		(183,885)	60,127,377
12/31/2022		5,755,963	59,034,009
09/30/2022		1,275,415	62,724,076
06/30/2022		(1,167,253)	81,377,133
03/31/2022		114,825	84,497,163
12/31/2021		1,498,066	81,427,511
09/30/2021		1,058,025	80,714,196
06/30/2021		(416,115)	80,181,269
03/31/2021		8,651,931	77,213,494
12/31/2020		28,882,995	83,691,984
09/30/2020		(8,340,913)	108,382,251
06/30/2020		15,460,253	94,662,926
03/31/2020		(19,725,714)	105,819,651
12/31/2019		2,180,899	100,554,236
09/30/2019		159,289	88,812,749
06/30/2019		3,157,548	84,264,018
03/31/2019		795,908	79,880,145
12/31/2018		1,809,421	85,060,023
09/30/2018		2,294,865	96,327,492
06/30/2018		505,835	94,382,039
03/31/2018		688,134	88,590,986
12/31/2017		205,193	84,818,442
09/30/2017		77,168	65,522,652
06/30/2017		61,549,631	60,867,200
03/31/2017		1,728,980	118,304,933
12/31/2016		243,264,559	120,706,187
09/30/2016		11,462,080	299,464,057

#### Cash Flow Summary

Cerberus cash invested to date (outflows):	\$	(571,609,460)
Cerberus cash returned to date (inflows):		635,678,702
Net Cerberus cash position		
as of 6/30/2023	\$	64,069,242

### Cerberus Fund Allocation

Total Cerberus Ownership: 100.0%

Fund	Market Value (2)	% of Total (2)
GRSF	\$ 17,962,561	30.0%
CIP-5	7,078,297	11.8%
RMBS Opp	6,372,444	10.7%
CDP	6,324,770	10.6%
CIREP-3	4,295,962	7.2%
CSCP	2,484,128	4.2%
CCPP	2,190,177	3.7%
CGSI	1,807,077	3.0%
CADP	1,807,077	3.0%
CRIFL	1,771,307	3.0%
CMAN	1,738,277	2.9%
CSC2	1,209,193	2.0%
CHHP	924,621	1.5%
CMAP	917,091	1.5%
CSC3	698,342	1.2%
SMRS	602,360	1.0%
CPWP	602,360	1.0%
CSGN	602,360	1.0%
CPEM	180,714	0.3%
CEUF1F	150,590	0.3%
CMGF	96,384	0.2%
<b>Cerberus Total</b>	<b>59,816,094</b>	<b>100.0%</b>

### Investment Updates

Since the acquisition, Cerberus successfully migrated the portfolio from the GE systems onto a third-party servicer, Pepper.

The official boarding date of September 13, 2015 was completed with no significant operational issues.

The portfolio has been securitized twice and is now in the TPFM 2019 - Vantage 2 securitization which is callable on any interest payment date and will be refinanced when the securitization spreads tighten.

The portfolio is performing in line with expected trends and tolerance levels.

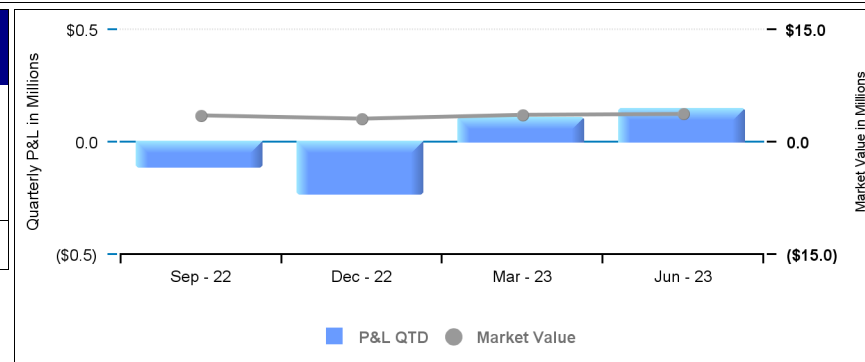
(1) Presented on an aggregate basis; not specific to an individual fund. Historical quarterly net cash flows and marks may not represent full history of investment.

(2) Inclusive of FX hedge. Mark excludes subscription line funding amounts.

## Executive Summary

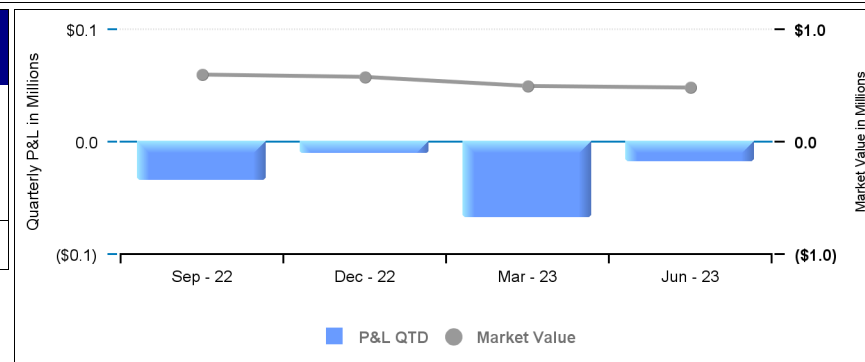
### Alpha Trading

	Market Value				P&L	
	Assets	Finance	Hedge	Net	QTD	YTD
Loan	34,428	-	2,424	36,851	(964)	(2,931)
Non-Agency	-	-	3,548	3,548	1,085	545
Non-performing Loan	(42)	-	-	(42)	(41)	(277)
TPMT Bonds	2,862,236	-	866,524	3,728,760	145,044	255,343
<b>Totals</b>	<b>2,896,622</b>	<b>-</b>	<b>872,496</b>	<b>3,769,118</b>	<b>145,124</b>	<b>252,680</b>



### CMBS Trading

	Market Value				P&L	
	Assets	Finance	Hedge	Net	QTD	YTD
AM	266,672	(209,000)	-	57,672	(2,322)	(2,281)
CMBX	-	-	2,572	2,572	(162)	(330)
PREF	425,438	-	-	425,438	(13,387)	(87,453)
US Treasuries	-	-	-	-	(711)	7,282
<b>Totals</b>	<b>692,111</b>	<b>(209,000)</b>	<b>2,572</b>	<b>485,682</b>	<b>(16,582)</b>	<b>(82,782)</b>





NEPC, LLC

**Firm:** Alcentra

**Strategy/Product:** Alcentra European Direct Lending Fund

**Client:** The Massachusetts Water Resource Authority

**NEPC Manager Due Diligence Questionnaire - Update**

**Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

**Firm/Organization**

**1. Have there been any changes in ownership or management in the past year?**

On November 1, 2022, Franklin Templeton/Benefit Street Partners announced the completion of its acquisition of BNY Alcentra Group Holdings, Inc. (together with its subsidiaries, "Alcentra") from The Bank of New York Mellon Corporation ("BNY Mellon").

The combined firm is now one of largest alternative credit asset managers globally, which provides greater resources and capabilities.

As part of our strategic plan to grow & enhance the business, we have made key appointments within Alcentra over the last 12 months, for example deepening our capabilities within the areas of IT, ESG and regulatory oversight with Vishal Patel (CTO), Vai Patel (Alcentra Head of ESG) and Brandon Bradkin (Executive Chairman) joining the firm.

**2. List firm AUM, net flows and accounts gained/lost for the past 5 years.**

	AUM (June 30, 2023)	AUM (June 30, 2018)	Cash Flow Out	Cash Flow Out (Matured) *	Cash Flow In	Accounts Gained**	Accounts Lost**
Firm	\$34.31 billion	\$36.22 billion	\$2.62 billion	\$2.04 billion	\$13.77 billion	29	16

*\*Naturally matured CLOs and vehicles*

*\*\*Accounts represent number of vehicles*



**3. Have there been any new or discontinued products in the past year?**

Over time, Alcentra adds new products based on demand, market conditions and trends.

Alcentra's European Direct Lending Fund IV held its final close on June 30, 2023, bringing the total committed amount to €580.8m.

Alcentra will be coming to market with its fifth Structured Credit Opportunities Fund (ASCOF V) and its Strategic Credit Fund III (SCF III).

As of June 29, 2023, Alcentra's Multi-Strategy European Credit Fund commenced an orderly liquidation and is currently in wind-down.

**4. Are any products capacity constrained?**

No.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

To the best of our knowledge, as of June 30, 2023, there is no pending or ongoing litigation against Alcentra or any key employee of Alcentra that will provide services to an account that would have a material impact on the account.

As a large and established global manager, Alcentra has been involved in past proceedings and matters that have been fully resolved with no material impact on its business or ability to fulfil its duties and obligations to clients. Alcentra may also be involved from time to time in proceedings related to its investment activities (e.g., company restructurings, recovery of defaulted debt) that are expected to arise given the nature of certain investment strategies (direct lending, special situations) that Alcentra pursues.

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

At this time, Alcentra does not have its own D&I Policy, however we act in line with the D&I policy of our parent company, Franklin Templeton.

Alcentra values diversity and recognizes that having a more diverse group of individuals will positively impact our chances for long-term success. Alcentra continues to strive on building a diverse environment and plan to focus on growing a more diverse investment team, particularly at the senior management level, for the foreseeable future.

The Firm is highly a collaborative organization, which employs men and women across various backgrounds. We believe that diversity enhances our ability as organizations to be successful longer term. Alcentra is an equal opportunity employer. Additionally, the Firm is a meritocracy, which believes in promoting and recognizing individuals for their demonstrated achievement. We maintain an





environment that encourages creativity, productivity and thinking “outside the box”. As the team further expands, we will continue to consider diverse candidates who will succeed in this collaborative, creative environment.

Alcentra takes pride in implementing its goals and objectives to promote Diversity across the firm. Currently we have not set defined targets however our goals include:

- Support the return of women, at all levels of seniority, to the workforce after a career break of at least 18 months through our involvement in the “Returners” project initiated by the Diversity Project
- Continue to diversify senior management

### **Portfolio Management Team**

#### **1. Have there been any changes in the portfolio management team in the past year?**

Howard Sharp, Joanna Layton and Alex Walker were formally confirmed the co-leaders of Alcentra’s European Direct Lending strategy in November 2022, with Jo and Alex taking the key decisions around the portfolio and Howard leveraging his extensive relationships on the sponsor and investor side of the business.

#### **2. Are there any expected changes to the team in the future (planned additions or departures)?**

We continue to invest in European Direct Lending resourcing in conjunction with our planned growth of the platform. We are adding incremental capability to each of our Origination & Execution, Portfolio Monitoring, Structuring, and Operations teams.

### **Process**

#### **1. Have there been significant changes in any of the areas below in the past year?**

- **Identification of investment ideas**
- **Process for exploring and vetting ideas**
- **Portfolio trading practices including buy/sell rules**
- **Approach to portfolio monitoring and risk management**

The European Direct Lending team hasn't made any significant structural changes to the investment process over the past year. Improvements include more standardised credit papers and the development of an internal rating system. ESG has been integrated significantly into our investment process; EDL IV (4<sup>th</sup> vintage) has been classified as Article 8 under the SFDR regulation. To comply with this, we issue an extensive ESG questionnaire to each of our borrowers annually which is then aggregated to our LPs. Our borrowers are incentivised using specific ESG ratchet targets which if reached will reduce the margin payable on their loan.



## Philosophy

1. Describe recent changes in investment philosophy, if any.

No changes.

## Portfolio

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

Please see attached Q2 Investment Advisor Report.

2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

	AUM (June 30, 2023)	Cash Flow Out	Cash Flow In	Accounts Gained*	Accounts Lost
Strategy	\$8.12 billion	NA – closed ended	\$5.78 billion	7	NA

\*New accounts

3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

Below information is as of June 30, 2023.

Type	% of Strategy AUM
Pension Funds	64%
Insurance	19%
Government	6%
Bank	5%
Family Offices	3%
Others	3%
<b>Total</b>	<b>100%</b>



Region	% of Strategy AUM
UK	36%
Europe Ex UK	31%
North America	21%
Asia	8%
Middle East	4%
<b>Total</b>	<b>100%</b>

Top 5 Investors	% of Strategy AUM
Investor 1	9%
Investor 2	5%
Investor 3	5%
Investor 4	4%
Investor 5	4%

## Performance / Market Outlook

- 1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

Included within the presentation.

- 2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

The rising interest rate environment is favourable to floating rate asset classes such as private credit after years of artificially low base rates. Spreads per unit of leverage have increased, reflecting a more dynamic pricing environment. From a Private Credit investor perspective, the movement in the Euribor & Sonia base rates in Europe has made the total yields extremely attractive. With Euribor at 3.72%<sup>1</sup> and Sonia at 4.93%<sup>2</sup> the 3-year loan yields are 11.31%<sup>3</sup> and 12.52%<sup>4</sup> in EUR & GBP respectively. This makes the current opportunity in European Private Debt the most exciting since the Global Financial Crisis.

Documentary terms have tightened in the current market, with an increased focus on covenant levels, as well as the leverageable EBITDA at the outset of financing (quality of earnings). Misalignment of interest between borrowers and private credit lenders, in the form of separate borrower baskets at operationally or structurally preferred levels, has been reduced.



Increasing pressure on debt service capacity that comes with higher rates has led to lower levels of debt leverage in the market, which in turn has contributed to a slowdown in M&A activity.

Equity contributions from PE buyers have been and remain robust at around 60% of transaction values, partly linked to the sectors where private credit has been investing heavily these last few years, namely the B2B services sector, where EV's have been elevated.

As the macroeconomic environment becomes increasingly challenging and liquid financing markets remaining closed, we have seen sponsors and advisors moving away from widely run processes and instead having targeted discussions with core lenders with whom they hold long-term relationships. Alcentra has always generated the majority of deal flow through direct channels and has long been a champion of a relationship driven approach. As such, whilst more broadly there is a degree of uncertainty around market conditions, we continue to see new deal flow from market leading private equity firms in addition to opportunities to deploy to existing portfolio companies.

*Source: Bloomberg, Alcentra market observations and indicative returns, as of 31 July 2023. <sup>1</sup>Euribor 3-month forward curve. <sup>2</sup>SONIA 3-month forward curve. <sup>3</sup>All-in-yield in EUR using mid-point of pricing and arrangement fees. <sup>4</sup>All-in-yield in GBP using mid-point of pricing and arrangement fees.*

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

We continue to explore exit opportunities for EDL I over the coming months.

The market continued to show muted levels of activity going into the summer. There is consensus that M&A volumes should start to recover as we move through the second half of 2023 and into early 2024 as buyers and sellers grow accustomed to the higher interest rate environment and the global macro backdrop for many sectors stabilises. Looking forward we have good visibility on c.€1.5bn of live transactions across new and existing borrowers.

The financial performance of businesses in the portfolio remains largely resilient given a focus on well capitalized businesses in defensive sectors.

**4. Could you please include a slide in your presentation that sows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

Included within the presentation.

# Alcentra European Direct Lending Update

5<sup>th</sup> October 2023



# Agenda



1	Market Update	3
2	EDL I Fund Update & Performance Review	5
3	Appendix	11

# Market Update

01

# Current Market Conditions – Opportunity for Compelling Returns

	Current Market Conditions
Margin	625 – 700bps
Fees	300bps
Euribor <sup>1</sup>	3.80%
Sonia <sup>1</sup>	5.19%
3 Yr Yield (EUR Loan) <sup>2</sup>	11.43%
3 Yr Yield (GBP Loan) <sup>2</sup>	12.81%
Leverage	4.0 – 5.0x
Equity Cushion	60-70%
Documentation	Covenant stepdowns, c30% headroom & tighter definitions

Source: Bloomberg, Alcentra market observations and indicative returns, as of 31 August 2023. There are no guarantees that Alcentra will invest in any deals with terms shown above. <sup>1</sup>Euribor and Sonia are 3 month forward curves. <sup>2</sup>The yields use the mid point of pricing and arrangement fees, the fees are amortised over 3 years in the calculation.

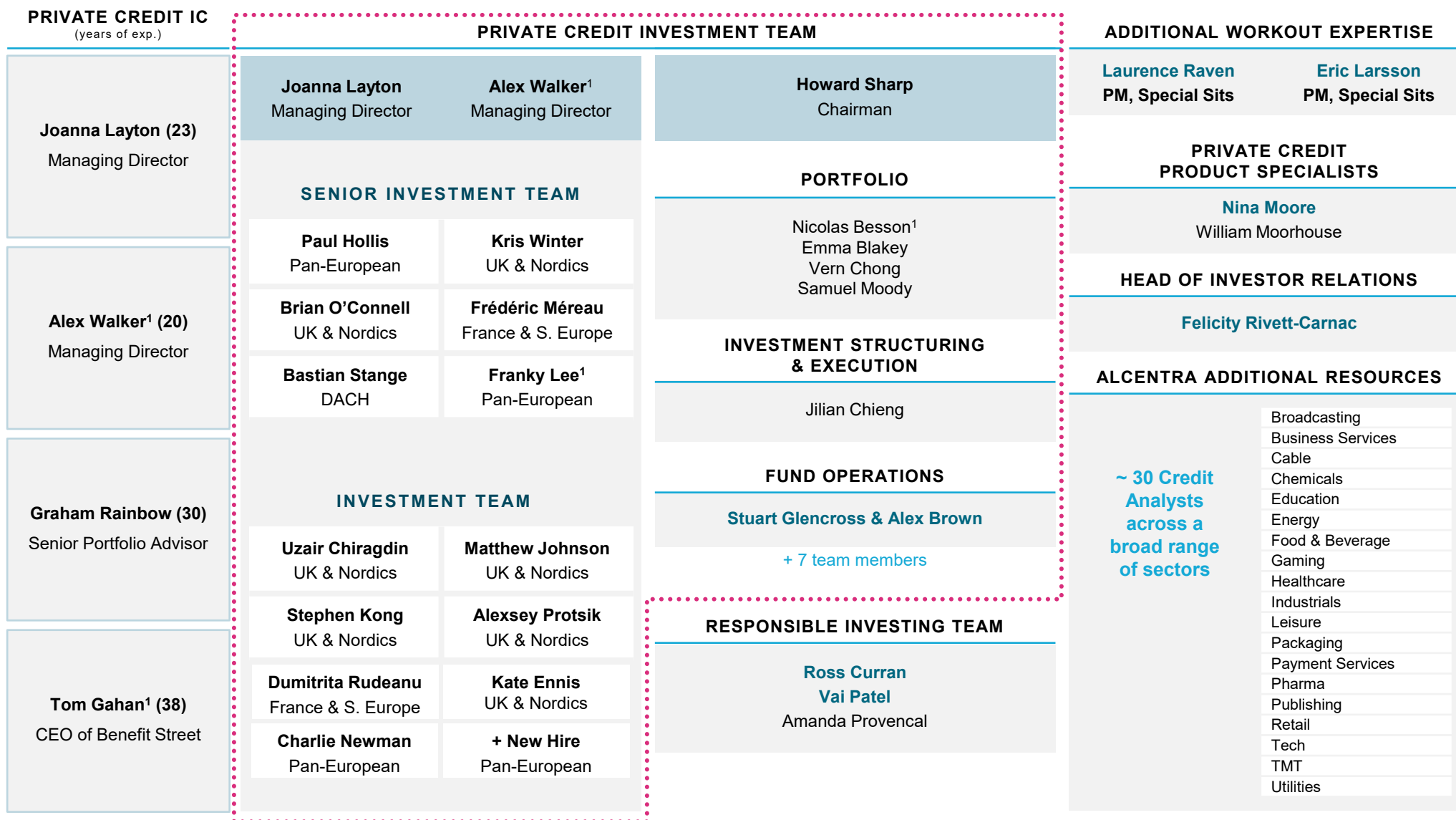


# European Direct Lending Fund I Update & Performance Review

02

# Private Credit Team

## A team of 30 Dedicated Professionals



Source: Alcentra, as of July 2023. There can be no assurance that any particular individual will be involved in the management of any portfolio for any given period of time, if at all.<sup>1</sup>Workout experience

# Fund Statistics

Fund Statistics Q2 2023	
	EDL I
Asset Yield <sup>1</sup>	8.28%
Net IRR <sup>2</sup> (USD CCY Partnership)	7.04%
# Investments (current, fully invested)	7 / 46
# Companies (current, fully invested)	3 / 29
Capital Invested	€1,048m
Total Commitments	€852m
Capital Remaining <sup>3</sup>	7%
Capital Returned to Investors <sup>4</sup>	€740m
Income Distributed <sup>4</sup>	€232m
<b>Roll Forward<sup>5</sup></b>	
Net IRR <sup>2</sup> Lower Range	7.18%
Net IRR <sup>2</sup> Upper Range	7.33%
TVPI <sup>5</sup> Lower Range	1.32x
TVPI <sup>5</sup> Upper Range	1.31x

Source: Alcentra, as of 30 June 2023. Please see Related Performance, IRR disclosures and assumptions at the end of this presentation; averages across currency pools where applicable <sup>1</sup>Total Asset Yields are calculated using the EUR Equivalent cashflows across all assets and the FV of all assets at the time of reporting. The EUR Equivalents are generated using historic FX rates. Internal Rate of Return for the CCY Pool as at the reporting date based on the NAV of the CCY Pool, and (all) historic cashflows between Investors and the Fund. All cashflows to investors are net of fund expenses, management fees and performance fee/carried interest which are calculated in accordance with the fund documentation relating to the relevant currency pool. <sup>3</sup>Weighted average remaining across the different currency partnerships. <sup>4</sup>This is a sum of all partnerships in the fund, for the non-EUR partnerships, these values have been converted to EUR using the FX rates at the final close of the respective funds. <sup>5</sup>Roll Forward IRR's are based on historic cashflows between the CCY Pool Investors and the Fund as well as projected cashflows based on a number of assumptions listed below. The lower range Roll Forward returns are based on the reporting period Fair Value marks (as if all marks become permanent) and the upper range are based on positions marked at Par except for assets that are permanently impaired which are included at the reporting period Fair Value marks. Please note that the calculations are based upon current valuation and do not guarantee future returns. <sup>6</sup>TVPI (Total Value to Paid In): NAV plus total distributions over Max Drawn Amount; <sup>7</sup>Please note that the calculations are based upon current valuation and do not guarantee future returns. This fund is closed to new investors.

# Expected Investment Realisations

EDL I	
Issuer	Current View
Fat Face	2023
Highfield Environmental	2023
Infopro	2024

# Review of Existing Investment

## Alcentra European Direct Lending Fund

- Commitment of \$5,000,000 on November 14, 2014

### Status

- Maximum Drawn Amount Since Inception: \$4,651,774 (93% of Commitment)
  - Capital Returned as of June 30, 2022: \$4,424,475 (88% of Commitment)
- Current Account Value as of June 30, 2022: \$240,613 (5% of Commitment)

### Distributions

- Total Distributions Since Inception: \$1,404,408 (28% of Commitment)
  - Income: \$1,269,242
  - Capital Gains: \$135,246

Income Distributions (\$USD)*	Q1	Q2	Q3	Q4	Total
2021	22,013	4,929	11,686	27,668	66,297
2020	-	13,314	26,119	10,592	50,024
2019	15,159	25,929	18,604	32,464	92,157
2018	45,536	57,267	152,641	58,242	313,686
2017	55,767	100,843	46,306	69,020	271,937
2016	56,022	86,651	56,274	77,250	276,197
2017	31,954	65,561	97,965	90,779	286,259
2014	-	-	-	47,932	47,932

# Impairment & Watchlist Statistics

## IMPAIRMENT STATISTICS

		EDL I (€)
		Q2 2023
Impairment Statistics	Number of Impaired Issuers	1
	of which have Permanent Impairments	1
	Total Fund Cost (EUR million)	1,048
	Impairments (EUR million)	33
	of which Permanent Impairments (EUR million)	2
	of which Realised Impairments (EUR million)	21
	Total Impairments by Fund Cost %	3.2%
	Permanent & Realised Impairments by Fund Cost %	2.2%

Source: Alcentra, as of 30 June 2023. Impairment defined as fair value mark below cost price. Fund Cost Amounts and % refer to breakdown over unrealised and realised assets. Includes debt and equity positions.

**Appendix**

**03**

# Disclosures

**This is a review presentation and is not intended as investment advice. The information provided within is for use by professional investors and/or distributors and should not be relied upon by retail investors.**

This material has been provided for informational purposes only and should not be construed as investment advice or a recommendation of any particular investment product, strategy, investment manager or account arrangement, and should not serve as a primary basis for investment decisions. Prospective investors should consult a legal, tax or financial professional in order to determine whether any investment product, strategy or service is appropriate for their particular circumstances.

**Background Information:** Franklin Templeton holds the majority of The Alcentra Group (or “Alcentra”), which is comprised of the following affiliated companies: Alcentra Ltd. and Alcentra NY, LLC. Assets under management include assets managed by both companies. Alcentra NY, LLC is registered with the U.S. Securities & Exchange Commission under the Investment Advisers Act of 1940. Alcentra Ltd. is registered with the U.S. Securities & Exchange Commission under the Investment Advisers Act of 1940 with respect to its US clients.

Alcentra Ltd is authorized and regulated by the Financial Conduct Authority – Registration number 196845 - and regulated by the Securities Exchange Commission with respect to its US clients – Registration number 801-74223. Registered office for Alcentra Ltd is 160 Queen Victoria Street, London, EC4V 4LA, UK. Alcentra NY, LLC is regulated by the Securities Exchange Commission – Registration number 801-62417. Registered office for Alcentra NY, LLC is 9 West 57th Street, Suite 4920, New York, NY 10019, USA.

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The information in this presentation is only as current as the date indicated, and may be superseded by subsequent market events or for other reasons. Nothing contained herein constitutes investment, legal, tax or other advice nor is it to be relied on in making an investment or other decision. Investors should independently investigate any investment strategy or manager, and consult with qualified investment, legal, and tax professionals before making an investment.

## **Assets Under Management**

Assets under management reflect assets of all accounts and portions of accounts managed by Alcentra for Alcentra and its affiliates.

Consultants may only provide these materials to prospective investors that are Accredited Investors (as defined under the U.S. Securities Act of 1933 (the “Securities Act”)) and Qualified Purchasers within the meaning of the Investment Company Act of 1940 and with whom the Consultant has a substantive and pre-existing relationship (“Qualified Clients”). All materials must be provided in its entirety and shall not under any circumstances be provided in a manner that would deem such information to be a public or general solicitation under Regulation D of the Securities Act. Consultants will not receive any compensation from Alcentra or the Fund(s) for referring any of the products or services herein to their clients.



# Disclosures



Performance is shown net of fees and expenses, and assumes the reinvestment of dividends and capital gains distributions.

## **Specific Fund Fees**

Alcentra European Direct Lending Fund I (Unlevered) – 1.00% Management Fee, 6% Hurdle and a 10% Catch-up have also been assumed to calculate the IRR on a Net basis.

Fees and expenses associated with the Fund may be higher or lower than those reflected. Many factors affect performance including changes in market conditions and interest rates and in response to other economic, political, or financial developments. Investment return and principal value of your investment will fluctuate, so that when your investment is sold, the amount you receive could be less than what you originally invested.

## **Past Performance Does Not Predict Future Returns**

# Key Risks

## Key Risks

### Past Performance does not predict future returns

#### The value of investments and the income from them is not guaranteed and can fall as well as rise due to market and currency movements

An investor should consider the Fund's investment objectives, risks, charges and expenses carefully before investing. Portfolios are subject to investment risks, including possible loss of the principal amount invested. Material in this publication is for general information only and is not intended to provide specific investment advice or recommendations for any purchase or sale of any specific security or commodity. No specific investment objectives, financial situation or particular needs of any recipient have been taken into consideration in connection with the preparation of this presentation. An investment in the Fund does not constitute a complete investment program.

Investments in sub-investment grade debt are speculative and involve special risks, and there can be no assurance that an account's investment objectives will be realized or that appropriate investments may be identified. Many factors affect performance including changes in market conditions and interest rates and in response to other economic, political, or financial developments. An investor could lose all or a substantial portion of his or her investment. No investment process is free of risk and there is no guarantee that the investment process described herein will be profitable. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Investments may involve complex tax structures resulting in delays in distributing important tax information. Alcentra may fair value securities and other instruments for which there is no readily available market or third party pricing, or for which Alcentra believes the third party pricing does not accurately reflect the value of those securities, and such value may be based on proprietary or other models. Leverage and other speculative investment practices may increase the risk of investment loss, and adherence to risk control mechanisms does not guarantee investment returns. Additionally, fees and expenses of the Fund may offset an investor's profits. A lack of strategy diversification may result in higher risk. The Fund may limit transparency and other notification to investors, there may be restrictions on transferring interests in the Fund vehicle, and there is generally no secondary market for an investor's interest in the Fund. This is not an inclusive list of all risk factors, and investments in private funds may be appropriate only for certain investors. A comprehensive list of potential risk factors is outlined in the Fund's private offering memorandum.

Investments in private funds are speculative and involve special risks, and there can be no assurance that a fund's investment objectives will be realized or that appropriate investments may be identified. An investor could lose all or a substantial portion of his or her investment. Investments may involve complex tax structures resulting in delays in distributing important tax information. The manager or their administrator may fair value securities and other instruments for which there is no readily available market or third party pricing, or for which the manager believes the third party pricing does not accurately reflect the value of those securities, and such value may be based on proprietary or other models. Private funds may not be required to provide periodic pricing or valuation information to investors. Performance may be volatile as underlying managers may employ leverage and other speculative investment practices that may increase the risk of investment loss, and adherence to risk control mechanisms does not guarantee investment returns. Additionally, high fees and expenses of a private fund may offset an investor's profits. A manager may reserve the right to limit transparency and other notifications to investors. There may be restrictions on transferring interests in private funds, and there is generally no secondary market for such interests. This is not an inclusive list of all risk factors, and investments in private funds may be appropriate only for certain investors. A comprehensive list of potential risk factors is outlined in the Fund's private offering memorandum. Also, investors should independently investigate any investment strategy or manager, and consult with qualified investment, legal, and tax professionals before making an investment.

# Definitions Return Statistics

**Gross Asset Yields (or “Asset Yields”)** are calculated using the EUR Equivalent cashflows across all assets and the FV of all assets at the time of reporting. The EUR Equivalents are generated using historic FX rates. Please note that Asset Yields reflect arrangement fees being amortised over a three year period rather than being recognised in full at close. Note that the underlying actual cashflows associated with the performance of an asset remain unchanged.

**Net IRR:** Internal Rate of Return for the CCY Pool as at the reporting date based on the NAV of the CCY Pool, and (all) historic cashflows between Investors and the Fund. All cashflows to investors are net of fund expenses, management fees and performance fee/carried interest which are calculated in accordance with the fund documentation relating to the relevant currency pool.

**Roll Forward net IRR's** are based on historic cashflows between the CCY Pool Investors and the Fund as well as projected cashflows based on a number of assumptions listed below. The lower range Roll Forward returns are based on the reporting period Fair Value marks (as if all marks become permanent) and the upper range are based on positions marked at Par except for assets that Alcentra had determined permanently impaired which are included at the reporting period Fair Value marks. Please note that the calculations are based upon views of current valuation and do not guarantee future returns.

Roll Forward IRR Assumptions:

- Roll forward Cashflows are modelled on a deal by deal basis using the margin for each respective investment. Interest and PIK capitalisations occur on a quarterly basis.
- Assets realisation dates are based on our current view of when the fund will be refinanced or repaid for each given investment. We do not assume to hold assets to their maturity date under the terms of the loan agreement. For most loans, we assume a 3 year hold but if we are aware of a reason that the hold period being longer or shorter we will adjust the expected exit date to reflect this.
- Cash from asset realisations and net available cash, which is interest proceeds less management fees, expenses and performance fees (carried interest), is distributed to investors on a quarterly basis.
- Base rates for the different CCY partnerships are based on overnight rates as of 30 June 2023: EURIBOR 3.58%, SONIA 4.93%, SOFR 5.09% and JPY 0.07%. Please note that not all rates will be applicable to all Funds.

**TVPI (Total Value to Paid In):** NAV plus total distributions over Max Drawn Amount.

**Base Currencies as follows:**

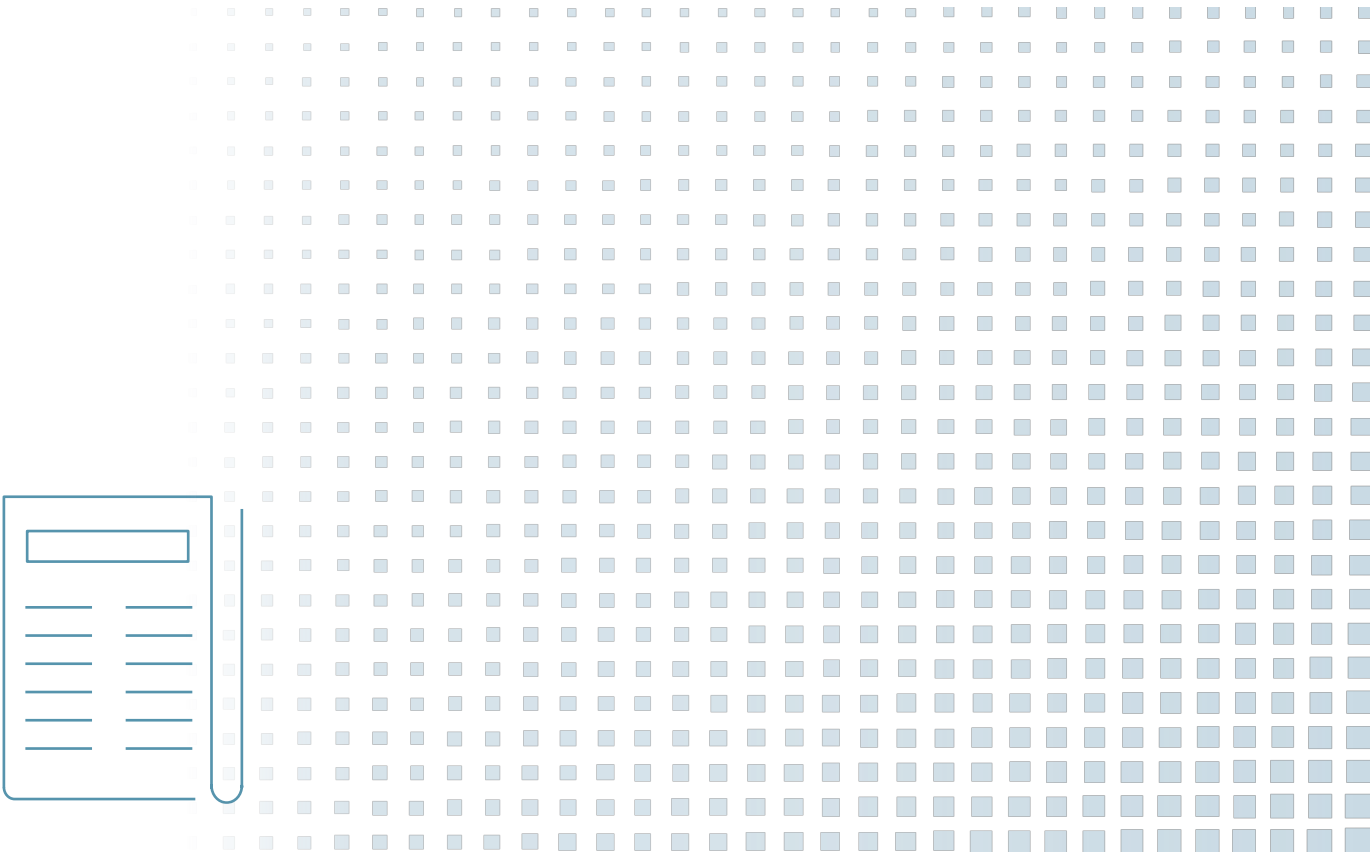
EUR is the base currency for Alcentra European Direct Lending Fund I.

Alcentra Limited

# Alcentra European Direct Lending Fund

## Investment Adviser Report

30th June 2023



# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## MANAGER'S REPORT

30th June 2023

Dear Investor,

We are pleased to release the Alcentra European Direct Lending Fund Investment Adviser Report for the period ending 30th June 2023.

### Portfolio Statistics

Please see below a snapshot of high-level Fund statistics as at 30th June 2023,

EDL I UL	
<b>TOTAL COMMITMENT (€m)</b>	<b>852</b>
First Close	14-Aug-13
Final Close	14-Nov-14
Investment Period	3 years from first close (up to Aug-2016)
Maturity Date	6 year term from first close, subject to up to a one-year extension (Fund extended to Aug-2024 in Aug-2022)

EDL I UL (€m)	Total Realised Assets	Total Unrealised Assets - Debt	Total Unrealised Assets - Equity	Total Unrealised Assets	Total Fund Investments
Holding Period (years)	3.9	8.8	8.2	8.7	4.2
Fund Cost	979.8	56.9	11.4	68.4	1,048.2
Committed (Redrawn)	0.0	0.0	0.0	0.0	0.0
Realised Capital	1005.9	14.2	8.0	22.1	1,028.1
Realised Income	227.2	18.1	2.5	20.6	247.8
Total Realised	1,233.2	32.2	10.5	42.7	1,275.9
Total Unrealised	0	28.0	4.5	32.5	32.5
Total Value	1,233.18	60.2	15.0	75.2	1,308.4
Gross Investment Multiple	1.26x	1.06x	1.31x	1.10x	1.25x
Asset Yield					8.28%
Net IRR <sup>1</sup>					7.04%
No. of Issuers <sup>2</sup>	26	2	2	3	29

EDL I UL (€m)	Total Fund (Weighted averages)
LTM EBITDA <sup>3</sup>	26.7
OPENING NET LEVERAGE	4.5x
CURRENT NET LEVERAGE <sup>3</sup>	NM
LTV <sup>3</sup>	NM
EV	262.4
EV/EBITDA	4.6x
CASH MARGIN	1.37%
PIK MARGIN	4.74%
TOTAL MARGIN	6.11%
ARRANGEMENT FEE <sup>3</sup>	3.0%

<sup>1</sup> Net IRR for relevant CCY partnership.

<sup>2</sup> Realised issuers included only if all tranches have been repaid.

<sup>3</sup> Excludes issuer Fat Face from weighted metrics.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## Fund Activity

We continue to explore exit opportunities for the fund over the coming months. Our current views on expected exit dates can be found in the Appendix, please note that these exit dates are Alcentra's estimate only and are subject to change.

The market continued to show muted levels of activity going into the summer. There is consensus that M&A volumes should start to recover as we move through the second half of 2023 and into early 2024 as buyers and sellers grow accustomed to the higher interest rate environment and the global macro backdrop for many sectors stabilises. Looking forward we have good visibility on c.€1.5bn of live transactions across new and existing borrowers.

The financial performance of businesses in the portfolio remains largely resilient given a focus on well capitalised businesses in defensive sectors. We continue to actively manage those positions on our watchlist. We have made notable progress on a number of watchlist situations this quarter, concluding negotiations around balance sheet restructurings, obtaining new equity commitments from sponsors and allowing businesses to focus on executing turnaround plans. In some limited situations this has included supporting borrowers with the provision of additional liquidity, either through interest capitalisation or the provision of new money.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## Macro Considerations

Global growth was ahead of expectations over Q2, in part due to cooling energy prices and slowing inflation across developed economies. With this in mind, the IMF raised their forecast for 2023 global economic growth to 3.0%, a 0.2% increase from Q1 figures. The stronger-than-expected Q2 can partly be attributed to enthusiasm around AI and its wide range of possible use-cases, which drove earnings outperformance primarily within the global tech sector. Whilst market participants are yet to reach a consensus on how transformative AI will be, there is an increasing acceptance that it is likely to bring about significant efficiency gains and cost savings across numerous sectors. Additionally, the global financial sector saw a calmer quarter following the Credit Suisse and Silicon Valley Bank collapses characterising Q1 2023, helping to further quell macroeconomic uncertainty. The sector was also spooked by a temporary face-off over the US debt ceiling, but an agreement was signed at the end of May which settled markets. Despite a more positive quarter, M&A activity remains subdued, though there is some cautious optimism that activity might increase in the second half of 2023. Focusing in on our key geographies, reported figures show UK GDP to have grown by 0.2% QoQ, whilst Germany's GDP remained flat QoQ. France and Belgium saw QoQ GDP growth of 0.5% and 0.2%, respectively.

Interest rates remain elevated to combat high, but falling, inflation. The Bank of England raised rates by a further 0.5% in June, and then again by 0.25% in early August, with the base rate now sitting at 5.25%. Similar actions were undertaken in Europe, with the ECB deposit facility increasing to 3.75% following three hikes of 0.25% in May, June and July. There are continued signs that inflation seems to be easing; Euro area inflation for the 12 months to June 2023 was 5.5%, representing a 1.4ppts reduction over the quarter. Inflation followed similar patterns in the UK where CPI inflation over the 12 months to June fell to 7.9%, a move in the right direction given March figures placed inflation at 10.1%. Further signals of easing inflation can be read from US figures; CPI inflation fell from 5% in March to 3% over the 12 months to June. Despite signs of a slowdown in inflation, the market expects the BoE to continue to raise rates, with some market commentators suggesting a peak at around 6% in early 2024. There is a similar expectation for the ECB, who have signalled that they are likely to increase the key interest rate again in September 2023.

A key impact of inflation and the cost-of-living crisis is the corresponding impact on wage pressures faced by firms in the Eurozone and UK, with average total pay increasing by 6.9% between March and May 2023. We have seen management teams act quickly, putting through price increases or adopting a more disciplined approach to cost control. European natural gas stores are currently holding greater volumes than in previous years due to a Eurozone wide reduction in usage over the winter period. As a result, energy prices have eased, alleviating some pressure on some businesses.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## QUARTERLY ESG REPORT

### Alcentra ESG Updates

- An extensive project is now underway to create a firmwide ESG data depository and to standardise ESG data collection and management processes across Alcentra strategies. This exercise will have a number of benefits, including: increased data quality, significant time and cost savings, stronger governance frameworks, and improved investor and regulatory reporting
- The Responsible Investing Team continues to roll out training across the firm. In Q2, one of these sessions for the Private Credit team explored the Sustainability Linked Loans Principles (“SLLPs”), based off industry-recognised guidance from the LMA and LSTA. This will help the team to set more robust and ambitious ESG KPIs when agreeing ESG margin ratchets with portfolio companies, with the aim to align more of our Private Credit loans with the SLLPs going forward
- For this year’s Private Credit ESG questionnaire we have now received a 100% response rate, up from 94% and 90% in the last two years. The questionnaire results feed into the Private Credit ESG database; which in turn enables granular fund level ESG analysis

### Private Credit Engagement Examples

- Alcentra discussed an existing ESG Margin Ratchet with a portfolio company; the KPI for the ratchet had been set in Jun-22. Specifically, the company wanted to reset the baseline for a metric which they had missed in the latest reporting period. Whilst some sensible points were made, our ESG KPIs are designed to be stretch targets - having explained our position clearly to the Sponsor, we are leaving the KPI unchanged

### Q2 23 Engagement Topics\*

	%
1 Strategy, Financial and Reporting - Risk management (e.g. operational risks, cyber/information security, product risks)	18%
2 Environment - Natural resource use/impact (e.g. water, biodiversity)	12%
3 Environment - Pollution, Waste	12%
4 Governance - Board effectiveness - Diversity	12%
5 Strategy, Financial and Reporting - Corporate reporting (e.g. audit, accounting, sustainability reporting)	12%
6 Strategy, Financial and Reporting - Firm strategy/purpose	12%
7 Other	24%

### Private Credit Origination

#### ESG Checklist Final Papers Ratings (1Q23)

Score	Category	Split %
1	No material ESG risk	-
2-3	Low / Moderate ESG risk	100%
4-5	High / Significant material ESG risk	-

### ESG Related Declines

#### Q2 23 transactions with ESG component to decline:

- Examples of ESG related decline in Q2 23: Forestry business (natural resource use/impact), online gambling provider (ethics and social considerations) and ethanol stoves (emissions and climate change considerations)

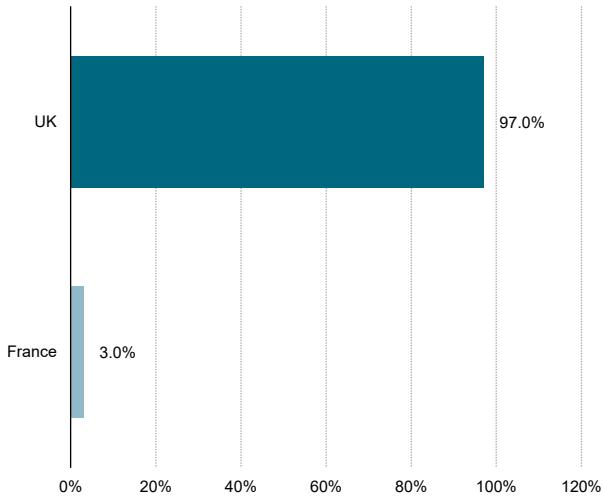


# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

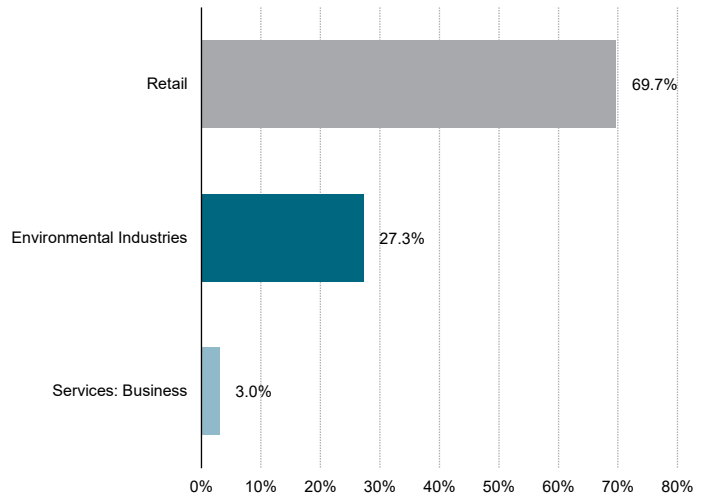
## PORTFOLIO AT A GLANCE

### Portfolio Positions by Geography (Debt at Par/ Equity at Cost)

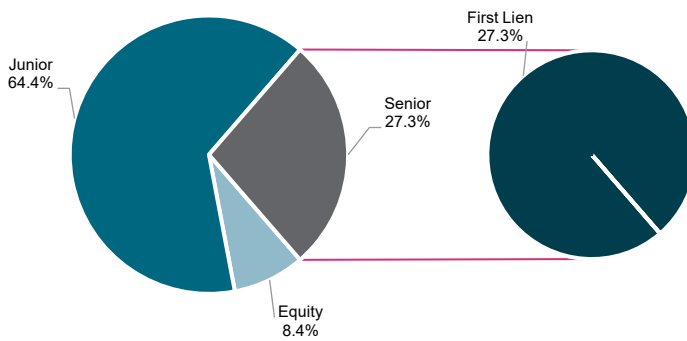


Data Source: Alcentra Limited. Charts may not add up to 100% due to rounding

### Portfolio Positions by Sector (Debt at Par/ Equity at Cost)

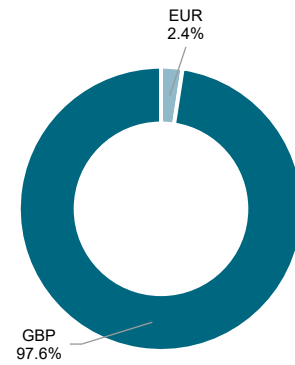


### Debt & Equity Classification (Debt at Par/ Equity at Cost)



Data Source: Alcentra Limited. Charts may not add up to 100% due to rounding

### Portfolio Positions by Currency (Debt at Par/ Equity at Cost)



# Alcentra European Direct Lending Fund

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## PORTFOLIO CREDIT METRICS

ISSUER	INSTRUMENT	BUSINESS DESCRIPTION	GEO	LTM EBITDA (€m)	Δ LTM EBITDA VS CLOSE (€m)	CURRENT NET LEVERAGE	Δ NET LEVERAGE VS CLOSE	LTV	EV (€m)	EV / EBITDA
<b>UNREALISED ASSETS - DEBT</b>										
Fat Face	Restructured Senior	Fashion and accessory retailer	UK	31.2	-17.0	NM	NM	NM	139.2	4.5x
Highfield Environmental	Senior	Waste management business	UK	9.9	6.2	1.0x	-4.1x	27%	36.8	3.7x
<b>TOTAL UNREALISED ASSETS - DEBT (WEIGHTED AVERAGE)<sup>1</sup></b>				<b>9.9</b>		<b>NM</b>		<b>NM</b>	<b>36.8</b>	<b>3.7x</b>
<b>UNREALISED ASSETS - EQUITY</b>										
Fat Face	Equitised Junior	Fashion and accessory retailer	UK	31.2	-17.0	-	-	-	139.2	4.5x
Infopro	Equity	Analytics and event solutions	FR	177.6	104.1	-	-	-	2,291.0	12.9x
<b>TOTAL UNREALISED ASSETS - DEBT &amp; EQUITY (WEIGHTED AVERAGE)<sup>1</sup></b>				<b>26.7</b>		<b>NM</b>		<b>NM</b>	<b>262.4</b>	<b>4.6x</b>

<sup>1</sup> Excludes issuer Fat Face from weighted metrics.

LTM EBITDA and EV are in €m. 'NM' signifies not meaningful. Total columns for LTM EBITDA, LTV, EV and EV/EBITDA are weighted average calculations against fund position (PAR) and exclude NM assets. We exclude from the aggregate fund statistics investments where leverage is abnormally high, not representative of a steady state capital structure and hence not meaningful.

Data Source: Alcentra Limited

# Alcentra European Direct Lending Fund

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## PORTFOLIO VALUATION AND PRICING STATISTICS

ISSUER	INSTRUMENT	SECTOR	INVESTMENT DATE	MATURITY DATE	COST PRICE	FAIR VALUE MARK (CURRENT QTR)	FUND POSITION (PAR)	CASH MARGIN	PIK MARGIN	TOTAL MARGIN
<b>UNREALISED ASSETS - DEBT</b>										
Highfield Environmental	Senior	Environmental Industries	Dec-13	Mar-23	100	100	7.4	4.00%	0.00%	4.00%
Fat Face	Restructured Senior Debt	Retail	Jan-15	Sep-25	93	63	26.6	0.25%	6.75%	7.00%
Highfield Environmental	Senior	Environmental Industries	Nov-16	Mar-23	100	100	3.8	4.00%	0.00%	4.00%
<b>TOTAL UNREALISED ASSETS - DEBT (WEIGHTED AVERAGE)</b>					<b>95</b>	<b>74</b>	<b>37.8</b>	<b>1.37%</b>	<b>4.74%</b>	<b>6.11%</b>
<b>UNREALISED ASSETS - EQUITY</b>										
Fat Face	Equitised Junior Debt	Retail	Jan-15		100	-	2.2			
Infopro	Equity	Services: Business	Jun-16		100	370	1.0			
Infopro	Equity	Services: Business	Apr-17		100	315	0.2			
Fat Face	Equitised Senior Debt	Retail	Sep-20		100	-	0.0			
<b>TOTAL UNREALISED ASSETS - EQUITY (WEIGHTED AVERAGE)</b>					<b>100</b>	<b>130</b>	<b>3.5</b>			
<b>TOTAL DEBT &amp; EQUITY (WEIGHTED AVERAGE)</b>					<b>95</b>	<b>79</b>	<b>41.3</b>			

Fund Position (PAR) is the current PAR position of the asset in the portfolio including capitalised PIK. Total Columns for Cash Margin, PIK Margin and Total Margin are weighted average calculations against Fund Position (PAR). Please note that some tranches are undrawn and hence do not show any margin. All figures are in fund base currency.

For Equity Assets: Fund Position (Par) represents Fund Position (Net Cost), this is the actual fund cost less any realised capital. Fair Value Mark represents Implied Mark.  
Data Source: Alcentra Limited.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## PORTFOLIO RETURN STATISTICS

ISSUER	INSTRUMENT	HOLDING PERIOD (years)	FUND COST	COMMITTED (UNDRAWN)	REALISED CAPITAL	REALISED INCOME	TOTAL REALISED	TOTAL UNREALISED	TOTAL VALUE	GROSS INVESTMENT MULTIPLE	ASSET YIELD	IMPLIED NET IRR
<b>REALISED ASSETS</b>												
Cambridge	Senior	5.6 y	5.9	-	5.9	1.8	7.7	-	7.7	1.31x	6.77%	4.44%
Ipacchem	Senior	2.0 y	17.2	-	17.2	3.7	20.9	-	20.9	1.22x	11.30%	8.97%
Looping Parks	Senior	1.9 y	18.0	-	18.0	3.4	21.4	-	21.4	1.19x	10.37%	8.04%
SERF Dediene	Senior	2.8 y	22.9	-	24.0	4.8	28.9	-	28.9	1.26x	9.86%	7.52%
Primacom	Senior	1.0 y	17.0	-	18.5	0.7	19.3	-	19.3	1.13x	13.75%	11.41%
Bio 7	Senior	3.8 y	30.0	-	32.0	5.7	37.7	-	37.7	1.26x	12.59%	10.26%
Moneycorp	Senior	3.0 y	18.9	-	18.9	3.4	22.3	-	22.3	1.18x	6.31%	3.98%
Amplitude	Senior	3.4 y	30.0	-	30.6	6.1	36.7	-	36.7	1.22x	8.42%	6.09%
Artemis	Senior	4.5 y	71.7	-	71.7	16.1	87.8	-	87.8	1.22x	8.48%	6.15%
Telepizza	Senior	1.5 y	29.4	-	29.4	3.3	32.7	-	32.7	1.11x	8.18%	5.84%
Anesco	Equitised Senior Debt	6.7 y	48.7	-	27.8	8.1	35.9	-	35.9	0.74x	-9.51%	-11.84%
Anesco	Equity	1.0 y	6.4	-	6.3	0.3	6.6	-	6.6	1.03x	3.36%	1.03%
Desk	Senior	3.0 y	76.6	-	78.9	13.4	92.4	-	92.4	1.21x	9.81%	7.47%
CCHL	Senior	2.1 y	41.0	-	43.1	8.0	51.1	-	51.1	1.25x	12.09%	9.76%
Alcumus	Senior	4.0 y	26.5	-	26.5	9.5	36.1	-	36.1	1.36x	9.54%	7.20%
CRF Health	Equity	3.6 y	9.4	-	31.5	2.4	33.9	-	33.9	3.60x	48.55%	46.21%
CRF Health	Senior	3.0 y	59.4	-	59.4	7.8	67.3	-	67.3	1.13x	7.04%	4.71%
CorpAcq	Senior	4.2 y	15.9	-	18.0	5.9	24.0	-	24.0	1.50x	12.71%	10.38%
BIMM	Senior	5.7 y	32.3	-	32.3	16.1	48.4	-	48.4	1.50x	9.29%	6.95%
Agilisys	Senior	5.3 y	19.0	-	19.0	8.5	27.5	-	27.5	1.45x	9.87%	7.54%
Mountain Warehouse	Senior	3.3 y	47.1	-	50.0	8.0	58.0	-	58.0	1.23x	9.21%	6.88%
Shark	Senior	3.2 y	25.2	-	25.2	7.5	32.7	-	32.7	1.30x	9.95%	7.62%
Looping Parks	Senior	0.7 y	6.8	-	6.8	0.6	7.4	-	7.4	1.09x	12.92%	10.59%
MH Gruppen	Senior	5.9 y	77.9	-	77.9	24.3	102.3	-	102.3	1.31x	10.41%	8.07%
Simply Biz	Senior	2.8 y	15.5	-	16.0	4.1	20.1	-	20.1	1.30x	11.29%	8.96%
CorpAcq	Senior	3.8 y	8.0	-	8.0	2.3	10.4	-	10.4	1.29x	8.05%	5.71%
Ambuiberica	Senior	6.0 y	43.0	-	50.4	6.4	56.7	-	56.7	1.32x	5.44%	3.11%
Altares	Senior	6.0 y	50.4	-	50.4	24.4	74.8	-	74.8	1.49x	9.07%	6.73%
Siblu	Senior	2.0 y	27.8	-	27.8	4.9	32.6	-	32.6	1.18x	9.89%	7.55%
Looping Parks	Senior	2.4 y	35.0	-	37.0	6.5	43.5	-	43.5	1.24x	10.88%	8.55%
First Names	Senior	2.2 y	14.5	-	14.5	2.7	17.1	-	17.1	1.18x	10.44%	8.10%
Infopro	Senior	1.2 y	8.6	-	8.6	1.1	9.7	-	9.7	1.13x	12.65%	10.31%
Shark	Senior	1.8 y	6.2	-	6.2	1.2	7.4	-	7.4	1.20x	11.73%	9.40%
Alcumus	Senior	2.1 y	2.2	-	2.2	0.4	2.6	-	2.6	1.20x	10.01%	7.68%
BIMM	Senior	4.0 y	7.4	-	7.4	2.9	10.3	-	10.3	1.39x	10.47%	8.14%
Ambuiberica	Junior	2.3 y	3.7	-	3.7	0.0	3.7	-	3.7	1.02x	1.02%	-1.32%
Fat Face	Junior	0.0 y	-	-	-0.0	-0.0	-0.0	-	-0.0	0.00x	0.00%	-2.33%
Fat Face	Senior	1.6 y	2.5	-	2.7	0.5	3.2	-	3.2	1.26x	16.20%	13.87%
Fat Face	Restructured Senior Debt	1.6 y	2.0	-	2.0	0.1	2.1	-	2.1	1.07x	4.35%	2.02%
<b>TOTAL REALISED ASSETS</b>		<b>3.9 y</b>	<b>979.8</b>	<b>-</b>	<b>1,005.9</b>	<b>227.2</b>	<b>1,233.2</b>	<b>-</b>	<b>1,233.2</b>	<b>1.26x</b>		

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## PORTFOLIO RETURN STATISTICS – UNREALISED

ISSUER	INSTRUMENT	HOLDING PERIOD (years)	FUND COST	COMMITTED (UNDRAWN)	REALISED CAPITAL	REALISED INCOME	TOTAL REALISED	TOTAL UNREALISED	TOTAL VALUE	GROSS INVESTMENT MULTIPLE	ASSET YIELD	IMPLIED NET IRR
<b>UNREALISED ASSETS - DEBT</b>												
Highfield Environments	Senior	9.5 y	24.1	0.0	2.0	8.9	10.9	7.4	18.3	0.76x	-4.43%	-6.77%
Fat Face	Restructured Senior Debt	8.5 y	28.9	-	11.4	7.5	18.9	16.8	35.7	1.23x	3.14%	0.81%
Highfield Environments	Senior	6.6 y	4.0	0.0	0.7	1.7	2.4	3.8	6.2	1.58x	8.77%	6.44%
<b>TOTAL UNREALISED ASSETS - DEBT</b>		<b>8.8 y</b>	<b>56.9</b>	<b>0.0</b>	<b>14.2</b>	<b>18.1</b>	<b>32.2</b>	<b>28.02</b>	<b>60.2</b>	<b>1.06x</b>		
<b>UNREALISED ASSETS - EQUITY</b>												
Fat Face	Equitised Junior Debt	8.5 y	9.7	-	7.5	2.1	9.5	0.0	9.5	0.98x	-0.94%	-3.28%
Infopro	Equity	7.1 y	1.5	-	0.5	0.4	0.9	3.7	4.6	3.10x	17.58%	15.25%
Infopro	Equity	6.2 y	0.2	-	-	-	-	0.8	0.8	3.15x	20.25%	17.92%
Fat Face	Equitised Senior Debt	2.8 y	-	-	-	-	-	0.0	0.0	0.00x	0.00%	-2.33%
<b>TOTAL UNREALISED ASSETS - EQUITY</b>		<b>8.2 y</b>	<b>11.4</b>	<b>-</b>	<b>8.0</b>	<b>2.5</b>	<b>10.5</b>	<b>4.5</b>	<b>15.0</b>	<b>1.31x</b>		
<b>TOTAL UNREALISED ASSETS</b>		<b>8.7 y</b>	<b>68.4</b>	<b>0.0</b>	<b>22.1</b>	<b>20.6</b>	<b>42.7</b>	<b>32.5</b>	<b>75.2</b>	<b>1.10x</b>		
<b>TOTAL FUND INVESTMENTS</b>		<b>4.2 y</b>	<b>1,048.2</b>	<b>0.0</b>	<b>1,028.1</b>	<b>247.8</b>	<b>1,275.9</b>	<b>32.5</b>	<b>1,308.4</b>	<b>1.25x</b>	<b>8.28%</b>	<b>7.04%<sup>1</sup></b>

The Total Unrealised Column represents the Current Fair Value position including capitalised PIK plus accrued PIK and Cash Interest. All figures are in EUR converted using historic FX rates. Total and Segment Asset Yields are calculated using the EUR Equivalent cashflows across all assets and the FV of all assets at the time of reporting. Please note that Asset Yields for unrealised investments reflect arrangement fees being amortised over a three year period rather than being recognised in full at close. We believe this results in an Asset Yield more reflective of underlying asset performance. Note that the underlying cashflows associated with the performance of an asset remain unchanged. Please note that investor (net) IRRs will vary depending on the investment vehicle they are invested in. 'NM' signifies not meaningful.

Implied Net IRR presented is being provided in accordance with new regulatory requirements and is calculated by applying the spread between the combined actual fund level Gross IRR and net IRRs as a result of the deduction of management fees, fund expenses and carried interest, if any, allocated to the General Partner to the gross asset yield. For investments where the Gross IRR is less than the weighted average preferred return of the fund, the effect of carried interest is not reflected in the investment level Implied Net IRR.

<sup>1</sup>Net IRR for relevant CCY partnership. Please see Related Performance and IRR disclosures at the end of this presentation.

Data Source: Alcentra Limited.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## QUARTER ON QUARTER PORTFOLIO STATISTICS

### Impairment Stats

	Q1 2023	Q2 2023
<b>Total Fund Cost</b>	<b>1,048.2</b>	<b>1,048.2</b>
<b>Total Impairments</b>	<b>-32.8</b>	<b>-33.1</b>
Of which are Permanent Impairments	-2.2	-2.2
Of which are Realised Impairments	-21.0	-21.0
<b>Total Impairments by Fund Cost %</b>	<b>3.13%</b>	<b>3.16%</b>
Permanent Impairments by Fund Cost %	2.21%	2.22%

### Watchlist Stats

	Q1 2023	Q2 2023
<b>Number of Watchlist Assets</b>	<b>0</b>	<b>0</b>

Fund Cost Amounts and % refer to breakdown over unrealised and realised assets. Includes debt and equity positions. All figures are in fund base currency.

Please note that the total and realised impairments have been corrected retrospectively to account for a sale of assets in earlier years resulting in capital being realised that had not been shown accurately previously.

Data Source: Alcentra Limited.

# Alcentra European Direct Lending Fund

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## FUND SUMMARY STATEMENT

<b>Fund Name</b>	Alcentra European Direct Lending Fund
<b>First Close</b>	14 August 2013
<b>Final Close</b>	14 November 2014
<b>Reporting Date</b>	30 June 2023

	Prior (Q123)	Current (Q223)
	USD LP	USD LP
	\$m	\$m
<b>Total Commitments</b>	<b>506.9</b>	<b>506.9</b>
<b>Max Drawn Amount</b>	<b>471.8</b>	<b>471.8</b>
- of total commitments	93.1%	93.1%
<b>Current Drawn Amount</b>	<b>24.2</b>	<b>24.2</b>
- of total commitments	4.8%	4.8%
<b>NAV</b>		
Investments	15.8	15.9
Cash	5.8	6.1
Debtors/Creditors	0.0	-0.1
FX MTM	0.1	-0.3
Leverage	0.0	0.0
Bridge Utilised	0.0	0.0
<b>NAV (Attributable to Limited Partners &amp; Carried Interest Partners)</b>	<b>21.7</b>	<b>21.6</b>
Carried Interest Allocation	-0.3	-0.4
<b>NAV (Limited Partners)</b>	<b>21.4</b>	<b>21.2</b>
- of total commitments	4.2%	4.2%
- of drawn	88.5%	87.8%
<b>Income Distributions - Quarter</b>	<b>0.0</b>	<b>0.0</b>
- of total commitments	0.0%	0.0%
- of max drawn amount	0.0%	0.0%
- of current drawn amount	0.0%	0.0%
<b>Income Distributions - Total</b>	<b>139.3</b>	<b>139.3</b>
- of total commitments	27.5%	27.5%
- of max drawn amount	29.5%	29.5%
- of current drawn amount	576.2%	576.2%
Net IRR	7.06%	7.04%
TVPI	1.29x	1.29x
<b>Roll Forward</b>		
Net IRR Upper Range	7.30%	7.33%
TVPI Upper Range	1.31x	1.32x
Net IRR Lower Range	7.20%	7.18%
TVPI Lower Range	1.31x	1.31x

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## Appendix - Expected Exits

Issuer	Current View
Fat Face	Current expected exit horizon: 2023 onwards
Highfield Environmental	Current expected exit horizon: 2023 onwards
Infopro	Current expected exit horizon: 2024 onwards



## GLOSSARY AND DEFINITIONS

### Definitions

The **Fund Summary Statement** shows the unaudited position of the Currency Pool (CCY Pool) in the Fund.

**CCY Pool** represents the grouped position of investors in the fund of the same currency typically investing in the same parallel partnership.

**Max Drawn Amount** represents the highest drawn position of investors over the life of the fund.

**TVPI (Total Value to Paid In)** is the NAV plus total distributions over Max Drawn Amount.

**Net IRR** is the internal Rate of Return for the CCY Pool as at the reporting date based on the NAV of the CCY Pool, and historic cashflows between Investors and the Fund. All cashflows to investors are net of fund expenses, management fees and performance fee/carried interest which are calculated in accordance with the fund documentation relating to the relevant currency pool.

**Roll Forward IRR's** are based on historic cashflows between the CCY Pool Investors and the Fund as well as projected cashflows based on a number of assumptions listed below. The lower range Roll Forward returns are based on the reporting period Fair Value marks (as if all marks become permanent) and the upper range are based on positions marked at Par except for assets that are permanently impaired which are included at the reporting period Fair Value marks. Please note that the calculations are based upon current valuation and do not guarantee future returns.

- Roll Forward IRR Assumptions:
- Roll forward Cashflows are modelled on a deal by deal basis using the margin for each respective investment. Interest and PIK capitalisations occur on a quarterly basis.
- Assets realisation dates are based on our current view of when the fund will be refinanced or repaid for each given investment. We do not assume to hold assets to their maturity date under the terms of the loan agreement. For most loans, we assume a 3 year hold but if we are aware of a reason that the hold period being longer or shorter we will adjust the expected exit date to reflect this.
- Cash from asset realisations and net available cash, which is interest proceeds less management fees, expenses and performance fees, is distributed to investors on a quarterly basis.
- Base rates for the different CCY partnerships are based on overnight rates as of 30 Jun 2023: EURIBOR 3.58%, SONIA 4.93%, SOFR 5.09% and JPY 0.07%. Please note not all rates will be applicable to this Currency Partnership.

**The Total Unrealised Column** represents the Current Fair Value position including capitalised PIK plus accrued PIK and Cash Interest. All figures are in EUR converted using historic FX rates.

**Asset Yields** are calculated using actual cashflows and the FV of the asset at the time of reporting. Please note that Asset Yields reflect arrangement fees being amortised over a three year period rather than being recognised in full at close. Note that the underlying actual cashflows associated with the performance of an asset remain unchanged.

**Implied Net IRR** presented is being provided in accordance with new regulatory requirements and is calculated by applying the spread between the combined actual fund level Gross IRR and net IRRs as a result of the deduction of management fees, fund expenses and carried interest, if any, allocated to the General Partner to the gross asset yield. For investments where the Gross IRR is less than the weighted average preferred return of the fund, the effect of carried interest is not reflected in the investment level Implied Net IRR.

**Total and Segment Asset Yields** are calculated using the EUR Equivalent cashflows across all assets and the FV of all assets at the time of reporting. The EUR Equivalents are generated using historic FX rates. Please note that investor (net) IRRs will vary depending on the investment vehicle they are invested in. Please note that Asset Yields reflect arrangement fees being amortised over a three year period rather than being recognised in full at close. Note that the underlying actual cashflows associated with the performance of an asset remain unchanged.

**Fund Position (Par)** is the current PAR position of the asset in the portfolio including capitalised PIK.

Total Columns for Opening Leverage, Current Leverage, LTV, Cash Margin, PIK Margin and Total Margin are weighted average calculations against Fund Position/Cost.

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

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# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

## Key Risks

### Past performance does not predict future returns

**The value of investments and the income from them is not guaranteed and can fall as well as rise due to market and currency movements**

An investor should consider the Fund's investment objectives, risks, charges and expenses carefully before investing. Portfolios are subject to investment risks, including possible loss of the principal amount invested. Material in this publication is for general information only and is not intended to provide specific investment advice or recommendations for any purchase or sale of any specific security or commodity. No specific investment objectives, financial situation or particular needs of any recipient have been taken into consideration in connection with the preparation of this presentation. An investment in the Fund does not constitute a complete investment program.

Investments in sub-investment grade debt are speculative and involve special risks, and there can be no assurance that an account's investment objectives will be realized or that appropriate investments may be identified. Many factors affect performance including changes in market conditions and interest rates and in response to other economic, political, or financial developments. An investor could lose all or a substantial portion of his or her investment. No investment process is free of risk and there is no guarantee that the investment process described herein will be profitable. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Investments may involve complex tax structures resulting in delays in distributing important tax information. Alcentra may fair value securities and other instruments for which there is no readily available market or third party pricing, or for which Alcentra believes the third party pricing does not accurately reflect the value of those securities, and such value may be based on proprietary or other models. Leverage and other speculative investment practices may increase the risk of investment loss, and adherence to risk control mechanisms does not guarantee investment returns. Additionally, fees and expenses of the Fund may offset an investor's profits. A lack of strategy diversification may result in higher risk. The Fund may limit transparency and other notification to investors, there may be restrictions on transferring interests in the Fund vehicle, and there is generally no secondary market for an investor's interest in the Fund. This is not an inclusive list of all risk factors, and investments in private funds may be suitable only for certain investors. A comprehensive list of potential risk factors is outlined in the Fund's private offering memorandum.

Investments in private funds are speculative and involve special risks, and there can be no assurance that a fund's investment objectives will be realized or that suitable investments may be identified. An investor could lose all or a substantial portion of his or her investment. Investments may involve complex tax structures resulting in delays in distributing important tax information. The manager or their administrator may fair value securities and other instruments for which there is no readily available market or third party pricing, or for which the manager believes the third party pricing does not accurately reflect the value of those securities, and such value may be based on proprietary or other models. Private funds may not be required to provide periodic pricing or valuation information to investors. Performance may be volatile as underlying managers may employ leverage and other speculative investment practices that may increase the risk of investment loss, and adherence to risk control mechanisms does not guarantee investment returns. Additionally, high fees and expenses of a private fund may offset an investor's profits. A manager may reserve the right to limit transparency and other notifications to investors. There may be restrictions on transferring interests in private funds, and there is generally no secondary market for such interests. This is not an inclusive list of all risk factors, and investments in private funds may be suitable only for certain investors. A comprehensive list of potential risk factors is outlined in the Fund's private offering memorandum. Also, investors should independently investigate any investment strategy or manager, and consult with qualified investment, legal, and tax professionals before making an investment

# Alcentra European Direct Lending Fund

Investment Adviser Report at 30th June 2023

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**Firm: HarbourVest Partners, LLC**

**Strategy/Product: Secondaries & Direct**

**Client: MWRA Employees' Retirement System**

**NEPC Manager Due Diligence Questionnaire - Update**

**Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

**Firm/Organization**

1. Have there been any changes in ownership or management in the past year?

*There have been no changes in HarbourVest ownership or management in the past year.*

*HarbourVest is an independent, privately-owned Firm. The equity ownership is held by 32 individuals. Within this group, no individual owns more than 7.5% of the Firm. In addition, 43 other employees (managing directors) participate in a profit-sharing plan. Together, these senior professionals have a significant vested personal and financial interest in the long-term success of HarbourVest. The ownership structure includes provisions to expand ownership over time to enable continuity and stability of the Firm.*

2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

*As of June 30, 2023 AUM \$109.8 Billion  
As of June 30, 2023, HarbourVest has nearly 1,800 (1,796) active LPs  
As of June 30, 2023, HarbourVest is actively invested with 650+ (651) GPs*

3. Have there been any new or discontinued products in the past year

*Please see attached "HarbourVest update – 2023" slide*

Are any products capacity constrained?

*Today, none of HarbourVest's open products are capacity constrained. In private equity there is a marked performance differential between top performing funds and median fund performance. To be compensated for the illiquidity assumed, investors must identify and access the top subset of the investible universe. We know that capacity with these top managers is finite, so we carefully monitor our forward-looking capacity to managers that we believe have the potential to deliver top performance. Each investment team sets and monitors capacity limits with this in mind.*

*Doing so allows us to manage pools of capital in-line with what we believe we can prudently invest without forcing capital into less attractive opportunities. Accordingly, we do not take on client capital beyond what we can appropriately allocate and invest on behalf of those clients. We believe maintaining this investment discipline is vital to long-term successful solutions for and partnerships with our investors.*



*Our Portfolio Construction Committee provides centralized portfolio construction and makes final allocation decisions for all HarbourVest managed pools of capital. To ensure a fair and equitable approach is maintained, each decision takes into consideration the overall portfolio construction, investment guidelines of that pool of capital and other considerations as outlined in our Allocation Policy. All allocation decisions are clearly documented and can be reviewed with our separate account investors and their consultants. Further, our allocation process is incorporated into SOC-1 audits.*

4. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.

*There are no current or pending regulatory, compliance or litigation issues and the expected business impact. In the normal course of business, as with many other private equity managers, HarbourVest is from time-to-time involved in litigation as a plaintiff and a defendant. In the opinion of the managing directors, litigation has not had any material impact on the Firm.*

5. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.

*HarbourVest has prioritized building a diverse and inclusive environment that promotes mutual respect and acceptance among all team members, regardless of age, gender, race, ethnic origin, marital status, physical abilities, religious beliefs, sexual orientation, or expression since its inception in 1982. Forty years later, we strive to uphold this proud legacy by cultivating a culture where everyone can be their full selves, have a true sense of belonging, and thrive.*

*This year, we are pleased to announce that Kelley King joined our team as the firm's first Chief Diversity, Equity, and Inclusion Officer to work in partnership with senior leadership on continually improving our internal programs and pushing HarbourVest further forward as an industry leader in the DEI space. She will also lead our Diversity & Inclusion Council, which was established in 2019 and has since made tremendous progress driving continuous learning, ensuring we challenge ourselves, and reinforcing our core strengths through hiring, retention, and development initiatives. These ongoing efforts have helped us launch an internship program with Sponsors for Educational Opportunity (SEO) and #10000BlackInterns as well as expand our network of external DEI-focused partners, many of whom participate in our Perspectives Speaker Series, a powerful learning tool for our global team.*

*Our dedication to these principles extends outside the firm as we remain committed to investing capital in support of emerging and diverse managers and under-resourced markets. We are engaged with organizations at the forefront of this important work at the industry level, including as a signatory of the National Association of Investment Companies (NAIC) [Diverse Alternative Investment Industry Statement](#) and a founding signatory of the Institutional Limited Partners Association (ILPA) [Diversity in Action Initiative](#). We are proud of the progress we have made and humbled to have been named a Top 10 Most Inclusive PE Firm by Equality Group<sup>1</sup> and LP Diversity & Inclusion Leader of the Year by Real Deals<sup>2</sup> for our diversity and inclusion advocacy across the industry. As we look ahead in the spirit of deeper understanding and constant improvement, we are focused on DEI not just because it is the right thing to do but because it is core to who we are and essential to how we deliver for our clients.*



## Portfolio Management Team

1. Have there been any changes in the portfolio management team in the past year?

*There have not been any changes to the portfolio management team in the past year.*

2. Are there any expected changes to the team in the future (planned additions or departures)?

*There are no expected changes to the team. We expect there to be normal course of business changes, such as junior hires, promotions, and associates leaving after three years, as scheduled per our investment associate program.*

## Process

1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

*No, our overall due diligence and investment process has remained consistent throughout HarbourVest's history, but we continually look for ways to refine and improve on what we do.*

## Philosophy

1. Describe recent changes in investment philosophy, if any.

*There have been no recent changes in investment philosophy.*

*HarbourVest's risk management approach derives from its philosophy that risk must be intended, understood, and compensated for at all levels. With this in mind, the Firm seeks to maximize returns while simultaneously managing risk appropriately.*

*Key tenets of HarbourVest's risk management philosophy include:*

- Comprehensive understanding of the Fund's current portfolio and risk profile
- Investing alongside general partners that are known and calibrated by HarbourVest
- Avoiding market timing
- Constructing portfolios that are diversified by sector, enterprise value, investment thesis, sponsor GP and vintage year

*Risks are assessed across three main categories: the target investment, portfolio construction, and investment monitoring. HarbourVest implements operational controls within each category to ensure a comprehensive risk management approach.*



*HarbourVest utilizes its systems and comprehensive databases to assess risk factors specific to each potential investment opportunity as well as on a more holistic level across the broader portfolio. For example, when evaluating opportunities, the Firm has the ability to assess the prior track record of private equity investments in the same industry, which allows the team to gain an understanding of whether the industry has typically generated strong private equity returns or whether it has been challenged. Industry-level risk assessment also highlights whether a particular manager or region has had more success in a respective area. At the broader level, when considering risk across an entire portfolio, the Firm's systems and analytics provide a view into the diversification and exposure of the portfolio to particular countries, industries, vintage years, investment years, strategies, and stages of investment.*

*The Firm's approach to portfolio construction places an emphasis on risk dynamics. HarbourVest works collaboratively with clients to educate them on certain risks and to encourage them to build flexible solutions to navigate the market's inevitable ups and downs. In building portfolios, the Credit team adheres to a three-pronged approach that has served investors well for four decades:*

- Portfolio diversification: ensure that no specific investment can have an outsized impact on the Fund's returns*
- Sector diversification: ensure that no specific portion of the portfolio is concentrated within a specific sector or industry*
- Security diversification: ensure the Fund is invested consistent with its targeted security mix*

## **Portfolio**

1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).

*Please see attached Q1 2023 reports as well as the most recent Audited Financial Statements.*

2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.

*The total fund size for HCF VI is \$4.194B.*

*As closed-end funds, client gains and losses are not applicable.*

Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.

*Dover X- Please refer to the Detailed Schedule of Partners' Equity in the Audited Financial Statement.*

*HCF VI- Please refer to the Detailed Schedule of Partners' Equity in the Audited Financial Statement.*

## **Performance / Market Outlook**





1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.

Fund	Fund LP IRR as of 3/31/2023	PME IRR - MSCI AC World	PME IRR - S&P 500 Index	Fund	Fund LP IRR as of 12/31/2022	PME IRR - MSCI AC World	PME IRR - S&P 500 Index
Dover X Fund	36.9%	3.0%	5.2%	Dover X Fund	41.6%	-1.2%	1.3%
Co-Investment VI	NM	NM	NM	Co-Investment VI	NM	NM	NM

**Questions 2 and 3 for HCF VI:**

**2) Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

*Recent Performance:*

*As of March 31, 2023, the TVPI for HCF VI is 1.0x and the IRR is not meaningful as the time period under consideration for cashflows is too short.*

*The majority of the portfolio is held at cost reflecting the short hold periods of the investments. As the portfolio matures, we would expect to see valuation marks trend upwards in-line with our more mature funds.*

*Portfolio companies have not had sufficient time to enact their value creation strategies underwritten at the time of investment (e.g. moving into new products or markets, growing through strategic acquisitions, bringing in new management etc.)*

*The average hold period for investments in a co-investment fund is 4-6 years. As we approach this time frame with our investments and as HCF VI matures, we would expect to reach our target return*

*The current volatility in public markets underlines the benefits of a private markets strategy and specifically one focused on co-investments. As co-investors, we hold our underlying investments for a medium to long-term timeframe. Our realized returns reflect long term value creation in companies through economic cycles. Our internal analysis, shows that our realized valuations on average exceed unrealized valuations by 55%*

*While deal making activity has trended down, our own co-investment activity is up year-on-year. We believe the current environment, while challenging, plays to the strengths of HarbourVest's co-investment strategy for the following, non-exhaustive, list of reasons:*

*As debt markets have tightened, the call on co-investment capital to get deals done has grown. We are being approached more frequently and for larger check sizes. This benefits well capitalized funds that can write larger tickets as opposed to smaller scale market participants.*

*More capital allows you to have a larger portfolio which in turn brings diversification benefits i.e. a write-down of an investment in a portfolio of ~50-60 companies has a smaller impact than in a fund with ~6-10 investments;*

*Scale advantages of a larger platform allows for greater sourcing of deals and so higher selectivity in those that are chosen for investment, a smaller fund may potentially attract less deal flow and of potentially lower quality due to difficulty in securing allocation from leading managers leading to potentially poorer outcomes.*

*GPs are looking for co-investment partners that have experience in underwriting investments during challenging markets. We have been co-investing for 40 years and have learned lessons from the GFC, dot-com bubble etc. which benefit our underwriting process.*

*Our focus on the middle market space allows for more proprietary sourcing of deals and greater alpha generation through the number of value creation strategies which are better suited to the mid/small cap*



company space. This trend is borne out in recent performance data, showing the space is even more attractive in the current environment. US middle-market funds outperformed mega funds for three consecutive quarters heading into 2023 as reported by Pitchbook. Additionally, the middle market has the potential to offer more advantages in securing exits in the current environment. The smaller size of portfolio companies allows PE firms to pursue multiple paths to exit they can grow under the middle-market sponsor to be a platform acquisition for other PE firms or stay small enough to roll into other platform companies as add-on deals. These companies also tend to be less leveraged, and no or lower amounts of debt paves the way for easier exits

### **3) Describe your market outlook and how strategy positioning is impacted by your views.**

#### **Overall Market Overview:**

*Geopolitical tensions and tough macro conditions have continued to squeeze the IPO window subduing exit activity.*

*While public markets have nascently recovered, fundraising remains challenging, illustrated by the tight liquidity environment and the number of delayed or below-target fundraises.*

*Inflation threat has subsided in some developed economies, but the overall level of inflation remains high particularly in Europe. Operating companies which have successfully been able to pass through inflationary costs during 2022 and 2023 have already proved to be more resilient and should see margins grow further especially as raw material and energy prices fall.*

*Higher interest rates which may stay elevated for longer equates to debt markets being more costly to access for finance for a longer time. Companies with robust capital structures and visibility over cashflows will continue to be favored.*

#### **Co-investment outlook and positioning:**

*Despite M&A activity continuing to wane in Q3 2023, co-investment deal flow remains buoyant, and the outlook remains strong*

*The current environment favors co-investors with large capital bases. GPs are turning to co-investors more frequently and for greater ticket sizes due to:*

*Scarcity of affordable debt finance continuing to drive equitization of capital structures.*

*GP fundraisings are under pressure, limiting the amount of capital that can be committed per deal*

*P2P activity likely to be a record this year, but if there is confidence in a public market recovery, we expect this activity to subside. We are already seeing signs of less affordable debt finance impacting the ability to get these deals over the line*

*Increase in vendor financing in deals to give comfort to buyers.*

*Given the macroeconomic headwinds, GPs remain keen to hold their “crown jewel” assets for longer than seek to exit in challenging markets. This has continued the trend for cross fund or single asset secondary trades.*

#### **Questions 2 and 3 for Dover X:**

### **2) Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

*Dover X's performance remains strong; in Q1, Dover X reported a gross portfolio gain of 2.4% vs 12/31/2022 NAV and was held at a Net to LP TVPI of 1.57x and Net to LP IRR of 36.9% as of March 31, 2023. Dover X also generated strong liquidity in the first half of 2023. The fund distributed \$219.7M of proceeds to LP,*



*increasing the Net to LP DPI from 0.35x as of December 31st, 2022, to 0.38x Net DPI as of 31 June 30th, 2023. The secondary market provides investors with an opportunity to earn compelling rates of return with arguably lower levels of risk than other private market strategies due to secondaries shorter duration, high levels of diversification, ability to acquire assets at attractive discounts to fair value, and other factors. Secondary investments have also shown an ability to generate strong returns in a range of economic environments. In terms of risks that could negatively impact Dover X, a significant shock to the global macro-economic environment late in the fund's investment period (i.e. after most or all of the portfolio has been invested) followed by a prolonged and anemic recovery period would likely negatively impact Dover X's performance. Such a scenario would likely cause actual investment outcomes to fall short of original underwriting expectations. With that said, such a scenario would likely impact other private market strategies in a similar manner. Furthermore, an argument could be made that secondary investments, which tend to produce greater levels of early liquidity (and early de-risking) relative to other strategies, may be relatively better positioned than other strategies to sustain the challenges associated with such an environment. In terms of tailwinds, the growth of the secondary market, including the exceptional growth of the GP-led segment of the secondary market, is creating a rapidly expanding opportunity set that HarbourVest believes Dover X capitalized on well during portfolio construction.*

**3) Describe your market outlook and how strategy positioning is impacted by your views.**

*In relation to Dover X, we believe the slowdown in exit activity may reduce distribution activity in the short term; however, the underlying assets in the fund have continued to, in aggregate, appreciate, as demonstrated by the quarter over quarter gain detailed in our response for Question 1 above. Given the level of diversification in Dover X, the portfolio is still generating liquidity exceeding the market average.*

**4) Could you please include a slide in your presentation that sows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

*Client Summary provided in presentation, page 7.*



# MWRA Employees' Retirement System

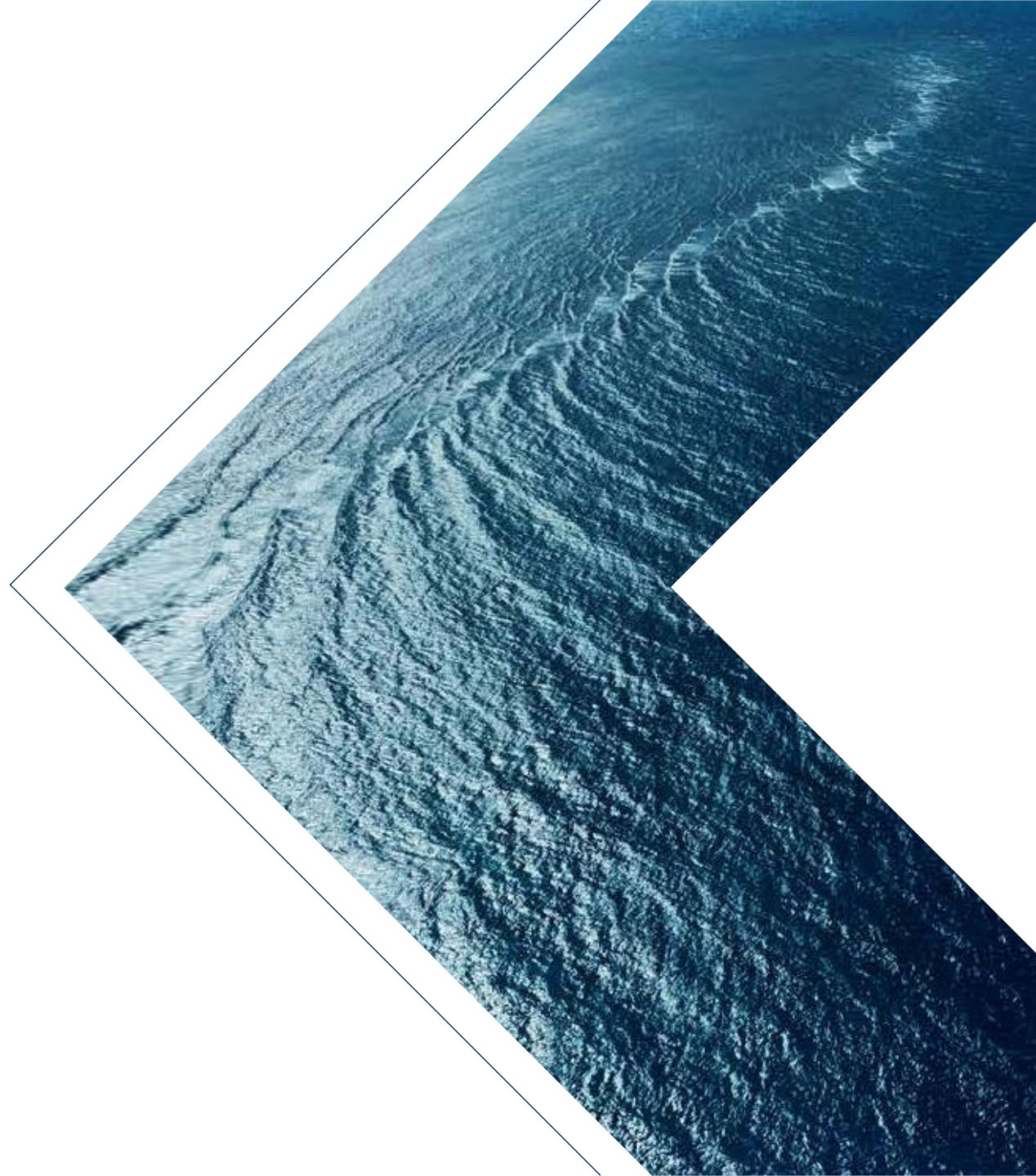
September 2023

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- IV. Co-investment program
- Appendix

# HarbourVest firm overview



# HarbourVest at-a-glance



As of March 31, 2023

\*Reflects committed capital from LPs for all active funds/accounts, excludes any funds / accounts that are in extension, liquidation, or fully liquidated.

Advisory board seats include all advisory / company board seats (including advisory / non-voting roles) held through a HarbourVest fund / account investments.



# Global scale

Our market coverage is broad and deep



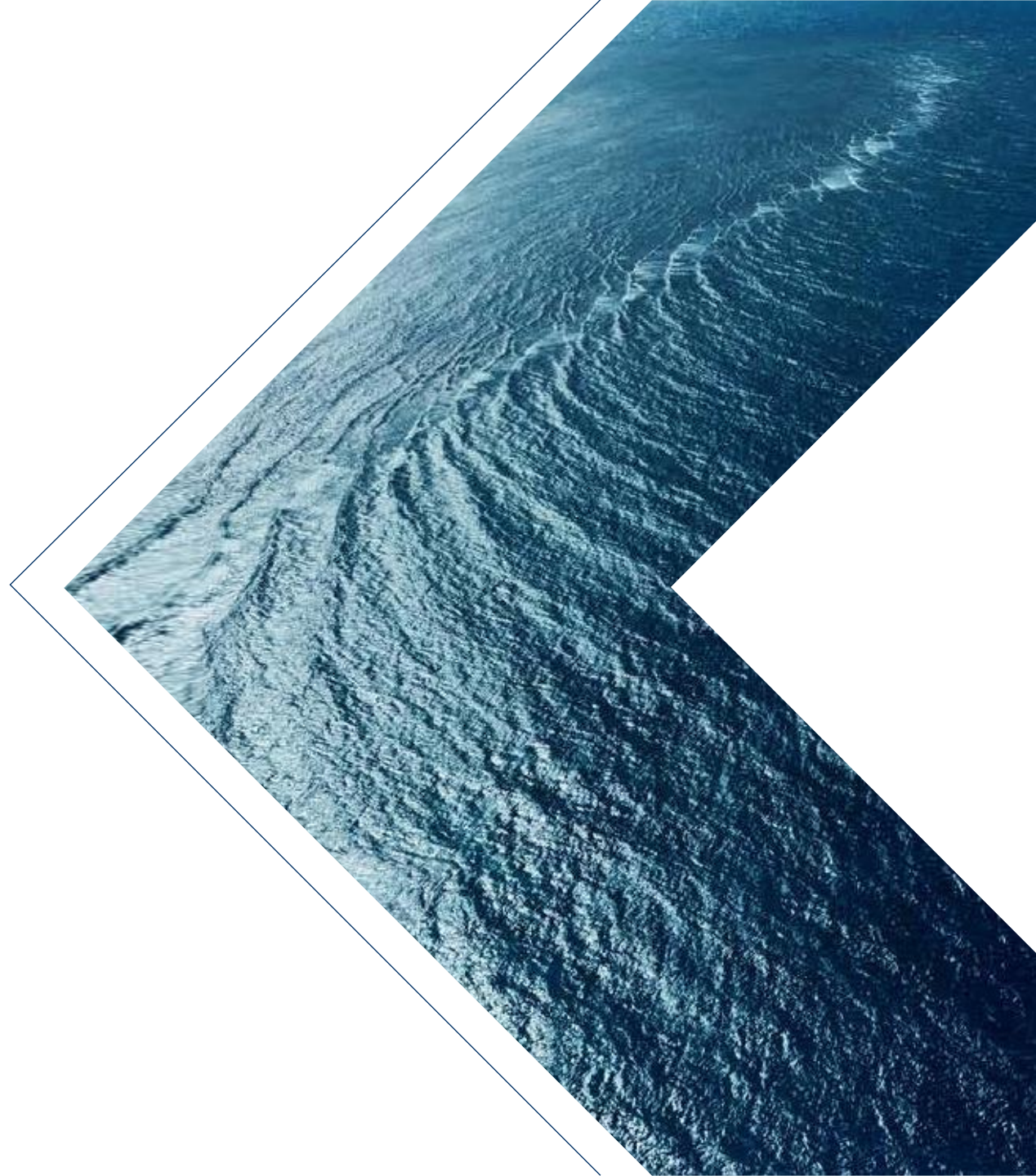
<b>Americas</b>	
149 Investment professionals	\$89.0B committed
<b>EMEA</b>	
45 Investment professionals	\$37.6B committed
<b>Asia Pacific</b>	
33 Investment professionals	\$12.3B committed

Expertise across capital structure (equity and debt) and investment types		
Primary investments	Secondary & real assets	Direct – equity & credit
\$56.1B committed	\$48.1B committed	\$34.7B committed

As of March 31, 2023. Based on primary, secondary, and direct commitments made by HarbourVest since inception. Commitment amounts reflect the aggregate commitments made by HarbourVest to primary, secondary, and direct investments since inception, and are presented gross of leverage. Arrows indicate HarbourVest team location. Singapore office opened May 2021. Frankfurt office opened July 2021. Sydney office opened August 2022.



# Client update



# Investments managed by HarbourVest

## MWRA Employees' Retirement System Summary as of March 31, 2023

Fund	NAV Date	Vintage Year	Committed Capital	Contributed Capital	Cumulative Distribution	Transfer of Interest	NAV	Total Value	TV/C	Investor IRR
Dover X Fund	03/31/23	2020	\$ 9,000,000	5,692,500	2,146,438	0	6,802,899	8,949,337	1.6x	37.1%
Co-Investment VI	03/31/23	2022	\$ 8,000,000	2,800,000	0	0	2,907,601	2,907,601	1.0x	NM
<b>Subtotal:</b>			<b>\$ 17,000,000</b>	<b>8,492,500</b>	<b>2,146,438</b>	<b>0</b>	<b>9,710,500</b>	<b>11,856,938</b>	<b>1.4x</b>	<b>34.2%</b>
<b>Grand Total:</b>			<b>\$ 17,000,000</b>	<b>8,492,500</b>	<b>2,146,438</b>	<b>0</b>	<b>9,710,500</b>	<b>11,856,938</b>	<b>1.4x</b>	<b>34.2%</b>

Totals are based on historic exchange rates on date of actual cash flow. All funds include related AIVs.

NAV and Total Value reflect values as of NAV Date, updated for capital calls and distributions through the As of Date. Investor IRRs are based on the As of Date.

NM: Since the majority of capital has yet to be called from partners, the IRR is not yet meaningful.

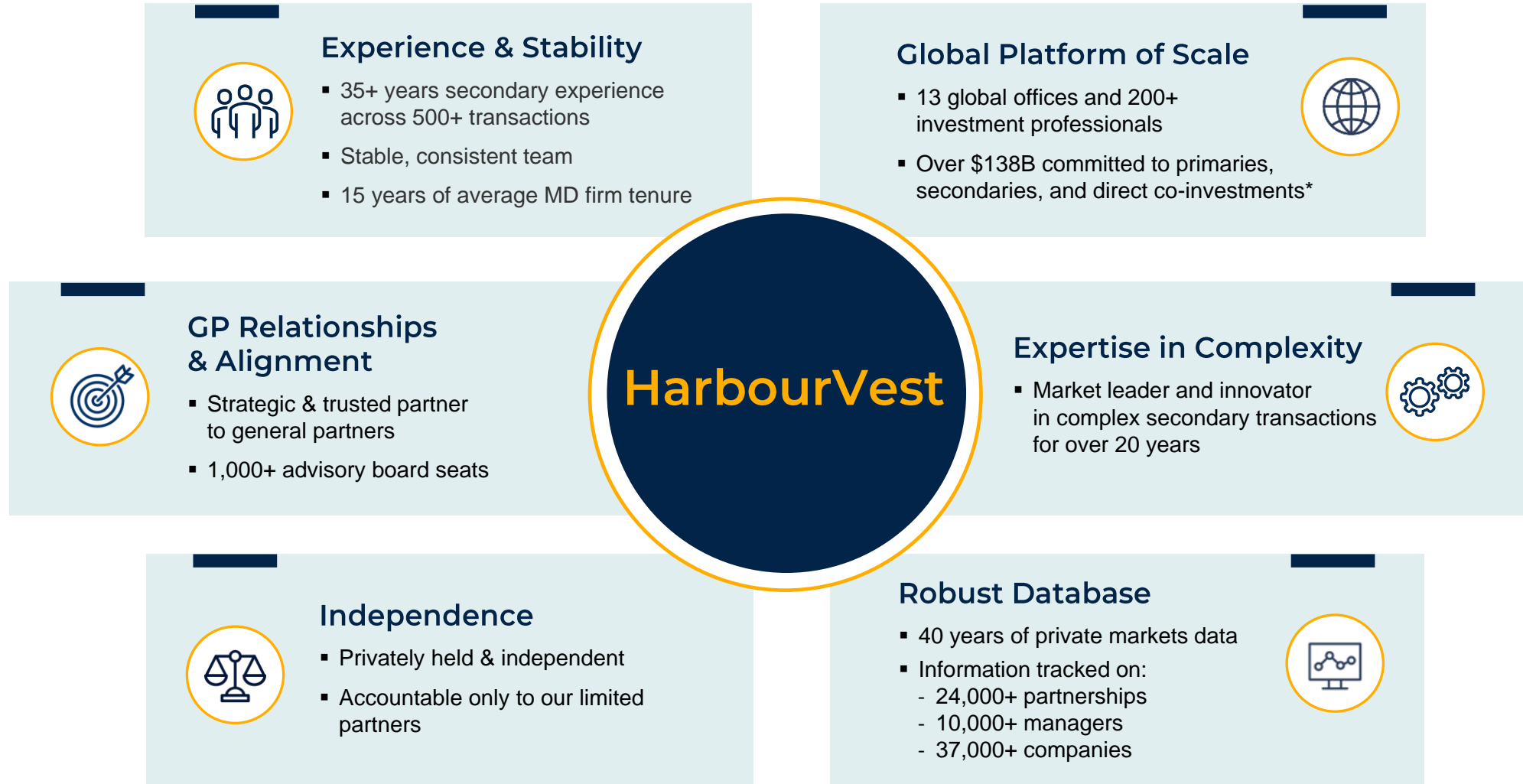
Reflects net returns to client based on their specific commitments and cash flows, after all fees, operating expenses and carried interest. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Net Performance Returns, Fees and Expenses. Past performance is not a reliable indicator of future results.

# Dover Street program



# HarbourVest secondary competitive advantages

In our experience, six core strengths provide significant advantages



As of March 31, 2023

\* Reflects the total committed capital since inception for primary, secondary and direct co-investments excluding real assets investments. Includes all investments made by a HarbourVest managed fund or account. In order to show a comprehensive track record and our experience in selecting investments, these figures include investments made by HarbourVest managed funds or accounts since 1983. This includes data (prior to 1998) related to transactions that occurred when the HarbourVest team was affiliated with Hancock Venture Partners, Inc.

# Secondary program performance

Since inception as of March 31, 2023

	Year of Initial Investment	Fund Size (millions)	% Called	Gross Portfolio DPI	Gross Portfolio TVPI	Gross Portfolio IRR	Net DPI	Net TVPI	Net IRR	MSCI AC World PME**	S&P 500 PME**
Dover Ia-Dover IV <sup>1</sup>	1991-1999	\$363.3	97%	1.9x	1.9x	34.5%	1.6x	1.6x	20.8%	8.1%	9.7%
Dover V	2003	\$515.2	97%	1.7x	1.7x	28.7%	1.5x	1.5x	17.9%	10.5%	8.3%
Dover VI	2005	\$621.2	96%	1.5x	1.5x	7.1%	1.3x	1.3x	3.9%	4.8%	7.1%
Dover VII	2007	\$2,929.3	96%	1.6x	1.6x	12.8%	1.4x	1.4x	9.2%	9.4%	13.8%
Secondary Overflow	2010	\$540.4	98%	1.8x	1.8x	17.0%	1.7x	1.7x	13.6%	11.6%	16.6%
Dover VIII	2012	\$3,591.5	92%	1.9x	2.0x	22.9%	1.6x	1.7x	19.6%	9.9%	13.4%
Secondary Overflow 2011	2012	\$253.8	85%	1.9x	2.1x	26.0%	1.6x	1.9x	19.6%	10.4%	14.1%
Dover IX	2016	\$4,777.0	88%	1.1x	2.0x	24.1%	1.0x	1.7x	23.1%	10.2%	13.4%
Secondary Overflow III	2016	\$334.7	74%	1.3x	2.2x	25.8%	1.2x	2.2x	24.2%	10.0%	13.2%
Secondary Overflow IV	2019	\$1,133.2	54%	0.3x	1.5x	31.4%	0.3x	1.4x	28.5%	1.7%	4.2%
Dover X	2019	\$8,121.8	63%	0.3x	1.6x	33.3%	0.4x	1.6x	36.9%	3.0%	5.2%

<sup>1</sup> Reflects the aggregated performance of all investments made by Dover Street Ia L.P., Dover Street II L.P., Dover Street III L.P., and Dover Street IV L.P. No investor received this aggregated performance. Excludes Dover Ib, which was a £10M fund and had a 18.9% net IRR at liquidation due to currency inconsistency with the rest of the Dover program.

The performance information in the table above represents the performance of HarbourVest's Dover Program which focuses exclusively on secondary investments and does not include secondary investments made by other HarbourVest-managed funds or accounts. The Secondary Overflow Programs make investments that may be more concentrated with respect to number of investments, geographic location of investments, and type of transactions as compared to the Dover Street Funds.

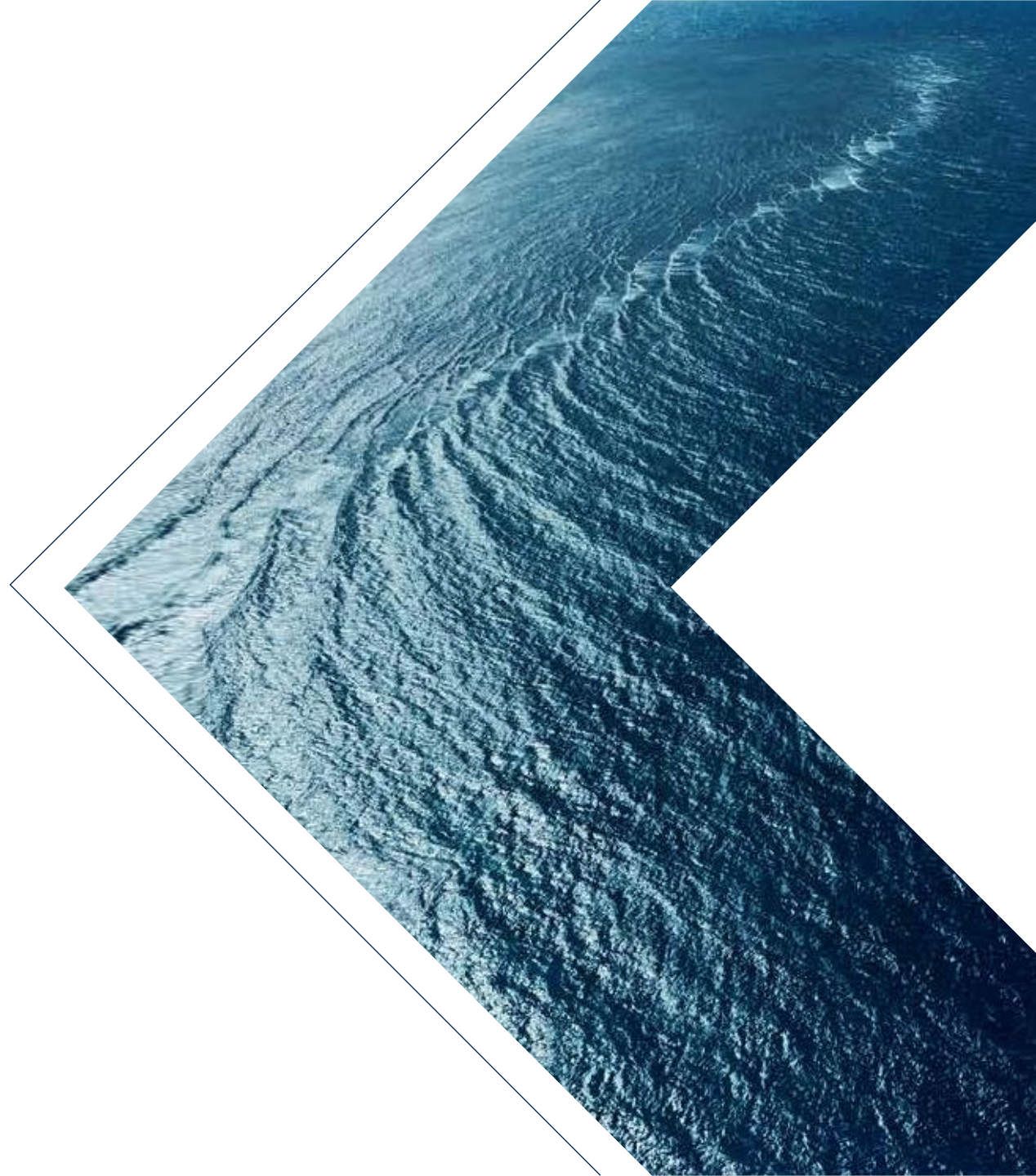
Dover IX and Dover X also include the performance of any AIF-related funds.

Past performance is not a reliable indicator of future results.

The vintage year presented for each fund represents the first year in which capital was called from limited partners; in certain cases, a fund's first investment may have occurred in a prior year.

See 'Additional Important Information' at the end of the presentation, including important disclosures related to Gross Performance Returns, Net Performance Returns, Dover Strategy Risks, Model Performance, Public Market Equivalent, and Fees and Expenses. \*\* Adjusted index returns to reflect a comparable public market index ("PME").

# Co-investment program



# Leader in building co-investment portfolios

## Longstanding co-investment history\*

**\$29.7 billion** committed to co-investments in last 10 years\*

**650+** co-investments made in last 10 years

## Focus on creating solutions for GPs

**66%** of capital invested in solutions-oriented opportunities†

**50+** GP partners§



## Active deal-sourcing platform\*\*

**1,082** deals sourced in LTM

**65%** small/mid-market deals reviewed in LTM

## Large, experienced global team

**77** investment professionals globally

**25** average years of MD experience

As of March 31, 2023, unless otherwise noted. For investments which have utilized leverage in a currency other than the U.S. Dollar, the investment and portfolio performance metrics reflect debt drawdowns and outstanding debt at exchange rates as of the report date, and debt repayments at exchange rates as of transaction dates. HarbourVest generally uses different currency translation in investor reporting, which may produce different results.

\* Reflects aggregate capital committed to, and number of investments made in, direct co-investments from January 1, 2013 to March 31, 2023. HarbourVest has committed \$34.7 billion to 1,131 direct co-investments since inception as of March 31, 2023.

\*\* As of December 31, 2022. Small/mid-market deals statistic represents percentage of deals reviewed in depth that has an enterprise value of \$1.5 billion or less at the time of our review.

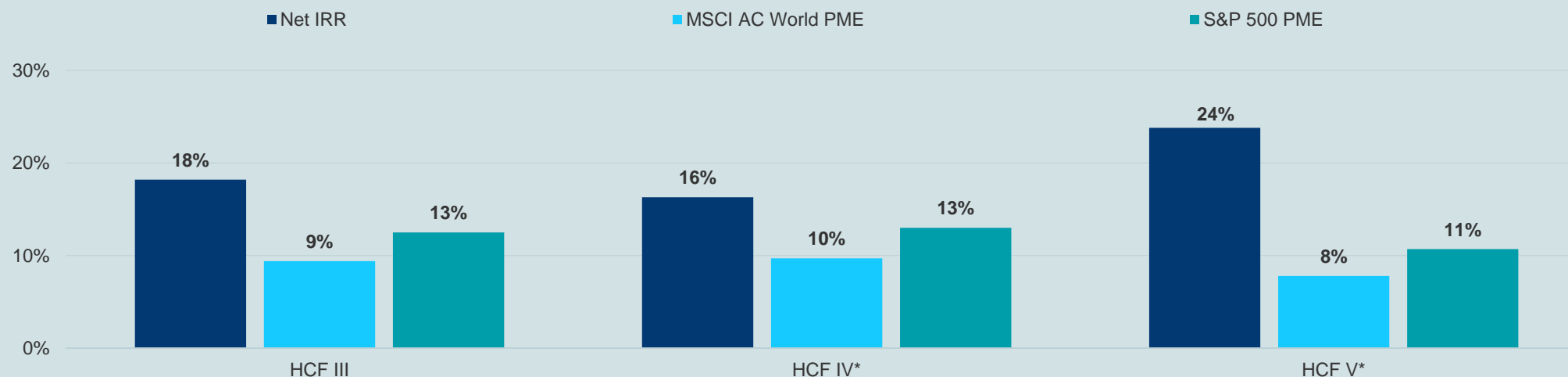
† Based on total cost of investments in Co-Investment Fund III – Co-Investment Fund V. Past performance is not a reliable indicator of future results.

§ Includes all GPs in Co-Investment Fund III – Co-Investment Fund V where HarbourVest provided a solution to the lead GP.

# HarbourVest direct co-investment fund performance

	Commitment Period	Fund Size (Millions)	% Called	Net DPI	Net TVPI	Net IRR	MSCI AC World PME	S&P 500 PME
HCF III	2013-2016	\$1,010.1	97%	1.6x	2.1x	18.2%	9.4%	12.5%
HCF IV*	2016-2019	\$1,767.7	84%	1.0x	1.9x	16.3%	9.7%	13.0%
HCF V*	2018-2022	\$3,030.3	79%	0.2x	1.8x	23.8%	7.8%	10.7%
HCF VI*	2021-Present	\$4,194.8	35%	0.0x	1.0x	NM	NM	NM

## Performance (Since Inception) versus Public Benchmarks



All funds referenced above are closed and no longer available for subscription.

\* HCF IV, HCF V, and HCF VI performance also includes the performance of any AIF-related funds.

Performance provided as of March 31, 2023. HCF III refers to 2013 Direct Fund, HCF IV to Co-Investment Fund IV, HCF V to Co-Investment Fund V, and HCF VI to Co-Investment Fund VI. NM: "Not Meaningful", as applicable, since there has been less than one year of cash flows, the IRR is not yet meaningful. Past performance is not a reliable indicator of future results. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Performance Returns, Public Market Comparison, and Fees and Expenses. For investments which have utilized leverage in a currency other than the U.S. Dollar, the investment and portfolio performance metrics reflect debt drawdowns and outstanding debt at exchange rates as of the report date, and debt repayments at exchange rates as of transaction dates. HarbourVest generally uses different currency translation in investor reporting, which may produce different results.



# Appendix

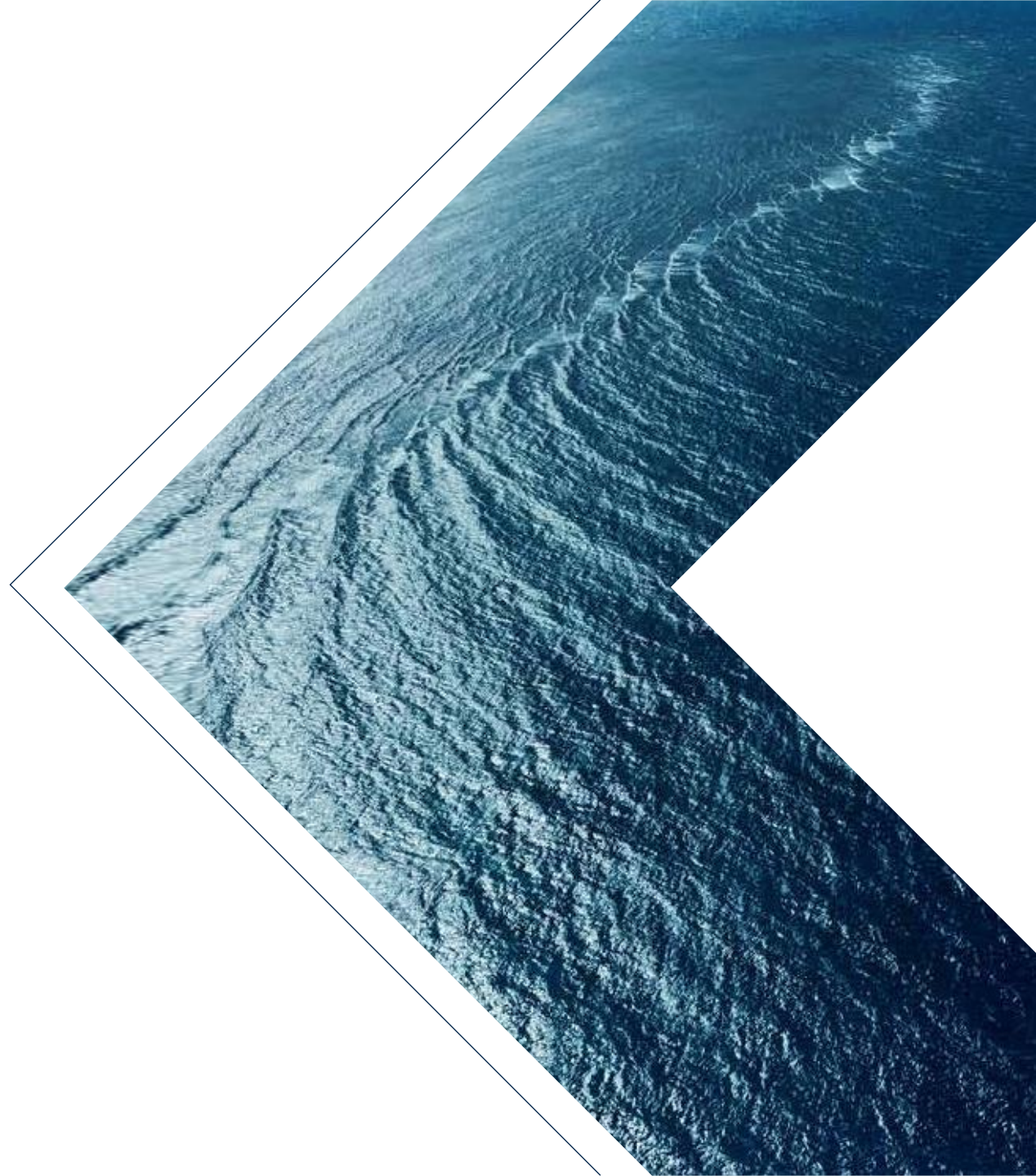


# Contacts

We are accessible across the globe

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	<b>TEL AVIV</b> HarbourVest Partners (Israel) Limited +972 3 3720123	<b>SINGAPORE</b> HarbourVest Partners (Singapore) Pte. Limited +65 6978 9800
		<b>SYDNEY</b> HarbourVest Partners (Australia) Pty. Limited +61 2 4072 7772
		<b>TOKYO</b> HarbourVest Partners (Japan) Limited +81 3 3284 4320

# Additional important information



# Additional important information

The information contained herein is highly confidential and may not be relied on in any manner as legal, tax, or investment advice or as an offer to sell or a solicitation of an offer to buy an interest in any fund or any other investment product sponsored by HarbourVest (the “Fund”). Any offering of interests in the Fund will be made by means of delivery of a confidential Private Placement Memorandum or similar materials (the “Memorandum”) that contain a description of the material terms of such investment and subscriptions will be accepted solely pursuant to definitive documentation. These materials do not purport to contain all the information relevant to evaluating an investment in the Fund. The information contained herein will be superseded by, and is qualified in its entirety by reference to, the Memorandum, which will contain information about the investment objective, terms, and conditions of an investment in the Fund and will also contain tax information and risk disclosures that are important to any investment decision regarding the Fund. No person has been authorized to make any statement concerning the Fund other than as will be set forth in the Memorandum and any such statements, if made, may not be relied upon. No sale will be made in any jurisdiction in which the offer, solicitation, or sale is not authorized or to any person to whom it is unlawful to make the offer, solicitation, or sale. Offers and sales of interests in the Fund will not be registered under the laws of any jurisdiction and will be made solely to “qualified purchasers” as defined in the U.S. Investment Company Act of 1940, as amended. The information contained herein must be kept strictly confidential and may not be reproduced or redistributed in any format without the express written approval of HarbourVest.

An investment in the Fund will involve significant risks, including loss of the entire investment. Before deciding to invest in the Fund, prospective investors should pay particular attention to the risk factors contained in the Memorandum. Prospective investors should make their own investigations and evaluations of the information contained herein. Prior to the closing of a private offering of interests in the Fund, HarbourVest will give investors the opportunity to ask questions and receive additional information concerning the terms and conditions of such offering and other relevant matters. Each prospective investor should consult its own attorney, business advisor, and tax advisor as to legal, business, tax, and related matters concerning the information contained herein and such offering.

Certain information contained herein (including financial information and information relating to investments) has been obtained from published and non-published sources. Such information has not been independently verified by HarbourVest. Except where otherwise indicated herein, the information provided herein is based on matters as they exist as of the date of preparation and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available, or circumstances existing or changes occurring after the date hereof. Any forecast provided herein is based on HarbourVest’s opinion of the market as of the date of preparation and is subject to change, dependent on future changes in the market.

**In considering any performance data contained herein, you should bear in mind that past performance is not a reliable indicator of future results. Certain information contained herein constitutes forward-looking statements, which can be identified by the use of terms such as “may”, “will”, “should”, “expect”, “anticipate”, “project”, “estimate”, “intend”, “continue”, or “believe” (or the negatives thereof) or other variations thereof. Due to various risks and uncertainties, including those discussed above, actual events or results or actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. As a result, investors should not rely on such forward-looking statements in making their investment decisions.**

# Additional important information

## Important Information and Risk Factors

An investment in the private markets involves high degree of risk, and therefore, should be undertaken only by prospective investors capable of evaluating the risks of the Fund and bearing the risks such an investment represents. The following is a summary of only some of the risks and is qualified in its entirety by the more detailed “Certain Investment Considerations, Risks and Conflicts of Interest” sections of the Private Placement Memorandum, if applicable.

**Risks Related to the Structure and Terms of a Private Markets Fund.** Investments in a fund of funds structure may subject investors to additional risks which would not be incurred if such investor were investing directly in private equity funds. Such risks may include but are not limited to (i) multiple levels of expense; and (ii) reliance on third-party management. In addition, a fund may issue capital calls, and failure to meet the capital calls can result in consequences including, but not limited to, a total loss of investment.

**Illiquidity of Interests; Limitations on Transfer; No Market for Interests.** An investor in a HarbourVest-managed closed-end fund or account will generally not be permitted to transfer its interest without the consent of the general partner of such fund. Furthermore, the transferability of an interest will be subject to certain restrictions contained in the governing documents of a closed-end fund and will be affected by restrictions imposed under applicable securities laws. A HarbourVest-managed open-end fund or account will generally provide limited liquidity events for investors, subject to certain restrictions contained in the governing documents of an open-end fund and will be affected by restrictions imposed under applicable securities laws. There is currently no market for the interests in HarbourVest-managed funds or accounts, and it is not contemplated that one will develop. The interests should only be acquired by investors able to commit their funds for an indefinite period of time, as the term of the closed-end fund could continue for over 14 years. In addition, there are very few situations in which an investor may withdraw from a private equity closed-end fund. The possibility of total loss of an investment in a fund exists and prospective investors should not invest unless they can readily bear such a loss.

**Risk of Loss.** There can be no assurance that the operations of a strategy will be profitable or that the strategy will be able to avoid losses or that cash from operations will be available for distribution to the limited partners. The possibility of partial or total loss of capital of the strategy exists, and prospective investors should not subscribe unless they can readily bear the consequences of a complete loss of their investment.

**Leverage.** The strategy may use leverage in its investment strategy. Leverage may take the form of loans for borrowed money or derivative securities and instruments that are inherently leveraged, including options, futures, forward contracts, swaps and repurchase agreements. The strategy may use leverage to acquire, directly or indirectly, new investments. The use of leverage by the strategy can substantially increase the market exposure (and market risk) to which the strategies' investment portfolio may be subject.

**Availability of Suitable Investments.** The business of identifying and structuring investments of the types contemplated by the strategy is competitive and involves a high degree of uncertainty. Furthermore, the availability of investment opportunities generally will be subject to market conditions and competition from other groups as well as, in some cases, the prevailing regulatory or political climate. Interest rates, general levels of economic activity, the price of securities, and participation by other investors in the financial markets may affect the value and number of investments made by the strategy or considered for prospective investment.

# Additional important information

**Reliance on the General Partner and Investment Manager.** The success of the strategy will be highly dependent on the financial and managerial expertise of the Fund's general partner and investment manager and their expertise in the relevant markets. The quality of results of the general partner and investment manager will depend on the quality of their personnel. There are risks that death, illness, disability, change in career or new employment of such personnel could adversely affect results of the strategy. The limited partners will not make decisions with respect to the acquisition, management, disposition or other realization of any investment, or other decisions regarding the strategies' businesses and portfolio.

**Market Risk.** Private equity, as a form of equity capital, shares similar economic exposures as public equities. As such, investments in each can be expected to earn the equity risk premium, or compensation for assuming the non-diversifiable portion of equity risk. However, unlike public equity, private equity's sensitivity to public markets is likely greatest during the late stages of the fund's life because the level of equity markets around the time of portfolio company exits can negatively affect private equity realizations. Though private equity managers have the flexibility to potentially time portfolio company exits to complete transactions in more favorable market environments, there's still the risk of capital loss from adverse financial conditions.

**Potential Conflicts of Interest.** The activities of the strategies may conflict with the activities of other HarbourVest-managed funds or accounts.

**Dover Strategy Risks.** The Fund will acquire interests in underlying funds through secondary market transactions. Secondary market transactions may impose higher costs than other investments and may require the Fund to assume contingent liabilities associated with events occurring prior to the Fund's investment. In addition, the Fund will make secondary market transactions based on information that may be incomplete or inaccurate. The Fund may invest in leveraged buyouts of companies; such leveraged buyouts are inherently sensitive to declines in portfolio company revenues and increases in portfolio company expenses and to increases in interest rates. The Fund and its investments can make growth equity and venture capital investments, which involve a high degree of business and financial risk that can result in substantial losses. The Fund and its investments can invest in securities of financially troubled companies or companies involved in work-outs, liquidations, reorganizations, recapitalizations, bankruptcies, and similar transactions and securities of highly leveraged companies. While these investments could offer the potential for high returns, they also bring with them correspondingly greater risks. A portion of the Fund's assets are expected to be invested outside of the United States. Non-US securities involve certain factors not typically associated with investing in US securities, including risks related to greater price volatility in and less liquidity of some non-US securities markets. This risk could be greater for investments made in developing and emerging countries.

**HCF Strategy Risks.** The Fund will make minority equity co-investments in portfolio companies where the Fund does not expect to be able to protect their portfolio investments or to control or influence effectively the business or affairs of such entities. In such investments, the Fund will rely on the existing management and board of directors of such companies, which could include representatives of other financial investors with whom the Fund are not affiliated and whose interests could at times conflict with the Fund's interests. Such investments involve additional risks not present in investments where the Fund has control, including the possibility that such other investors have financial difficulties resulting in a negative impact on such investments or take actions contrary to the investment objectives of the Fund. A portion of the Fund's assets are expected to be invested outside of the United States. Non-US securities involve certain factors not typically associated with investing in US securities, including risks related to greater price volatility in and less liquidity of some non-US securities markets. This risk could be greater for investments made in developing or emerging markets.

# Additional important information

**Direct Co-Invest Investing Risks.** Direct co-investments result in HarbourVest holding a minority equity interest in portfolio companies where HarbourVest does not expect to be able to protect its portfolio investments or to control or influence effectively the business or affairs of such entities. In such investments, HarbourVest will rely on the existing management and board of directors of such companies, which could include representatives of other financial investors with whom HarbourVest is not affiliated and whose interests could at times conflict with HarbourVest's interests. Such investments involve additional risks not present in investments where HarbourVest has control, including the possibility that such other investors have financial difficulties resulting in a negative impact on such investments or take actions contrary to the investment objectives of HarbourVest. A portion of HarbourVest's assets are expected to be invested outside of the United States. Non-US securities involve certain factors not typically associated with investing in US securities, including risks related to greater price volatility in and less liquidity of some non-US securities markets. This risk could be greater for investments made in developing or emerging markets.

## PERFORMANCE INFORMATION

The source of certain performance information is HarbourVest. In considering the performance information contained herein, prospective investors should bear in mind that past performance is not a reliable indicator of future results, and there can be no assurance that an investment sponsored (or an account managed) by HarbourVest will achieve comparable results or be able to implement its investment strategy or meet its performance objectives. The funds that made these investments may have had different terms and investment objectives than those proposed or modeled herein.

Any data presented about investments prior to 1998 is related to transactions that occurred when the HarbourVest team was affiliated with Hancock Venture Partners, Inc.

**Ported Performance:** HarbourVest's founders began making venture capital investments for John Hancock Financial Services in late 1970s. In 1982 they formed Hancock Venture Partners, Inc, which was fully owned by John Hancock Mutual Life Insurance Company, to independently develop and manage third-party private equity capital. In January 1997, the Hancock Venture Partners management team formed a new independent management company, HarbourVest Partners, LLC. All then-employees of Hancock Venture Partners became owners and/or employees of HarbourVest Partners, LLC. HarbourVest Partners, LLC has no affiliation with John Hancock Financial Services.

The foregoing performance information includes realized and unrealized investments. Unrealized investments are valued by HarbourVest in accordance with the valuation guidelines contained in the applicable partnership agreement. Actual realized returns on unrealized investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations used in prior performance data contained herein are based. Accordingly, the actual realized returns on these unrealized investments may differ materially from returns indicated herein.

In certain cases, a HarbourVest fund or account, or the partnerships in which it invests, may utilize a credit facility or other third-party financing. This is generally to bridge capital calls from limited partners or to fund a portion of an investment and may also be used to facilitate transactions involving the recapitalization of portfolio investments. This may make the resulting IRR and multiples higher or lower than the IRR or multiples that would have been presented had drawdowns from partners or available cash been initially used to acquire or pay for the investment.

# Additional important information

IRRs are calculated from the date of a fund's first cash flow from a limited partner, which may include capital contributions in connection with fund formation, as may occur with certain AIF-Related Funds, and therefore can be earlier than the date of the first capital call from a limited partner for the purpose of investment. The start date for IRR calculations can also be later than the date of initial investment when a credit facility or other third-party financing is used to fund such investment.

Performance is expressed in US dollars, unless otherwise noted. Returns do not include the effect of any withholding taxes. Cash flows are converted to US dollars at historic daily exchange rates, unless otherwise indicated. The return to investors whose local currency is not the US dollar may increase or decrease as a result of currency fluctuations.

**Fees and Expenses (Net and Gross):** Actual management fees and carried interest will vary and are established in negotiations with the limited partners of a Fund or separate account client. Management fees may range from an average of 0.1% to 1.25% per year of committed, called, or invested capital over the expected life of a Fund, pursuant to the limited partnership agreement or investment management agreement. Fees for Funds in extension years may be reduced, including to nil. Fund investors will typically bear all the costs and expenses relating to the operations of a Fund and its general partners (or similar managing fiduciary). A Fund shall bear its pro rata share of any such expenses incurred in connection with any portfolio investment to the extent the same portfolio investment is being made by other Funds. Organization expenses of a Fund will also typically be borne by Fund investors. When a Fund is generally expected to invest alongside a Fund primarily intended for European-based investors, which takes into account the regulatory requirements of the Alternative Investment Fund Managers Directive (an "AIF Related Fund"), organization expenses may be aggregated and allocated pro-rata between a Fund and its AIF Related Fund based on the relative commitments of the partners of the Fund and the partners of its AIF Related Fund (unless HarbourVest, as general partner, determines in good faith that a different share is appropriate). Fees and expenses are also described in HarbourVest's Form ADV, Part 2A brochure.



# Additional important information

**Performance Returns:** Performance returns information (TV/TC (Total Value / Total Cost), TVPI (Total Value Paid-In), Portfolio IRR (Internal Rate of Return), TWR (Time Weighted Return), and IRR) shown net of fees and expenses are based on the Fund's Limited Partner ("LP") cash flow after all management fees, commissions, fund operating expenses, and carried interest. These returns reflect the combined return for all LPs in a fund and do not necessarily reflect an individual LP's actual return. Where applicable, a final LP cash flow is based on the fair market value of all LP capital accounts as determined by the Fund or account's General Partner ("GP") in accordance with the Firm's valuation policy. Net IRR and Net TVPI are calculated based on daily LP cash flows.

Gross performance returns, if shown, are based on the annual return calculated using daily cash flows from the Fund(s) to and from the various partnerships or companies held by the Fund, either directly or through a special purpose vehicle in which the Fund invested during the period specified, inclusive of the effects of fund-level leverage which is used to achieve those returns, to the extent such a fund is a levered fund. Gross performance returns are presented before management fees, carried interest, and other expenses borne by investors in the Fund(s), inclusive of the effects of fund-level leverage which is used to achieve those returns, to the extent such a fund is a levered fund. An actual portfolio would bear such fees and expenses. If such fees and expenses were deducted from performance, returns would be lower. For example, if a fund appreciated by 10% a year for five years, the total annualized return for five years prior to deducting fees and expenses at the end of the five-year period would be 10%. If total fund fees and expenses were 1% for each of the five years, the total annualized return of the fund for five years at the end of the five-year period would be 8.90%. These returns reflect the fees, expenses, and carried interest of the underlying fund investments (where applicable), certain expenses of any special purpose vehicle that held an interest in the underlying fund (where applicable), and the upfront costs, fees, expenses, and interest expense of the fund's leverage facilities, to the extent such a fund is a levered fund, but do not reflect the management fees, carried interest, and other expenses borne by investors in the Fund(s), which will reduce returns. The specific payment terms and other conditions of the management fees, carried interest, and other expenses of a Fund are set forth in the governing documents of the Fund.

Certain data metrics included (Distributed / Funded, Distributed Paid In Capital) are components of performance and should not be viewed as performance results.

Portfolio Company Performance is based on the cost and value of the individual company referenced. These returns do not reflect the fees, expenses, and carried interest of the partnership investments of the Fund(s), which will reduce returns. These returns do not represent the performance of any specific Fund or the return to limited partners of any specific Fund.

**Derived Net Performance:** Derived net performance figures are presented to comply with new SEC Rule 206(4)-1 under the Investment Advisers Act. Derived net performance figures are estimated and do not represent actual net performance experienced by any investors. These figures have been calculated on a model basis by applying the gross and net performance "spread" of the average of all prior related portfolios offered by the adviser, excluding related portfolios (1) with less than one year of investor cash flows, and (2) utilizing a credit line with significant credit remaining so that the net performance of the related portfolio is higher than the gross performance of the related portfolio. The netting ratio is calculated using the currency of the Fund and is updated quarterly.

The figures herein illustrate the potentially substantial impact of fees, carried interest and expenses on gross returns, even though these amounts are typically charged or allocated at the fund or partner level. These derived net returns are based on performance of the applicable HarbourVest fund(s) as of the most recent calendar quarter; changes in performance of any HarbourVest fund(s) may result in changes to these derived net returns in the future (e.g., whether carried interest is allocated or not allocated) and such changes may be material.

The methodology utilized to calculate the derived net performance is based on HarbourVest's current understanding of industry practice and SEC guidance. These returns are based on actual prior investments. This methodology may be changed in the future.

# Additional important information

**Short-term performance:** Private markets performance expressed over short periods of time (especially 1 year or less) may produce IRRs that are not representative of the expected and realized IRRs of funds, vintages, and strategies that have been invested for longer periods of time. Consequently, short term performance is not a reliable indication of the fund's expected or future performance. Investors are encouraged to review private markets performance over longer periods of time, and should not make investment decisions based solely on investment performance.

**HarbourVest PME:** This information represents adjusted hypothetical Model Track Record of each index as if the respective index had been purchased and sold at the time of the limited partners' capital calls and distributions, with the remainder held at the date noted. The indices used assume reinvestment of all dividends. Under this methodology, the capital calls for the purchase of the public market index are the same as the capital calls for the Fund. The distributions for the sales of the public market index are scaled to represent the same proportion of the Fund's NAV at the time of the distribution. For example, if the Fund distributes 5% of NAV, then 5% of the index NAV is distributed. The adjusted public market indices shown are not subject to the risk, investment strategy, or investment characteristics of the Fund. The securities comprising the public market indices have substantially different characteristics than the investments held by a Fund, and accordingly, a direct comparison may not be meaningful. The adjusted indices are shown to demonstrate the approximate returns an investor may have received had the investor invested in certain publicly-traded equity securities in lieu of a Fund or the investments made by HarbourVest. An investor is not able to directly invest in an unmanaged index. See Definitions for additional information pertaining to the indexes shown.

**Burgiss Private Equity Index Comparison:** Unless otherwise indicated, all private equity fund benchmark data reflects the fees, carried interest, and other expenses of the funds included in the benchmark. Please note that Fund returns would be reduced by the fees, carried interest, and other expenses borne by investors in the Fund. Such fees, carried interest, and other expenses may be higher or lower than those of the funds included in the benchmark. Burgiss (unless otherwise noted) is the source and owner of any private equity index data contained or reflected in this material and all trademarks and copyrights related thereto. Public market equivalent is provided by Burgiss and is based on a the Long-Nickels ICM methodology illustrating the direct opportunity cost comparison of how net funds invested in the private investment would have performed had they been invested in the stated index over the life of the particular investment. In calculation of the IRR ICM, the private capital valuation is ignored and substituted instead with a Valuation ICM. Valuation ICM is essentially a sum of private capital contributions and distributions grown to the analysis date using the respective index values; contributions are treated as purchases into the index and are used to increase the Valuation ICM, while distributions are treated as sales and are applied to reduce Valuation ICM; the IRR ICM then becomes a standard IRR calculation, using the original private capital transactions and Valuation ICM substituted for the original private capital valuation. The securities comprising the public market index have substantially different characteristics than the private equity benchmarks, and, accordingly, a direct comparison may not be meaningful. The public market comparison is shown for illustrative purposes only. An investor is not able to directly invest in an unmanaged index. This is HarbourVest's presentation of the data. Burgiss is not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

## **Definitions:**

Unless otherwise noted, Bloomberg is the source of the index data contained or reflected in this material. MSCI, S&P, FTSE Russell, and JP Morgan are the owners of the index data contained or reflected in this material and all trademarks and copyrights related thereto. This is HarbourVest's presentation of the data. Bloomberg, MSCI, S&P, FTSE Russell, and JP Morgan are not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

The MSCI AC World® Index (ACWI) is designed to measure the performance of publicly-traded large and mid-capitalization equity securities in global developed and emerging markets. The MSCI ACWI Index is maintained by Morgan Stanley Capital International ("MSCI") and has historically captured approximately 85% coverage of the free float-adjusted market capitalization of its publicly-traded global equity opportunity set.

The S&P 500® Index is designed to measure the performance of publicly-traded equity securities of the large capitalization sector of the US market and includes 500 large companies having common stock listed on eligible U.S. exchanges. The S&P 500 Index is maintained by Standard & Poors ("S&P") and has historically captured approximately 80% coverage of available market capitalization of publicly-traded equities in the US market.

Vintage Years - HarbourVest vintage classification is based on the year in which capital was first funded to each underlying fund (for primary fund investments) or the year of HarbourVest's purchase (for secondary investments).

# Country disclosures

These materials do not constitute an offer to sell or the solicitation of an offer to buy interests in any fund or any other investment product sponsored by HarbourVest Partners L.P. or its affiliates (“HarbourVest”), hereafter referred to as the “Fund”. Any offering of interests in the Fund will be made by means of delivery of a confidential Private Placement Memorandum or similar materials that contain a description of the material terms of such investment and subscriptions will be accepted solely pursuant to definitive documentation. These materials do not purport to contain all the information relevant to evaluating an investment in the Fund. No sale will be made in any jurisdiction in which the offer, solicitation, or sale is not authorized or to any person to whom it is unlawful to make the offer, solicitation, or sale. Offers and sales of interests in the Fund will not be registered under the laws of any jurisdiction and will be made solely to “qualified purchasers” as defined in the U.S. Investment Company Act of 1940, as amended. These materials are highly confidential and may not be reproduced or redistributed in any format without the express written approval of HarbourVest. An investment in the Fund involves a high degree of risk and therefore should be undertaken only by prospective investors capable of evaluating the risks of the Fund and bearing the risks such an investment represents. There can be no assurance that the Fund will be able to achieve its investment objectives or that the investors will receive a return on their capital. For further legal and regulatory disclosures see ‘Additional Important Information’ at the end of these materials.

# AUDITED FINANCIAL STATEMENTS

Dover Street X L.P.

Year ended December 31, 2022

With Report of Independent Auditors

Dover Street X L.P.  
Audited Financial Statements  
Year ended December 31, 2022

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## **Report of Independent Auditors**

To the General Partner of Dover Street X L.P.

### ***Opinion***

We have audited the accompanying financial statements of Dover Street X L.P. (the "Partnership"), which comprise the balance sheet, as of December 31, 2022, and the related statements of operations, of changes in partners' equity and of cash flows, including the related notes for the year then ended (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Partnership as of December 31, 2022, and the results of its operations, changes in its partners' equity and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for one year after the date the financial statements are available to be issued.

### ***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.



In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

*PricewaterhouseCoopers LLP*

Boston, MA  
May 11, 2023

Dover Street X L.P.  
 Balance Sheet  
 December 31, 2022  
*In U.S. Dollars*

<b>Assets</b>	
Investment in <b>HarbourVest Dover Street X Investment L.P.</b>	5,792,446,253
Accounts receivable	15,470,589
Cash and equivalents	<u>3,421,557</u>
 Total assets	 <b><u>\$5,811,338,399</u></b>
<b>Liabilities and partners' equity</b>	
Liabilities:	
Notes payable, net of deferred financing costs	177,356,011
Due to affiliate	43,431,285
Accounts payable and accrued expenses	326,952
Accounts payable to HarbourVest Partners L.P.	<u>180,980</u>
Total liabilities	221,295,228
Partners' equity:	
Paid-in capital and allocated profits and losses, less syndication costs and distributions:	
General Partner	412,521,216
Less: capital contributions receivable	<u>(65,873,303)</u>
	346,647,913
Limited Partners	5,237,647,136
Special Limited Partner	<u>5,748,122</u>
Total partners' equity	<u>5,590,043,171</u>
 Total liabilities and partners' equity	 <b><u>\$5,811,338,399</u></b>

*The accompanying notes and attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*



Dover Street X L.P.  
Statement of Operations  
Year ended December 31, 2022  
In U.S. Dollars

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Net investment loss allocated from **HarbourVest Dover Street X Investment L.P.**

Investment income:

Interest and dividends from cash and equivalents	531,800
Other income	382,007
Total investment income	<u>913,807</u>

Investment expenses:

Interest expense	35,821,088
Professional fees	1,069,372
Travel expenses	32,592
Other expenses	5,467
Total investment expenses	<u>36,928,519</u>

Net investment loss allocated from **HarbourVest Dover Street X Investment L.P.** (36,014,712)

**Partnership income:**

Other income	396,132
Interest and dividends from cash and equivalents	19,325
	<u>415,457</u>

**Partnership expenses:**

Management fee	67,254,107
Interest and debt financing expenses	11,804,116
Professional fees	311,928
Other expenses	149,771
Travel expenses	76,803
	<u>79,596,725</u>

Net investment loss (115,195,980)

Realized and unrealized gains (losses) on investments allocated from  
**HarbourVest Dover Street X Investment L.P.**

Net realized gain (loss) on investments	430,594,559
Net change in unrealized appreciation (depreciation) on investments	72,418,756
	<u>503,013,315</u>

Net gain on investments 503,013,315

Net income \$387,817,335

*The accompanying notes and attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

Dover Street X L.P.  
Statement of Changes in Partners' Equity  
Year ended December 31, 2022  
In U.S. Dollars

	<b>General Partner</b>	<b>Limited Partners</b>	<b>Special Limited Partner</b>	<b>Total</b>
Partners' equity at December 31, 2021	318,055,872	4,162,532,742	(314,170)	4,480,274,444
Contributions from partners	22,131,346	1,453,291,750	-	1,475,423,096
Increase/decrease in capital contributions receivable	(22,131,346)	-	-	(22,131,346)
Allocation of net income (loss)				
Share of net income (loss)	5,915,507	321,197,358	-	327,112,865
Carried interest allocation	60,704,470	-	-	60,704,470
Distributions to partners	(10,604,757)	(696,378,935)	-	(706,983,692)
Tax distributions	(21,360,887)	-	-	(21,360,887)
Syndication costs	-	(2,995,779)	-	(2,995,779)
Income reallocation	(6,062,292)	-	6,062,292	-
Partners' equity at December 31, 2022	<b>\$346,647,913</b>	<b>\$5,237,647,136</b>	<b>\$5,748,122</b>	<b>\$5,590,043,171</b>

*The accompanying notes and attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

Dover Street X L.P.  
Statement of Cash Flows  
Year ended December 31, 2022  
In U.S. Dollars

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**Operating activities**

Net income	387,817,335
Adjustments to reconcile net income to net cash used in operating activities:	
Payments made on investment commitments	(1,453,291,750)
Cash distributions received from investments	706,983,692
Net realized (gain) loss on investments	(430,594,559)
Net change in unrealized (appreciation) depreciation on investments	(72,418,756)
Net change in due to affiliate	43,684,240
Net change in accounts receivable	(14,847,196)
Net investment (income) loss allocated from investment	36,014,712
Other	(13,386,228)
Net cash used in operating activities	<u>(810,038,510)</u>

**Financing activities**

Contributions from partners	1,453,291,750
Distributions to partners	(728,344,579)
Borrowings from notes payable, net of deferred financing costs	86,838,082
Syndication costs	(2,995,779)
Net cash provided by financing activities	<u>808,789,474</u>

Net decrease in cash and equivalents (1,249,036)

Cash and equivalents at the beginning of year 4,670,593

Cash and equivalents at the end of year \$3,421,557

**Supplemental disclosure:**

Cash paid for interest during the year \$5,377,675

*The accompanying notes and attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

## 1. Partnership

Dover Street X L.P. (the "Partnership") was legally formed on September 20, 2018 as a limited partnership under Delaware law and began admitting limited partners on April 9, 2019. The sole purpose of the Partnership is to make a commitment as a limited partner in HarbourVest Dover Street X Investment L.P. (the "Aggregating Partnership") in an amount equal to the aggregate commitments of the partners of the Partnership. The Partnership and Dover Street X AIF SCSp (collectively, the "Dover X Partnerships") each made a commitment as a limited partner to the Aggregating Partnership. The primary purpose of the Aggregating Partnership is to invest in limited partnerships or other entities which have been in existence for at least twelve months, a substantial portion of the underlying assets of such entity have been outstanding for at least twelve months, or the principal investment objective of such entity is to invest in assets which have been outstanding for at least twelve months ("Secondary Partnerships") and which intend to invest primarily in equity or debt investments in venture capital, management buy-in, management buy-out, leveraged buy-out, mezzanine, special situation, recapitalization, power, infrastructure assets that are not "core-like" and other private market transactions, provided that up to 5% of the aggregate commitments to the Aggregating Partnership may be invested in Primary Partnerships (such investments being measured on the basis of the net equity cost thereof) and up to 15% of the aggregate commitments to the Aggregating Partnership may be invested in partnerships which have as their principal investment objective investing in energy, oil and gas, natural resources, real estate, or "core-like" infrastructure assets. The Partnership commenced operations and began charging management fees as of June 1, 2019. The first capital call was made on January 13, 2020.

At December 31, 2022, the partners had committed \$6,943,167,513 in capital, of which 63.3% or \$4,391,553,455 has been called. The remaining unfunded capital commitments of \$2,551,614,058 are due upon not less than 10 days prior written notice from the General Partner. The General Partner has agreed to contribute capital to the Partnership in an aggregate amount equal to 1.5% of the aggregate capital contributions of all partners. Such amount may be paid by the General Partner upon and to the extent of distributions made by the Partnership to the General Partner, but in no event later than the end of the Partnership's taxable year in which the General Partner's interest is liquidated (or, if later, within 90 days after the date of such liquidation). The amount due from the General Partner at December 31, 2022 was \$65,873,303.

Net temporary investment profits and losses (excluding the management fee and expenses of placement agents related to the offering of interests (syndication costs)) are allocated to the partners in proportion to their respective sharing percentages. Management fees and syndication costs are allocated to the limited partners in accordance with the Management Agreement, as referenced in Note 3. Net profits and losses of the Partnership (except for net temporary investment profits and losses, as defined in the partnership agreement), are allocated 12.5% to the General Partner (carried interest) and 87.5% to all partners in proportion to their sharing percentages, as defined in the partnership agreement, unless cumulative net losses exceed cumulative net profits. In such a case, excess net losses are allocated to all partners in proportion to their respective sharing percentages. Subsequent net profits are allocated in proportion to each partner's sharing percentage, up to previously allocated excess net losses. Net investment profits, including realized and unrealized gains and losses, subject to carried interest for the year ended December 31, 2022 total \$485,635,757.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

HV-ECI II LLC (the "Special Limited Partner") is wholly owned by HarbourVest Partners L.P. (the "Management Company"). The General Partner may allocate to the Special Limited Partner solely out of net temporary investment profits and losses, net profits and losses otherwise allocable to the General Partner, any items of income, gain, loss or deductions effectively connected with the conduct of a trade or business within the United States. For the purpose of allocating net temporary investment profits and losses, amounts allocated to the Special Limited Partner will be treated as having been allocated to the General Partner.

The General Partner will make adjustments to the allocations of net temporary investment profits and losses and net profits and losses to the extent necessary to take into account the General Partner's obligations as they relate to the 8% annualized effective internal rate of return (the "Preferred Return").

No limited partner may assign or otherwise transfer all or any part of their interest in the Partnership to another entity unless the General Partner has consented to the transfer in writing in accordance with the partnership agreement.

The performance of the Partnership is dependent upon the performance of HarbourVest Dover Street X Investment L.P. The financial statements of the Partnership should be read in conjunction with the December 31, 2022 audited financial statements of HarbourVest Dover Street X Investment L.P., which are attached and are an integral part of these financial statements.

The Partnership is scheduled to terminate on May 31, 2029, subject to four one-year extensions, upon such decision by the General Partner.

## **2. Significant Accounting Policies**

### **Method of Accounting**

The financial statements are prepared in conformity with U.S. generally accepted accounting principles. The Partnership is an investment company following the accounting and reporting guidance of the Financial Accounting Standards Boards ("FASB") Accounting Standards Codification ("ASC") Topic 946 Financial Services – Investment Companies.

### **Estimates**

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles requires the General Partner to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **Cash and Equivalents**

The Partnership considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The carrying amount included in the balance sheet for cash and equivalents approximates their fair value.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

Cash and cash equivalents may consist of deposits held at a bank or an investment in a money market fund to which the Partnership is exposed to credit risk. As of December 31, 2022, the Partnership held no deposits at a bank and held \$3,421,557 in one or more money market funds. Investments in money market funds are recorded at NAV per share and are classified as Level 1 assets.

### **Accounts Receivable**

Accounts receivable includes amounts due from certain limited partners for taxes withheld and remitted and estimated withholding tax payments made on their behalf.

### **Foreign Currency Transactions**

Foreign currency transactions are translated into U.S. dollars at the exchange rate in effect at the transaction dates. Foreign currency balances are translated at the rates in effect at December 31, 2022. Foreign currency translation is included in realized and unrealized gain (loss) on investments as incurred. The Partnership does not segregate that portion of realized or unrealized gain or loss attributable to foreign currency translation.

### **Expenses**

The Aggregating Partnership allocates expenses to the Partnership in accordance with the partnership agreement. Additional expenses paid directly by the Partnership may include tax expenses, professional fees, and other out-of-pocket expenses which are presented separately in the statement of operations.

### **Income Taxes**

The Partnership has elected to be treated as a partnership for U.S. tax purposes.

The Partnership accounts for income taxes under the provisions of ASC 740, "Income Taxes." This standard establishes consistent thresholds as it relates to accounting for income taxes. It defines the threshold for recognizing the benefits of tax-return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority and requires measurement of a tax position meeting the more-likely-than-not criterion, based on the largest benefit that is more than fifty percent likely to be realized. The Partnership may be subject to potential examination by certain taxing authorities in various jurisdictions. Any potential tax liability is also subject to ongoing interpretation of laws by taxing authorities. The tax years under potential examination vary by jurisdiction. The General Partner has analyzed the Partnership's inventory of tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction), and has concluded that no provision for income tax is required in the Partnership's financial statements. Each partner individually may be required to report on its own tax return its pro rata share of the Partnership's taxable income or loss.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

The Partnership may be subject to taxes imposed by countries in which it invests. Such taxes are generally based on income and/or capital gains earned or repatriated. Foreign taxes, if any, are recorded based on the tax regulations and rates that exist in the foreign markets in which the Partnership invests. To the extent taxes are attributable to certain partners, the amounts are withheld from those partners' distributions and the withholdings are accounted for as deemed non-cash distributions to such partners. To the extent taxes are borne by the Partnership, the amounts are accrued and applied to net investment income, net realized gains and net unrealized appreciation as such income and/or gains are earned, and the Partnership records an estimated deferred tax liability in an amount that would be payable if the securities were disposed of on the valuation date. As of December 31, 2022, there were no deferred tax liabilities at the Partnership level.

### **Deferred Financing Costs**

Deferred financing fees, including loan origination fees, underwriter fees, legal fees, and other costs attributable to acquiring the loan are capitalized in the balance sheet and amortized using the straight-line method, which approximates the effective yield method over the duration of the loan.

### **Investments**

The Partnership values its investment in the Aggregating Partnership at fair value. The valuation is based on the value of the Partnership's capital determined from the December 31, 2022 audited financial statements of the Aggregating Partnership, which are attached and are an integral part of the financial statements. Income derived from the Partnership's investment in the Aggregating Partnership is recorded using the equity pick-up method. Under the equity pick-up method of accounting, the Partnership's proportionate share of the net investment income (loss), net realized gains (losses), and aggregate increase or decrease in unrealized appreciation (depreciation), as reported by the underlying Aggregating Partnership, is reflected in the statement of operations.

### **3. Management Fees**

The General Partner, or its designee, has agreed to provide management services to the Partnership for which it receives a management fee based on capital commitments of the limited partners. In general, the General Partner, or its designee, bears all ordinary costs of administering the Partnership (other than the management fee), except for such expenses as organizational expenses, syndication costs, legal and accounting fees, costs of reporting to the limited partners, and other costs of evaluating, making, holding and selling investments and certain other costs and expenses. The General Partner has retained the Management Company to provide such services.

The management fee commenced on June 1, 2019 and is based on a percentage of limited partner commitments. The partnership agreement stipulates tiered levels of management fees based on the aggregate capital commitments made by a limited partner to the Dover Street X Program ("Program"). The Program is comprised of Dover Street X L.P. and Dover Street X AIF SCSp.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

Dover Street X L.P.  
Notes to Financial Statements

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The management fee with respect to each Limited Partner's commitment is computed in accordance with the following schedule:

Period	Commitments less than \$100M	Commitments of at least \$100M and less than \$200M	Commitments of at least \$200M and less than \$300M	Commitments of at least \$300M and less than \$400M	Commitments of at least \$400M
1/1/22 - 5/31/22	0.85%	0.80%	0.75%	0.70%	0.60%
6/1/22 - 12/31/22	1.25%	1.20%	1.15%	1.10%	1.00%

For any limited partner that irrevocably committed to become a limited partner on or before May 31, 2019, each percentage in the above table is reduced by five basis points with respect to the actual amount irrevocably committed to the Partnership on or before May 31, 2019.

The management fee shall be reduced, but not below zero, by the amount of any director's, break-up, management, consulting, monitoring, transaction or other similar fees received by the General Partner or any partner of the General Partner from any portfolio entity. The management fee is also reduced for any syndication costs paid by the Partnership.

During the year ended December 31, 2022, management fees charged by the Management Company totaled \$70,249,886. Management fees were reduced by syndication costs of \$2,995,779 during the year ended December 31, 2022.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*



#### 4. Financial Highlights

Financial highlights for the year ended December 31, 2022 were as follows:

	Percent (%)
<b><i>Internal rate of return to limited partners since inception:</i></b>	
Beginning of year	<u><u>85.7</u></u>
End of year	<u><u>41.7</u></u>
<b><i>Ratio to limited partners' average partners' equity:</i></b>	
Net investment loss	<u><u>(2.3)</u></u>
Operating expenses	2.3
Carried interest allocation	<u>1.3</u>
Total expenses and carried interest	<u><u>3.6</u></u>
<b><i>Ratio to limited partners' committed capital:</i></b>	
Operating expenses	<u><u>1.7</u></u>

The internal rate of return to limited partners is calculated net of carried interest and expenses taking into account the actual dates of the cash inflows (contributions), outflows (distributions), and the ending net asset value at the end of the period (residual value) of the limited partners' capital account as of the measurement date.

Net investment loss is the limited partners' share of investment income, net of operating expenses and the income and expenses allocated from the Aggregating Partnership, and does not include the proportionate share of net gain or loss from underlying investments. Operating expenses include the limited partners' share of the Partnership's expenses and expenses allocated from the Aggregating Partnership and do not include the proportionate share of expenses from underlying investments.

The carried interest allocation is the General Partner's share of net income or loss calculated in accordance with the partnership agreement.

The ratios are calculated based on the limited partners' capital taken as a whole. The computation of such ratios based on the amount of net investment income or loss, total expenses and incentive allocation assessed to an individual limited partners' capital may vary from these ratios based on the tiered management fee schedule.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

As the Partnership's expenses are largely based on the limited partners' committed capital rather than their average capital, supplemental information has been provided in order to disclose the expense ratio as a percentage of the limited partners' committed capital.

#### **5. Related-Party Transactions**

Due to affiliate represents capital called for investments and the Partnership's share of equity due for repayment of debt of the Aggregating Partnership incurred in the ordinary course of business which have been paid by the Aggregating Partnership and are reimbursable by the Partnership at December 31, 2022.

Accounts payable to HarbourVest Partners L.P. represents expenses of the Partnership incurred in the ordinary course of business, which have been paid by and are reimbursable to the Management Company at December 31, 2022.

Certain partners of the Management Company serve as members of the advisory committees of certain investee entities and are the partners of the General Partner.

The General Partner of the Partnership is also the General Partner of Dover Street X Feeder Fund L.P., a limited partner which has a \$5,026,750,000 capital commitment to the Partnership.

#### **6. Investment in HarbourVest Dover Street X Investment L.P.**

In accordance with the ASC 820, "Fair Value Measurement," the Partnership reports its investments at fair value. At December 31, 2022, the Partnership's only fair valued investment is its investment in the Aggregating Partnership. The value of the Partnership's investment in the Aggregating Partnership is based primarily upon the net asset value of the Aggregating Partnership. For further discussion about the Aggregating Partnership's valuation policies refer to the audited financial statements and footnotes of the Aggregating Partnership.

The investment consists of a partnership interest in HarbourVest Dover Street X Investment L.P., which carries restrictions on redemption as described in the partnership agreement. At December 31, 2022, the Partnership's sharing percentage of the Aggregating Partnership is 85.5%.

#### **7. Investment Commitments**

As of December 31, 2022, the Partnership has unfunded investment commitments to the Aggregating Partnership of \$2,614,986,844 which is payable upon 10 days notice by the General Partner of the Partnership.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

## 8. Notes Payable

The Partnership has entered into a \$2,795,000,000 multicurrency revolving credit agreement (the “Facility”) with a bank, with a maturity date of April 15, 2024. The credit agreement is shared amongst the Dover X Partnerships, several affiliated funds (each a “Borrower”) and the Aggregating Partnership. Under the Facility, the same terms and conditions apply to all Borrowers, and each Borrower is liable for its obligations under its established sublimit. There is no cross-collateralization or cross-default between borrowers. The Facility is collateralized by the uncalled capital commitments of the Borrowers.

At December 31, 2022, the combined borrower sublimit commitment assigned to the Dover X Partnerships was \$1,601,405,000, of which \$184,719,465 was outstanding by the Partnership, which approximates fair value. The interest rate on outstanding debt at December 31, 2022 ranged from 6.0% to 7.8%.

During the year ended December 31, 2022, the Partnership incurred interest expense of \$5,462,614, credit facility fees of \$5,544,155 and commitment fees of \$797,347. At December 31, 2022, \$7,363,454 of unamortized deferred financing costs incurred in connection with the issuance of the Facility are capitalized on the balance sheet as an offset to notes payable on the balance sheet and \$5,267,332 of amortized costs are included in interest and debt financing expenses on the statement of operations.

## 9. Indemnifications

### General Indemnifications

In the normal course of business, the Partnership may enter into contracts that contain a variety of representations and warranties and which provide for general indemnifications. The Partnership's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Partnership that have not yet occurred. Based on the prior experience of the General Partner, the Partnership expects the risk of loss under these indemnifications to be remote.

### General Partner Indemnifications

Consistent with standard business practices in the normal course of business, the Partnership has provided general indemnifications to the General Partner, any affiliate of the General Partner and any person acting on behalf of the General Partner or such affiliate when they act in good faith, in the best interest of the Partnership. The Partnership is unable to develop an estimate of the maximum potential amount of future payments that could potentially result from any hypothetical future claim but expects the risk of having to make any payments under these general business indemnifications to be remote.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*

## **10. Subsequent Events**

In the preparation of the financial statements, the General Partner has evaluated the effects, if any, of events occurring after December 31, 2022 through May 11, 2023, which is the date that the financial statements were available to be issued. There were no events or material transactions subsequent to December 31, 2022 that required recognition or disclosure in the financial statements.

*The attached financial statements of HarbourVest Dover Street X Investment L.P. form an integral part of the financial statements.*



## **Report of Independent Auditors**

To the General Partner of Dover Street X L.P.

### ***Opinion***

We have audited the accompanying detailed schedules of partners' equity of Dover Street X L.P. (the "Partnership") for the year ended December 31, 2022 and for the period from June 1, 2019 (commencement of operations) to December 31, 2022, including the related notes (collectively referred to as the "schedules").

In our opinion, the accompanying schedules present fairly, in all material respects, the changes in total partners' equity of the Partnership for the year ended December 31, 2022 and for the period from June 1, 2019 (commencement of operations) to December 31, 2022 in accordance with accounting principles generally accepted in the United States of America and the allocation of partners' equity to the individual partners based on the allocation set forth in sections 4.1-4.8, 2.1-2.6, 5.1-5.10 and 9.1 of the Amended and Restated Limited Partnership Agreement of the Partnership, dated April 29, 2020 (the "Partnership Agreement").

### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Basis of Accounting***

The schedules present the allocation of total partners' equity to the individual partners' based on the allocation set forth in sections 4.1-4.8, 2.1-2.6, 5.1-5.10 and 9.1 of the Partnership Agreement. As a result, the schedules may not be suitable for another purpose. Our opinion is not modified with respect to this matter.

### ***Responsibilities of Management for the Schedules***

Management is responsible for the preparation and fair presentation of the schedules in accordance with accounting principles generally accepted in the United States of America, based on the allocation set forth in sections 4.1-4.8 of the Partnership Agreement with respect to the allocation of net operating income (loss), net realized gain (loss), and net unrealized appreciation (depreciation) of investments; in accordance with sections 2.1-2.6 of the Partnership Agreement with respect to capital contributions; in accordance with sections 5.1-5.10 of the Partnership Agreement with respect to distributions; and in accordance with section 9.1 of the Partnership Agreement with respect to the payments of management fees. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

In preparing the schedules, management is responsible for the evaluation of whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.



### ***Auditors' Responsibility for the Audit of the Schedules***

Our objectives are to obtain reasonable assurance about whether the schedules as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedules.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedules, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedules.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedules.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### ***Other Matter***

We have audited, in accordance with auditing standards generally accepted in the United States, the financial statements of Dover Street X L.P. as of December 31, 2022 and for the year then ended, and in our report dated May 11, 2023, we expressed an unmodified opinion on those financial statements.

### ***Restriction of Use***

This report is intended solely for the information and use of the General Partner of Dover Street X L.P. and each of the Limited Partners to the Partnership Agreement and is not intended to be and should not be used by anyone other than these specified parties.

*PricewaterhouseCoopers LLP*

Boston, MA  
May 11, 2023

Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01,2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
<b>Limited Partners</b>									
1199SEIU Home Care Employees Pension Fund	2,433,826	850,000	(65,782)	216,843	36,506	(1,752)	(407,297)	0	3,062,344
<i>AAFES Army &amp; Air Force Entities</i>									
The Retirement Annuity Plan for Employees of the Army and Air Force Exchange Service Trust	22,817,068	7,968,750	(616,685)	2,032,905	342,242	(16,427)	(3,818,414)	0	28,709,439
Trust for Retiree Medical, Dental and Life Insurance Plan of the Army and Air Force Exchange Service	12,169,102	4,250,000	(328,901)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,311,697
American Federation of Musicians and Employers' Pension Fund	4,563,410	1,593,750	(123,339)	406,580	68,448	(3,285)	(763,682)	0	5,741,882
American Lebanese Syrian Associated Charities, Inc. (ALSAC)	12,169,102	4,250,000	(328,901)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,311,697
American United Life Insurance Company	6,071,618	2,125,000	(169,445)	542,110	91,264	(4,380)	(1,018,243)	0	7,637,924
HarbourVest AP7 PE Investment (Account 3)	24,286,480	8,500,000	(677,804)	2,168,431	365,058	(17,522)	(4,072,975)	0	30,551,668
Austin Firefighters Relief and Retirement Fund	24,286,480	8,500,000	(677,803)	2,168,431	365,058	(17,522)	(4,072,975)	0	30,551,669
Employees' Retirement System of Baltimore County	9,107,436	3,187,500	(254,178)	813,162	136,898	(6,571)	(1,527,365)	0	11,456,882
Belmont Contributory Retirement System	1,821,489	637,500	(50,838)	162,633	27,378	(1,314)	(305,473)	0	2,291,375
Ben Barejo Holdings Inc.	2,428,649	850,000	(67,784)	216,843	36,506	(1,752)	(407,297)	0	3,055,165
Marion and Henry Bloch Family Foundation	6,078,085	2,125,000	(166,949)	542,110	91,264	(4,380)	(1,018,243)	0	7,646,887
BRCAP Investment Fund, LP	2,125,073	743,750	(59,312)	189,738	31,943	(1,533)	(356,386)	0	2,673,273
BVU Fund, L.P.	912,689	318,750	(24,665)	81,316	13,690	(657)	(152,736)	0	1,148,387
Calconn Private Equity II, LLC	1,825,367	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,752
<i>Calvert County Entities</i>									
Calvert County Employees Retirement Plan	303,585	106,250	(8,471)	27,106	4,564	(219)	(50,912)	0	381,903
Calvert County Other Post Employment Benefits Trust Fund	455,380	159,375	(12,706)	40,658	6,846	(329)	(76,367)	0	572,857
Calvert County Sheriff's Office Pension Plan	303,585	106,250	(8,472)	27,106	4,564	(219)	(50,912)	0	381,902
Canterbury Consulting PC Fund I (A), L.P.	1,335,760	467,500	(37,276)	119,265	20,077	(964)	(224,013)	0	1,680,349
Castilleja School Foundation	456,342	159,375	(12,332)	40,658	6,846	(329)	(76,367)	0	574,193
CH Investment Program LP	1,216,914	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,174

Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
Chapman University	2,433,826	850,000	(65,781)	216,843	36,506	(1,752)	(407,297)	0	3,062,345
<i>Cheyne/Ronald/Getty Entities</i>									
Cheyne Walk Master Fund LP	4,796,583	1,678,750	(133,861)	428,265	72,098	(3,461)	(804,414)	0	6,033,960
Ronald B Master Fund LP	1,275,036	446,250	(35,585)	113,841	19,166	(920)	(213,831)	0	1,603,957
Policemen's Annuity and Benefit Fund of Chicago	15,179,049	5,312,500	(423,628)	1,355,271	228,160	(10,951)	(2,545,609)	0	19,094,792
The Children's Mercy Hospital Foundation	1,825,367	637,500	(49,338)	162,633	27,378	(1,314)	(305,473)	0	2,296,753
China Life Insurance Co., Ltd.	12,143,240	4,250,000	(338,899)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,275,837
City of Fort Lauderdale General Employees Retirement System	9,107,433	3,187,500	(254,174)	813,162	136,898	(6,571)	(1,527,365)	0	11,456,883
<i>City of Hope (COH) Entities</i>									
Beckman Research Institute of the City of Hope	4,867,633	1,700,000	(131,559)	433,686	73,012	(3,504)	(814,595)	0	6,124,673
City of Hope	7,301,472	2,550,000	(197,339)	650,529	109,516	(5,257)	(1,221,893)	0	9,187,028
The Claremont Colleges, Inc.	456,343	159,375	(12,332)	40,658	6,846	(329)	(76,367)	0	574,194
Claremont Investment Fund	6,084,549	2,125,000	(164,449)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,851
CN Investment Fund I LP	1,216,913	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,173
The Colburn School	1,521,139	531,250	(41,109)	135,526	22,816	(1,095)	(254,562)	0	1,913,965
Concordia Account - 19	9,107,435	3,187,500	(254,178)	813,162	136,898	(6,571)	(1,527,365)	0	11,456,881
The State of Connecticut, acting through its Treasurer	60,845,520	21,250,000	(1,644,510)	5,421,079	912,644	(43,804)	(10,182,436)	0	76,558,493
Dalby Investments, Ltd.	304,227	106,250	(8,223)	27,106	4,564	(219)	(50,912)	0	382,793
DENSO HV PEP L.P.	12,143,241	4,250,000	(338,899)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,275,838
DIBALYD Investments, LLC	3,035,810	1,062,500	(84,728)	271,054	45,632	(2,190)	(509,122)	0	3,818,956
Dover Street X Feeder Fund L.P.	3,060,489,799	1,068,184,375	(81,916,062)	272,504,051	45,876,348	(2,201,934)	(511,845,688)	0	3,851,090,889
<i>DSC Capital Entities</i>									
DSC Capital, LLC	607,160	212,500	(16,947)	54,211	9,127	(438)	(101,824)	0	763,789
DSC Holdings, LLC	1,216,914	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,174
Duquesne University of the Holy Spirit	6,084,550	2,125,000	(164,450)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,851



Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
East Providence Firemen's and Policemen's Pension Fund	3,042,277	1,062,500	(82,229)	271,054	45,632	(2,190)	(509,122)	0	3,827,922
<i>Enterprise Holdings Entities</i>									
The JTK Family Trust	4,250,133	1,487,500	(118,620)	379,477	63,886	(3,066)	(712,770)	0	5,346,540
The Carolyn Kindle Betz 2019 Life Trust	2,884,017	1,009,375	(80,487)	257,500	43,350	(2,081)	(483,667)	0	3,628,007
The Alison Kindle Hogan 2019 Life Trust	2,884,017	1,009,375	(80,487)	257,500	43,350	(2,081)	(483,667)	0	3,628,007
Christine B. Taylor Gift Trust	2,580,436	903,125	(72,014)	230,395	38,788	(1,862)	(432,754)	0	3,246,114
Patricia A. Taylor Gift Trust	2,580,436	903,125	(72,014)	230,395	38,788	(1,862)	(432,754)	0	3,246,114
Equity-League Pension Fund	9,126,830	3,187,500	(246,679)	813,162	136,898	(6,571)	(1,527,365)	0	11,483,775
HarbourVest Frenchmen Street Fund L.P. (Tranche I-1)	15,179,048	5,312,500	(423,629)	1,355,271	228,160	(10,951)	(2,545,609)	0	19,094,790
Georgia Firefighters' Pension Fund	4,563,412	1,593,750	(123,339)	406,580	68,448	(3,285)	(763,682)	0	5,741,884
The H&R Block Foundation	1,216,914	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,174
Hawaii Pacific Health	2,738,050	956,250	(74,003)	243,948	41,068	(1,971)	(458,208)	0	3,445,134
Bank of Hawaii, Non-Discretionary Directed Trustee for the Hawaii Pacific Health Retirement Plan Trust	1,521,140	531,250	(41,110)	135,526	22,816	(1,095)	(254,562)	0	1,913,965
Houston Firefighters' Relief and Retirement Fund	30,422,752	10,625,000	(822,253)	2,710,540	456,323	(21,902)	(5,091,220)	0	38,279,240
Hues For You, LLC	912,690	318,750	(24,665)	81,316	13,690	(657)	(152,736)	0	1,148,388
HV SI - Fund (Tranche 1)	20,036,340	7,012,500	(559,187)	1,788,956	301,172	(14,455)	(3,360,204)	0	25,205,122
HVSHP L.P.	18,214,853	6,375,000	(508,353)	1,626,324	273,792	(13,141)	(3,054,732)	0	22,913,743
iCapital HarbourVest Dover Street X, L.P. (Class A Taxable and Class I Taxable Interests)	32,222,087	11,277,375	(899,277)	2,876,967	484,339	(23,247)	(5,403,821)	0	40,534,423
JBA Family Investments, Ltd.	1,216,913	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,173
Kessler Private LLC	1,825,367	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,752
KPC Private Equity LLC	3,042,276	1,062,500	(82,230)	271,054	45,632	(2,190)	(509,122)	0	3,827,920
Drake Leonard II LLC (Cambridge)	1,825,368	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,753
LHFI XII, LLC	6,071,618	2,125,000	(169,446)	542,110	91,264	(4,380)	(1,018,243)	0	7,637,923
Susan Lizan	304,227	106,250	(8,223)	27,106	4,564	(219)	(50,912)	0	382,793

Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
Lyric Opera of Chicago	1,821,489	637,500	(50,838)	162,633	27,378	(1,314)	(305,473)	0	2,291,375
Main Line Health Inc.	3,042,276	1,062,500	(82,229)	271,054	45,632	(2,190)	(509,122)	0	3,827,921
Main Line Health, Inc. Retirement Income Plan	6,084,549	2,125,000	(164,450)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,850
<i>Metropolitan Life Entities</i>									
Metropolitan Life Insurance Company (on behalf of Separate Account 285)	3,042,276	1,062,500	(82,229)	271,054	45,632	(2,190)	(509,122)	0	3,827,921
Metropolitan Life Insurance Company	34,134,328	11,921,250	(922,572)	3,041,225	511,993	(24,574)	(5,712,346)	0	42,949,304
Metropolitan Tower Life Insurance Company	6,023,699	2,103,750	(162,808)	536,688	90,352	(4,337)	(1,008,061)	0	7,579,283
Meyer Memorial Trust	9,120,363	3,187,500	(249,178)	813,162	136,898	(6,571)	(1,527,365)	0	11,474,809
MF Hope Venture VI LLC	3,042,276	1,062,500	(82,229)	271,054	45,632	(2,190)	(509,122)	0	3,827,921
State Treasurer of the State of Michigan, Custodian of the Michigan Public School Employees' Retirement System, State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges Retirement System	91,462,232	31,875,000	(2,391,765)	8,131,620	1,368,967	(65,706)	(15,273,657)	0	115,106,691
Montana Community Foundation, Inc.	304,227	106,250	(8,223)	27,106	4,564	(219)	(50,912)	0	382,793
Mortenson Construction Holdings, Inc.	2,428,648	850,000	(67,784)	216,843	36,506	(1,752)	(407,297)	0	3,055,164
The Museum of Contemporary Art	608,457	212,500	(16,444)	54,211	9,127	(438)	(101,824)	0	765,589
Mutual of Omaha Foundation	456,343	159,375	(12,332)	40,658	6,846	(329)	(76,367)	0	574,194
MWRA Employees' Retirement System	5,464,462	1,912,500	(152,506)	487,898	82,138	(3,942)	(916,420)	0	6,874,130
National Football League Reciprocal Trust	6,084,549	2,125,000	(164,450)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,850
Navigators Insurance Company	4,857,295	1,700,000	(135,558)	433,686	73,012	(3,504)	(814,595)	0	6,110,336
<i>Nebraska Investment Council Entities</i>									
Nebraska Investment Council - Defined Benefits	30,358,093	10,625,000	(847,252)	2,710,540	456,323	(21,902)	(5,091,220)	0	38,189,582
Nebraska Investment Council - Endowments	9,714,586	3,400,000	(271,117)	867,373	146,023	(7,009)	(1,629,190)	0	12,220,666
Nevada System of Higher Education	608,456	212,500	(16,444)	54,211	9,127	(438)	(101,824)	0	765,588
<i>New Canaan Country School Entities</i>									
Horizons at New Canaan Country School, Inc.	145,720	51,000	(4,068)	13,010	2,192	(105)	(24,437)	0	183,312
New Canaan Country School, Inc.	1,068,611	374,000	(29,824)	95,411	16,063	(771)	(179,212)	0	1,344,278

Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
New Hampshire Retirement System	30,422,750	10,625,000	(822,253)	2,710,540	456,323	(21,902)	(5,091,220)	0	38,279,238
The Philharmonic Symphony Society of New York Inc. Endowment	1,821,487	637,500	(50,838)	162,633	27,378	(1,314)	(305,473)	0	2,291,373
NextG Partners, LLC	1,214,326	425,000	(33,890)	108,423	18,252	(876)	(203,649)	0	1,527,586
Ochsner Clinic Foundation	7,285,943	2,550,000	(203,344)	650,529	109,516	(5,257)	(1,221,893)	0	9,165,494
City of Omaha Police & Fire Retirement System	18,253,649	6,375,000	(493,350)	1,626,324	273,792	(13,141)	(3,054,732)	0	22,967,542
Orange County Community Foundation	1,825,366	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,751
The Oregon Community Foundation	4,259,186	1,487,500	(115,118)	379,477	63,886	(3,066)	(712,770)	0	5,359,095
HarbourVest PA Co-Investment Fund L.P. (Pool 2 PASERS)	12,143,239	4,250,000	(338,898)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,275,837
Philadelphia Museum of Art	1,825,366	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,751
<i>Plymouth Rock/Response/High Point Entities</i>									
High Point Preferred Insurance Company	1,821,489	637,500	(50,838)	162,633	27,378	(1,314)	(305,473)	0	2,291,375
Palisades Safety and Insurance Association	5,464,461	1,912,500	(152,506)	487,898	82,138	(3,942)	(916,420)	0	6,874,129
Plymouth Rock Assurance Corporation	4,857,292	1,700,000	(135,558)	433,686	73,012	(3,504)	(814,595)	0	6,110,333
The Poizner Family Blind Trust	304,226	106,250	(8,223)	27,106	4,564	(219)	(50,912)	0	382,792
Private Equity Fund 13, LLC	1,214,326	425,000	(33,890)	108,423	18,252	(876)	(203,649)	0	1,527,586
Providence College	1,825,367	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,752
HarbourVest New Street Fund L.P. (Park Series)	18,214,854	6,375,000	(508,352)	1,626,324	273,792	(13,141)	(3,054,732)	0	22,913,745
<i>Ravinia Entities</i>									
Ravinia Festival Association - Fund to Assure	912,688	318,750	(24,664)	81,316	13,690	(657)	(152,736)	0	1,148,387
Ravinia Festival Association - Steans Institute Endowment	304,226	106,250	(8,222)	27,106	4,564	(219)	(50,912)	0	382,793
The REACH Healthcare Foundation	912,688	318,750	(24,665)	81,316	13,690	(657)	(152,736)	0	1,148,386
HarbourVest Reynolds Fund I L.P. (Tranche 2)	36,429,714	12,750,000	(1,016,706)	3,252,648	547,587	(26,283)	(6,109,462)	0	45,827,498
University of San Diego	4,259,186	1,487,500	(115,118)	379,477	63,886	(3,066)	(712,770)	0	5,359,095
San Francisco Retiree Health Care Trust Fund	7,589,527	2,656,250	(211,812)	677,635	114,082	(5,476)	(1,272,804)	0	9,547,402

Dover Street X L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
San Francisco State University Foundation	608,456	212,500	(16,444)	54,211	9,127	(438)	(101,824)	0	765,588
SDPE II Holdings A, LLC	12,143,239	4,250,000	(338,898)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,275,837
The Sealy and Smith Foundation	3,042,275	1,062,500	(82,229)	271,054	45,632	(2,190)	(509,122)	0	3,827,920
Silver Aggressive Growth Fund, L.P.	3,042,275	1,062,500	(82,230)	271,054	45,632	(2,190)	(509,122)	0	3,827,919
SMT Investors LLC	1,216,912	425,000	(32,890)	108,423	18,252	(876)	(203,649)	0	1,531,172
Southern New Hampshire University	1,825,367	637,500	(49,338)	162,633	27,378	(1,314)	(305,473)	0	2,296,753
Sovereign Investments Holdco, LLC	6,084,548	2,125,000	(164,449)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,850
W. Clement & Jessie V. Stone Foundation	1,520,495	531,250	(41,359)	135,526	22,816	(1,095)	(254,562)	0	1,913,071
HarbourVest Summit Hill Fund L.P. (Tranche 4)	30,422,750	10,625,000	(822,254)	2,710,540	456,323	(21,902)	(5,091,220)	0	38,279,237
Talcott Resolution Life and Annuity Insurance Company	9,714,587	3,400,000	(271,117)	867,373	146,023	(7,009)	(1,629,190)	0	12,220,667
The University of Tennessee	12,143,239	4,250,000	(338,898)	1,084,216	182,529	(8,761)	(2,036,488)	0	15,275,837
Employees Retirement System of Texas	60,845,519	21,250,000	(1,644,511)	5,421,079	912,644	(43,804)	(10,182,436)	0	76,558,491
Tower Hill Non-Marketable III, LLC	1,825,366	637,500	(49,338)	162,633	27,378	(1,314)	(305,473)	0	2,296,752
Valleyspring Mutual Trust LLC	608,456	212,500	(16,444)	54,211	9,127	(438)	(101,824)	0	765,588
Ventura County Employees' Retirement Association	24,338,201	8,500,000	(657,800)	2,168,431	365,058	(17,522)	(4,072,975)	0	30,623,393
Vermont Pension Investment Commission	60,974,826	21,250,000	(1,594,512)	5,421,079	912,644	(43,804)	(10,182,436)	0	76,737,797
Volterra Investments LLC	1,825,366	637,500	(49,339)	162,633	27,378	(1,314)	(305,473)	0	2,296,751
WCB Investment Pool LLC	6,084,548	2,125,000	(164,450)	542,110	91,264	(4,380)	(1,018,243)	0	7,655,849
WellSpan Health Master Trust	6,071,617	2,125,000	(169,446)	542,110	91,264	(4,380)	(1,018,243)	0	7,637,922
West Juniper Capital, LLC	1,216,912	425,000	(32,889)	108,423	18,252	(876)	(203,649)	0	1,531,173
Zurich American Insurance Company	6,071,617	2,125,000	(169,446)	542,110	91,264	(4,380)	(1,018,243)	0	7,637,922
	<b>4,162,532,742</b>	<b>1,453,291,750</b>	<b>(111,967,249)</b>	<b>370,748,692</b>	<b>62,415,915</b>	<b>(2,995,779)</b>	<b>(696,378,935)</b>	<b>0</b>	<b>5,237,647,136</b>
<b>General Partner</b>									
Dover X Associates L.P.	318,055,872	0	(3,228,731)	59,845,867	10,002,841	0	(31,965,644)	(6,062,292)	346,647,913
<b>Special Limited Partner</b>									
HV-ECI II LLC	(314,170)	0				0	0	6,062,292	5,748,122

## Detailed Schedule of Partners' Equity

from JANUARY 01, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
	\$4,480,274,444	\$1,453,291,750	\$(115,195,980)	\$430,594,559	\$72,418,756	\$(2,995,779)	\$(728,344,579)	\$0	\$5,590,043,171

NOTE: Totals and subtotals may not recalculate due to rounding.

*Basis of Presentation: This detailed schedule of partners' equity represents annual changes in the individual partners' capital accounts, who are the partners represented in the statement of changes in partners' capital included in the accompanying financial statements. The schedule was prepared on the same basis of accounting as described in the Significant Accounting Policies note to the accompanying financial statements. The allocations related to net operating income (loss), net realized gain (loss), net unrealized appreciation (depreciation) of investments, syndication costs, partners' contributions, partners' distributions, and management fee/priority profit share charged, where applicable, were made in accordance with the relevant sections of the Partnership Agreement.*

## Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
<b>Limited Partners</b>										
1199SEIU Home Care Employees Pension Fund	4,000,000	2,530,000	0	(156,178)	576,106	990,817	(1,752)	(876,649)	0	3,062,344
<i>AAFES Army &amp; Air Force Entities</i>										
The Retirement Annuity Plan for Employees of the Army and Air Force Exchange Service Trust	37,500,000	23,718,750	0	(1,464,188)	5,400,997	9,288,901	(16,427)	(8,218,594)	0	28,709,439
Trust for Retiree Medical, Dental and Life Insurance Plan of the Army and Air Force Exchange Service	20,000,000	12,650,000	0	(780,903)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,311,697
American Federation of Musicians and Employers' Pension Fund	7,500,000	4,743,750	0	(292,843)	1,080,197	1,857,781	(3,285)	(1,643,718)	0	5,741,882
American Lebanese Syrian Associated Charities, Inc. (ALSAC)	20,000,000	12,650,000	0	(780,903)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,311,697
American United Life Insurance Company	10,000,000	6,325,000	0	(408,376)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,637,924
HarbourVest AP7 PE Investment (Account 3)	40,000,000	25,300,000	71,435	(1,633,531)	5,761,062	9,908,159	(17,522)	(8,766,500)	0	30,551,668
Austin Firefighters Relief and Retirement Fund	40,000,000	25,300,000	27,569	(1,633,530)	5,761,062	9,908,159	(17,522)	(8,766,500)	0	30,551,669
Employees' Retirement System of Baltimore County	15,000,000	9,487,500	0	(612,573)	2,160,400	3,715,562	(6,571)	(3,287,436)	0	11,456,882
Belmont Contributory Retirement System	3,000,000	1,897,500	1,090	(122,518)	432,081	743,112	(1,314)	(657,486)	0	2,291,375
Ben Barejo Holdings Inc.	4,000,000	2,530,000	7,144	(163,357)	576,106	990,817	(1,752)	(876,649)	0	3,055,165
Marion and Henry Bloch Family Foundation	10,000,000	6,325,000	0	(399,413)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,646,887
BRCAP Investment Fund, LP	3,500,000	2,213,750	6,250	(142,935)	504,094	866,965	(1,533)	(767,068)	0	2,673,273
BVU Fund, L.P.	1,500,000	948,750	0	(58,559)	216,039	371,556	(657)	(328,742)	0	1,148,387
Calconn Private Equity II, LLC	3,000,000	1,897,500	0	(117,141)	432,081	743,112	(1,314)	(657,486)	0	2,296,752
<i>Calvert County Entities</i>										
Calvert County Employees Retirement Plan	500,000	316,250	892	(20,413)	72,014	123,852	(219)	(109,581)	0	381,903
Calvert County Other Post Employment Benefits Trust Fund	750,000	474,375	1,339	(30,618)	108,020	185,780	(329)	(164,371)	0	572,857
Calvert County Sheriff's Office Pension Plan	500,000	316,250	892	(20,414)	72,014	123,852	(219)	(109,581)	0	381,902
Canterbury Consulting PC Fund I (A), L.P.	2,200,000	1,391,500	3,928	(89,837)	316,860	544,947	(964)	(482,157)	0	1,680,349
Castilleja School Foundation	750,000	474,375	0	(29,282)	108,020	185,780	(329)	(164,371)	0	574,193
CH Investment Program LP	2,000,000	1,265,000	0	(78,084)	288,054	495,407	(876)	(438,327)	0	1,531,174
Chapman University	4,000,000	2,530,000	0	(156,177)	576,106	990,817	(1,752)	(876,649)	0	3,062,345
<i>Cheyne/Ronald/Getty Entities</i>										

## Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
Cheyne Walk Master Fund LP	7,900,000	4,996,750	0	(322,614)	1,137,810	1,956,861	(3,461)	(1,731,386)	0	6,033,960
Ronald B Master Fund LP	2,100,000	1,328,250	0	(85,764)	302,454	520,179	(920)	(460,242)	0	1,603,957
Policemen's Annuity and Benefit Fund of Chicago	25,000,000	15,812,500	37,100	(1,020,961)	3,600,666	6,192,600	(10,951)	(5,479,062)	0	19,094,792
The Children's Mercy Hospital Foundation	3,000,000	1,897,500	0	(117,140)	432,081	743,112	(1,314)	(657,486)	0	2,296,753
China Life Insurance Co., Ltd.	20,000,000	12,650,000	0	(816,763)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,275,837
City of Fort Lauderdale General Employees Retirement System	15,000,000	9,487,500	6,892	(612,572)	2,160,400	3,715,562	(6,571)	(3,287,436)	0	11,456,883
<i>City of Hope (COH) Entities</i>										
Beckman Research Institute of the City of Hope	8,000,000	5,060,000	0	(312,367)	1,152,212	1,981,632	(3,504)	(1,753,300)	0	6,124,673
City of Hope	12,000,000	7,590,000	0	(468,532)	1,728,320	2,972,447	(5,257)	(2,629,950)	0	9,187,028
The Claremont Colleges, Inc.	750,000	474,375	0	(29,281)	108,020	185,780	(329)	(164,371)	0	574,194
Claremont Investment Fund	10,000,000	6,325,000	0	(390,449)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,851
CN Investment Fund I LP	2,000,000	1,265,000	0	(78,085)	288,054	495,407	(876)	(438,327)	0	1,531,173
The Colburn School	2,500,000	1,581,250	0	(97,609)	360,066	619,259	(1,095)	(547,906)	0	1,913,965
Concordia Account - 19	15,000,000	9,487,500	0	(612,574)	2,160,400	3,715,562	(6,571)	(3,287,436)	0	11,456,881
The State of Connecticut, acting through its Treasurer	100,000,000	63,250,000	0	(3,904,514)	14,402,657	24,770,403	(43,804)	(21,916,249)	0	76,558,493
Dalby Investments, Ltd.	500,000	316,250	0	(19,523)	72,014	123,852	(219)	(109,581)	0	382,793
DENSO HV PEP L.P.	20,000,000	12,650,000	7,268	(816,762)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,275,838
DIBALYD Investments, LLC	5,000,000	3,162,500	8,929	(204,197)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,818,956
Dover Street X Feeder Fund L.P.	5,026,750,000	3,179,419,377	1,935,635	(193,583,032)	723,985,517	1,245,146,083	(2,201,934)	(1,101,675,122)	0	3,851,090,889
<i>DSC Capital Entities</i>										
DSC Capital, LLC	1,000,000	632,500	1,787	(40,845)	144,027	247,706	(438)	(219,161)	0	763,789
DSC Holdings, LLC	2,000,000	1,265,000	0	(78,084)	288,054	495,407	(876)	(438,327)	0	1,531,174
Duquesne University of the Holy Spirit	10,000,000	6,325,000	0	(390,449)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,851
East Providence Firemen's and Policemen's Pension Fund	5,000,000	3,162,500	0	(195,231)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,922
<i>Enterprise Holdings Entities</i>										
The JTK Family Trust	7,000,000	4,427,500	9,891	(285,871)	1,008,187	1,733,929	(3,066)	(1,534,139)	0	5,346,540

Dover Street X L.P.

Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
The Carolyn Kindle Betz 2019 Life Trust	4,750,000	3,004,375	6,712	(193,981)	684,125	1,176,593	(2,081)	(1,041,024)	0	3,628,007
The Alison Kindle Hogan 2019 Life Trust	4,750,000	3,004,375	6,712	(193,981)	684,125	1,176,593	(2,081)	(1,041,024)	0	3,628,007
Christine B. Taylor Gift Trust	4,250,000	2,688,125	6,006	(173,563)	612,111	1,052,743	(1,862)	(931,440)	0	3,246,114
Patricia A. Taylor Gift Trust	4,250,000	2,688,125	6,006	(173,563)	612,111	1,052,743	(1,862)	(931,440)	0	3,246,114
Equity-League Pension Fund	15,000,000	9,487,500	0	(585,680)	2,160,400	3,715,562	(6,571)	(3,287,436)	0	11,483,775
HarbourVest Frenchmen Street Fund L.P. (Tranche I-1) (2)	25,000,000	15,812,500	27,554	(1,020,963)	3,600,666	6,192,600	(10,951)	(5,479,062)	0	19,094,790
Georgia Firefighters' Pension Fund	7,500,000	4,743,750	0	(292,841)	1,080,197	1,857,781	(3,285)	(1,643,718)	0	5,741,884
The H&R Block Foundation	2,000,000	1,265,000	0	(78,084)	288,054	495,407	(876)	(438,327)	0	1,531,174
Hawaii Pacific Health	4,500,000	2,846,250	0	(175,700)	648,118	1,114,667	(1,971)	(986,230)	0	3,445,134
Bank of Hawaii, Non-Discretionary Directed Trustee for the Hawaii Pacific Health Retirement Plan Trust	2,500,000	1,581,250	0	(97,609)	360,066	619,259	(1,095)	(547,906)	0	1,913,965
Houston Firefighters' Relief and Retirement Fund	50,000,000	31,625,000	0	(1,952,262)	7,201,328	12,385,201	(21,902)	(10,958,125)	0	38,279,240
Hues For You, LLC	1,500,000	948,750	0	(58,558)	216,039	371,556	(657)	(328,742)	0	1,148,388
HV SI - Fund (Tranche 1)	33,000,000	20,872,500	36,370	(1,347,666)	4,752,877	8,174,230	(14,455)	(7,232,364)	0	25,205,122
HVSH L.P.	30,000,000	18,975,000	0	(1,225,155)	4,320,798	7,431,117	(13,141)	(6,574,876)	0	22,913,743
iCapital HarbourVest Dover Street X, L.P. (Class A Taxable and Class I Taxable Interests)	53,070,000	33,566,775	79,119	(2,167,291)	7,643,491	13,145,651	(23,247)	(11,630,956)	0	40,534,423
JBA Family Investments, Ltd.	2,000,000	1,265,000	0	(78,085)	288,054	495,407	(876)	(438,327)	0	1,531,173
Kessler Private LLC	3,000,000	1,897,500	0	(117,141)	432,081	743,112	(1,314)	(657,486)	0	2,296,752
KPC Private Equity LLC	5,000,000	3,162,500	0	(195,233)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,920
Drake Leonard II LLC (Cambridge)	3,000,000	1,897,500	0	(117,140)	432,081	743,112	(1,314)	(657,486)	0	2,296,753
LHFI XII, LLC	10,000,000	6,325,000	11,021	(408,377)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,637,923
Susan Lizan	500,000	316,250	0	(19,523)	72,014	123,852	(219)	(109,581)	0	382,793
Lyric Opera of Chicago	3,000,000	1,897,500	1,090	(122,518)	432,081	743,112	(1,314)	(657,486)	0	2,291,375
Main Line Health Inc.	5,000,000	3,162,500	0	(195,232)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,921
Main Line Health, Inc. Retirement Income Plan	10,000,000	6,325,000	0	(390,450)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,850
<i>Metropolitan Life Entities</i>										
Metropolitan Life Insurance Company (on behalf of Separate Account 285)	5,000,000	3,162,500	3,446	(195,232)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,921



## Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars		Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
	Metropolitan Life Insurance Company	(1) 56,100,000	35,483,250	38,665	(2,190,441)	8,079,890	13,896,194	(24,574)	(12,295,015)	0	42,949,304
	Metropolitan Tower Life Insurance Company	9,900,000	6,261,750	6,823	(386,553)	1,425,864	2,452,269	(4,337)	(2,169,710)	0	7,579,283
	Meyer Memorial Trust	15,000,000	9,487,500	0	(594,646)	2,160,400	3,715,562	(6,571)	(3,287,436)	0	11,474,809
	MF Hope Venture VI LLC	5,000,000	3,162,500	0	(195,232)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,921
	State Treasurer of the State of Michigan, Custodian of the Michigan Public School Employees' Retirement System, State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges Retirement System	150,000,000	94,875,000	0	(5,587,814)	21,603,986	37,155,600	(65,706)	(32,874,375)	0	115,106,691
	Montana Community Foundation, Inc.	500,000	316,250	0	(19,523)	72,014	123,852	(219)	(109,581)	0	382,793
	Mortenson Construction Holdings, Inc.	4,000,000	2,530,000	1,454	(163,358)	576,106	990,817	(1,752)	(876,649)	0	3,055,164
	The Museum of Contemporary Art	1,000,000	632,500	0	(39,045)	144,027	247,706	(438)	(219,161)	0	765,589
	Mutual of Omaha Foundation	750,000	474,375	0	(29,281)	108,020	185,780	(329)	(164,371)	0	574,194
	MWRA Employees' Retirement System	9,000,000	5,692,500	6,202	(367,542)	1,296,239	2,229,337	(3,942)	(1,972,462)	0	6,874,130
	National Football League Reciprocal Trust	10,000,000	6,325,000	0	(390,450)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,850
	Navigators Insurance Company	8,000,000	5,060,000	14,287	(326,704)	1,152,212	1,981,632	(3,504)	(1,753,300)	0	6,110,336
	<i>Nebraska Investment Council Entities</i>										
	Nebraska Investment Council - Defined Benefits	50,000,000	31,625,000	0	(2,041,920)	7,201,328	12,385,201	(21,902)	(10,958,125)	0	38,189,582
	Nebraska Investment Council - Endowments	16,000,000	10,120,000	0	(653,413)	2,304,425	3,963,263	(7,009)	(3,506,600)	0	12,220,666
	Nevada System of Higher Education	1,000,000	632,500	0	(39,046)	144,027	247,706	(438)	(219,161)	0	765,588
	<i>New Canaan Country School Entities</i>										
	Horizons at New Canaan Country School, Inc.	240,000	151,800	0	(9,799)	34,565	59,449	(105)	(52,598)	0	183,312
	New Canaan Country School, Inc.	1,760,000	1,113,200	0	(71,873)	253,489	435,959	(771)	(385,726)	0	1,344,278
	New Hampshire Retirement System	50,000,000	31,625,000	0	(1,952,264)	7,201,328	12,385,201	(21,902)	(10,958,125)	0	38,279,238
	The Philharmonic Symphony Society of New York Inc. Endowment	3,000,000	1,897,500	2,068	(122,520)	432,081	743,112	(1,314)	(657,486)	0	2,291,373
	NextG Partners, LLC	2,000,000	1,265,000	3,571	(81,672)	288,054	495,407	(876)	(438,327)	0	1,527,586
	Ochsner Clinic Foundation	12,000,000	7,590,000	8,270	(490,066)	1,728,320	2,972,447	(5,257)	(2,629,950)	0	9,165,494
	City of Omaha Police & Fire Retirement System	30,000,000	18,975,000	0	(1,171,356)	4,320,798	7,431,117	(13,141)	(6,574,876)	0	22,967,542
	Orange County Community Foundation	3,000,000	1,897,500	0	(117,142)	432,081	743,112	(1,314)	(657,486)	0	2,296,751

## Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
The Oregon Community Foundation	7,000,000	4,427,500	0	(273,316)	1,008,187	1,733,929	(3,066)	(1,534,139)	0	5,359,095
HarbourVest PA Co-Investment Fund L.P. (Pool 2 PASERS)	20,000,000	12,650,000	13,784	(816,763)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,275,837
Philadelphia Museum of Art	3,000,000	1,897,500	0	(117,142)	432,081	743,112	(1,314)	(657,486)	0	2,296,751
<i>Plymouth Rock/Response/High Point Entities</i>										
High Point Preferred Insurance Company	3,000,000	1,897,500	0	(122,518)	432,081	743,112	(1,314)	(657,486)	0	2,291,375
Palisades Safety and Insurance Association	9,000,000	5,692,500	0	(367,543)	1,296,239	2,229,337	(3,942)	(1,972,462)	0	6,874,129
Plymouth Rock Assurance Corporation	8,000,000	5,060,000	0	(326,707)	1,152,212	1,981,632	(3,504)	(1,753,300)	0	6,110,333
The Poizner Family Blind Trust	500,000	316,250	0	(19,524)	72,014	123,852	(219)	(109,581)	0	382,792
Private Equity Fund 13, LLC	2,000,000	1,265,000	0	(81,672)	288,054	495,407	(876)	(438,327)	0	1,527,586
Providence College	3,000,000	1,897,500	0	(117,141)	432,081	743,112	(1,314)	(657,486)	0	2,296,752
HarbourVest New Street Fund L.P. (Park Series)	30,000,000	18,975,000	0	(1,225,153)	4,320,798	7,431,117	(13,141)	(6,574,876)	0	22,913,745
<i>Ravinia Entities</i>										
Ravinia Festival Association - Fund to Assure	1,500,000	948,750	0	(58,559)	216,039	371,556	(657)	(328,742)	0	1,148,387
Ravinia Festival Association - Steans Institute Endowment	500,000	316,250	0	(19,523)	72,014	123,852	(219)	(109,581)	0	382,793
The REACH Healthcare Foundation	1,500,000	948,750	0	(58,560)	216,039	371,556	(657)	(328,742)	0	1,148,386
HarbourVest Reynolds Fund I L.P. (Tranche 2)	60,000,000	37,950,000	0	(2,450,304)	8,641,594	14,862,241	(26,283)	(13,149,750)	0	45,827,498
University of San Diego	7,000,000	4,427,500	0	(273,316)	1,008,187	1,733,929	(3,066)	(1,534,139)	0	5,359,095
San Francisco Retiree Health Care Trust Fund	12,500,000	7,906,250	22,324	(510,476)	1,800,333	3,096,301	(5,476)	(2,739,530)	0	9,547,402
San Francisco State University Foundation	1,000,000	632,500	0	(39,046)	144,027	247,706	(438)	(219,161)	0	765,588
SDPE II Holdings A, LLC	20,000,000	12,650,000	0	(816,763)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,275,837
The Sealy and Smith Foundation	5,000,000	3,162,500	0	(195,233)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,920
Silver Aggressive Growth Fund, L.P.	5,000,000	3,162,500	0	(195,234)	720,135	1,238,522	(2,190)	(1,095,814)	0	3,827,919
SMT Investors LLC	2,000,000	1,265,000	0	(78,086)	288,054	495,407	(876)	(438,327)	0	1,531,172
Southern New Hampshire University	3,000,000	1,897,500	0	(117,140)	432,081	743,112	(1,314)	(657,486)	0	2,296,753
Sovereign Investments Holdco, LLC	10,000,000	6,325,000	0	(390,450)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,850
W. Clement & Jessie V. Stone Foundation	2,500,000	1,581,250	550	(98,503)	360,066	619,259	(1,095)	(547,906)	0	1,913,071
HarbourVest Summit Hill Fund L.P. (Tranche 4)	50,000,000	31,625,000	0	(1,952,265)	7,201,328	12,385,201	(21,902)	(10,958,125)	0	38,279,237

## Detailed Schedule of Partners' Equity

From Commencement of Operations (June 01, 2019) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Distributions	Transfers	Capital account at 12/31/2022
Talcott Resolution Life and Annuity Insurance Company	16,000,000	10,120,000	28,574	(653,412)	2,304,425	3,963,263	(7,009)	(3,506,600)	0	12,220,667
The University of Tennessee	20,000,000	12,650,000	13,784	(816,763)	2,880,530	4,954,081	(8,761)	(4,383,250)	0	15,275,837
Employees Retirement System of Texas	100,000,000	63,250,000	178,586	(3,904,516)	14,402,657	24,770,403	(43,804)	(21,916,249)	0	76,558,491
Tower Hill Non-Marketable III, LLC	3,000,000	1,897,500	0	(117,141)	432,081	743,112	(1,314)	(657,486)	0	2,296,752
Valleyspring Mutual Trust LLC	1,000,000	632,500	0	(39,046)	144,027	247,706	(438)	(219,161)	0	765,588
Ventura County Employees' Retirement Association	40,000,000	25,300,000	0	(1,561,806)	5,761,062	9,908,159	(17,522)	(8,766,500)	0	30,623,393
Vermont Pension Investment Commission	100,000,000	63,250,000	0	(3,725,210)	14,402,657	24,770,403	(43,804)	(21,916,249)	0	76,737,797
Volterra Investments LLC	3,000,000	1,897,500	0	(117,142)	432,081	743,112	(1,314)	(657,486)	0	2,296,751
WCB Investment Pool LLC	10,000,000	6,325,000	0	(390,451)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,655,849
WellSpan Health Master Trust	10,000,000	6,325,000	0	(408,378)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,637,922
West Juniper Capital, LLC	2,000,000	1,265,000	0	(78,085)	288,054	495,407	(876)	(438,327)	0	1,531,173
Zurich American Insurance Company	10,000,000	6,325,000	6,892	(408,378)	1,440,266	2,477,038	(4,380)	(2,191,624)	0	7,637,922
	<b>6,839,020,000</b>	<b>4,325,680,152</b>	<b>2,657,911</b>	<b>(265,233,745)</b>	<b>985,000,592</b>	<b>1,694,052,634</b>	<b>(2,995,779)</b>	<b>(1,498,856,718)</b>	<b>0</b>	<b>5,237,647,136</b>
<b>General Partner</b>										
Dover X Associates L.P.	104,147,513	0	0	(10,081,171)	158,344,502	271,490,668	0	(67,357,964)	(5,748,122)	346,647,913
<b>Special Limited Partner</b>										
HV-ECI II LLC	0	0	0				0	0	5,748,122	5,748,122
	<b>\$6,943,167,513</b>	<b>\$4,325,680,152</b>	<b>\$2,657,911</b>	<b>\$(275,314,916)</b>	<b>\$1,143,345,094</b>	<b>\$1,965,543,302</b>	<b>\$(2,995,779)</b>	<b>\$(1,566,214,682)</b>	<b>\$0</b>	<b>\$5,590,043,171</b>

NOTE: Totals and subtotals may not recalculate due to rounding.

**Basis of Presentation:** This detailed schedule of partners' equity represents cumulative changes in the individual partners' capital accounts, who are the partners represented in the statement of changes in partners' capital included in the accompanying financial statements. The schedule was prepared on the same basis of accounting as described in the Significant Accounting Policies note to the accompanying financial statements. The allocations related to net operating income (loss), net realized gain (loss), net unrealized appreciation (depreciation) of investments, syndication costs, partners' contributions, partners' distributions, and management fee/priority profit share charged, where applicable, were made in accordance with the relevant sections of the Partnership Agreement.

## Related Footnotes:

- (1) On March 31, 2021, Metropolitan Property and Casualty Insurance Company transferred its \$3,300,000 commitment to Metropolitan Life Insurance Company.
- (2) On September 30, 2021, Municipal Police Employees' Retirement System transferred its \$25,000,000 commitment to HarbourVest Frenchman Street Fund L.P.

# AUDITED FINANCIAL STATEMENTS

HarbourVest Dover Street X Investment L.P.  
Year ended December 31, 2022  
With Report of Independent Auditors

HarbourVest Dover Street X Investment L.P.  
Audited Financial Statements  
Year ended December 31, 2022

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## **Report of Independent Auditors**

To the General Partner of HarbourVest Dover Street X Investment L.P.

### ***Opinion***

We have audited the accompanying financial statements of HarbourVest Dover Street X Investment L.P. (the "Partnership"), which comprise the balance sheet, including the condensed schedule of investments, as of December 31, 2022, and the related statements of operations, of changes in partners' equity and of cash flows, including the related notes for the year then ended (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Partnership as of December 31, 2022, and the results of its operations, changes in its partners' equity and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for one year after the date the financial statements are available to be issued.

### ***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.



In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

*PricewaterhouseCoopers LLP*

Boston, MA  
May 11, 2023

HarbourVest Dover Street X Investment L.P.  
Balance Sheet  
December 31, 2022  
*In U.S. Dollars*

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**Assets**

Investments	8,483,228,779
Due from affiliates	50,840,129
Cash and equivalents	14,167,434
Accounts receivable	2,841,958
Marketable securities	948,376

Total assets **\$8,552,026,676**

**Liabilities and partners' equity**

Liabilities:

Notes payable	1,322,154,062
Payable for investments purchased	453,059,483
Accounts payable and accrued expenses	890,708
Accounts payable to HarbourVest Partners L.P.	160,687
Total liabilities	<u>1,776,264,940</u>

Partners' equity:

Paid-in capital and allocated profits and losses, less distributions:	
Limited Partners	6,775,761,736
Total partners' equity	<u>6,775,761,736</u>

Total liabilities and partners' equity **\$8,552,026,676**

*The accompanying notes form an integral part of the financial statements.*



HarbourVest Dover Street X Investment L.P.  
Statement of Operations  
Year ended December 31, 2022  
*In U.S. Dollars*

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Investment income:	
Interest and dividends from cash and equivalents	622,077
Other income	446,854
	<u>1,068,931</u>
Expenses:	
Interest expense	41,902,013
Professional fees	1,250,906
Travel expenses	38,125
Other expenses	6,395
	<u>43,197,439</u>
Net investment loss	<u>(42,128,508)</u>
Realized and unrealized gains (losses) on investments:	
Net realized gain (loss) on investments	503,691,533
Net change in unrealized appreciation (depreciation) on investments	84,712,437
	<u>588,403,970</u>
Net gain on investments	<u>588,403,970</u>
Net income	<u><b>\$546,275,462</b></u>

*The accompanying notes form an integral part of the financial statements.*

HarbourVest Dover Street X Investment L.P.  
Statement of Changes in Partners' Equity  
Year ended December 31, 2022  
*In U.S. Dollars*

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	<b>Limited Partners</b>	<b>Total</b>
Partners' equity at December 31, 2021	5,356,486,274	5,356,486,274
Contributions from partners	1,700,000,000	1,700,000,000
Share of net income (loss)	546,275,462	546,275,462
Distributions to partners	(827,000,000)	(827,000,000)
Partners' equity at December 31, 2022	<b>\$6,775,761,736</b>	<b>\$6,775,761,736</b>

*The accompanying notes form an integral part of the financial statements.*

HarbourVest Dover Street X Investment L.P.  
Statement of Cash Flows  
Year ended December 31, 2022  
In U.S. Dollars

**Operating activities**

Net income	546,275,462
Adjustments to reconcile net income to net cash used in operating activities:	
Payments made on investment commitments	(1,943,638,374)
Cash distributions received from investments	940,754,732
Proceeds from sale of marketable securities	16,497,681
Net realized (gain) loss on investments	(503,691,533)
Net change in unrealized (appreciation) depreciation on investments	(84,712,437)
Net change in contributions receivable	1,510,218
Net change in due from affiliates	(50,840,129)
Net change in accounts receivable	(2,712,207)
Other	(3,839,123)
Net cash used in operating activities	<u>(1,084,395,710)</u>

**Financing activities**

Contributions from partners	1,700,000,000
Distributions to partners	(827,000,000)
Borrowings from notes payable	1,085,412,003
Repayments on notes payable	<u>(1,087,988,221)</u>
Net cash provided by financing activities	<u>870,423,782</u>

Net decrease in cash and equivalents (213,971,928)

Cash and equivalents at the beginning of year 228,139,662

Cash and equivalents at the end of year **\$14,167,434**

**Supplemental disclosure:**

Cash paid for interest during the year \$41,362,347

*The accompanying notes form an integral part of the financial statements.*

HarbourVest Dover Street X Investment L.P.  
Condensed Schedule of Investments  
December 31, 2022  
In U.S. Dollars

	Geography	Fair Value \$	Fair Value as a Percentage of Partners' Equity
<b>Investments</b>			
Project Gallop (IDG Capital Project Fund IV, L.P.) ‡ <i>SheIn, approximate fair value \$965.7 million</i>	Asia	1,110,688,010	16.4%
Project Fig (HV Structured Solutions IV Holdings L.P.) ‡ <i>HarbourVest Structured Solutions IV L.P., approximate fair value \$840.6 million</i>	United States	397,473,138	5.9%
All other Investments (i)		6,975,067,631	102.9%
<b>Total Partnership Investments</b>		<b>8,483,228,779</b>	<b>125.2%</b>
<b>Marketable Securities</b>		948,376	-
<b>Total Investments *</b>		<b>\$ 8,484,177,155</b>	<b>125.2%</b>

‡ The Partnership's implied ownership of the underlying company is greater than 5% of Partners' equity at December 31, 2022.

(i) As of December 31, 2022 there are no individual investments over 5% included in All other Investments.

The allocation by geography of all other Investments is as follows (percentages are based on partners' equity) – United States: 49.7 %; Europe: 20.6 %; China: 17.7 %; Western Europe: 8.0 %; Latin America: 1.8 %; Asia: 1.6 %; Greater India: 1.4 %; Canada: 0.9 %; France: 0.8 %; India: 0.4 %.

\* As of December 31, 2022, allocation by industry of Investments as a whole is as follows (percentages are based on partners' equity) – Consumer Discretionary: 43.6 %; Information Technology: 20.3 %; Industrials: 17.2 %; Financials: 15.5 %; Health Care: 14.5 %; Consumer Staples: 6.5 %; Communication Services: 4.8 %; Materials: 1.4 %; Business Services: 0.6 %; Utilities: 0.5 %; Energy: 0.2 %; Real Estate: 0.1 %.

The cost basis of Partnership Investments as of December 31, 2022 is \$6,213,466,708.

The cost basis of Marketable Securities as of December 31, 2022 is \$2,414,454.

Differences in the calculation of the Partnership Investments that constitute more than 5% of the Partnership's total partners' equity and the Partnership's share of underlying portfolio companies that are greater than 5% of the Partnership's total partners' equity may arise due to the effect of carried interest at the Partnership Investment level.

The investment objectives of the individual partnership investments over 5% presented above are consistent with the investment objectives disclosed in Note 1.

Details may not add to totals and subtotals due to rounding

*The accompanying notes form an integral part of the financial statements.*

## 1. Partnership

HarbourVest Dover Street X Investment L.P. (the "Partnership") was legally formed on March 7, 2019 as a limited partnership under Cayman law and began admitting limited partners on April 9, 2019. The purpose of the Partnership is to make and hold investments of Dover Street X L.P. and Dover Street X AIF SCSp (collectively, the "Dover X Partnerships"). The Dover X Partnerships each made a commitment as a limited partner to the Partnership. The Dover X Partnerships allow for the Partnership to invest in limited partnerships or other entities which have been in existence for at least twelve months, a substantial portion of the underlying assets of such entity have been outstanding for at least twelve months, or the principal investment objective of such entity is to invest in assets which have been outstanding for at least twelve months ("Secondary Partnerships") and which intend to invest primarily in equity or debt investments in venture capital, management buy-in, management buy-out, leveraged buy-out, mezzanine, special situation, recapitalization, power, infrastructure assets that are not "core-like" and other private market transactions, provided that up to 5% of the aggregate Commitments of the Partners may be invested in Primary Partnerships (such investments being measured on the basis of the net equity cost thereof) and up to 15% of the aggregate Commitments of the Partners may be invested in partnerships which have as their principal investment objective investing in energy, oil and gas, natural resources, real estate, or "core-like" infrastructure assets. The Partnership commenced operations as of June 1, 2019. The first capital call was made on January 13, 2020.

At December 31, 2022, Dover Street X L.P. had committed \$6,943,167,513 in capital to the Partnership, and Dover Street X AIF SCSp had committed \$1,178,659,898 in capital to the Partnership, totaling \$8,121,827,411 in committed capital, of which 62.3% or \$5,062,925,004 has been funded. The remaining unfunded capital commitments of \$3,058,902,407 are due upon not less than 10 days prior written notice from the General Partner. The General Partner shall make no contributions to the capital of the Partnership.

Net profits and losses are allocated to the partners in accordance with their respective sharing percentages, as defined in the partnership agreement. The General Partner has no economic interest in the Partnership.

No limited partner may assign or otherwise transfer all or any part of their interest in the Partnership to another entity unless the General Partner has consented to the transfer in writing in accordance with the partnership agreement.

The term of the Partnership has no defined termination date, but will terminate upon dissolution under the terms of the partnership agreement.

## **2. Significant Accounting Policies**

### **Method of Accounting**

The financial statements are prepared in conformity with U.S. generally accepted accounting principles. The Partnership is an investment company following the accounting and reporting guidance of the Financial Accounting Standards Boards ("FASB") Accounting Standards Codification ("ASC") Topic 946 Financial Services – Investment Companies.

### **Estimates**

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles requires the General Partner to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **Cash and Equivalents**

The Partnership considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The carrying amount included in the balance sheet for cash and equivalents approximates their fair value.

Cash and cash equivalents may consist of deposits held at a bank or an investment in a money market fund to which the Partnership is exposed to credit risk. As of December 31, 2022, the Partnership held deposits of \$2,622,148 at a bank and held \$11,545,286 in one or more money market funds. Investments in money market funds are recorded at NAV per share and are classified as Level 1 assets.

### **Accounts Receivable**

Accounts receivable includes amounts due from certain limited partners for taxes withheld and remitted and estimated withholding tax payments made on their behalf.

### **Foreign Currency Transactions**

Foreign currency transactions are translated into U.S. dollars at the exchange rate in effect at the transaction dates. Foreign currency balances are translated at the rates in effect at December 31, 2022. Foreign currency translation is included in realized and unrealized gain (loss) on investments as incurred. The Partnership does not segregate that portion of realized or unrealized gain or loss attributable to foreign currency translation.

### **Expenses**

The Partnership allocates expenses to limited partners in accordance with their respective sharing percentages. Expenses paid directly by the Partnership may include tax expense, professional fees, and other out-of-pocket expenses and are presented separately in the statement of operations.

## **Income Taxes**

The Partnership has been granted a tax exemption by the Cayman Islands Government under the provisions of the Exempted Limited Partnership Law. The Partnership has elected to be treated as a partnership for U.S. tax purposes.

The Partnership accounts for income taxes under the provisions of ASC 740, "Income Taxes." This standard establishes consistent thresholds as it relates to accounting for income taxes. It defines the threshold for recognizing the benefits of tax-return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority and requires measurement of a tax position meeting the more-likely-than-not criterion, based on the largest benefit that is more than fifty percent likely to be realized. The Partnership may be subject to potential examination by certain taxing authorities in various jurisdictions. Any potential tax liability is also subject to ongoing interpretation of laws by taxing authorities. The tax years under potential examination vary by jurisdiction. The General Partner has analyzed the Partnership's inventory of tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction), and has concluded that no provision for income tax is required in the Partnership's financial statements. Each partner individually may be required to report on its own tax return its pro rata share of the Partnership's taxable income or loss.

The Partnership may be subject to taxes imposed by countries in which it invests. Such taxes are generally based on income and/or capital gains earned or repatriated. Foreign taxes, if any, are recorded based on the tax regulations and rates that exist in the foreign markets in which the Partnership invests. To the extent taxes are attributable to certain partners, the amounts are withheld from those partners' distributions and the withholdings are accounted for as deemed non-cash distributions to such partners. To the extent taxes are borne by the Partnership, the amounts are accrued and applied to net investment income, net realized gains and net unrealized appreciation as such income and/or gains are earned, and the Partnership records an estimated deferred tax liability in an amount that would be payable if the securities were disposed of on the valuation date. As of December 31, 2022, there were no deferred tax liabilities at the Partnership level.

## **Market and Other Risk Factors**

The Partnership's investments are subject to various risk factors including market, credit, interest rate and currency risk. Investments are based primarily in the U.S. and thus have concentrations in this region. The Partnership's investments are also subject to the risks associated with investing in leveraged buyout and venture capital transactions that are illiquid and non-publicly traded. Such investments are inherently more sensitive to declines in revenues and to increases in expenses that may occur due to general downward swings in the world economy or other risk factors including increasingly intense competition, rapid changes in technology, changes in federal, state and foreign regulations, and limited capital investments. Since the Partnership's investments generally will involve a high degree of risk, poor performance by a few of the investments could adversely affect the total return to limited partners.

## **Payable for Investments Purchased**

Payable for investments purchased represents the purchase price of certain investments purchased by the Partnership with an effective date on or before the balance sheet date, but paid subsequent to December 31, 2022.

### 3. Investments

In accordance with the authoritative guidance on fair value measurements and disclosures under generally accepted accounting principles in the United States, the Partnership discloses the fair value of its investments in a hierarchy that prioritizes the inputs to valuation techniques used to measure the fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The guidance establishes three levels of the fair value hierarchy as follows:

- Level 1 Inputs that reflect unadjusted quoted prices in active markets for identical assets or liabilities that the Partnership has the ability to access at the measurement date;
- Level 2 Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly, including inputs in markets that are not considered to be active;
- Level 3 Inputs that are unobservable.

For investments in partnerships and other pooled investment vehicles, the General Partner encourages all managers to apply fair value principles in their financial reports that are consistent with U.S. generally accepted accounting principles. Inputs used to determine fair value include financial statements provided by the investment partnerships which typically include fair market value capital account balances. The Partnership values its partnership investments at fair value using the net asset value as a practical expedient. In reviewing the underlying financial statements and capital account balances, the General Partner considers compliance with authoritative guidance on fair value measurements, the currency in which the investment is denominated, and other information deemed appropriate. If the General Partner shall in good faith determine that a manager is not reporting fair value consistent with U.S. generally accepted accounting principles, the General Partner shall use best efforts to undertake its own valuation analysis using fair market value principles and adjust such value so it is in accordance with the authoritative guidance.

Income derived from investments in partnerships is recorded using the equity pick-up method. Under the equity pick-up method of accounting, the Partnership's proportionate share of the net investment income (loss) and net realized gains (losses), as reported by the underlying partnership investments, is reflected in the statement of operations as net realized gain (loss) on partnership investments. The Partnership's proportionate share of the aggregate increase or decrease in unrealized appreciation (depreciation), as reported by the underlying partnership investments, is reflected in the statement of operations as net change in unrealized appreciation (depreciation) on partnership investments.



HarbourVest Dover Street X Investment L.P.  
Notes to Financial Statements

The Partnership received securities valued at \$16,766,877 during the year ended December 31, 2022 as distributions from the partnership investments. Net realized gain (loss) on partnership investments includes realized gains on marketable securities of (\$192,796) for the year ended December 31, 2022. Realized gains and losses on marketable securities are measured by the difference between proceeds from the sale and the cost basis of those securities. The cost basis is based on the distribution value assigned to the securities by the partnership making the distribution. Net change in unrealized appreciation (depreciation) on investments includes unrealized losses on marketable securities of (\$749,041) for the year ended December 31, 2022.

Because of the inherent uncertainty of these valuations, the estimated fair value may differ significantly from the value that would have been used had a ready market for this security existed, and the difference could be material.

Securities traded in public exchanges (e.g. marketable securities) shall be valued at the closing price at the end of the valuation period, and are classified within Level 1. If any security was not traded on such date, the latest closing price shall be used. Discounts shall be applied when a formal legal restriction exists on the securities. This restriction shall apply to transferability issues related to the security and not to the holder of the instrument.

The following table summarizes the levels used in valuing the Partnership's investments as of December 31, 2022. This table does not include investment in partnerships in the amount of \$8,198,368,183 which are measured on the basis of fair value NAV as reported.

	Level 1 \$	Level 2 \$	Level 3 \$	Total \$
Investments	-	-	284,860,596	284,860,596
Marketable Securities	948,376	-	-	948,376
<b>Total</b>	<b>\$948,376</b>	<b>\$ -</b>	<b>\$284,860,596</b>	<b>\$285,808,972</b>

Investments include partnership interests in private equity partnerships, all of which carry restrictions on redemption. The Partnership recognizes transfers at the fair value at the transfer date. There were no transfers during the year ended December 31, 2022. For the year ended December 31, 2022, purchases of Level 3 investments were \$201,539,190.

The following table presents additional information about valuation methodologies and inputs used for investments that are measured at fair value and categorized within Level 3 as of December 31, 2022:

	<b>Fair Value at December 31, 2022</b>			
<b>Investments</b>	<b>\$</b>	<b>Valuation Technique</b>	<b>Unobservable Input</b>	<b>Range</b>
Investments	129,364,723	Market Approach	Multiple of EBITDA Comparability Discount	7.0x - 22.5x 16.6x

The table above excludes \$155,495,873 which are valued using a recent private transaction without adjustment.

The Partnership has entered into performance guaranty agreements (the “Guaranty”) with lenders to certain affiliated underlying investment partnerships (the “Investment Partnerships”). The credit agreements of the Investment Partnerships contain certain terms related to performance, event of default and remedy, and require a maximum loan to value ratio of between 45% to 50% and the borrowings are secured by the partners’ equity interest in Investment Partnerships. In the event of foreclosure, as defined in the credit agreements of the Investment Partnership, the Partnership would be obligated under the terms of the Guaranty to use commercially reasonable efforts to assist the lenders to transfer ownership or sell the equity interests in the Investment Partnerships. At December 31, 2022, there have been no events of default under the Investment Partnership credit agreements. The General Partner believes the risk of loss under the Guaranty is remote and the maximum guaranty exposure of the Partnership is \$705,754,462.

#### 4. Financial Highlights

Financial highlights for the year ended December 31, 2022 were as follows:

	Percent (%)
<i>Internal rate of return to limited partners since inception:</i>	
Beginning of year	<u>100.9</u>
End of year	<u>49.5</u>
<i>Ratio to limited partners’ average partners’ equity:</i>	
Net investment loss	<u>(0.7)</u>
Operating expenses	<u>0.7</u>
Total expenses	<u>0.7</u>
<i>Ratio to limited partners’ committed capital:</i>	
Operating expenses	<u>0.5</u>

The internal rate of return to limited partners is calculated taking into account the actual dates of the cash inflows (contributions), outflows (distributions), and the ending net asset value at the end of the period (residual value) of the limited partners’ capital account as of the measurement date.

Net investment loss is the limited partners’ share of investment income, net of operating expenses and the income and expenses allocated from the Partnership, and does not include the proportionate share of net gain or loss from underlying investments. Operating expenses include the limited partners’ share of the Partnership’s expenses and expenses allocated from the Partnership and do not include the proportionate share of expenses from underlying investments.

As the Partnership's expenses are largely based on the limited partners' committed capital rather than their average capital, supplemental information has been provided in order to disclose the expense ratio as a percentage of the limited partners' committed capital.

## **5. Related-Party Transactions**

Due from affiliates represents expenses of a related entity incurred in the ordinary course of business and other amounts which have been paid by and are reimbursable to the Partnership from the Dover X Partnerships at December 31, 2022.

Accounts payable to HarbourVest Partners L.P. (the "Management Company") represents expenses of the Partnership incurred in the ordinary course of business, which have been paid by and are reimbursable to the Management Company at December 31, 2022.

Certain partners of the Management Company serve as members of the advisory committees of certain investee entities and are the partners of the General Partner.

The General Partner of the Partnership is also the General Partner of Dover Street X L.P., Dover Street X Feeder Fund L.P., and the Founder Partner of Dover Street X AIF SCSp. The General Partner has no economic interest in the Partnership.

## **6. Investment Commitments**

As of December 31, 2022, the Partnership has unfunded investment commitments to other partnerships of \$2,876,689,330 which are payable upon notice by the partnerships to which the commitments have been made.

## **7. Notes Payable**

The Partnership has entered into a \$2,795,000,000 multicurrency revolving credit agreement (the "Facility") with a bank, with a maturity date of April 15, 2024. The credit agreement is shared amongst the Dover X Partnerships, several affiliated funds (each a "Borrower") and the Partnership. Under the Facility, the same terms and conditions apply to all Borrowers, and each Borrower is liable for its obligations under its established sublimit. There is no cross-collateralization or cross-default between borrowers. The Facility is collateralized by the uncalled capital commitments of the Borrowers.

At December 31, 2022, the combined borrower sublimit commitment assigned to the Partnership and the Dover X Partnerships was \$1,601,405,000, of which \$1,322,154,062 was outstanding by the Partnership, which approximates fair value. \$715,285,665 of the outstanding balance was denominated in U.S. dollars, \$535,820,357 was denominated in Euros and \$71,048,040 was denominated in Great British pounds. The interest rate on outstanding debt at December 31, 2022 ranged from 3.0% to 8.3%.

During the year ended December 31, 2022, the Partnership incurred interest expense of \$41,902,013 included on the statement of operations. Deferred financing costs incurred in connection with the issuance of the Facility were borne by the Dover X Partnerships.

## **8. Indemnifications**

### General Indemnifications

In the normal course of business, the Partnership may enter into contracts that contain a variety of representations and warranties and which provide for general indemnifications. The Partnership's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Partnership that have not yet occurred. Based on the prior experience of the General Partner, the Partnership expects the risk of loss under these indemnifications to be remote.

### General Partner Indemnifications

Consistent with standard business practices in the normal course of business, the Partnership has provided general indemnifications to the General Partner, any affiliate of the General Partner and any person acting on behalf of the General Partner or such affiliate when they act in good faith, in the best interest of the Partnership. The Partnership is unable to develop an estimate of the maximum potential amount of future payments that could potentially result from any hypothetical future claim but expects the risk of having to make any payments under these general business indemnifications to be remote.

## **9. Subsequent Events**

In the preparation of the financial statements, the General Partner has evaluated the effects, if any, of events occurring after December 31, 2022 through May 11, 2023, which is the date that the financial statements were available to be issued.

On January 5, 2023, the Partnership entered into a \$800,000,000 multi-currency senior secured term loan with a bank, collateralized by the investments of the Partnership (the "NAV Facility"). The maturity date of the NAV Facility is January 5, 2028. The proceeds from the NAV Facility were used to pay down outstanding borrowings on the Facility.



# 2023 | First Quarter Report

## Dover Street X L.P.



This report contains highly confidential information, including trade secrets, commercial and financial information, regarding HarbourVest Partners Funds (each a "Fund") and the Fund's investments. The information included in this report is for use only by our investors and solely for the purpose of evaluating and monitoring their investment in the Fund. Any disclosure of this information could cause competitive harm to HarbourVest Partners, LLC and its affiliates, the Fund, and its underlying investments. By accepting delivery of this report, each recipient and its representatives acknowledge the highly confidential nature of the information contained herein and agree that this information will not be reproduced in any manner, or disclosed to any other person, without the express written consent of HarbourVest Partners, LLC. If you cannot agree to the above, please return this report to HarbourVest Partners, LLC immediately.

# Executive summary

## Dover Street X Program

To Our Limited Partners:

We are pleased to present the 2023 First Quarter Report for the Dover Street X Program (“Dover X Program” or “the Program”).

This report covers activities for the Program and its affiliated investment vehicles Dover Street X L.P. (“Dover X”) and Dover Street X AIF SCSp (“Dover X AIF”). The investment vehicles are presented in aggregate form in this Executive Summary. The Fund Summary and Supplemental Portfolio Information sections of this report provide information specific to the individual vehicle.

The Dover X Program held its initial round of subscriptions in 2019, and the final closing took place in 2020. The Program is focused on building a diversified portfolio of global secondary investments in buyout, growth equity, venture capital, and other private markets assets. To offer investors differentiated exposure and the potential for outperformance, the HarbourVest team is focused on following its proven strategy of constructing secondary portfolios with an emphasis on complex transaction types, including GP-led transactions and other customized liquidity solutions. The Dover X Program’s portfolio includes selective exposure to traditional secondary investments, where HarbourVest believes it has an advantage due to its differentiated access to information, manager relationships, or competitive positioning.

## Fund Activity

Please note: The 2022 Annual Quarterly Report (the “Report”) for the December 31, 2022 reporting period overstated the IRR for Dover X. The Report stated Dover X had an IRR of 41.7%. The actual IRR for Dover X as of December 31, 2022 was 41.6%. This overstatement was also included in the June 2023 PPM Supplement.

### MARCH 31, 2022 FUND ACTIVITY (\$ MILLIONS)

	Dover X	Dover X AIF	Dover X Program
Total Fund Size*	6,943.2	1,178.7	8,121.8
% Called from Limited Partners YTD	0.0%	0.0%	0.0%
% Called from Limited Partners Overall	63.3%	63.2%	63.3%
Distributed to Limited Partners YTD	132.2	22.4	154.6
Net LP DPI (Distributions to Paid-In Capital)	0.38x	0.38x	0.38x
Net LP TVPI (Total Value to Paid-In Capital)	1.58x	1.57x	1.57x
Net LP IRR	37.0%	36.9%	36.9%

*\*Including the General Partner commitment*

# Portfolio Activity

## Investment Activity

During the first quarter of 2023, the Dover X Program funded a total of \$214.7 million to the portfolio. Larger capital calls were funded to **Project Pomelo**, **Project Voyage**, **Project Fig**, and several others.

## Distributions & Liquidity

The Program's portfolio generated proceeds of \$195.3 million during the first quarter of the year. Cumulative proceeds totaled \$2.0 billion, at March 31, 2023. Larger sources of first quarter proceeds are profiled below.

MARCH 31, 2023 SIGNIFICANT DISTRIBUTIONS RECEIVED (\$ MILLIONS)			
Investment	Portfolio	D/F	Amount YTD (M)
Project Lagoon	Secondary	1.8x	116.1
Project Voyage	Secondary	0.2x	32.2
Project Antarctica	Secondary	0.6x	30.0
Project Fig	Secondary	0.3x	13.7
Project Boylston	Secondary	0.4x	9.8

## Significant Valuation Changes

The Program's portfolio generated a \$188.9 million net valuation increase during the first quarter of 2023, 2.4% of the current value at year-end 2022. Gains across the portfolio were partially offset by some smaller losses. The largest valuation changes during the quarter are profiled below.

MARCH 31, 2023 SIGNIFICANT VALUATION CHANGES (\$ MILLIONS)			
Investment	Commitment (M)	TV/F	Gain/Loss YTD (M)
Project Fig	788.1	1.3x	26.7
Project Giant	320.5	1.2x	26.6
Project Voyage	629.1	1.3x	14.4
Project Eight	399.0	1.7x	12.5
Project Zeus	154.0	1.2x	(12.0)



# Fund summary

## Fund Summary

(in \$ except percentages and multiples)

	March 31, 2023	December 31, 2022	Change
<b>Capital Contributions</b>			
Total Commitments (Fund Size)	6,943,167,513	6,943,167,513	-
Less: Unfunded Commitments	2,617,487,361	2,617,487,361	-
<b>Cumulative Paid-In Capital</b>	<b>4,325,680,152</b>	<b>4,325,680,152</b>	-
Paid-In Capital to Committed Capital (PICC)	62.3%	62.3%	-
<b>Fund Summary</b>			
Partnership Investments	5,785,900,038	5,792,446,253	(6,546,215)
Cash and Other Net Assets (Liabilities)	(240,652,064)	(202,403,082)	(38,248,982)
<b>Partners' Equity (NAV)</b>	<b>5,545,247,974</b>	<b>5,590,043,171</b>	<b>(44,795,197)</b>
Cumulative Distributions	1,708,048,960	1,566,214,682	141,834,278
<b>Fund Total Value</b>	<b>7,253,296,934</b>	<b>7,156,257,853</b>	<b>97,039,081</b>
<b>Net LP Valuation Metrics</b>			
DPI (Distributions to Paid-In Capital)	0.38x	0.35x	0.03x
TVPI (Total Value to Paid-In Capital)	1.58x	1.56x	0.02x
Net IRR	37.0%	41.6%	(4.6%)

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**Dover Street X L.P.**

# Supplemental portfolio information

In order to provide transparency into the portfolio, the following Supplemental Portfolio Information section of the report shows the look-through performance and metrics of the portfolio and companies. The data reflects the effective ownership of the underlying assets.

Given the structure of private markets funds, the underlying portfolio assets can be held through special purpose vehicles, including deal-specific structures, aggregators, HarbourVest commingled funds, and other entities.

This data may not equal the Fund Summary section due to the structuring of vehicles, use of leverage, working capital, and cash flow timing.

# Portfolio Summary

March 31, 2023

(\$ thousands except percentages and multiples)

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
<b>Dover X Fund</b>												
<b>Primary</b>												
Apax X L.P.	Europe	Buyout	2020	4,274.4	See Undisclosed Investments			3,978.8				
Ares Corporate Opportunities Fund VI, L.P.	North America	Buyout	2021	4,274.4	See Undisclosed Investments			3,364.5				
Audax Private Equity Fund VII-B, L.P.	North America	Buyout		4,274.4	See Undisclosed Investments							
Baring Asia Private Equity Fund VIII, L.P.	Asia	Buyout	2023	4,274.4	See Undisclosed Investments			(4.3)				
BC Partners Fund XI	Europe	Buyout	2021	5,096.8	See Undisclosed Investments							
Blackstone Tactical Opportunities Fund IV L.P.	North America	Buyout		4,274.4	See Undisclosed Investments			(97.5)				
Bregal Unternehmerkapital III SCSp	Europe	Buyout	2021	3,723.2	2,348.6	-	-	2,656.8	2,656.8	1.1x	223.8	14.9%
Bridgepoint Europe VII	Europe	Buyout		4,633.0	-	-	-	(79.5)	(79.5)	-	(29.1)	NM
CapVest Equity Partners V SCSp	Europe	Buyout	2023	9,265.4	171.5	-	-	(33.4)	(33.4)	-0.2x	30.4	NM
Centerbridge Capital Partners IV, L.P.	North America	Buyout	2021	4,274.4	See Undisclosed Investments			2,846.5				
Clayton, Dubilier & Rice Fund XI, L.P.	North America	Buyout	2021	8,548.8	5,995.6	-	-	6,299.9	6,299.9	1.1x	181.2	5.6%
CPEChina Fund IV, L.P.	Asia	Venture/Growth	2021	3,432.9	1,440.1	11.0	-	1,306.8	1,317.8	0.9x	29.9	(6.8%)
CVC Capital Partners Asia V L.P.	Asia	Buyout	2020	8,548.8	5,939.8	8.6	-	7,456.5	7,465.1	1.3x	341.4	23.4%
Francisco Partners VI, L.P.	North America	Buyout	2021	2,137.2	1,571.9	-	-	1,803.2	1,803.2	1.1x	77.3	13.0%
Francisco Partners VII, L.P.	North America	Buyout		2,137.2	See Undisclosed Investments							
FSN Capital VI	Europe	Buyout	2021	4,709.8	2,991.6	-	-	3,094.2	3,094.2	1.0x	86.3	3.9%
GI Partners Fund VI LP	North America	Buyout	2021	4,274.4	See Undisclosed Investments			2,659.5				
Green Equity Investors IX, L.P.	North America	Buyout		8,548.8	-	-	-	(15.2)	(15.2)	-	(3.8)	NM
Green Equity Investors VIII, L.P.	North America	Buyout	2020	8,548.8	7,381.0	(5.9)	-	8,444.2	8,438.3	1.1x	331.7	8.7%
IDG China Venture Capital Fund VII L.P.	Asia	Venture/Growth	2022	12,823.2	See Undisclosed Investments			1,164.8				
KKR Asian Fund IV SCSp	Asia	Buyout	2021	4,787.3	See Undisclosed Investments			1,885.0				

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**Dover Street X L.P.**

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
KKR European Fund VI (USD) SCSp	Europe	Buyout	2023	8,548.8	-	-	-	(156.9)	(156.9)	-	(39.3)	NM
L Catterton IX, L.P.	North America	Buyout	2021	4,303.4	3,338.9	-	-	3,818.4	3,818.4	1.1x	121.4	12.4%
MBK Partners Fund V, L.P.	Asia	Buyout	2021	8,548.8	4,076.0	-	-	5,757.9	5,757.9	1.4x	1,463.6	41.5%
Montagu VI L.P.	Europe	Buyout	2021	4,752.9	2,158.8	0.4	-	2,403.5	2,403.9	1.1x	93.4	7.7%
New Mountain Partners VI, L.P.	North America	Buyout	2021	4,274.4	<i>See Undisclosed Investments</i>				3,002.0			
Nordic Capital Fund XI, L.P.	Europe	Buyout		4,633.0	<i>See Undisclosed Investments</i>							
Nordic Capital X, L.P.	Europe	Buyout	2021	4,641.8	<i>See Undisclosed Investments</i>				3,859.8			
Oak Hill Capital Partners V, L.P.	North America	Buyout	2021	4,274.4	<i>See Undisclosed Investments</i>				5,012.9			
Oakley Capital V-B1 SCSp	Europe	Buyout	2022	4,579.3	<i>See Undisclosed Investments</i>				533.6			
PAI Partners VIII-1 SCSp	Europe	Buyout	2023	4,633.0	<i>See Undisclosed Investments</i>							
PSG V, L.P.	North America	Venture/Growth	2021	4,274.4	<i>See Undisclosed Investments</i>				1,816.8			
Roark Capital Partners VI LP	North America	Buyout	2021	4,279.6	<i>See Undisclosed Investments</i>							
TCV XI, L.P.	North America	Venture/Growth	2021	1,709.8	875.1	-	-	795.0	795.0	0.9x	4.8	(6.7%)
The Veritas Capital Fund VII, L.P.	North America	Buyout	2020	4,274.4	<i>See Undisclosed Investments</i>				5,626.5			
The Veritas Capital Fund VIII, L.P.	North America	Buyout	2022	4,274.4	<i>See Undisclosed Investments</i>							
Thomas H. Lee Equity Fund IX, L.P.	North America	Buyout	2022	4,274.4	<i>See Undisclosed Investments</i>				1,203.5			
Tiger Global Private Investment Partners XV, L.P.	North America	Venture/Growth	2022	4,274.4	<i>See Undisclosed Investments</i>				2,976.2			
TPG Growth V, L.P.	North America	Buyout	2021	4,304.9	2,484.5	29.5	-	3,184.8	3,214.3	1.3x	15.0	23.4%
Trident IX, L.P.	North America	Buyout	2022	4,274.4	1,394.7	-	-	1,298.7	1,298.7	0.9x	(26.6)	NM
Trident VIII, L.P.	North America	Buyout	2020	2,564.6	2,240.1	19.0	-	2,920.9	2,939.8	1.3x	(27.3)	14.1%
WCAS XIV, L.P.	North America	Buyout	2022	4,274.4	<i>See Undisclosed Investments</i>				249.5			
Undisclosed Investments					40,260.5	(47.7)		5,477.1	45,507.4		1,059.0	
<b>Primary Subtotal</b>				<b>212,831.1</b>	<b>84,668.6</b>	<b>15.0</b>	<b>-</b>	<b>96,510.5</b>	<b>96,525.5</b>	<b>1.1x</b>	<b>3,932.8</b>	
<b>Secondary</b>												
Project Antarctica	Europe	Buyout	2019	234,567.7	223,167.7	125,213.1	0.6x	175,342.5	300,555.6	1.3x	(1,133.2)	10.2%
Project Artemis	Europe	Buyout	2020	58,407.4	55,077.6	(45.1)	-	81,829.8	81,784.7	1.5x	2,238.8	15.4%
Project Ash	Europe	Buyout	2020	34,482.6	30,534.1	9,100.9	0.3x	29,200.0	38,300.9	1.3x	1,531.2	12.0%
Project Atlas	Emerging Markets	Venture/Growth	2022	138,832.0	126,845.0	-	-	107,983.3	107,983.3	0.9x	8,562.4	(14.7%)

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**Dover Street X L.P.**

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
Project Balvenie	North America	Buyout	2021	113,980.0	86,544.6	27,041.8	0.3x	83,224.5	110,266.3	1.3x	6,229.7	18.2%
Project Boreal	Europe	Credit	2019	31,441.5	31,441.5	18,209.6	0.6x	31,624.7	49,834.3	1.6x	1,168.4	18.6%
Project Boylston	North America	Buyout	2021	254,387.9	174,120.0	65,330.1	0.4x	176,192.9	241,523.0	1.4x	1,176.9	33.5%
Project Cadence	Asia	Venture/Growth	2022	71,809.7	63,752.8	-	-	76,952.5	76,952.5	1.2x	1,973.2	19.1%
Project Ceres	Europe	Buyout	2021	57,195.0	42,835.8	-	-	54,141.6	54,141.6	1.3x	1,400.3	19.4%
Project Cereza	Europe	Buyout	2021	69,074.1	68,517.2	1,473.3	-	78,025.7	79,499.0	1.2x	4,664.6	12.4%
Project Chimera	North America	Buyout	2020	368,834.4	313,391.5	336,922.8	1.1x	273,036.4	609,959.2	1.9x	2,208.1	89.0%
Project Clover	North America	Buyout	2019	229,187.9	194,667.7	137,669.3	0.7x	198,360.8	336,030.2	1.7x	4,425.5	26.1%
Project Crestone	North America	Credit	2020	47,407.3	47,407.3	18,033.1	0.4x	58,036.2	76,069.3	1.6x	734.0	23.3%
Project Digital	North America	Buyout	2021	85,487.8	71,239.8	-	-	82,183.5	82,183.5	1.2x	244.9	8.0%
Project Eight	Europe	Buyout	2020	341,068.0	241,048.9	141,936.9	0.6x	261,724.2	403,661.1	1.7x	10,681.4	48.5%
Project Fig	North America	Buyout	2021	673,739.7	333,621.4	102,399.4	0.3x	338,242.1	440,641.4	1.3x	22,791.3	29.5%
Project Gallop	Asia	Venture/Growth	2020	178,655.5	170,032.3	12,819.1	0.1x	949,794.5	962,613.6	5.7x	292.3	104.0%
Project Giant	Europe	Buyout	2021	273,971.3	242,817.7	225.2	-	302,177.4	302,402.7	1.2x	22,749.8	14.2%
Project Grasshopper	North America	Buyout	2021	166,983.3	120,409.4	65,565.0	0.5x	131,524.9	197,089.9	1.6x	1,432.2	34.9%
Project Haven	Europe	Buyout	2021	51,305.5	24,084.1	-	-	41,291.8	41,291.8	1.7x	143.1	56.0%
Project Hercules	Europe	Buyout	2020	106,313.2	73,267.5	-	-	96,812.2	96,812.2	1.3x	5,948.9	12.5%
Project Hybrid	North America	Venture/Growth	2020	66,631.3	56,842.5	48,548.8	0.9x	26,685.3	75,234.1	1.3x	(331.3)	25.1%
Project ICON	North America	Buyout	2019	47,553.0	43,874.2	50,565.7	1.2x	51,841.6	102,407.3	2.3x	604.4	51.1%
Project Innovation	North America	Venture/Growth	2021	71,056.0	54,843.4	-	-	49,239.3	49,239.3	0.9x	(573.1)	(7.5%)
Project Kansas	Europe	Venture/Growth	2021	49,739.9	47,735.1	19,459.0	0.4x	52,734.0	72,193.0	1.5x	651.9	40.1%
Project Kenobi	North America	Buyout	2022	149,293.1	85,886.2	-	-	98,382.2	98,382.2	1.1x	1,316.2	13.4%
Project Lagoon	Europe	Buyout	2020	59,471.9	59,471.9	105,356.0	1.8x	74,613.7	179,969.7	3.0x	2,141.0	42.6%
Project Lloyds	Europe	Buyout	2020	95,517.0	80,100.3	-	-	135,222.2	135,222.2	1.7x	2,399.8	27.2%
Project Mandalorian	North America	Buyout	2022	73,519.5	68,390.2	-	-	68,010.4	68,010.4	1.0x	(107.9)	NM
Project Mesa	North America	Buyout	2020	49,685.6	47,622.1	-	-	84,060.3	84,060.3	1.8x	3,221.4	31.4%
Project Newton	North America	Buyout	2020	72,037.5	60,747.6	17,349.3	0.3x	98,252.0	115,601.3	1.9x	2,547.2	51.3%
Project Orion	North America	Buyout	2022	89,693.9	61,044.4	5,866.0	0.1x	78,743.9	84,609.9	1.4x	2,470.0	NM
Project Oyster	Europe	Buyout	2022	106,796.9	-	-	-	-	-	-	-	NM
Project Parcel	North America	Buyout	2022	78,447.5	65,040.8	-	-	68,018.6	68,018.6	1.0x	(145.0)	4.3%
Project Pearl	Europe	Buyout	2022	46,250.6	34,652.7	26.5	-	45,052.8	45,079.4	1.3x	13.9	NM
Project Pioneer	Asia	Buyout	2022	71,760.3	27,897.5	-	-	36,828.6	36,828.6	1.3x	9,411.4	NM
Project Plymouth	North America	Buyout	2022	68,034.4	68,034.4	-	-	71,229.6	71,229.6	1.0x	-	NM
Project Pomelo	Europe	Buyout	2022	286,157.6	124,860.6	26,518.6	0.2x	132,989.2	159,507.7	1.3x	3,589.9	NM

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Dover Street X L.P.

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
Project Porcini	Europe	Buyout	2020	136,413.7	70,102.9	-	-	62,497.0	62,497.0	0.9x	8,634.2	(5.6%)
Project Purple	North America	Buyout	2021	85,487.8	63,334.1	95,670.8	1.5x	39,891.3	135,562.1	2.1x	(759.6)	74.4%
Project Raindrop	Europe	Buyout	2022	60,000.2	-	-	-	3,644.3	3,644.3	-	844.1	NM
Project Roast	North America	Buyout	2022	165,048.2	99,467.8	-	-	122,817.0	122,817.0	1.2x	(667.5)	NM
Project Sapphire	North America	Buyout	2020	244,612.4	218,558.5	97,258.4	0.4x	210,314.5	307,572.9	1.4x	(3,628.5)	21.3%
Project Shield	North America	Buyout	2020	81,981.3	80,937.0	-	-	129,497.1	129,497.1	1.6x	(100.2)	19.2%
Project Spike	North America	Venture/Growth	2019	113,624.0	103,159.2	50,609.5	0.5x	137,399.0	188,008.4	1.8x	402.0	20.7%
Project Spire	North America	Buyout	2020	77,630.7	55,722.3	13,838.8	0.2x	116,053.9	129,892.7	2.3x	5,189.5	58.0%
Project Sunshine	Europe	Buyout	2019	126,478.7	122,891.5	-	-	206,125.3	206,125.3	1.7x	10,196.5	17.4%
Project Tilburg	North America	Buyout	2021	173,919.4	131,675.1	40,417.9	0.3x	139,795.8	180,213.6	1.4x	(2,823.1)	40.4%
Project Timber II	Europe	Venture/Growth	2021	149,868.8	135,230.5	515.4	-	197,898.9	198,414.4	1.5x	2,248.4	38.3%
Project Triangle	Asia	Buyout	2019	59,770.0	52,447.2	61,292.5	1.2x	81,792.7	143,085.2	2.7x	6,112.8	61.7%
Project Twenty-Four	North America	Buyout	2022	39,395.9	4,453.3	6.6	-	9,482.9	9,489.6	2.1x	946.5	NM
Project Vision	North America	Venture/Growth	2022	57,611.9	5,664.3	-	-	9,413.2	9,413.2	1.7x	2,193.1	NM
Project Voyage	North America	Buyout	2022	537,814.4	262,717.5	55,223.3	0.2x	289,332.0	344,555.3	1.3x	12,338.6	40.8%
Project Zeus	North America	Buyout	2021	131,663.4	126,301.5	-	-	146,115.8	146,115.8	1.2x	(10,221.3)	9.7%
<b>Secondary Subtotal</b>				<b>7,310,098.6</b>	<b>5,254,530.9</b>	<b>1,750,417.8</b>	<b>0.3x</b>	<b>6,701,675.8</b>	<b>8,452,093.6</b>	<b>1.6x</b>	<b>157,579.2</b>	
<b>Dover X Fund Subtotal</b>				<b>7,522,929.7</b>	<b>5,339,199.5</b>	<b>1,750,432.7</b>	<b>0.3x</b>	<b>6,798,186.4</b>	<b>8,548,619.1</b>	<b>1.6x</b>	<b>161,512.0</b>	
<b>Grand Total</b>				<b>7,522,929.7</b>	<b>5,339,199.5</b>	<b>1,750,432.7</b>	<b>0.3x</b>	<b>6,798,186.4</b>	<b>8,548,619.1</b>	<b>1.6x</b>	<b>161,512.0</b>	

Detail may not add to totals and subtotals due to rounding.

Each IRR is calculated based on the HarbourVest fund's cash flows to and from the investment and may not be the same performance reported by the manager or other investors. IRRs are provided for investments where the initial cash flow occurred more than 12 months prior.

At the request of certain managers, performance can not be disclosed due to confidentiality. The aggregate performance is provided in Undisclosed Investments.

# Supplemental company information

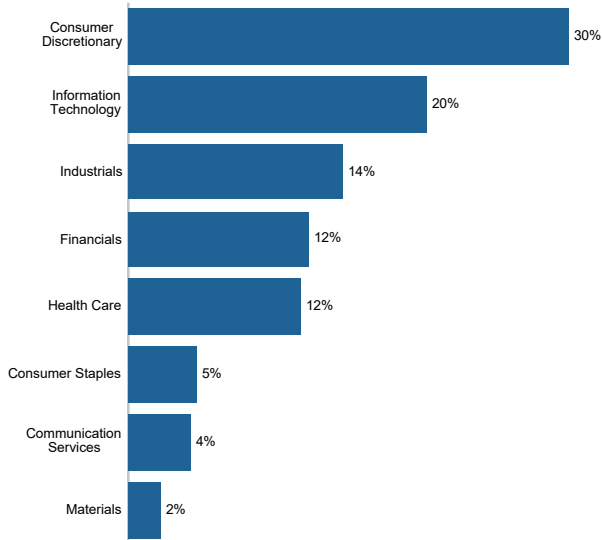


# Company Diversification - Based on Current Value

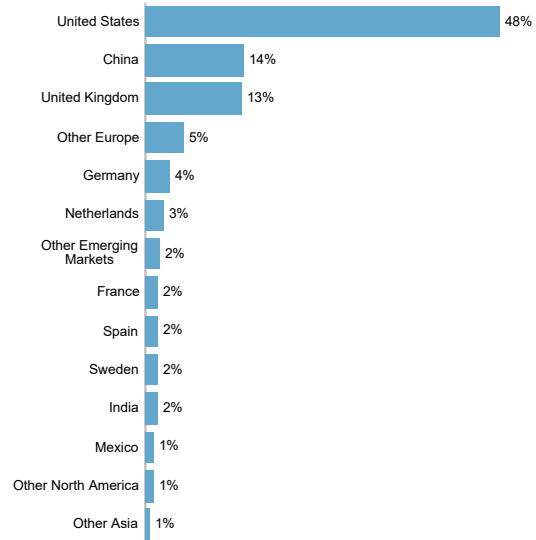
March 31, 2023

Total Companies: 4,032

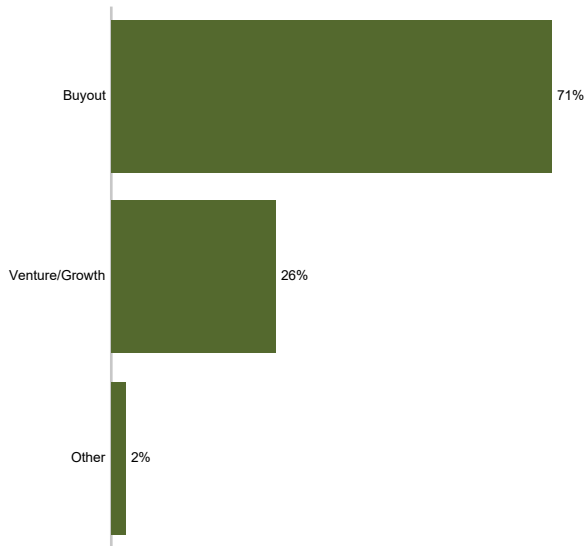
## INDUSTRY



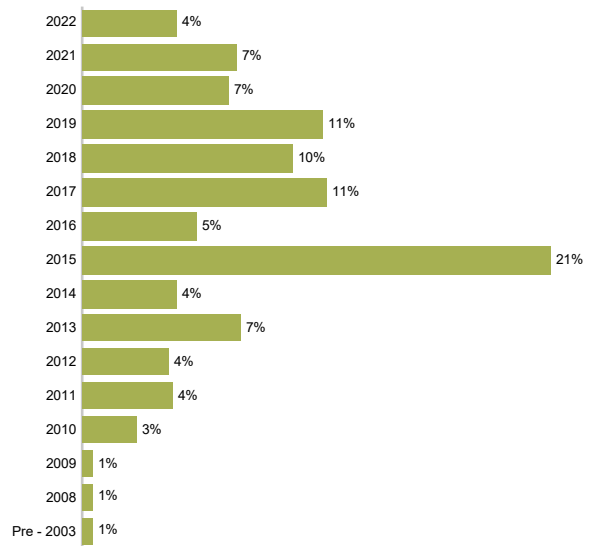
## GEOGRAPHY



## STAGE



## YEAR OF INITIAL INVESTMENT

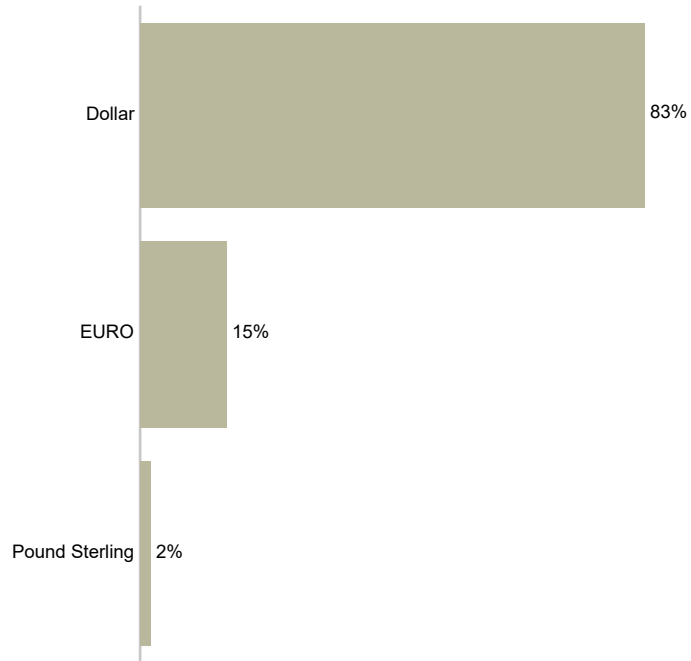


Percentages may not total 100% due to rounding.

# Currency Diversification - Based on Current Value

## March 31, 2023

### CURRENCY



*Percentages may not total 100% due to rounding.*

*Diversification for primary funds and secondary investments is based on the underlying fund's investing currency.*

# Largest Underlying Companies

March 31, 2023

In aggregate, these investments represent 35% of current portfolio

Company Name	Ticker	Primary Location	Current Value
Sheln		China	10.7%
Froneri Limited		United Kingdom	2.1%
Action Nederland BV		Netherlands	2.0%
Howden Group Holdings		United Kingdom	1.8%
Allied Universal		United States	1.4%
CHG Healthcare Services, Inc.		United States	1.3%
FlixMobility GmbH		Germany	1.2%
Pro Unlimited, Inc.		United States	1.0%
TEAM Risk Management Strategies, Inc		United States	1.0%
Inspire Brands, Inc.		United States	0.9%
CLO Equity		United States	0.9%
Press Ganey Associates, Inc.		United States	0.9%
DigiCert, Inc.		United States	0.9%
Verisure		Sweden	0.9%
Argus Media		United Kingdom	0.9%
Smarsh, Inc.		United States	0.9%
BMS Group		United Kingdom	0.8%
Belron		United States	0.8%
Sanfer		Mexico	0.8%
Internet Brands, Inc.		United States	0.8%
Duravant		United States	0.7%
Care UK, PLC		United Kingdom	0.7%
IQ-EQ		Luxembourg	0.7%
Vastu Housing		India	0.6%
The Dwyer Group (TDG Investment)		United States	0.6%

*Companies can be held in multiple funds.*

# M&A Activity

## January 1, 2023 to March 31, 2023

### YTD Selected Underlying Company M&A Events

Company Name	Acquired By	Manager(s)	Portfolio(s)	Project(s)
KnowBe4	Vista Equity Partners	Vista Equity Partners	Secondary	Project Chimera
Howden Compressors	Chart Industries, Inc.	KPS Capital Partners	Secondary	Project Orion
1Life Healthcare, Inc.	Amazon.com, Inc.	Carlyle U.S. Buyout	Secondary	Project Voyage
ServiceMax, Inc.	PTC, Inc.	Silver Lake Management, L.L.C.	Secondary	Project Fig, Project Orion, Project Voyage
Paya, Inc.	Nuvei Corporation	GTCR, L.L.C.	Secondary	Project Orion
Axis Cyber Security	Hewlett-Packard Company	Spark Capital	Secondary	Project Voyage
Apex Companies	Morgan Stanley Dean Witter Capital Partners	Sentinel Capital Partners	Secondary	Project Orion
Mielle Organics	Procter & Gamble	Berkshire Partners LLC	Secondary	Project Boylston, Project ICON, Project Orion, Project Spire
Agrivida	Novus International	Kleiner Perkins	Secondary	Project ICON
Brand Networks	Augeo Affinity Marketing, Inc.	AEA Investors LLC	Secondary	Project Chimera
Bulgin	Warburg Pincus	Equistone Partners (formerly Barclays PE)	Secondary	Project Voyage
Clyde Technologies	Cover Genius	Spark Capital	Secondary	Project Voyage
Elekeiroz	Oswaldo Cruz Química	H.I.G. Capital	Secondary	Project Orion
Eruptr	Amulet Capital Partners, Athyrium Capital Management	H.I.G. Capital	Secondary	Project Orion
Fasteners	Monroe Engineering	AIP, LLC	Secondary	Project Voyage

*Companies can be held in multiple funds.*

# AUDITED FINANCIAL STATEMENTS

HarbourVest Partners Co-Investment Fund VI L.P.  
Year ended December 31, 2022  
With Report of Independent Auditors

HarbourVest Partners Co-Investment Fund VI L.P.  
Audited Financial Statements  
Year ended December 31, 2022

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## **Report of Independent Auditors**

To the General Partner of HarbourVest Partners Co-Investment Fund VI L.P.

### **Opinion**

We have audited the financial statements of HarbourVest Co-Investment Fund VI L.P. (the “Partnership”), which comprise the balance sheet, including the condensed schedule of investments, as of December 31, 2022, and the related statements of operations, changes in partners’ equity and cash flows for the year ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Partnership at December 31, 2022, and the results of its operations, changes in its partners’ equity and its cash flows for the year ended December 31, 2022 in accordance with accounting principles generally accepted in the United States of America.

### **Basis for Opinion**

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership’s ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

### **Auditor’s Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.



In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

*Ernst + Young LLP*

May 11, 2023



HarbourVest Partners Co-Investment Fund VI L.P.  
 Balance Sheet  
 December 31, 2022  
*In U.S. Dollars*

**Assets**

Investment in <b>HarbourVest Partners Co-Investment Fund VI Aggregator L.P.</b>	935,617,499
Cash and equivalents	5,690,288
Accounts receivable	110,000
Due from affiliate	13,605

Total assets	<b><u>\$941,431,392</u></b>
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**Liabilities and partners' equity**

Liabilities:

Notes payable, net of deferred financing costs	21,842,972
Accounts payable and accrued expenses	176,614
Management fee payable	39,114
Accounts payable to HarbourVest Partners L.P.	23,825
Due to affiliate	13,605
Total liabilities	<u>22,096,130</u>

Partners' equity:

Paid-in capital and allocated profits and losses, less syndication costs:

General Partner	9,406,858
Less: capital contributions receivable from General Partner:	<u>(9,359,304)</u>
	47,554
Limited Partners	<u>919,287,708</u>
Total partners' equity	<u>919,335,262</u>

Total liabilities and partners' equity	<b><u>\$941,431,392</u></b>
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*The accompanying notes and the attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

HarbourVest Partners Co-Investment Fund VI L.P.  
Statement of Operations  
Year ended December 31, 2022  
In U.S. Dollars

Net investment loss allocated from <b>HarbourVest Partners Co-Investment VI Aggregator L.P.</b>	
Investment income:	
Interest from investments held for syndication	1,566,753
Interest and dividends from cash and equivalents	590,146
	<u>2,156,899</u>
Investment expenses:	
Interest expense	30,587,527
Professional fees	4,080,091
Organization expenses	1,228,691
Administrative expense	103,422
Other expenses	40,941
	<u>36,040,672</u>
Net investment loss allocated from <b>HarbourVest Partners Co-Investment VI Aggregator L.P.</b>	<u>(33,883,773)</u>
<b>Partnership income:</b>	
Interest from subsequent closings	557,146
Dividends from cash and equivalents	10,377
	<u>567,523</u>
<b>Partnership expenses:</b>	
Management fee, net of offset	8,454,994
Interest and debt financing expenses	3,349,821
Professional fees	182,269
Administrative expense	30,000
Other expenses	12,774
	<u>12,029,858</u>
Net investment loss	<u>(45,346,108)</u>
Realized and unrealized gains (losses) on investments allocated from <b>HarbourVest Partners Co-Investment VI Aggregator L.P.</b>	
Net realized gain (loss) on:	
Partnership investments	(2,185,571)
Direct investments	(6,048,544)
	<u>(8,234,115)</u>
Net change in unrealized appreciation (depreciation) on:	
Partnership investments	4,805,868
Direct investments	31,190,734
	<u>35,996,602</u>
Net gain on investments	<u>27,762,487</u>
Net loss	<u><b>(\$17,583,621)</b></u>

The accompanying notes and the attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.

HarbourVest Partners Co-Investment Fund VI L.P.  
Statement of Changes in Partners' Equity  
Year ended December 31, 2022  
In U.S. Dollars

	<u>General Partner</u>	<u>Limited Partners</u>	<u>Total</u>
Partners' equity at December 31, 2021	2,519,414	9,707,894	12,227,308
Contributions from partners	9,359,304	926,571,075	935,930,379
Increase in capital contributions receivable	(9,359,304)	-	(9,359,304)
Allocation of net income (loss)			
Share of net income (loss)	(67,225)	(15,111,761)	(15,178,986)
Carried interest allocation	(2,404,635)	-	(2,404,635)
Syndication costs	-	(1,879,500)	(1,879,500)
Partners' equity at December 31, 2022	<u>\$47,554</u>	<u>\$919,287,708</u>	<u>\$919,335,262</u>

*The accompanying notes and the attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

HarbourVest Partners Co-Investment Fund VI L.P.  
Statement of Cash Flows  
Year ended December 31, 2022  
In U.S. Dollars

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**Operating activities**

Net loss	(17,583,621)
Adjustments to reconcile net loss to net cash used in operating activities:	
Payments made on partnership investment commitments	(926,571,075)
Net realized (gain) loss on partnership investments	2,185,571
Net realized (gain) loss on direct investments	6,048,544
Net change in unrealized (appreciation) depreciation on partnership investments	(4,805,868)
Net change in unrealized (appreciation) depreciation on direct investments	(31,190,734)
Net investment loss allocated from investment	33,883,773
Net change in management fee payable	(1,097,079)
Other	(459,175)
Net cash used in operating activities	<u>(939,589,664)</u>

**Financing activities**

Contributions from partners	926,571,075
Borrowings from notes payable	20,100,000
Syndication costs	(1,879,500)
Net cash provided by financing activities	<u>944,791,575</u>

Net increase in cash and equivalents 5,201,911

Cash and equivalents at the beginning of year 488,377

Cash and equivalents at the end of year **\$5,690,288**

**Supplemental disclosure:**

Cash paid for interest during the year \$391,752

*The accompanying notes and the attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

## 1. Partnership

HarbourVest Partners Co-Investment Fund VI L.P. (the "Partnership") was legally formed on October 16, 2020 as a limited partnership under Delaware law and began admitting limited partners on March 31, 2021. The purpose of the Partnership is to make a commitment as a limited partner in HarbourVest Partners Co-Investment VI Aggregator L.P. (the "Aggregating Partnership"). The Aggregating Partnership shall make investments with a primary emphasis on equity-oriented investments in management buy-in, management buy-out, leveraged buy-out, recapitalization, growth equity, special situation and mezzanine transactions (such investments being referred to as "Direct Investments"). In addition, the Aggregating Partnership may make selective investments in investments in partnerships or other pooled investment vehicles ("Primary Partnership Investments") which, in turn, make private equity investments. The Partnership will primarily invest in entities which intend to operate principally in North America, Europe, Latin America, Asia and Australia. The investment period is scheduled to end after the earliest of (i) such date as may be determined by limited partners holding in the aggregate sharing percentages equal to 80% of the total sharing percentages and written notice to the General Partner, (ii) April 1, 2026 (the fifth anniversary of the Commencement date) and (iii) such date as determined by the General Partner and written notice to the limited partners (the "Investment Period Termination Date"). The Partnership commenced operations and began charging management fees as of April 1, 2021. The first capital call was made on April 27, 2022.

As of December 31, 2022, Co-Investment VI Associates L.P. ("General Partner") and limited partners had committed \$3,743,721,515 in capital of which \$935,930,379 or 25% has been called. The remaining unfunded capital commitments of \$2,807,791,136 are due upon not less than 10 days prior written notice from the General Partner. The General Partner has agreed to contribute capital to the Partnership in an aggregate amount equal to 1% of the aggregate capital contributions of all partners. Such amount may be paid by the General Partner upon and to the extent of distributions made by the Partnership to the General Partner, but in no event later than the end of the Partnership's taxable year in which the General Partner's interest is liquidated (or, if later, within 90 days after the date of such liquidation). The amount due from the General Partner at December 31, 2022 was \$9,359,304.

Net profits and losses (defined as "Net Profits" or "Net Losses" in the Partnership agreement) are allocated to the partners in proportion to their sharing percentages, except for management fees and any excess offering expenses and the Partnership's share of any fees and expenses paid to placement agents related to the offering of interests (syndication costs) which are allocated to the limited partners. If a limited partner gives written notice to the General Partner that such limited partner is prohibited from paying placement fees and the General Partner has consented to the notice, then such limited partner will not be allocated any losses with respect to placement fees and will be allocated additional management fees in an amount equal to the amount of the placement fee it would have otherwise borne, and the allocations of placement fees and management fees to the other limited partners will be correspondingly adjusted. The placement fees for the year ended December 31, 2022 were \$1,879,500.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

HarbourVest Partners Co-Investment Fund VI L.P.  
Notes to Financial Statements

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Net direct profits and losses, as defined in the partnership agreement, represent the net profits and losses derived directly or indirectly from direct investments. If the Partnership has cumulative net direct profits, then all such cumulative net direct profits and losses are allocated 12.5% to the General Partner (carried interest) and 87.5% to all partners in proportion to their sharing percentages, as defined in the partnership agreement. If the Partnership has cumulative net direct losses, then all such cumulative net direct losses are allocated to all partners in proportion to their respective sharing percentages. The net direct investment profits, including realized and unrealized gains and losses, subject to carried interest for the year ended December 31, 2022 were \$21,416,817.

The General Partner will make adjustments to the allocations of net investment profits and net investment losses to the extent necessary to take into account the General Partner's obligations as they relate to the 8% annualized effective internal rate of return (the "Preferred Return"). If the limited partners would not receive the preferred return were the Partnership to be liquidated, then, to the extent necessary, such net investment profits or net investment losses shall be re-allocated among the partners in a manner such that, to the extent practicable, the balance of each partner's capital account equals the amount of such partner would be entitled to receive if the Partnership were to be liquidated.

HV-ECI II LLC (the "Special Limited Partner") is wholly owned by HarbourVest Partners L.P. (the "Management Company"). The General Partner may allocate to the Special Limited Partner solely out of net direct profits and losses, net profits and losses otherwise allocable to the General Partner, any items of income, gain, loss and deductions effectively connected with the conduct of a trade or business within the United States. For the purpose of allocating net direct profits and losses, net profits and losses amounts allocated to the Special Limited Partner will be treated as having been allocated to the General Partner. There were no amounts allocated from the General Partner to the Special Limited Partner as of December 31, 2022.

The General Partner may permit electing limited partners to participate in portfolio investments through a subsidiary of the Partnership that is treated as a corporation for U.S. federal income tax purposes (a "Blocker Corporation"). If the General Partner determines to form a Blocker Corporation in connection with a potential portfolio investment, then the General Partner will offer to each limited partner the opportunity to elect to have its capital contributions with respect to such portfolio investment invested through such blocker corporation, the General Partner will also form an intermediate entity that is treated as a partnership for U.S. federal income tax purposes, and the Partnership and such blocker corporation will invest in such portfolio investment through such intermediate entity. The profit and loss allocable by such intermediate entity shall be allocated as follows: (i) the aggregate amount that would have been allocated to the electing limited partners if such portfolio investment had been owned directly by the Partnership shall be allocated to such blocker corporation, and the profits and losses of the Partnership derived from such blocker corporation shall be allocated to the electing limited partners in proportion to their sharing percentages, and (ii) the aggregate amount that would have been allocated to the General Partner and the non-electing limited partners if such portfolio investment had been owned directly by the Partnership shall be allocated to the General Partner and the non-electing limited partners, respectively; and the General Partner will make such adjustments to allocations and distributions and any other items as it shall determine to be equitable.

No limited partner may assign or otherwise transfer all or any part of their interest in the Partnership to another entity unless the General Partner has consented to the transfer in writing in accordance with the partnership agreement.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

The Partnership is scheduled to terminate on April 1, 2031, subject to three one-year extensions, upon such decision by the General Partner.

## **2. Significant Accounting Policies**

### **Method of Accounting**

The financial statements are prepared in conformity with U.S. generally accepted accounting principles. The Partnership is an investment company following the accounting and reporting guidance of the Financial Accounting Standards Boards ("FASB") Accounting Standards Codification ("ASC") Topic 946 Financial Services – Investment Companies.

### **Estimates**

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles requires the General Partner to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **Investment**

The Partnership values its investment in the Aggregating Partnership at fair value. The valuation is based on the value of the Partnership's capital determined from the December 31, 2022 audited financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P., which are attached and are an integral part of the financial statements. Income derived from the Partnership's investment in the Aggregating Partnership is recorded using the equity pick-up method. Under the equity pick-up method of accounting, the Partnership's proportionate share of the net investment income (loss), net realized gains (losses), and aggregate increase or decrease in unrealized appreciation (depreciation), as reported by the underlying Aggregating Partnership, is reflected in the statement of operations.

### **Cash and Equivalents**

The Partnership considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The carrying amount included in the balance sheet for cash and equivalents approximates their fair value.

Cash and cash equivalents may consist of deposits held at a bank or an investment in a money market fund to which the Partnership is exposed to credit risk. As of December 31, 2022, the Partnership held \$5,690,288 in one or more money market funds. Investments in money market funds are recorded at NAV per share and are classified as Level 1 assets.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

### **Organization Expenses**

Pursuant to ASC 720-15, "Start-Up Costs," the costs associated with organizing the Partnership are expensed as incurred.

### **Accounts Receivable**

Accounts receivable includes amounts due from certain limited partners for taxes withheld and remitted and estimated withholding tax payments made on their behalf.

### **Expenses**

The Aggregating Partnership allocates expenses to the Partnership in accordance with the partnership agreement. Additional expenses paid directly by the Partnership may include management fees, tax expenses, professional fees, and other out-of-pocket expenses and are presented separately in the statement of operations.

### **Foreign Currency Transactions**

Foreign currency transactions are translated into U.S. dollars at the exchange rate in effect at the transaction dates. Foreign currency balances are translated at the rates in effect at December 31, 2022. Foreign currency translation is included in realized and unrealized gain (loss) on investments as incurred. The Partnership does not segregate that portion of realized or unrealized gain or loss attributable to foreign currency translation.

### **Deferred Financing Costs**

Deferred financing fees, including loan origination fees, underwriter fees, legal fees, and other costs attributable to acquiring the loan are capitalized in the balance sheet and amortized using the straight-line method, which approximates the effective yield method over the duration of the loan.

### **Income Taxes**

The Partnership has elected to be treated as a partnership for U.S. tax purposes. The Partnership accounts for income taxes under the provisions of ASC 740, "Income Taxes." This standard establishes consistent thresholds as it relates to accounting for income taxes. It defines the threshold for recognizing the benefits of tax-return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority and requires measurement of a tax position meeting the more-likely-than-not criterion, based on the largest benefit that is more than fifty percent likely to be realized. The Partnership may be subject to potential examination by certain taxing authorities in various jurisdictions. Any potential tax liability is also subject to ongoing interpretation of laws by taxing authorities. The tax years under potential examination vary by jurisdiction. The General Partner has analyzed the Partnership's inventory of tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction), and has concluded that no provision for income tax is required in the Partnership's financial statements. Each partner individually may be required to report on its own tax return its pro rata share of the Partnership's taxable income or loss.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*



The Partnership may be subject to taxes imposed by countries in which it invests. Such taxes are generally based on income and/or capital gains earned or repatriated. Foreign taxes, if any, are recorded based on the tax regulations and rates that exist in the foreign markets in which the Partnership invests. To the extent taxes are attributable to certain partners, the amounts are withheld from those partners' distributions and the withholdings are accounted for as deemed non-cash distributions to such partners. To the extent taxes are borne by the Partnership, the amounts are accrued and applied to net investment income, net realized gains and net unrealized appreciation as such income and/or gains are earned, and the Partnership records an estimated deferred tax liability in an amount that would be payable if the securities were disposed of on the valuation date. As of December 31, 2022, there were no deferred tax liabilities at the Partnership level.

### **Market and Other Risk Factors**

The Partnership's investments are subject to various risk factors including market, credit, interest rate and currency risk. Investments are based primarily in the U.S. and thus have concentrations in this region. The Partnership's investments are also subject to the risks associated with investing in leveraged buyout and venture capital transactions that are illiquid and non-publicly traded. Such investments are inherently more sensitive to declines in revenues and to increases in expenses that may occur due to general downward swings in the world economy or other risk factors including increasingly intense competition, rapid changes in technology, changes in federal, state and foreign regulations, and limited capital investments. Since the Partnership's investments generally will involve a high degree of risk, poor performance by a few of the investments could adversely affect the total return to limited partners.

### **3. Management Fees**

The General Partner, or its designee, has agreed to provide management services to the Partnership for which it receives a management fee. In general, the General Partner, or its designee, bears all ordinary costs of administering the Partnership (other than the management fee), except for such expenses as organizational expenses, legal and accounting fees, costs of reporting to the limited partners, and other costs of evaluating, making, holding and selling investments and certain other costs and expenses. The General Partner has retained the Management Company to provide such services.

The management fee commenced on April 1, 2021. For the period from April 1, 2021 through March 31, 2026, the annual management fee is equal to the Applicable Percentage as defined in the LPA of each Limited Partner's pro-rata share of the lesser of (A) cumulative capital invested in, or committed to be invested in, Direct Investments by the Partnership (including commitments financed with indebtedness) calculated on a daily basis and (B) the aggregate capital commitments of the limited partners. The Applicable Percentage, subject to volume fee and early closing reductions as defined in the partnership agreement, is equal to 1.2% for any Limited Partner with a Combined Commitment less than \$5 million and 1.0% for any Limited Partner with a Combined Commitment equal to or greater than \$5 million. No management fee shall be payable with respect to capital invested in, or committed to be invested in Primary Partnership Investments. For the year ended December 31, 2022, the effective annual management fee rate was 0.08%.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

HarbourVest Partners Co-Investment Fund VI L.P.  
Notes to Financial Statements

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The management fee shall be reduced, but not below zero, by the amount of any director's, break-up, management, consulting, monitoring, transaction, or other similar fees received by the General Partner, members of the General Partner or the Management Company from any portfolio entity or proposed portfolio entity. The management fee shall also be reduced, but not below zero, by the amount of any placement fees and expenses paid by the Partnership to placement agents in connection with the formation of the Partnership and the offering and distribution of the interests to the Limited Partners and the amount of any Excess Offering Expenses. During the year ended December 31, 2022, management fees charged by Management Company totaled \$10,334,494, reduced by management fee reimbursements of \$1,879,500 in accordance with the Fund's Partnership Agreement.

#### 4. Financial Highlights

Financial highlights for the year ended December 31, 2022 were as follows:

	Percent (%)
<b><i>Internal rate of return to limited partners since inception:</i></b>	
Beginning of year	<u>NM<sup>^</sup></u>
End of year	<u>(1.5)</u>
<b><i>Ratio to limited partners' average partner's equity:</i></b>	
Net investment loss	<u>(14.8)</u>
Operating expenses	15.7
Carried interest allocation	<u>(0.8)</u>
Total expenses and carried interest	<u>14.9</u>
<b><i>Ratio to limited partners' committed capital:</i></b>	
Operating expenses	<u>1.3</u>

<sup>^</sup> IRR is not determinable as HarbourVest Partners Co-Investment VI L.P. had not made any capital calls or distributions as of December 31, 2021.

Internal rate of return to limited partners is calculated net of carried interest and expenses taking into account the actual dates of the cash inflows (contributions), outflows (distributions), and the ending net asset value at the end of the year (residual value) of the limited partners' capital account as of the measurement date. For the year ended December 31, 2022, the internal rate of return was not annualized.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

Net investment loss is the limited partners' share of investment income, net of operating expenses and the income and expenses allocated from the Aggregating Partnership, and does not include the proportionate share of net gain or loss from underlying investments. Operating expenses include the limited partners' share of the Aggregating Partnership's expenses and expenses allocated from the Aggregating Partnership and do not include the proportionate share of expenses from underlying investments.

The carried interest allocation is the General Partner's share of net income or loss calculated in accordance with the partnership agreement.

The ratios are calculated based on the limited partners' capital taken as a whole. The computation of such ratios based on the amount of net investment income or loss, total expenses and incentive allocation assessed to an individual limited partners' capital may vary from these ratios based on the management fee schedule.

As the Partnership's expenses are largely based on the limited partners' committed capital rather than their average capital, supplemental information has been provided in order to disclose the expense ratio as a percentage of the limited partners' committed capital.

## **5. Related-Party Transactions**

Certain partners of the Management Company serve as members of the advisory committees of certain investee entities and are the partners of HarbourVest Co-Investment VI Associates L.P., the Partnership's General Partner.

Management fees payable to the Management Company as of December 31, 2022 were \$39,114.

Accounts payable to HarbourVest Partners L.P. represents expenses of the Partnership incurred in the ordinary course of business, which have been paid by and are reimbursable to the Management Company at December 31, 2022.

The financial statements include the Partnership's share of the accounts of the Aggregating Partnership, which is approximately 89.25%.

Administrative expenses charged by the Management Company during the year ended December 31, 2022 were \$30,000.

Due from affiliates represents capital called for investments of a related entity incurred in the ordinary course of business which are payable to the Partnership at December 31, 2022.

Due to affiliates represents capital called for investments of a related entity incurred in the ordinary course of business which are reimbursable by the Partnership at December 31, 2022.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

## **6. Investment in HarbourVest Partners Co-Investment Fund VI Aggregator L.P.**

In accordance with ASC 820, "Fair Value Measurement", the Partnership reports its investments at fair value. At December 31, 2022, the Partnership's only fair valued investment is its investment in the Aggregating Partnership. The value of the Partnership's investment in the Aggregating Partnership is based primarily upon the net asset value of the Aggregating Partnership. For further discussion about the Aggregating Partnership's valuation policies, refer to the audited financial statements and footnotes of the Aggregating Partnership.

The investment consists of a limited partnership interest in HarbourVest Partners Co-Investment VI Aggregator L.P., which carries restrictions on redemption as described in the partnership agreement.

## **7. Investment Commitment**

As of December 31, 2022, the Partnership has unfunded investment commitments to HarbourVest Partners Co-Investment VI Aggregator L.P. of \$2,817,150,440 which is payable upon 10 days notice by the General Partner of the Aggregating Partnership.

## **8. Notes Payable**

The Partnership has entered into a \$1,735,000,000 multicurrency revolving credit agreement (the "Facility") with a bank, with a maturity date of April 9, 2024. The credit agreement is shared amongst HarbourVest Partners Co-Investment Fund V L.P., HarbourVest Partners Co-Investment V AIF L.P., HarbourVest Partners Co-Investment Fund V AIV, L.P., HarbourVest Partners Co-Investment Fund VI L.P., and HarbourVest Partners Co-Investment Fund VI AIF L.P. (each a "Borrower"). Under the Facility, the same terms and conditions apply to all Borrowers, and each Borrower is severally liable for its obligations under its established sublimit. There is no cross-collateralization or cross default between borrowers. The Facility is collateralized by the uncalled capital commitments of the Borrowers.

At December 31, 2022, the borrower sublimit commitment assigned to the Partnership was \$1,218,873,413, of which \$24,900,000 was outstanding by the Partnership, which approximates fair value. The interest rate on outstanding debt at December 31, 2022 was 6.2%.

During the year ended December 31, 2022, the Partnership incurred interest expense of \$418,840 and commitment fees of \$788,522. At December 31, 2022, \$3,057,028 of unamortized deferred financing costs incurred in connection with the issuance of the Facility are capitalized on the balance sheet as an offset to notes payable and \$2,142,459 of amortized costs are included in interest and debt financing expenses on the statement of operations.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*

## **9. Indemnifications**

### General Indemnifications

In the normal course of business, the Partnership may enter into contracts that contain a variety of representations and warranties and which provide for general indemnifications. The Partnership's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Partnership that have not yet occurred. Based on the prior experience of the General Partner, the Partnership expects the risk of loss under these indemnifications to be remote.

### General Partner Indemnifications

Consistent with standard business practices in the normal course of business, the Partnership has provided general indemnifications to the General Partner, any affiliate of the General Partner and any person acting on behalf of the General Partner or such affiliate when they act in good faith, in the best interest of the Partnership. The Partnership is unable to develop an estimate of the maximum potential amount of future payments that could potentially result from any hypothetical future claim but expects the risk of having to make any payments under these general business indemnifications to be remote.

## **10. Subsequent Events**

In the preparation of the financial statements, the General Partner has evaluated the effects, if any, of events occurring after December 31, 2022 through May 11, 2023, which is the date that the financial statements were available to be issued. There were no events or material transactions subsequent to December 31, 2022 that required recognition or disclosure in the financial statements.

*The attached financial statements of HarbourVest Partners Co-Investment VI Aggregator L.P. form an integral part of the financial statements.*



## Report of Independent Auditors

To the General Partner of HarbourVest Partners Co-Investment Fund VI L.P.

### Opinion

We have audited the detailed schedules of partners' equity of HarbourVest Partners Co-Investment Fund VI L.P. (the "Partnership") for the year ended December 31, 2022 and for the period from commencement of operations through December 31, 2022 (the "Schedules").

In our opinion, the accompanying Schedules present fairly, in all material respects, the changes in the capital accounts of the partners for the year ended December 31, 2022 and for the period from commencement of operations through to December 31, 2022, in accordance with sections 4.1, 4.2 and 4.3 of the Limited Partnership Agreement of the Partnership, dated March 31, 2021 (the "Partnership Agreement") with respect to the allocation of net operating income (loss), net realized gain (loss), and net unrealized appreciation (depreciation) of investments and in accordance with sections 5.1, 5.2, 5.3 and 5.4 of the Partnership Agreement with respect to the handling of partners' distributions and in accordance with section 9.1 of the Partnership Agreement with respect to the payments of management fees, as described in the footnote to the Schedules.

### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Basis of Accounting

We draw attention to the footnote to the Schedules, which describes the method of calculating the changes in the capital accounts of the partners prescribed by sections 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 5.4 and 9.1 of the Partnership Agreement. As a result, the Schedules may not be suitable for another purpose. Our opinion is not modified with respect to this matter.

### Responsibilities of Management for the Schedules

Management is responsible for the preparation and fair presentation of the Schedules in accordance with sections 4.1, 4.2 and 4.3 of the Partnership Agreement with respect to the allocation of net operating income (loss), net realized gain (loss), and net unrealized appreciation (depreciation) of investments and in accordance with sections 5.1, 5.2, 5.3 and 5.4 of the Partnership Agreement with respect to the handling of partners' distributions. Management also is responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the Schedules that are free of material misstatement, whether due to fraud or error.

### Auditor's Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the Schedules as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the Schedules.



In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the Schedules, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the Schedules.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the Schedules.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

#### **Report on Financial Statements as of December 31, 2022**

We have audited, in accordance with GAAS, the financial statements of the Partnership as of December 31, 2022 and for the year ended December 31, 2022 and our report thereon, dated May 11, 2023 expressed an unmodified opinion on those financial statements.

#### **Restriction on Use**

This report was prepared solely for the information and use of the Partnership in connection with its obligations to its limited partners under the Partnership Agreement and is not intended for use by anyone other than these specified parties.

*Ernst + Young LLP*

May 11, 2023

HarbourVest Partners Co-Investment Fund VI L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 1, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
<b>Limited Partners</b>							
Back Bay Investors	0	100,000	(6,346)	(1,238)	6,572	(203)	98,785
Employees' Retirement System of Baltimore County	69,357	5,000,000	(222,328)	(38,845)	166,330	(10,142)	4,964,372
Boston Water and Sewer Commission Pension Trust	10,604	750,000	(32,472)	(5,827)	24,949	(1,521)	745,733
BRCAP Investment Fund, LP	35,892	2,587,500	(116,913)	(20,102)	86,076	(5,249)	2,567,204
CARE Super	262,591	18,750,000	(809,308)	(145,668)	623,737	(38,033)	18,643,319
Citrine Capital LLC, Series 2008-A	24,275	1,750,000	(79,071)	(13,596)	58,215	(3,550)	1,736,273
City of Orlando OPEB Trust	12,371	875,000	(37,884)	(6,798)	29,108	(1,775)	870,022
HarbourVest Partners Co-Investment VI Feeder Fund L.P.	5,617,599	595,133,575	(29,837,816)	(5,495,297)	25,925,793	(1,207,197)	590,136,657
Concordia Account - 21	52,018	3,750,000	(169,439)	(29,134)	124,747	(7,607)	3,720,586
UMBALTI FBO CPG Vintage Access Fund IV, LLC	103,701	7,500,000	(340,339)	(58,267)	249,495	(15,213)	7,439,377
Denali Peak Investors, L.P.	53,751	3,875,000	(175,087)	(30,105)	128,897	(7,860)	3,844,597
DENSO HV PEP II L.P.	0	6,250,000	(378,668)	(77,404)	410,736	(12,678)	6,191,987
Enervest LLC Tranche 3	0	12,500,000	(730,409)	(154,808)	821,473	(25,356)	12,410,900
Fairfax County Uniformed Retirement System	69,357	5,000,000	(225,918)	(38,845)	166,330	(10,142)	4,960,781
Federated Mutual Insurance Company	34,011	2,500,000	(115,883)	(19,422)	83,165	(5,071)	2,476,800
HarbourVest Frenchmen Street Fund L.P. (Tranche I-1)	127,245	9,000,000	(389,669)	(69,921)	299,394	(18,256)	8,948,793
HarbourVest FRS R3 LLC (Tranche 1)	0	9,375,000	(547,807)	(116,106)	616,126	(19,017)	9,308,196
Georgia Firefighters' Pension Fund	17,673	1,250,000	(54,121)	(9,711)	41,582	(2,536)	1,242,888
Houston Firefighters' Relief and Retirement Fund	121,374	8,750,000	(395,357)	(67,978)	291,077	(17,749)	8,681,367
Board of Administration of the Los Angeles City Employees' Retirement System	176,729	12,500,000	(541,207)	(97,112)	415,825	(25,356)	12,428,879
Massachusetts Mutual Life Insurance Company	104,035	7,500,000	(338,878)	(58,267)	249,495	(15,213)	7,441,172



HarbourVest Partners Co-Investment Fund VI L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 1, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
Louis M. Mayberg Revocable Tr & Manette E. Mayberg Rev Tr Ten Com	26,009	1,875,000	(84,719)	(14,567)	62,374	(3,803)	1,860,293
State Treasurer of the State of Michigan, Custodian of the Michigan Public School Employees' Retirement System, State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges Retirement System	706,917	50,000,000	(2,200,730)	(388,448)	1,663,299	(101,422)	49,679,616
Morgan Stanley Clients	27,476	2,000,000	(91,536)	(15,538)	66,532	(4,057)	1,982,876
MWRA Employees' Retirement System	27,743	2,000,000	(88,931)	(15,538)	66,532	(4,057)	1,985,749
State Highway Patrol Retirement System	69,357	5,000,000	(225,918)	(38,845)	166,330	(10,142)	4,960,781
<i>Ohio National Entities</i>							
Ohio National Life Assurance Corporation	0	1,250,000	(75,733)	(15,481)	82,150	(2,536)	1,238,400
The Ohio National Life Insurance Company	0	5,000,000	(302,934)	(61,923)	328,600	(10,142)	4,953,601
<i>Orlando Police &amp; Fire Entities</i>							
Orlando Police Pension Fund	53,019	3,750,000	(162,362)	(29,134)	124,747	(7,607)	3,728,664
City of Orlando Fire Pension Fund	35,346	2,500,000	(108,241)	(19,422)	83,165	(5,071)	2,485,776
Power Authority of the State of New York Other Post Employment Benefits Trust	35,346	2,500,000	(108,241)	(19,422)	83,165	(5,071)	2,485,776
HarbourVest New Street Fund L.P. (Franklin Series)	108,835	8,000,000	(370,822)	(62,152)	266,110	(16,228)	7,925,743
Fire and Police Pension Fund, San Antonio	69,357	5,000,000	(225,918)	(38,845)	166,330	(10,142)	4,960,781
Sandia Foundation	6,669	500,000	(23,761)	(3,884)	16,632	(1,014)	494,641
Sentry Insurance Company	103,368	7,500,000	(341,800)	(58,267)	249,495	(15,213)	7,437,582
State Street Australia Limited as custodian for Sunsuper Pooled Superannuation Trust	795,281	56,250,000	(2,435,432)	(437,003)	1,871,212	(114,100)	55,929,958
Texas A & M Foundation	104,035	7,500,000	(338,878)	(58,267)	249,495	(15,213)	7,441,172
HarbourVest TJU Declaration Fund L.P.	102,033	7,500,000	(347,646)	(58,267)	249,478	(15,213)	7,430,384

HarbourVest Partners Co-Investment Fund VI L.P.  
**Detailed Schedule of Partners' Equity**  
from JANUARY 1, 2022 to DECEMBER 31, 2022

US Dollars	Capital account at 12/31/2021	Capital contributions	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
Ventura County Employees' Retirement Association	123,710	8,750,000	(378,845)	(67,978)	291,077	(17,749)	8,700,216
Vermont Pension Investment Commission	0	5,000,000	(302,934)	(61,923)	328,600	(10,142)	4,953,601
Virginia Retirement System	350,121	25,000,000	(1,114,979)	(194,224)	831,650	(50,711)	24,821,857
WellSpan Health Master Trust	70,692	5,000,000	(216,483)	(38,845)	166,330	(10,142)	4,971,552
	<b>9,707,894</b>	<b>926,571,075</b>	<b>(45,091,767)</b>	<b>(8,252,420)</b>	<b>38,232,426</b>	<b>(1,879,500)</b>	<b>919,287,708</b>
<b>General Partner</b>							
HarbourVest Co-Investment VI Associates L.P.	2,519,414	0	(254,341)	18,305	(2,235,824)	0	47,554
	<b>\$12,227,308</b>	<b>\$926,571,075</b>	<b>\$(45,346,108)</b>	<b>\$(8,234,115)</b>	<b>\$35,996,602</b>	<b>\$(1,879,500)</b>	<b>\$919,335,262</b>

**NOTE: Totals and subtotals may not recalculate due to rounding.**

**Basis of Presentation:** This detailed schedule of partners' equity represents annual changes in the individual partners' capital accounts, who are the partners represented in the statement of changes in partners' capital included in the accompanying financial statements. The schedule was prepared on the same basis of accounting as described in the Significant Accounting Policies note to the accompanying financial statements. The allocations related to net operating income (loss), net realized gain (loss), net unrealized appreciation (depreciation) of investments, syndication costs, partners' contributions, partners' distributions, and management fee/priority profit share charged, where applicable, were made in accordance with the relevant sections of the Partnership Agreement.

HarbourVest Partners Co-Investment Fund VI L.P.

**Detailed Schedule of Partners' Equity**

from Commencement of Operations (April 1, 2021) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
<b>Limited Partners</b>								
Back Bay Investors	400,000	100,000	846	(6,346)	(1,238)	6,572	(203)	98,785
Employees' Retirement System of Baltimore County	20,000,000	5,000,000	0	(292,164)	(61,923)	328,600	(10,142)	4,964,372
Boston Water and Sewer Commission Pension Trust	3,000,000	750,000	0	(42,747)	(9,288)	49,290	(1,521)	745,733
BRCAP Investment Fund, LP	10,350,000	2,587,500	0	(153,053)	(32,045)	170,051	(5,249)	2,567,204
CARE Super	75,000,000	18,750,000	0	(1,068,688)	(232,211)	1,232,251	(38,033)	18,643,319
Citrine Capital LLC, Series 2008-A	7,000,000	1,750,000	0	(103,514)	(21,673)	115,010	(3,550)	1,736,273
City of Orlando OPEB Trust	3,500,000	875,000	0	(49,872)	(10,837)	57,505	(1,775)	870,022
HarbourVest Partners Co-Investment VI Feeder Fund L.P.	2,380,534,300	595,133,575	251,178	(35,530,102)	(7,370,491)	39,110,872	(1,207,197)	590,136,657
Concordia Account - 21	15,000,000	3,750,000	0	(221,815)	(46,442)	246,450	(7,607)	3,720,586
UMBALTI FBO CPG Vintage Access Fund IV, LLC	30,000,000	7,500,000	0	(445,426)	(92,884)	492,901	(15,213)	7,439,377
Denali Peak Investors, L.P.	15,500,000	3,875,000	0	(229,209)	(47,990)	254,657	(7,860)	3,844,597
DENSO HV PEP II L.P.	25,000,000	6,250,000	52,962	(378,668)	(77,404)	410,736	(12,678)	6,191,987
Enervest LLC Tranche 3	50,000,000	12,500,000	105,925	(730,409)	(154,808)	821,473	(25,356)	12,410,900
Fairfax County Uniformed Retirement System	20,000,000	5,000,000	0	(295,754)	(61,923)	328,600	(10,142)	4,960,781
Federated Mutual Insurance Company	10,000,000	2,500,000	0	(151,468)	(30,962)	164,300	(5,071)	2,476,800
HarbourVest Frenchmen Street Fund L.P. (Tranche I-1)	36,000,000	9,000,000	0	(512,970)	(111,461)	591,481	(18,256)	8,948,793
HarbourVest FRS R3 LLC (Tranche 1)	37,500,000	9,375,000	79,442	(547,807)	(116,106)	616,126	(19,017)	9,308,196
Georgia Firefighters' Pension Fund	5,000,000	1,250,000	0	(71,246)	(15,481)	82,150	(2,536)	1,242,888
Houston Firefighters' Relief and Retirement Fund	35,000,000	8,750,000	0	(517,569)	(108,365)	575,051	(17,749)	8,681,367
Board of Administration of the Los Angeles City Employees' Retirement System	50,000,000	12,500,000	0	(712,458)	(154,808)	821,501	(25,356)	12,428,879
Massachusetts Mutual Life Insurance Company	30,000,000	7,500,000	0	(443,631)	(92,884)	492,901	(15,213)	7,441,172

## Detailed Schedule of Partners' Equity

from Commencement of Operations (April 1, 2021) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
Louis M. Mayberg Revocable Tr & Manette E. Mayberg Rev Tr Ten Com	7,500,000	1,875,000	0	(110,908)	(23,221)	123,225	(3,803)	1,860,293
State Treasurer of the State of Michigan, Custodian of the Michigan Public School Employees' Retirement System, State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges Retirement System	200,000,000	50,000,000	0	(2,885,735)	(619,230)	3,286,004	(101,422)	49,679,616
Morgan Stanley Clients	8,000,000	2,000,000	0	(119,738)	(24,769)	131,440	(4,057)	1,982,876
MWRA Employees' Retirement System	8,000,000	2,000,000	0	(116,865)	(24,769)	131,440	(4,057)	1,985,749
State Highway Patrol Retirement System	20,000,000	5,000,000	0	(295,754)	(61,923)	328,600	(10,142)	4,960,781
<i>Ohio National Entities</i>								
Ohio National Life Assurance Corporation	5,000,000	1,250,000	10,593	(75,733)	(15,481)	82,150	(2,536)	1,238,400
The Ohio National Life Insurance Company	20,000,000	5,000,000	42,371	(302,934)	(61,923)	328,600	(10,142)	4,953,601
<i>Orlando Police &amp; Fire Entities</i>								
Orlando Police Pension Fund	15,000,000	3,750,000	0	(213,738)	(46,442)	246,450	(7,607)	3,728,664
City of Orlando Fire Pension Fund	10,000,000	2,500,000	0	(142,492)	(30,962)	164,300	(5,071)	2,485,776
Power Authority of the State of New York Other Post Employment Benefits Trust	10,000,000	2,500,000	0	(142,492)	(30,962)	164,300	(5,071)	2,485,776
HarbourVest New Street Fund L.P. (Franklin Series)	32,000,000	8,000,000	0	(484,695)	(99,077)	525,742	(16,228)	7,925,743
Fire and Police Pension Fund, San Antonio	20,000,000	5,000,000	0	(295,754)	(61,923)	328,600	(10,142)	4,960,781
Sandia Foundation	2,000,000	500,000	0	(31,011)	(6,192)	32,859	(1,014)	494,641
Sentry Insurance Company	30,000,000	7,500,000	0	(447,221)	(92,884)	492,901	(15,213)	7,437,582
State Street Australia Limited as custodian for Sunsuper Pooled Superannuation Trust	225,000,000	56,250,000	0	(3,206,062)	(696,634)	3,696,754	(114,100)	55,929,958
Texas A & M Foundation	30,000,000	7,500,000	0	(443,631)	(92,884)	492,901	(15,213)	7,441,172
HarbourVest TJU Declaration Fund L.P.	30,000,000	7,500,000	0	(454,401)	(92,884)	492,884	(15,213)	7,430,384
Ventura County Employees' Retirement Association	35,000,000	8,750,000	0	(498,721)	(108,365)	575,051	(17,749)	8,700,216
Vermont Pension Investment Commission	20,000,000	5,000,000	13,829	(302,934)	(61,923)	328,600	(10,142)	4,953,601

## Detailed Schedule of Partners' Equity

from Commencement of Operations (April 1, 2021) To DECEMBER 31, 2022

US Dollars	Capital commitment	Capital contributions	Interest Paid	Net operating income (loss)	Net realized gain (loss)	Net unrealized appreciation (depreciation) of investments	Syndication Costs	Capital account at 12/31/2022
Virginia Retirement System	100,000,000	25,000,000	0	(1,460,818)	(309,615)	1,643,002	(50,711)	24,821,857
WellSpan Health Master Trust	20,000,000	5,000,000	0	(284,983)	(61,923)	328,600	(10,142)	4,971,552
	<b>3,706,284,300</b>	<b>926,571,075</b>	<b>557,146</b>	<b>(54,821,536)</b>	<b>(11,475,211)</b>	<b>60,892,880</b>	<b>(1,879,500)</b>	<b>919,287,708</b>
<b>General Partner</b>								
HarbourVest Co-Investment VI Associates L.P.	37,437,215	0	0	(451,629)	(115,911)	615,094	0	47,554
<b>Special Limited Partner</b>								
HV-ECI II LLC	0	0	0	0	0	0	0	0
	<b>\$3,743,721,515</b>	<b>\$926,571,075</b>	<b>\$557,146</b>	<b>\$(55,273,165)</b>	<b>\$(11,591,122)</b>	<b>\$61,507,974</b>	<b>\$(1,879,500)</b>	<b>\$919,335,262</b>

**NOTE: Totals and subtotals may not recalculate due to rounding.**

**Basis of Presentation:** This detailed schedule of partners' equity represents cumulative changes in the individual partners' capital accounts, who are the partners represented in the statement of changes in partners' capital included in the accompanying financial statements. The schedule was prepared on the same basis of accounting as described in the Significant Accounting Policies note to the accompanying financial statements. The allocations related to net operating income (loss), net realized gain (loss), net unrealized appreciation (depreciation) of investments, syndication costs, partners' contributions, partners' distributions, and management fee/priority profit share charged, where applicable, were made in accordance with the relevant sections of the Partnership Agreement.

# AUDITED FINANCIAL STATEMENTS

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Year ended December 31, 2022  
With Report of Independent Auditors

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Audited Financial Statements  
Year ended December 31, 2022

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## Report of Independent Auditors

To the General Partner of HarbourVest Co-Investment VI Aggregator L.P.

### Opinion

We have audited the financial statements of HarbourVest Co-Investment VI Aggregator L.P. (the “Partnership”), which comprise the balance sheet, including the condensed schedule of investments, as of December 31, 2022, and the related statements of operations, changes in partners’ equity and cash flows for the year ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Partnership at December 31, 2022, and the results of its operations, changes in its partners’ equity and its cash flows for the year ended December 31, 2022 in accordance with accounting principles generally accepted in the United States of America.

### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Partnership and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership’s ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

### Auditor’s Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.





In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Partnership's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Partnership's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

*Ernst + Young LLP*

May 11, 2023

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Balance Sheet  
December 31, 2022  
*In U.S. Dollars*

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**Assets**

Direct investments	1,911,130,461
Partnership investments	62,096,940
Cash and equivalents	40,282,180
Investments held for syndication	70,846,200
Accounts receivable	21,753
Due from affiliate	<u>14,291</u>
Total assets	<u><b>\$2,084,391,825</b></u>

**Liabilities and partners' equity**

Liabilities:

Notes payable	1,033,520,000
Accounts payable and accrued expenses	2,344,767
Accounts payable to HarbourVest Partners L.P.	<u>187,233</u>
Total liabilities	1,036,052,000

Partners' equity:

Paid-in capital and allocated profits and losses:

Limited Partners	<u>1,048,339,825</u>
Total partners' equity	<u>1,048,339,825</u>

Total liabilities and partners' equity	<u><b>\$2,084,391,825</b></u>
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*The accompanying notes form an integral part of the financial statements.*

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Statement of Operations  
Year ended December 31, 2022  
*In U.S. Dollars*

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Investment income:	
Interest from investments held for syndication	1,755,515
Interest and dividends from cash and equivalents	<u>661,070</u>
	2,416,585
Expenses:	
Interest expense	34,219,100
Professional fees	4,565,032
Organization expenses	1,283,381
Administrative expense	114,450
Other expenses	<u>21,645</u>
	<u>40,203,608</u>
Net investment loss	<u>(37,787,023)</u>
Realized and unrealized gains (losses) on investments:	
Net realized gain (loss) on:	
Partnership investments	(2,383,703)
Direct investments	<u>(6,756,426)</u>
	<u>(9,140,129)</u>
Net change in unrealized appreciation (depreciation) on:	
Partnership investments	5,268,658
Direct investments	<u>34,410,957</u>
	<u>39,679,615</u>
Net gain on investments	<u>30,539,486</u>
Net loss	<u><u>(\$7,247,537)</u></u>

*The accompanying notes form an integral part of the financial statements.*

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Statement of Changes in Partners' Equity  
Year ended December 31, 2022  
*In U.S. Dollars*

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	<b>Limited Partners</b>	<b>Total</b>
Partners' equity at December 31, 2021	17,383,787	17,383,787
Contributions from partners	1,038,203,575	1,038,203,575
Share of net income (loss)	(7,247,537)	(7,247,537)
Partners' equity at December 31, 2022	<b>\$1,048,339,825</b>	<b>\$1,048,339,825</b>

*The accompanying notes form an integral part of the financial statements.*

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Statement of Cash Flows  
Year ended December 31, 2022  
In U.S. Dollars

**Operating activities**

Net loss	(7,247,537)
Adjustments to reconcile net loss to net cash used in operating activities:	
Payments made on partnership investment commitments	(33,353,758)
Cash distributions received from partnership investments	(463,499)
Cost of direct investments purchased	(1,478,245,886)
Net realized (gain) loss on partnership investments	2,383,703
Net realized (gain) loss on direct investments	6,756,426
Net change in unrealized (appreciation) depreciation on partnership investments	(5,268,658)
Net change in unrealized (appreciation) depreciation on direct investments	(34,410,957)
Net change in accounts payable to HarbourVest Partners L.P.	(1,077,288)
Net change in accounts payable and accrued expenses	1,632,350
Net change in investment held for syndication	(70,846,200)
Net change in accounts receivable	(21,753)
Net change in due from affiliate	(14,291)
Other	739,994
Net cash used in operating activities	<u>(1,619,437,354)</u>

**Financing activities**

Contributions from partners	1,038,203,575
Borrowings from notes payable	1,126,020,000
Repayments of notes payable	<u>(565,000,000)</u>
Net cash provided by financing activities	<u>1,599,223,575</u>
Net decrease in cash and equivalents	(20,213,779)

Cash and equivalents at the beginning of year	<u>60,495,959</u>
Cash and equivalents at the end of year	<u><b>\$40,282,180</b></u>

**Supplemental disclosure:**

Cash paid for interest during the year	\$33,891,978
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*The accompanying notes form an integral part of the financial statements.*

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Condensed Schedule of Investments  
December 31, 2022  
In U.S. Dollars

	Units / Shares / Par	Geography	Fair Value \$	Fair Value as a Percentage of Partners' Equity
<b>Direct Investments</b>				
<u>Communication Services</u>				
Three Forty-Five Spectrum, LLC (invested through Three Forty-Five Holdings LLC) Convertible Note	79,031,430	United States	79,031,430	7.5%
<u>Consumer Discretionary</u>				
Solina Group SAS (invested through Astorg VII Co-Invest Solina) Limited Partnership Interest		France	108,700,081	10.5%
Power Home Remodeling Group, LLC (invested through HP PHRG Blocked Co-Invest, LP) Common Units	81,081,081	United States	81,081,081	7.7%
Zooplus AG (invest through EQT IX Co-Investment (G) SCSP) Limited Partnership Interest		Germany	63,798,873	6.1%
Ekaterra B.V. (invested through Cuppa Co-Investment L.P.) Limited Partnership Interest		United Kingdom	53,902,152	5.2%
<u>Financials</u>				
Fastmarkets (invested through Astorg VIII Co-Invest Lithium) Limited Partnership Interest		United Kingdom	73,685,901	7.0%
<u>Health Care</u>				
Action Behavior Centers (invested through ABC Co-Invest Aggregator, L.P.) Limited Partnership Interest		United States	83,497,890	8.0%
Velsera (formerly Project M51 (invested through M51 Co-Investment (No. 1) AB)) Principal-Linked Participation Debenture		United States	78,446,697	7.5%
Ensemble Health Partners Holdings, LLC (invested through BEHP Co-Investor I, L.P. / BEHP Co-Investor II, L.P.) Limited Partnership Interest		United States	73,264,304	7.0%
CordenPharma (invested through Astorg VIII Co-Invest Corden) Limited Partnership Interest		Germany	65,513,798	6.2%
Symeres (invested through Keensight Symeres Co-Invest SLP) Limited Partnership Shares	437,922	Netherlands	56,739,278	5.4%
<u>Industrials</u>				
Ruppert Landscape, LLC (invested through KLC Fund 1022-CI LP and KLC Fund 1022-CIA-A LP) Limited Partnership Interest issued by KLC Fund 1022-CI LP Limited Partnership Interest issued by KLC Fund 1022-CI-A LP			15,898,312 39,092,431 <hr/> 54,990,743	5.2%
<u>Information Technology</u>				
ZenDesk, Inc. Limited Partnership Interest issued by Zephyr Partners I, L.P.		United States	90,000,000	8.6%
Mimecast Limited (invested through Magnesium Co-Invest SCSp) Limited Partnership Interest		United States	82,802,371	7.9%
Kaseya Holdings Inc. (invested through Knockout Co-Invest, L.P.) Limited Partnership Interest		United States	81,827,751	7.8%
Lexipol Parent Holding Company (invested through GTCR (LP Investors) LP) Limited Partnership Interest		United States	80,962,918	7.7%
TravelNet Solutions (invested through BSIP/Stay Co-Invest LP) Limited Partnership Interest		United States	79,700,000	7.6%
Anaplan, Inc. (invested through Project Alpine Co-Invest Fund, L.P.) Limited Partnership Interest		United States	69,675,741	6.6%
Likewise (formerly Brightstar Corporation (invested through Brightstar Capital Partners Replay, L.P.)) Limited Partnership Interest		United States	68,301,849	6.5%
Medallia, Inc. (Invested through Project Metal Co-Invest, L.P.) Limited Partnership Interest		United States	59,638,898	5.7%

The accompanying notes form an integral part of the financial statements.

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Condensed Schedule of Investments  
December 31, 2022  
In U.S. Dollars

	Units/ Shares / Par	Geography	Fair Value \$	Fair Value as a Percentage of Partners' Equity
<u>Materials</u>				
SK Microworks (invested through HCPE VI, L.P) Limited Partnership Interest		South Korea	58,296,246	5.6%
All other Direct Investments (i)			367,272,459	35.0%
<b>Total Direct Investments</b>			<u>1,911,130,461</u>	<u>182.3%</u>
<b>Partnership Investments (ii) *</b>			<u>62,096,940</u>	<u>5.9%</u>
<b>Total Investments</b>			<u><b>\$ 1,973,227,401</b></u>	<u><b>188.2%</b></u>

(i) As of December 31, 2022 there are no individual investments over 5% included in All other Direct Investments.

The allocation by geography of All other Direct Investments is as follows (percentages are based on partners' equity) – United States: 14.0%; Western Europe: 9.3%; Australia/NZ: 4.0%; Nordic: 3.7%; Japan: 2.6%; Greater India: 1.4%.

The allocation by industry of All other Direct Investments is as follows (percentages are based on partners' equity) – Information Technology: 15.0%; Financials: 10.9%; Industrials: 3.9%; Consumer Discretionary: 3.8%; Communication Services: 1.4%.

(ii) As of December 31, 2022 there are no individual investments over 5% included in Partnership Investments.

The allocation by geography of Partnership Investments is as follows (percentages are based on partners' equity) – United States: 3.3%; Greater China: 1.3%; Europe: 0.6%; Southeast Asia: 0.3%; Nordic: 0.2%; Australia/NZ: 0.1%; Western Europe: 0.1%.

\* As of December 31, 2022, allocation by industry of Partnership Investments is as follows (percentages are based on partners' equity) – Consumer Discretionary: 1.3%; Industrials: 1.2%; Communication Services: 1.0%; Information Technology: 0.8%; Health Care: 0.8%; Materials: 0.3%; Consumer Staples: 0.2%; Financials: 0.2%; Utilities: 0.1%.

The cost basis of Partnership investments as of December 31, 2022 is \$51,630,499.

The cost basis of Direct Investments as of December 31, 2022 is \$1,852,678,578.

Details may not add to totals and subtotals due to rounding.

*The accompanying notes form an integral part of the financial statements.*

## 1. Partnership

HarbourVest Partners Co-Investment VI Aggregator L.P. (the "Partnership") was legally formed on October 16, 2020 as a limited partnership under Cayman law and began admitting limited partners on March 31, 2021. The purpose and business of the Partnership is to make and hold all of the Portfolio Investments of HarbourVest Partners Co-Investment Fund VI L.P. and HarbourVest Partners Co-Investment VI AIF SCSp (the "HarbourVest Partners Co-Investment Fund VI Partnerships"). The Partnership will give primary emphasis to equity-oriented investments in management buy-in, management buy-out, leveraged buy-out, recapitalization, growth equity, special situation and mezzanine transactions (such investments being referred to as "Direct Investments"). In addition, the Partnership may make selective investments in partnerships or other pooled investment vehicles ("Primary Partnership Investments") which, in turn, make private equity investments. The Partnership may make Direct Investments and Primary Partnership Investments indirectly through intermediate holding entities, including partnerships and other pooled investment vehicles, or directly in companies or entities. The Partnership will primarily invest in entities which intend to operate principally in North America, Europe, Latin America, Asia and Australia. The investment period is scheduled to end after the earliest of (i) such date as may be determined by limited partners holding in the aggregate sharing percentages equal to 80% of the total sharing percentages and written notice to the General Partner, (ii) April 1, 2026 (the fifth anniversary of the Commencement date) and (iii) such date as determined by the General Partner and written notice to the limited partners (the "Investment Period Termination Date"). The Partnership commenced operations and began charging management fees on April 1, 2021. The first capital call was made on April 27, 2022.

At December 31, 2022, the limited partners had committed \$4,194,761,919 in capital of which \$1,038,203,575 or 24.8% has been called. The remaining unfunded capital commitments of \$3,156,558,344 are due upon not less than 10 days prior written notice from Co-Investment VI Associates L.P. ("General Partner"). The General Partner shall make no contributions to the capital of the Partnership.

Net profits and losses are allocated to the partners in accordance with their respective sharing percentages, as defined in the partnership agreement. The General Partner has no economic interest in the Partnership.

No limited partner may assign or otherwise transfer all or any part of their interest in the Partnership to another entity unless the General Partner has consented to the transfer in writing in accordance with the partnership agreement.

The Partnership is scheduled to terminate on April 1, 2031. The General Partner may extend the Partnership with the written consent of limited partners holding at least a majority of the total sharing percentages.



## **2. Significant Accounting Policies**

### **Method of Accounting**

The financial statements are prepared in conformity with U.S. generally accepted accounting principles. The Partnership is an investment company following the accounting and reporting guidance of the Financial Accounting Standards Boards ("FASB") Accounting Standards Codification ("ASC") Topic 946 Financial Services – Investment Companies.

### **Estimates**

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles requires the General Partner to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **Cash and Equivalents**

The Partnership considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The carrying amount included in the balance sheet for cash and equivalents approximates their fair value.

Cash and cash equivalents may consist of deposits held at a bank or an investment in a money market fund to which the Partnership is exposed to credit risk. As of December 31, 2022, the Partnership held deposits of \$2,763,662 at a bank and held \$37,518,518 in one or more money market funds. Investments in money market funds are recorded at NAV per share and are classified as Level 1 assets.

### **Accounts Receivable**

Accounts receivable includes amounts due from certain limited partners for taxes withheld and remitted and estimated withholding tax payments made on their behalf.

### **Investment Held for Syndication**

The Partnership purchased a direct investment which was held for syndication as of December 31, 2022, with the option to be repurchased by the lead sponsor or sold to a third party at the original transaction price plus interest.

### **Foreign Currency Transactions**

Foreign currency transactions are translated into U.S. dollars at the exchange rate in effect at the transaction dates. Foreign currency balances are translated at the rates in effect at December 31, 2022. Foreign currency translation is included in realized and unrealized gain (loss) on investments as incurred. The Partnership does not segregate that portion of realized or unrealized gain or loss attributable to foreign currency translation.

### **Organization Expenses**

Pursuant to ASC 720-15 "Start-Up Costs," the costs associated with organizing the Partnership are expensed as incurred.

### **Expenses**

The Partnership allocates expenses to limited partners in accordance with their respective sharing percentages. Expenses paid directly by the Partnership may include tax expense, professional fees, and other out-of-pocket expenses and are presented separately in the statement of operations.

### **Income Taxes**

The Partnership has been granted a tax exemption by the Cayman Islands Government under the provisions of the Exempted Limited Partnership Law. The Partnership has elected to be treated as a partnership for U.S. tax purposes. The Partnership accounts for income taxes under the provisions of ASC 740, "Income Taxes." This standard establishes consistent thresholds as it relates to accounting for income taxes. It defines the threshold for recognizing the benefits of tax-return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority and requires measurement of a tax position meeting the more-likely-than-not criterion, based on the largest benefit that is more than fifty percent likely to be realized. The Partnership may be subject to potential examination by certain taxing authorities in various jurisdictions. Any potential tax liability is also subject to ongoing interpretation of laws by taxing authorities. The tax years under potential examination vary by jurisdiction. The General Partner has analyzed the Partnership's inventory of tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction), and has concluded that no provision for income tax is required in the Partnership's financial statements. Each partner individually may be required to report on its own tax return its pro rata share of the Partnership's taxable income or loss.

The Partnership may be subject to taxes imposed by countries in which it invests. Such taxes are generally based on income and/or capital gains earned or repatriated. Foreign taxes, if any, are recorded based on the tax regulations and rates that exist in the foreign markets in which the Partnership invests. To the extent taxes are attributable to certain partners, the amounts are withheld from those partners' distributions and the withholdings are accounted for as deemed non-cash distributions to such partners. To the extent taxes are borne by the Partnership, the amounts are accrued and applied to net investment income, net realized gains and net unrealized appreciation as such income and/or gains are earned, and the Partnership records an estimated deferred tax liability in an amount that would be payable if the securities were disposed of on the valuation date. As of December 31, 2022, there were no deferred tax liabilities at the Partnership level.

### Market and Other Risk Factors

The Partnership's investments are subject to various risk factors including market, credit, interest rate and currency risk. Investments are based primarily in the U.S. and Europe and thus have concentrations in these regions. The Partnership's investments are also subject to the risks associated with investing in leveraged buyout and venture capital transactions that are illiquid and non-publicly traded. Such investments are inherently more sensitive to declines in revenues and to increases in expenses that may occur due to general downward swings in the world economy or other risk factors including increasingly intense competition, rapid changes in technology, changes in federal, state and foreign regulations, and limited capital investments. Since the Partnership's investments generally will involve a high degree of risk, poor performance by a few of the investments could adversely affect the total return to limited partners.

### 3. Investments

In accordance with the authoritative guidance on fair value measurements and disclosures under generally accepted accounting principles in the United States, the Partnership discloses the fair value of its investments in a hierarchy that prioritizes the inputs to valuation techniques used to measure the fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The guidance establishes three levels of the fair value hierarchy as follows:

- Level 1 Inputs that reflect unadjusted quoted prices in active markets for identical assets or liabilities that the Partnership has the ability to access at the measurement date;
- Level 2 Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly, including inputs in markets that are not considered to be active;
- Level 3 Inputs that are unobservable.

For investments in partnerships and other pooled investment vehicles, the General Partner encourages all managers to apply fair value principles in their financial reports that are consistent with U.S. generally accepted accounting principles. Inputs used to determine fair value include financial statements provided by the investment partnerships which typically include fair market value capital account balances. The Partnership values its partnership investments at fair value using the net asset value as a practical expedient. In reviewing the underlying financial statements and capital account balances, the General Partner considers compliance with authoritative guidance on fair value measurements, the currency in which the investment is denominated, and other information deemed appropriate. If the General Partner shall in good faith determine that a manager is not reporting fair value consistent with U.S. generally accepted accounting principles, the General Partner shall use best efforts to undertake its own valuation analysis using fair market value principles and adjust such value so it is in accordance with the authoritative guidance.

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Notes to Financial Statements

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Income derived from investments in partnerships is recorded using the equity pick-up method. Under the equity pick-up method of accounting, the Partnership's proportionate share of the net investment income (loss) and net realized gains (losses), as reported by the underlying partnership investments, is reflected in the statement of operations as net realized gain (loss) on partnership investments. The Partnership's proportionate share of the aggregate increase or decrease in unrealized appreciation (depreciation), as reported by the underlying partnership investments, is reflected in the statement of operations as net change in unrealized appreciation (depreciation) on partnership investments.

Direct investments include common and preferred equity securities, debt, warrants and other privately issued securities, as well as investments in operating companies. When observable prices are not available for these securities, the General Partner uses one or more valuation techniques (e.g. the market approach or the income approach) for which sufficient and reliable data is available. The use of the market approach generally consists of using either the guideline company method or similar transaction method, while the income approach generally consists of the net present value of estimated future cash flows, discounted as appropriate for liquidity, credit, market and/or other risk factors. The inputs used by the General Partner in estimating the value primarily include specific company metrics (i.e. multiples of revenue, EBITDA, EBIT) for similar companies based on size, growth, comparability, etc. The inputs also include the original transaction price, recent transactions for similar instruments, completed or pending third-party transactions, subsequent rounds of financing, recapitalizations or other transactions, or changes in financial ratios or cash flows. As it relates to operating companies, the General Partner considers the financial condition and operating results of each issuer, the nature of each investment, the prices at which securities purchased in subsequent financing, if any, were issued and such other factors as the General Partner deems appropriate. Realized gains and losses on Direct Investments are measured by the difference between the proceeds from the sale and the cost basis of the investment using the specific identification method.

Because of the inherent uncertainty of these valuations, the estimated fair value may differ significantly from the value that would have been used had a ready market for this security existed, and the difference could be material.

The following table summarizes the levels used in valuing the Partnership's direct investments as of December 31, 2022. This table does not include investments in partnerships in the amount of \$62,096,940 which are measured on the basis of fair value NAV as reported. Direct investments in the amount of \$863,876,361 are measured on the basis of fair value NAV as reported, which is not considered part of the fair value hierarchy for leveling purposes.

	Level 1	Level 2	Level 3	Total
Direct Investments	<b>\$-</b>	<b>\$27,205,677</b>	<b>\$1,020,048,423</b>	<b>\$1,047,254,100</b>

Investments include partnership interests in private equity partnerships, all of which carry restrictions on redemption. The Partnership recognizes transfers at the fair value at the transfer date. For the year ended December 31, 2022, there were no transfers. For the year ended December 31, 2022, purchases of Level 3 investments were \$917,817,626.

HarbourVest Partners Co-Investment VI Aggregator L.P.  
Notes to Financial Statements

The following table presents additional information about valuation methodologies and inputs used for direct investments that are measured at fair value and categorized within Level 3 as of December 31, 2022:

<b>Investments</b>	<b>Fair Value at December 31, 2022</b>	<b>Valuation Technique</b>	<b>Unobservable Input(s)</b>	<b>Range</b>
Direct Investments	\$452,854,848	Public Market Comparables	Multiple of EBITDA Comparability discount Subjective discount Multiple of revenue Comparability premium	8.3x - 22.2x 1% - 27% 0% - 10% 7.3x - 19.2x 4% - 6%

The table above excludes \$567,193,575 which are valued using a recent private transaction without adjustment.

The following table presents additional information about investments held for syndication as of December 31, 2022. These positions are held at the recent private transaction value plus \$1,755,515 of interest receivable and are categorized as Level 3 securities in the fair value hierarchy.

<b>Description</b>	<b>Cost \$</b>	<b>Fair Value \$</b>	<b>Value as a Percent of Partners' Equity</b>
Action Behavior Centers (invested through ABC Co-Invest Aggregator, L.P.)	69,090,685	70,846,200	6.8%

#### 4. Financial Highlights

Financial highlights for the year ended December 31, 2022 were as follows:

	Percent (%)
<b><i>Internal rate of return to limited partners since inception:</i></b>	
Beginning of year	<u>NM<sup>^</sup></u>
End of year	<u><u>1.9</u></u>
<b><i>Ratio to limited partners' average partner's equity:</i></b>	
Net investment loss	<u>(10.7)</u>
Operating expenses	<u><u>11.4</u></u>
<b><i>Ratio to limited partners' committed capital:</i></b>	
Operating expenses	<u><u>1.0</u></u>

<sup>^</sup> IRR is not determinable as HarbourVest Partners Co-Investment VI Aggregator L.P. had not made any capital calls or distributions as of December 31, 2021.

The internal rate of return to limited partners is calculated taking into account the actual dates of the cash inflows (contributions), outflows (distributions), and the ending net asset value at the end of the period (residual value) of the limited partners' capital account as of the measurement date. For the year ended December 31, 2022, the internal rate of return was not annualized.

Net investment loss is the limited partners' share of investment income, net of operating expenses and does not include the proportionate share of net gain or loss from underlying investments. Operating expenses include the limited partners' share of partnership expenses and do not include expenses from underlying investments.

As the Partnership's expenses are largely based on the limited partners' committed capital rather than their average capital, supplemental information has been provided in order to disclose the expense ratio as a percentage of the limited partners' committed capital.

## 5. Related-Party Transactions

Certain partners of the HarbourVest Partners L.P. (“the Management Company”) serve as members of the advisory committees of certain investee entities and are the partners of the General Partner.

Accounts payable to HarbourVest Partners L.P. represents expenses of the Partnership incurred in the ordinary course of business, which have been paid by and are reimbursable to the Management Company at December 31, 2022.

Administrative expense charged by the Management Company during the year ended December 31, 2022 was \$114,450.

The General Partner of the Partnership is also the General Partner of HarbourVest Partners Co-Investment Fund VI L.P. and the Founder Partner of HarbourVest Partners Co-Investment VI AIF SCSp. The General Partner has no economic interest in the Partnership.

Due from affiliate represents capital called for investments of a related entity incurred in the ordinary course of business which are payable to the Partnership at December 31, 2022.

## 6. Investment Commitments

As an investment company, the Partnership is required to disclose financial support provided or contractually required to be provided to its portfolio companies (Direct Investments). The Partnership may provide financial support to Direct Investments in accordance with its investment objectives. This financial support may be provided pursuant to contractual agreements or at the discretion of the General Partner. As of December 31, 2022, the Partnership had a Direct Investment unfunded commitment of \$162,132,405. All direct investment commitments are payable upon notice by the company to which the commitment has been made.

As of December 31, 2022, the Partnership has unfunded investment commitments to other partnerships of \$115,638,664 which are payable upon notice by the partnerships to which the commitments have been made.

## 7. Notes Payable

The Partnership has entered into a \$1,735,000,000 multicurrency revolving credit agreement (the “Facility”) with a bank, with a maturity date of April 9, 2024. The credit agreement is shared amongst HarbourVest Partners Co-Investment Fund V L.P., HarbourVest Partners Co-Investment V AIF L.P., HarbourVest Partners Co-Investment Fund V AIV, L.P, HarbourVest Partners Co-Investment Fund VI L.P., and HarbourVest Partners Co-Investment Fund VI AIF L.P. (each a “Borrower”). Under the Facility, the same terms and conditions apply to all Borrowers, and each Borrower is liable for its obligations under its established sublimit. There is no cross-collateralization or cross-default between borrowers. The Facility is collateralized by the uncalled capital commitments of the Borrowers.

At December 31, 2022, the combined borrower sublimit commitment assigned to the Partnership was \$1,374,486,958, of which \$1,033,520,000 was outstanding by the Partnership, which approximates fair value. The interest rate on outstanding debt at December 31, 2022 ranged from 5.37% to 6.19%.

During the year ended December 31, 2022, the Partnership incurred interest expense of \$34,219,100.

## **8. Indemnifications**

### General Indemnifications

In the normal course of business, the Partnership may enter into contracts that contain a variety of representations and warranties and which provide for general indemnifications. The Partnership's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Partnership that have not yet occurred. Based on the prior experience of the General Partner, the Partnership expects the risk of loss under these indemnifications to be remote.

### General Partner Indemnifications

Consistent with standard business practices in the normal course of business, the Partnership has provided general indemnifications to the General Partner, any affiliate of the General Partner and any person acting on behalf of the General Partner or such affiliate when they act in good faith, in the best interest of the Partnership. The Partnership is unable to develop an estimate of the maximum potential amount of future payments that could potentially result from any hypothetical future claim but expects the risk of having to make any payments under these general business indemnifications to be remote.

## **9. Subsequent Events**

In the preparation of the financial statements, the General Partner has evaluated the effects, if any, of events occurring after December 31, 2022 through May 11, 2023, which is the date that the financial statements were available to be issued. There were no events or material transactions subsequent to December 31, 2022 that required recognition or disclosure in the financial statements.





2023 | First Quarter Report

HarbourVest Partners Co-Investment Fund VI L.P.



This report contains highly confidential information, including trade secrets, commercial and financial information, regarding HarbourVest Partners Funds (each a "Fund") and the Fund's investments. The information included in this report is for use only by our investors and solely for the purpose of evaluating and monitoring their investment in the Fund. Any disclosure of this information could cause competitive harm to HarbourVest Partners, LLC and its affiliates, the Fund, and its underlying investments. By accepting delivery of this report, each recipient and its representatives acknowledge the highly confidential nature of the information contained herein and agree that this information will not be reproduced in any manner, or disclosed to any other person, without the express written consent of HarbourVest Partners, LLC. If you cannot agree to the above, please return this report to HarbourVest Partners, LLC immediately.

# Executive summary

## HarbourVest Partners Co-Investment Fund VI Program

To Our Limited Partners:

We are pleased to present the 2023 First Quarter Report for HarbourVest Partners Co-Investment Fund VI Program (“Co-Invest VI Program” or the “Program”).

This Executive Summary covers activities for the Program and its affiliated investment vehicles (HarbourVest Partners Co-Investment Fund VI L.P. (“Co-Invest VI”) and HarbourVest Partners Co-Investment VI AIF SCSp (“Co-Invest VI AIF”). The investment vehicles are presented in aggregate form in the Executive Summary, and investment activities are conducted on a non-commingled basis on behalf of each investment vehicle’s respective investors. The Fund Summary and Supplemental Portfolio Summary sections of this report provide information specific to the individual vehicle.

Co-Invest VI was formed to build a global portfolio of primarily direct co-investments focused on buyout, growth equity, and other private market transactions alongside sought-after private markets managers. HarbourVest’s experienced co-investment team aims to generate attractive returns and provide a comprehensive direct co-investment solution for investors by leveraging the firm’s proactive deal sourcing resources, proprietary due diligence processes, and global presence. HarbourVest has a successful track record of investing globally across private markets strategies through a variety of macroeconomic cycles and has been a leader in direct co-investing since 1983.

At March 31, 2023, the Program has built a portfolio of over 30 direct co-investments supported by a number of strategic primary investments across a wide range of sectors in North America, Europe, and Asia Pacific. The portfolio had a total value of 1.1x total cost at March 31, 2023, an increase from 1.0x at year-end 2022.

## Fund Activity

### MARCH 31, 2023 FUND ACTIVITY (\$ MILLIONS)

	Co-Invest VI	Co-Invest VI AIF	Co-Invest VI Program
Total Fund Size*	3,743.7	451.0	4,194.8
% Called from Limited Partners YTD	10.0%	10.0%	10.0%
% Called from Limited Partners Overall	35.0%	35.0%	35.0%
Net LP TVPI (Total Value to Paid-In Capital)	1.04x	1.04x	1.04x
Net LP IRR†	NM	NM	NM

\*Including the General Partner commitment

†NM: Not Meaningful

# Portfolio Activity

## Investment Activity

During the first quarter of 2023, the Co-Invest VI Program funded a total of \$221.8 million to the portfolio including to new investments in European discount retailer **Action Holding B.V.** and corks for high-end spirits **Tapi S.p.A.**

## Distributions & Liquidity

The Program generated proceeds of \$33.2 million during the first quarter of 2023. First quarter 2023 proceeds were received primarily from direct co-investment **Likewize** (fka Brightstar Corporation), related to a recapitalization (proceeds of \$30.9 million).

## Significant Valuation Changes

During the quarter, the portfolio generated a valuation increase of \$98.8 million, 5.0% of the current value at year-end 2022. Valuation increases were partially offset by some smaller decreases across the combined portfolio. Larger first quarter 2023 valuation changes are profiled below.

MARCH 31, 2023 SIGNIFICANT VALUATION CHANGES (\$ MILLIONS)			
Investment	Commitment (M)	TV/F	Gain/Loss YTD (M)
Mimecast	90.1	1.2x	19.5
Power Home Remodeling Group, LLC	81.1	1.2x	18.4
Action Behavior Centers	85.2	1.2x	17.8
Zooplus AG	69.1	1.2x	15.3
Velsera	76.0	1.0x	(7.3)

## New Investments (January 1, 2023 to March 31, 2023)

MARCH 31, 2023 INVESTMENTS	
Investment	Stage
<b>Europe Direct Co-Investments</b>	
Action Holding B.V.	Buyout - Large
Tapi S.p.A.	Buyout - Small

*Individual commitment amounts and performance for investments closed at March 31, 2023 are included in the Supplemental Portfolio Information section of the Report.*

# Fund summary

# Fund Summary

(in \$ except percentages and multiples)

	March 31, 2023	December 31, 2022	Change
<b>Capital Contributions</b>			
Total Commitments (Fund Size)	3,743,721,515	3,743,721,515	-
Less: Unfunded Commitments	2,446,522,010	2,817,150,440	(370,628,430)
<b>Cumulative Paid-In Capital</b>	<b>1,297,199,505</b>	<b>926,571,075</b>	<b>370,628,430</b>
Paid-In Capital to Committed Capital (PICC)	34.7%	24.8%	9.9%
<b>Fund Summary</b>			
Partnership Investments	1,380,802,189	935,617,499	445,184,690
Cash and Other Net Assets (Liabilities)	(21,551,237)	(16,282,237)	(5,269,000)
<b>Partners' Equity (NAV)</b>	<b>1,359,250,952</b>	<b>919,335,262</b>	<b>439,915,690</b>
Cumulative Distributions	-	-	-
<b>Fund Total Value</b>	<b>1,359,250,952</b>	<b>919,335,262</b>	<b>439,915,690</b>
<b>Net LP Valuation Metrics</b>			
TVPI (Total Value to Paid-In Capital)	1.04x	0.99x	0.05x

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HarbourVest Partners Co-Investment Fund VI L.P.

# Supplemental company information

# Portfolio Summary

March 31, 2023

(\$ thousands except percentages and multiples)

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
<b>Co-Investment VI</b>												
<b>Direct Co-Investment</b>												
Action Behavior Centers	North America	Buyout	2022	76,053.3	73,918.2	-	-	90,449.7	90,449.7	1.2x	15,929.9	NM
Action Holding B.V.	Europe	Buyout	2023	60,764.8	60,764.8	1,007.8	-	61,329.9	62,337.7	1.0x	1,572.9	NM
Airspace Technologies, Inc.	North America	Venture/Growth	2021	26,033.5	26,033.5	-	-	26,033.5	26,033.5	1.0x	-	(0.0%)
Anaplan, Inc.	North America	Buyout	2022	71,940.5	69,884.8	-	-	66,754.0	66,754.0	1.0x	4,570.1	NM
Blauwtrust Groep B.V.	Europe	Buyout	2022	45,439.0	45,439.0	-	-	48,484.7	48,484.7	1.1x	1,875.9	5.4%
Businessolver.com	North America	Buyout	2022	30,949.0	30,924.3	-	-	30,897.1	30,897.1	1.0x	(0.1)	NM
CordenPharma	Europe	Buyout	2022	55,702.9	55,702.9	-	-	59,250.1	59,250.1	1.1x	780.6	NM
Ensemble Health Partners Holdings, LLC	North America	Buyout	2022	81,108.0	60,393.1	-	-	67,394.3	67,394.3	1.1x	2,007.7	NM
Fastmarkets	Europe	Buyout	2022	65,551.4	63,553.9	-	-	66,582.6	66,582.6	1.0x	819.7	NM
Four Seasons Heating and Cooling	North America	Buyout	2022	35,297.4	35,297.4	-	-	35,297.4	35,297.4	1.0x	-	NM
Hantverksdata Holding I AB	Europe	Buyout	2022	33,907.2	33,907.2	-	-	37,029.5	37,029.5	1.1x	1,939.2	7.9%
Howden Group Holdings Limited	Europe	Buyout	2022	60,686.5	57,932.5	-	-	57,796.7	57,796.7	1.0x	-	NM
iTrust Capital, Inc.	North America	Venture/Growth	2021	29,054.0	29,054.0	-	-	14,829.2	14,829.2	0.5x	408.7	(42.5%)
Kaseya Holdings Inc.	North America	Buyout	2022	75,213.0	73,060.3	-	-	78,066.1	78,066.1	1.1x	5,036.8	NM
Lexipol Parent Holding Company	North America	Buyout	2021	80,344.1	69,867.2	-	-	76,561.5	76,561.5	1.1x	4,304.1	6.9%
Likewise	North America	Buyout	2021	35,700.9	26,195.1	27,563.7	1.1x	33,994.7	61,558.4	2.4x	583.7	55.9%
Lipton Teas and Infusions	Europe	Buyout	2022	49,235.1	46,875.3	-	-	48,706.0	48,706.0	1.0x	599.6	NM
Medallia, Inc.	North America	Buyout	2021	73,540.0	71,436.1	-	-	59,441.6	59,441.6	0.8x	6,215.4	(12.1%)
Mimecast Limited	North America	Buyout	2022	80,425.2	78,417.1	-	-	91,338.3	91,338.3	1.2x	17,439.3	NM
Nitro Software Limited	North America	Buyout	2022	94,426.3	77,803.4	-	-	77,565.0	77,565.0	1.0x	(5,932.0)	NM
Power Home Remodeling Group, LLC	North America	Buyout	2022	72,362.9	72,362.9	-	-	88,814.9	88,814.9	1.2x	16,452.1	NM
Ruppert Landscape, LLC	North America	Buyout	2022	49,429.5	49,086.1	-	-	49,036.1	49,036.1	1.0x	(41.8)	NM
ShareChat	Asia	Venture/Growth	2021	12,102.2	12,102.2	-	-	10,839.8	10,839.8	0.9x	(2,025.8)	(8.5%)
SK Microworks	Asia	Buyout	2022	53,377.8	53,377.8	-	-	52,022.2	52,022.2	1.0x	(5.8)	NM

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HarbourVest Partners Co-Investment Fund VI L.P.



	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
Solina Group SAS	Europe	Buyout	2021	70,560.0	70,560.0	-	-	101,406.1	101,406.1	1.4x	4,393.9	28.7%
Symeres	Europe	Buyout	2021	53,520.4	47,021.9	-	-	47,858.6	47,858.6	1.0x	(2,779.8)	1.0%
Tapi S.p.A.	Europe	Buyout	2023	50,843.1	50,843.1	-	-	50,843.1	50,843.1	1.0x	-	NM
Three Forty-Five Spectrum, LLC	North America	Buyout	2021	71,398.0	70,533.6	-	-	70,533.6	70,533.6	1.0x	-	(0.0%)
TravelNet Solutions	North America	Buyout	2022	75,176.7	72,748.9	-	-	71,130.3	71,130.3	1.0x	-	NM
Velsera	North America	Buyout	2022	67,836.7	66,402.7	-	-	63,475.9	63,475.9	1.0x	(6,535.8)	NM
Waste Services Holding Co Pty	Asia	Buyout	2021	28,707.9	28,695.6	-	-	40,340.2	40,340.2	1.4x	826.9	33.0%
Yayoi Preparation K.K.	Asia	Buyout	2022	30,629.8	29,451.7	-	-	24,912.7	24,912.7	0.8x	509.8	(14.8%)
ZenDesk, Inc.	North America	Buyout	2022	82,006.3	80,711.2	-	-	84,929.6	84,929.6	1.1x	4,606.8	NM
Zooplus AG	Europe	Buyout	2022	61,641.1	60,240.5	-	-	70,601.0	70,601.0	1.2x	13,662.1	NM
<b>Direct Co-Investment Subtotal</b>				<b>1,940,964.4</b>	<b>1,850,598.1</b>	<b>28,571.5</b>	<b>-</b>	<b>1,954,546.1</b>	<b>1,983,117.6</b>	<b>1.1x</b>	<b>87,214.4</b>	

**Primary**

Bowmark Growth Partners Fund I	Europe	Buyout	2022	5,427.4	<i>See Undisclosed Investments</i>							
Brightstar Capital Partners Fund II, L.P.	North America	Buyout	2021	17,889.1	12,610.8	811.9	0.1x	16,720.8	17,532.6	1.4x	788.6	33.2%
EQT Growth (No.2) SCSp	Europe	Buyout	2021	7,770.7	2,454.9	(284.4)	(0.1x)	2,048.1	1,763.7	0.7x	(86.6)	(25.8%)
Guidepost Growth Equity III, L.P.	North America	Venture/Growth	2021	6,772.9	4,932.1	-	-	5,604.9	5,604.9	1.1x	409.2	12.9%
Hahn & Company IV L.P.	Asia	Buyout		6,247.3	-	-	-	-	-	-	-	NM
Hahn & Company IV-S L.P.	Asia	Buyout		2,677.4	-	-	-	-	-	-	-	NM
IK Partnership II Fund	Europe	Buyout	2022	8,082.6	3,220.2	-	-	3,406.0	3,406.0	1.1x	97.8	NM
Innova/7 SCA SICAV-RAIF	Europe	Buyout	2022	7,005.4	97.1	-	-	(73.7)	(73.7)	-0.8x	(62.7)	NM
KV Asia Capital Fund II L.P.	Asia	Buyout	2021	8,924.8	3,041.0	50.0	-	2,870.8	2,920.9	1.0x	43.4	(3.8%)
Med Platform II S.L.P.	Europe	Buyout	2022	9,607.8	1,067.8	-	-	1,267.3	1,267.3	1.2x	(75.7)	NM
Motion Equity Partners IV FPCI	Europe	Buyout	2021	7,658.6	2,860.5	-	-	3,237.8	3,237.8	1.1x	(10.1)	15.4%
Nexus Point Partners II LP	Asia	Buyout	2022	8,924.8	1,559.2	3.3	-	1,201.9	1,205.3	0.8x	(109.3)	NM
Percheron Capital Fund I LP	North America	Buyout	2021	4,462.4	2,995.2	(10.4)	-	4,189.6	4,179.2	1.4x	9.2	38.8%
Potentia Capital VCLP II, LP	Asia	Buyout	2022	8,369.5	939.8	-	-	789.1	789.1	0.8x	(91.5)	NM
Primavera Capital Fund IV L.P.	Asia	Venture/Growth	2022	8,924.8	5,980.1	(114.5)	-	5,638.7	5,524.1	0.9x	(129.4)	(7.5%)
Telstra Ventures Fund III, L.P.	North America	Venture/Growth	2021	4,462.4	1,452.3	-	-	1,125.2	1,125.2	0.8x	(54.4)	(35.1%)

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**HarbourVest Partners Co-Investment Fund VI L.P.**

	Geography	Stage	Vintage Year	Total Commitment	Amount Invested	Cumulative Distributions	DPI	Current Value	Total Value	TV/F	YTD Gain/(Loss)	IRR
Thomas H. Lee Equity Fund IX, L.P.	North America	Buyout	2022	4,462.4	<i>See Undisclosed Investments</i>			1,256.4				
True Wind Capital II, L.P.	North America	Buyout	2021	8,945.9	<i>See Undisclosed Investments</i>							
Trustar Growth Partners I, L.P.	Asia	Venture/Growth	2021	8,827.6	5,604.7	4.4	-	6,254.4	6,258.8	1.1x	114.3	8.1%
WindRose Health Investors VI, L.P.	North America	Buyout	2022	8,924.8	<i>See Undisclosed Investments</i>			2,947.1				
Undisclosed Investments					9,620.1	9.9		4,474.5	8,687.8		203.9	
<b>Primary Subtotal</b>				154,368.4	58,435.8	470.2	-	62,958.8	63,429.0	1.1x	1,046.7	
<b>Co-Investment VI Subtotal</b>				2,095,332.8	1,909,034.0	29,041.8	-	2,017,504.8	2,046,546.6	1.1x	88,261.1	
<b>Grand Total</b>				2,095,332.8	1,909,034.0	29,041.8	-	2,017,504.8	2,046,546.6	1.1x	88,261.1	

Detail may not add to totals and subtotals due to rounding.

Each IRR is calculated based on the HarbourVest fund's cash flows to and from the investment and may not be the same performance reported by the manager or other investors. IRRs are provided for investments where the initial cash flow occurred more than 12 months prior.

At the request of certain managers, performance can not be disclosed due to confidentiality. The aggregate performance is provided in Undisclosed Investments.

Excludes unfunded commitments as of March 31, 2023.

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HarbourVest Partners Co-Investment Fund VI L.P.

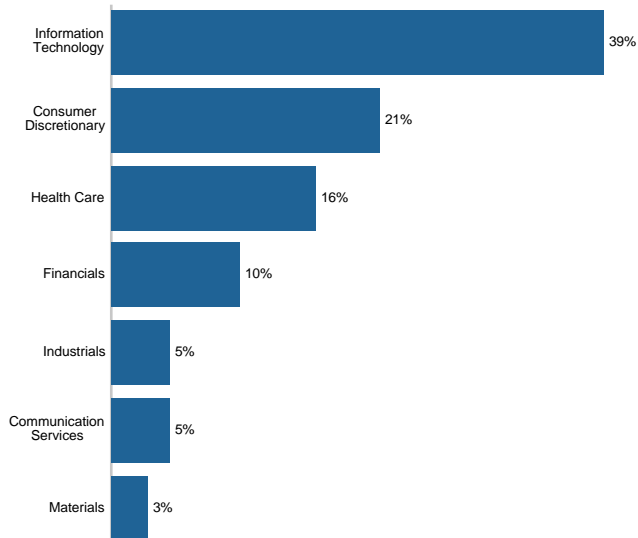
# Supplemental company information

# Company Diversification - Based on Total Cost

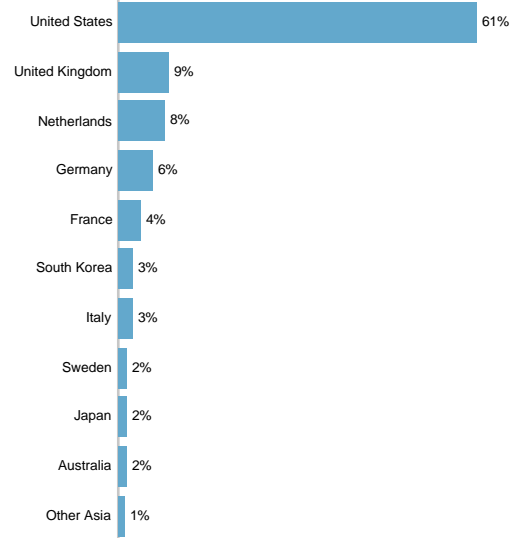
## March 31, 2023

Total Companies: 141

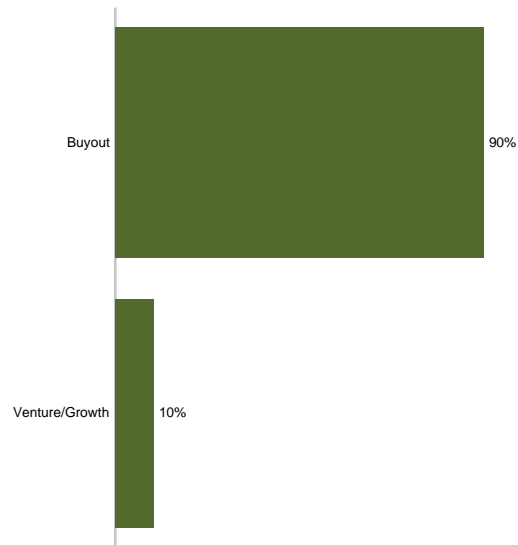
### INDUSTRY



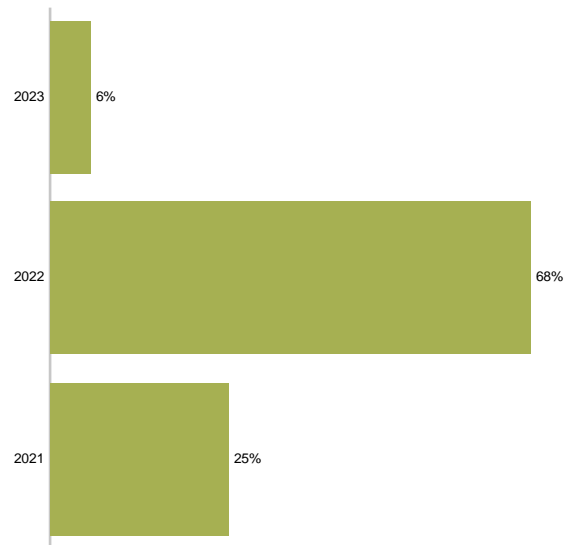
### GEOGRAPHY



### STAGE



### YEAR OF INITIAL INVESTMENT



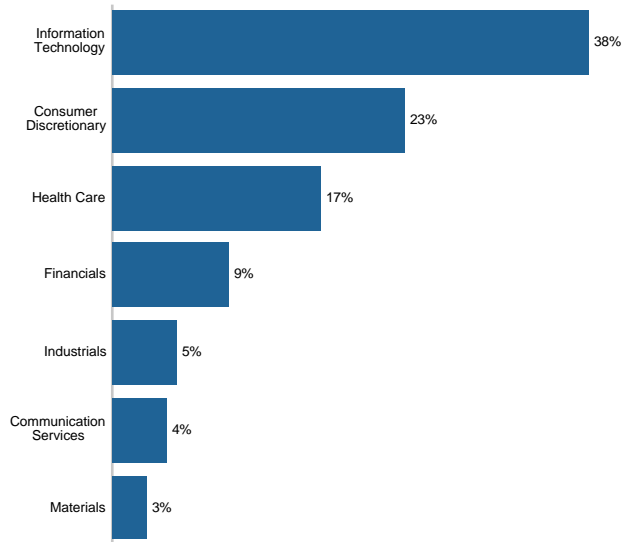
Percentages may not total 100% due to rounding.

# Company Diversification - Based on Current Value

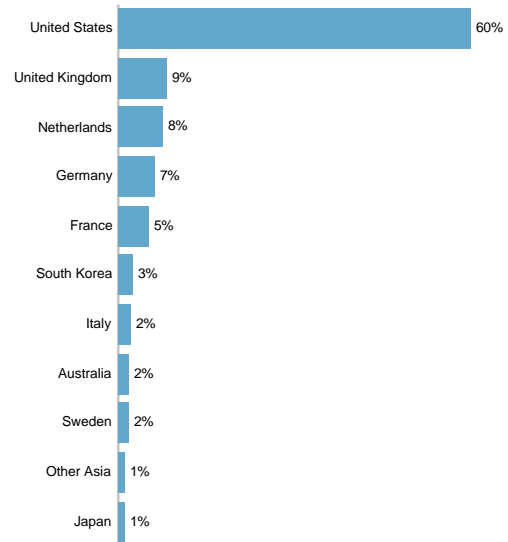
March 31, 2023

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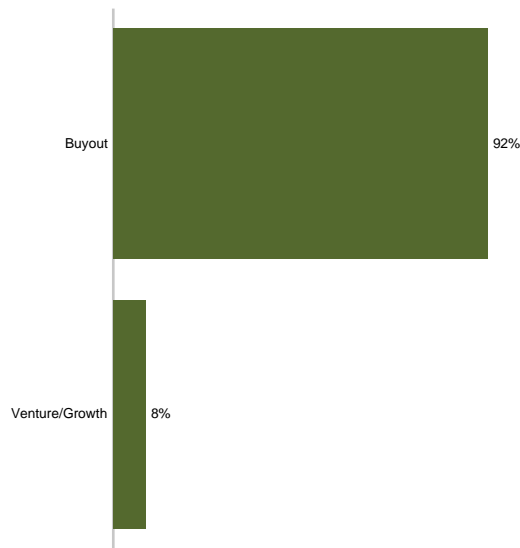
## INDUSTRY



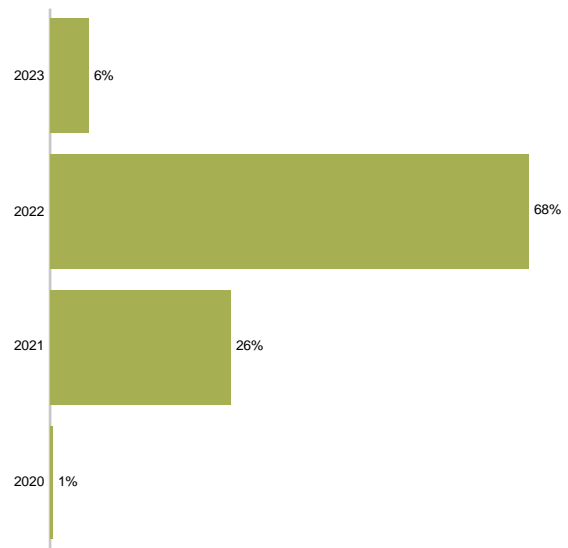
## GEOGRAPHY



## STAGE



## YEAR OF INITIAL INVESTMENT

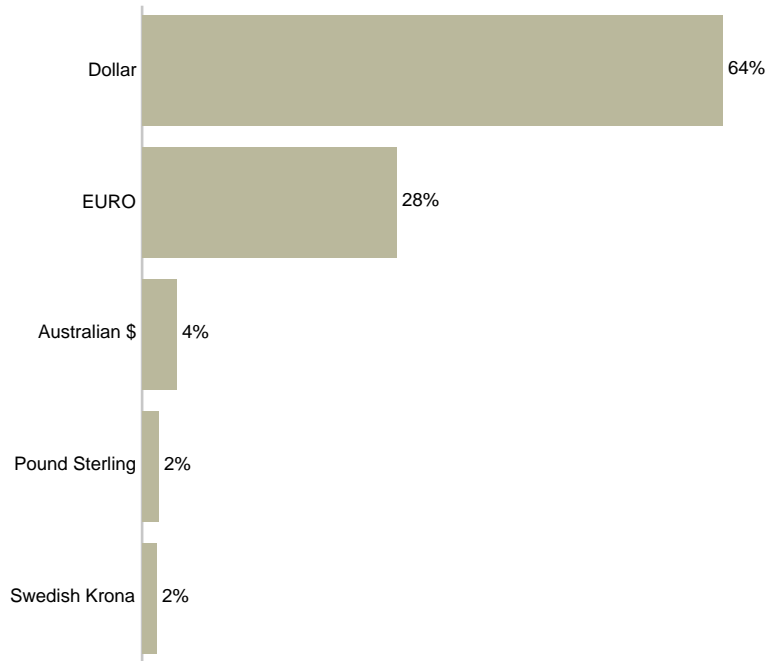


Percentages may not total 100% due to rounding.

# Currency Diversification - Based on Current Value

## March 31, 2023

### CURRENCY



*Percentages may not total 100% due to rounding.*

*Diversification for primary funds is based on the underlying fund's investing currency. Diversification for direct co-investments is based on the company's currency.*

# Largest Underlying Companies

March 31, 2023

In aggregate, these investments represent 83% of current portfolio

Company Name	Ticker	Primary Location	Current Value
Solina Group		France	5.0%
Mimecast Limited		United States	4.5%
Action Behavior Centers		United States	4.4%
Power Home Remodeling		United States	4.4%
Zendesk Inc.		United States	4.2%
Kaseya Holdings SA		United States	3.8%
Nitro Software, Inc.	NTO AU	United States	3.8%
Lexipol		United States	3.8%
TravelNet		United States	3.5%
zooplus		Germany	3.5%
Mid-Band		United States	3.5%
Ensemble Health Partners		United States	3.3%
Anaplan		United States	3.3%
Fastmarkets (Astorg VIII Co-Invest Lithium)		United Kingdom	3.3%
Velsera		United States	3.1%
Action Nederland BV		Netherlands	3.0%
Medallia		United States	2.9%
CordenPharma		Germany	2.9%
Howden Group Holdings		United Kingdom	2.8%
SK Microworks (HCPE VI, L.P)		South Korea	2.6%
Tapi		Italy	2.5%
Ruppert Landscape		United States	2.4%
Ekaterra		United Kingdom	2.4%
Blauwtrust Groep		Netherlands	2.4%
Symeres		Netherlands	2.3%

*Companies can be held in multiple funds.*

*Includes underlying companies held in funds and direct co-investments as relevant to the portfolio.*

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HarbourVest Partners Co-Investment Fund VI L.P.

# HarbourVest update – 2023

## Private market trends

- Private market returns showing more resilience than public markets.
- Fundraising slowed in 2022, what's in store for 2023?
- Denominator effect provides potentially compelling opportunity for secondary investments.
- Sharp rise in interest rates has enhanced private credit attractiveness.
- Elevated inflation levels draw attention to infrastructure and real assets.

## HarbourVest in the news

- Celebrated the 40th anniversary of HarbourVest at our Annual Meeting in May.
- Continued to add world class talent -- now over 200+ members of global investment team.
- Named a Top 10 Most Inclusive PE Firm by the Equality Group\*.

## Strategy updates

- Launched first open-ended vehicle, the HarbourVest Infrastructure Income Partnership (HIIP), in March 2022.
- Held first close for Dover Street XI, our flagship private equity secondaries program. Expect to be in market into 2H'23.
- Held final close for HarbourVest Co-Investment Fund VI (HCF VI), exceeding target fund size.
- Held final close for the 2022 Global Fund in December; officially launched 2023 Global Fund in January.

## 2023 – Funds in the market

- Dover Steet XI
- Credit Opportunities Fund III
- HarbourVest Direct Lending II
- Infrastructure Opportunities Fund III
- Private Equity Continuation Solutions (PECS)
- HIPEP X
- 2023 Global Fund
- HIIP
- Stewardship Fund

Information shown as of January 30, 2023.

\* As of March 2022. Equality Group's Inclusive Top 20 PE & VC Index is a comprehensive evaluation tool that analyses fund performance on inclusion, diversity, and equity over the past 12 months. The Index includes 400 global private equity and venture capital groups each with a minimum of \$1bn in assets under management. The data is sourced from multiple publicly available information sites, including fund websites, social media channels, published articles and reports. The index covers six core categories: leadership, actions and policies, work-life balance, inclusive team, explicit I&D support and additional public information. Within these categories, there are a total of 22 inclusion and diversity sub metrics. There are a total of 45 points available in the Inclusive Index. Equality Group has applied variable weightings to individual categories to reflect the most impactful data points across the core categories, as informed by the latest academic research.







NEPC, LLC

**Firm:** Apogem Capital, LLC

**Strategy/Product:** Private Equity Co-Investments; PA Small Company Coinvestment Fund ("PASCCIF")

**Client:** Massachusetts Water Resources Authority Employees' Retirement System ("MWRA")

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

##### **1. Have there been any changes in ownership or management in the past year?**

As mentioned in our submission last year, Apogem was formed in April 2022 through the combination of PA Capital, GoldPoint Partners, and Madison Capital Funding. Apogem Capital is a wholly owned subsidiary of New York Life Insurance Company ("New York Life") through New York Life Investment Management Holdings, LLC. As such, no ownership changes have occurred in the past year.

Regarding management, Apogem recently hired Josh Niedner as Head of Credit in September 2023. Mr. Niedner will join the Firm's Management Committee ("MC") as the fifth member. The MC is responsible for the day-to-day management of Apogem Capital, strategic direction of the Firm, business planning, and goal setting. Members of the MC average more than 25 years in the industry.

Additional information regarding Mr. Niedner's background has been provided below:

Prior to joining Apogem, Mr. Niedner served as Managing Director at Vista Credit Partners, and before that, spent 14 years at Madison Capital Funding LLC (now part of Apogem), where he served in a range of roles and capacities including investment underwriting and structuring, portfolio management, and client relationship development. He began his career at Banc One Capital Markets, now JPMorgan. Mr. Niedner received his Bachelor of Science in Finance from Indiana University's Kelley School of Business.



## 2. List firm AUM, net flows and accounts gained/lost for the past 5 years.

As of March 31, 2023, Apogem manages over \$39 billion of assets.

As Apogem was formed in 2022, as previously described, the following table includes net flows and total number of accounts since the Firm's formation. Additional information regarding net flows and/or number of accounts for Apogem's legacy boutiques can be provided upon request.

Year <sup>1</sup>	Net Flows	Total # of Accounts
2022	\$1,538,015,000	1453
2023 YTD	\$1,197,204,993	1438

*Note: Apogem Capital's long/short equity program formally spun out to form a new entity at the end of 2022. As such, the 2022 figures reflect the inclusion of related accounts, whereas 2023 would not. The program represented ~\$1B of Firm AUM relative to the Firm's current \$39B in assets under management.*

## 3. Have there been any new or discontinued products in the past year?

There were no discontinued products in the past year. Please refer to the below for a list of all current and upcoming fund offerings.

Fund	Core Strategy	Portfolio Construction	Capital Raise	
<b>Apogem Private Equity Fund X</b>	<b>Focus:</b> Lower Middle Market <b>Strategies:</b> Buyout, Growth Equity & Distressed / Turnaround <b>Geography:</b> North America	<ul style="list-style-type: none"> <li>Primary Funds (60-70%)</li> <li>Direct Co-investments (30%)</li> <li>Secondaries (opportunistic)</li> </ul>	<ul style="list-style-type: none"> <li><b>Target:</b> \$500M</li> <li><b>Closed:</b> \$315M (60%)</li> <li><b>Next Close:</b> Q3 2023</li> <li><b>Final Close:</b> Q1 2024</li> </ul>	
<b>RidgeLake Partners</b>	<b>Focus:</b> Middle Market private equity firms with \$1 – 10 billion in AUM <b>Strategy:</b> Direct minority equity investments in GPs <b>Geography:</b> North America, W. Europe	<ul style="list-style-type: none"> <li>Middle Market Buyout (80%)</li> <li>Other: Secondaries, Real Assets, Private Credit (20%)</li> </ul>	<ul style="list-style-type: none"> <li><b>Target:</b> \$1.25B</li> <li><b>Closed:</b> \$817M (65%)</li> <li><b>Co-invest available:</b> Yes</li> <li><b>Next Close:</b> Q3 2023</li> <li><b>Final close:</b> Q4 2023</li> </ul>	
<b>Apogem Co-Investment VII</b>	<b>Focus:</b> Middle Market companies alongside Apogem GP relationships <b>Strategies:</b> Buyout, Growth Equity <b>Geography:</b> North America	<ul style="list-style-type: none"> <li>Direct Co-investments (100%)</li> </ul>	<ul style="list-style-type: none"> <li><b>Target:</b> \$500M</li> <li><b>Closed:</b> \$300M (60%)</li> <li><b>Next Close:</b> Q3 2023</li> <li><b>Final Close:</b> Q1 2024</li> </ul>	
<b>Apogem Secondary Fund VII</b>	<b>Focus:</b> LP & GP Solutions where our platform creates a sourcing / diligence advantage <b>Strategies:</b> Buyout, Growth Equity <b>Geography:</b> North America	<ul style="list-style-type: none"> <li>LP Solutions (50%): single and multi-fund portfolio acquisitions</li> <li>GP Solutions (50%): continuation vehicles, strip sales, fund restructurings, etc.</li> </ul>	<ul style="list-style-type: none"> <li><b>Target:</b> \$1.0B</li> <li><b>Closed:</b> \$200M (20%)</li> <li><b>Co-invest available:</b> Yes</li> <li><b>First Close:</b> Q3 2023</li> <li><b>First External Close:</b> Q4 2023</li> <li><b>Final Close:</b> TBD</li> </ul>	
<b>Apogem Real Assets Fund IV<sup>1</sup></b>	<b>Focus:</b> Lower Middle Market private natural resources <b>Sectors:</b> Energy, Energy Transition, Infrastructure, Services, Agriculture, and Metals & Mining <b>Geography:</b> North America-focus	<ul style="list-style-type: none"> <li>Direct &amp; Co-investments (60-100%)</li> <li>Opportunistic investments, Secondaries / Seasoned Primaries (0-40%)</li> </ul>	<ul style="list-style-type: none"> <li><b>Target Size:</b> TBD</li> <li><b>Co-invest available:</b> Yes</li> <li><b>First Close:</b> TBD</li> <li><b>First External Close:</b> TBD</li> <li><b>Final Close:</b> TBD</li> </ul>	
Custom Account Opportunities				
Middle Market Funds	Middle Market Co-Invest	Private Real Assets	GP Solutions (Secondaries)	Direct Lending (Private Credit)
Platform-Wide Best Ideas: multi-strategy / asset class custom portfolios				

<sup>1</sup> Data for 2022 is as of December 31, 2022. Data for 2023 represents year-to-date.



*Note: As of August 2023. Figures are rounded. All allocations represent targets. Co-investment availability and close timing estimates are approximate, estimated, and subject to change. There can be no assurances the target allocation will be achieved. 1. Apogem Real Assets Fund IV has not yet been formed. There is no guarantee a fund will be formed or have the attributes described herein. Subject to change.*

**4. Are any products capacity constrained?**

None.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

Apogem does not have any material litigation that impacts its ability to manage assets on behalf of its clients or the funds that it manages. In addition, the Firm has not been the subject of any regulatory exams/issues.

Apogem was notified in July 2022 that the SEC is conducting a non-public fact-finding inquiry as a follow up to the Madison Capital examination which concluded in July 2021. Apogem has responded to the inquiry. Although there has been no contact with the SEC since November 2022, we believe the inquiry is ongoing and no conclusions have been made.

For informational purposes, Madison Capital is the predecessor to Apogem's direct lending business, which is unrelated to the Firm's co-investment strategy in which MWRA has invested.

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

Apogem's diversity, equity, and inclusion ("DEI") statement, effective January 2023, is as follows:

***Diversity, Equity, and Inclusion Statement***

*Attracting and retaining top talent from all backgrounds and experiences are top priorities of Apogem Capital LLC. Cultivating a diverse and inclusive workplace is a strategic priority and is critical to growth—not only the growth of our organization and our business, but also the growth of each employee personally and professionally. By increasing our ranks with a diverse mix of talent that reflects the marketplace we're serving, our company is better positioned to serve our employees and the communities we support.*

*It is also part of our policy to ensure that the work environment is free of unlawful discrimination or harassment, regardless of age, citizenship, color, ethnicity, gender, gender identity, genetic information, marital status, national origin,*



*physical or mental disability, political affiliation, race, religion, sex, sexual orientation, veteran, or other protected status.*

Apogem, as a subsidiary of New York Life, has full access to the numerous programs offered by New York Life to promote and foster diversity in the organization and the community.

As an example, New York Life sponsors seven Employee Resource Groups (ERGs), which embody the strength and inclusive spirit of the Firm's corporate culture and diverse workforce and help the company to foster an environment in which differences and unique perspectives are encouraged and valued. The ERGs provide robust programming centered on four core areas: Awareness and Advocacy, Professional Development, Talent Acquisition, and Community Service. These ERGs support diverse communities, and each group is voluntary, inclusive, non-political, and non-religious and is open to all employees from any office location. The ERGs also provide opportunities to connect and network with employees across functions and sites, develop and strengthen various skills including leadership, and plan and deliver a variety of programs that have been impactful to the New York Life community.

Apogem has access to these seven formal ERGs for the following communities: Women, LGBTQ+, Black, Latino, Asian, Veterans, and Disability.

Apogem and its employees have full access to and support the efforts highlighted above. Apogem believes these programs provide significant opportunities for those who choose to participate.

Importantly, New York Life's diversity, equity, and inclusion efforts are recognized externally. Last year, the organization was featured among Forbes magazine's Best Employers for Diversity. They were also honored to receive numerous Seramount awards in 2023 including: Seramounts 2023 100 Best Companies, Seramount's 2023 Top Companies for Executive Women, Seramount's Pinnacle Inclusion Index Organization for 2023, and Seramount's 2023 Best Companies for Multicultural Women. These lists highlight companies with superior achievements in their DE&I efforts.

Apogem's Human Resources Team works with New York Life's teams on a regular basis to ensure all Apogem employees, both recent hires and long-tenured professionals, are aware of the various programs and trainings offered by its parent company.

## **Portfolio Management Team**

- 1. Have there been any changes in the portfolio management team in the past year?**



Since the formation of Apogem, the Fund and Co-investment Team's senior leadership has not changed and is comprised of the same leadership responsible for the investments within PASCCIF, the program in which MWRA is invested.

**2. Are there any expected changes to the team in the future (planned additions or departures)?**

Apogem does not anticipate any departures at this time. Regarding additions, the Firm's dedicated Fund and Co-investment Team, the team responsible for managing this product, expects to hire two additional junior level professionals to support the growing nature of its Fund and Co-investment programs.

### Process

**1. Have there been significant changes in any of the areas below in the past year?**

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

None.

### Philosophy

**1. Describe recent changes in investment philosophy, if any.**

None.

### Portfolio

**1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).**

Please refer to meeting presentation materials.

**2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.**

As of March 31, 2023 (most recent available), Apogem's private equity assets under management are ~\$21 billion. The Firm manages a total of \$39 billion in assets.

As Apogem was formed in 2022, as previously described, the following table includes net flows related to the Firm's co-investment strategy since Apogem's



formation. Additional information regarding co-investment related net flows for Apogem’s legacy boutiques can be provided upon request.

Year	Net Flows
2022	\$34,600,000
2023 YTD	\$300,000,000

*Note: 2022 includes the final close of PASCIF II, the successor vehicle to the Fund in which MWRA has invested, and 2023 includes Apogem’s new co-investment offering which was launched in 2023, Apogem Co-investment Fund VII (“ACI VII”) which includes closed capital to date.*

**3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.**

Please refer to the tables below for the requested information related to the Firm’s Co-investment strategy.

Investor Type	% of Strategy AUM
Corporate	34%
Foundation / Endowment	7%
HNW / Family Office	18%
Pension / Retirement	27%
Public / Taft-Hartley	14%

Data represents third-party capital only and includes Apogem’s full co-investment program. Data is as of June 30, 2023.

Top 5 Investors (Strategy)	% of Strategy AUM
Client #1 (Corporate)	12%
Client #2 (Corporate)	11%
Client #3 (Pension/Retirement)	11%
Client #4 (Public/Taft-Hartley)	7%
Client #5 (Corporate)	6%

Data represents third-party capital only and includes Apogem’s full co-investment program. Data is as of June 30, 2023.

### Performance / Market Outlook

**1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

Please refer to meeting presentation materials for benchmark comparisons.

**2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

PASCIF is currently in its seventh year (from the first call date) and has entered its harvest period. As of June 30, 2022, the Fund has twelve (12) full or partial



realizations currently generating a combined 3.4x gross MOIC (3.1x implied net MOIC<sup>2</sup>). In the aggregate, the Fund has returned ~92% of invested capital to date<sup>3</sup>. The remaining investments in the portfolio have an average hold period of 5.1 years.

Following a more than 40% increase in value in 2020, The Fund has increased in value by ~15% as of June 30, 2023, since year-end 2022, and is up ~50% compared to three years ago. Accelerating financial performance of companies (vs. multiple expansion) is driving the value growth as revenue and EBITDA have increased 10% and 18%, respectively over the last year. PASCIF, including all realized and unrealized investments, is currently marked at a 2.2x net MOIC and a 23% net IRR. Apogem expects continued liquidity over the next twelve months as the portfolio continues to mature, although we anticipate an overall slower pace of exits given current market conditions.

Please refer to our response in the following question for additional information on the strategy being in or out of favor.

**3. Describe your market outlook and how strategy positioning is impacted by your views.**

Small to Middle Market private equity has provided attractive private equity returns and portfolio diversification across multiple capital market cycles. We believe the characteristics that have made the Lower Middle and Middle Markets attractive historically persist to the present and are particularly attractive in the current environment. Specifically, we believe the Lower Middle and Middle Markets are a compelling segment of the private equity market for the following reasons:

- **Capital Constrained** – while private equity fundraising has increased rapidly, the growth has been concentrated in larger private equity funds. Specifically, dry powder available to funds with more than \$5 billion in capital commitments has increased by 13% year-over-year on average for the past three years, relative to an increase of less than 5% on average for funds less than \$5 billion

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<sup>2</sup> “Implied Net Returns” (including “Implied Net IRR” and “Implied Net MOIC”) for individual or aggregate investment-level performance are provided in an attempt to demonstrate the impact which fund-level fees, expenses, and carried interest could have at the investment level, as instructed in the U.S. Securities and Exchange Commission’s (“SEC”) “New Marketing Rule.” Where Implied Net Returns are included for individual or aggregate investments, the Implied Net Returns have been calculated by multiplying the ratio of fund-level net returns to fund-level gross returns times the investment-level gross returns (the “ratio method”). For example, if the gross IRR is 20% and the net IRR is 18%, the “ratio” would be 90% (18% divided by 20%), which would be multiplied by the gross IRR to arrive at the “implied net”. In the case of aggregate returns, an average ratio of multiple funds may be used, as specified in the footnote associated with the calculation. This calculation is performed separately for the IRR and the MOIC performance metrics, and as such the ratio may vary between these return metrics. Please note, none of the information in this presentation, including the Implied Net Returns, has been reviewed or approved by the SEC.

<sup>3</sup> As of September 15, 2023.



(the focus of Apogem).<sup>4</sup> Even as fundraising has slowed over the past year, capital has continued to concentrate in large and mega PE funds.

- **Deep Pool of Potential Opportunities** – the Lower Middle & Middle Markets have a deeper pool of potential opportunities than the larger end of the market. Over the past 10 years, over 20 times more private equity deals have been completed with enterprise values between \$100 million and \$1 billion (the focus of Apogem’s co-investment program), relative to deals with enterprise values greater than \$1 billion.<sup>5</sup>
- **Value Creation through Business Building** – Apogem’s investment in companies alongside its Lower Middle & Middle Market sponsors typically represents the first or an early investment of institutional capital into smaller, less mature companies. As a result, there exists a limited value creation opportunity to purchase smaller companies, grow and improve the underlying businesses, and sell them up market to strategic / corporate acquirers and larger private equity funds. Typical business building strategies utilized by Lower Middle & Middle Market sponsors include professionalizing management teams, upgrading systems, M&A strategies, and geographic or product expansion.
- **Robust and Consistent Exit Opportunities** – Lower Middle & Middle Market private equity sponsors typically sell companies to larger private equity funds, PE-backed strategics, and corporate acquirers. Capital available to these groups has increased substantially over the past decade and stands near record levels.<sup>6</sup> Lower Middle & Middle Market private equity is typically less reliant on initial public offerings for exits than larger private equity funds, with exits to IPOs historically accounting for less than 5% of Apogem’s exits.<sup>7</sup> The IPO market has historically been a more volatile and less consistent exit avenue that is generally correlated to the performance and accommodativeness of public markets.

These characteristics have persisted over the past two decades, and recent trends indicate to us that they are likely to continue. The favorable supply / demand dynamics have historically resulted in lower purchase prices and less leverage for Lower Middle & Middle Market companies. These dynamics, coupled with the

---

<sup>4</sup> Source: PitchBook database. Accessed July 17, 2023. Defined as US and Canada buyout and growth funds.

<sup>5</sup> Source: PitchBook, “US PE Breakdown.” As of June 30, 2023.

<sup>6</sup> Source for Corporate Cash: Bloomberg. As of December 31, 2022. Represents cash and cash equivalents available to S&P 500 constituents. Source for Private Equity Dry Powder: PitchBook database. Accessed July 17, 2023. Defined as US and Canada buyout and growth funds.

<sup>7</sup> Includes portfolio companies acquired in Apogem commingled co-investment funds from 2010 to December 31, 2022. Portfolio company information has been provided by the underlying managers, which is subject to change and has not been independently verified or audited. Does not include companies realized via secondary sale, write-offs, or where the buyer was unknown.





ability to exit companies to buyers with significant capital reserves, can enable Lower Middle & Middle Market private equity-owned companies to better navigate macroeconomic and credit market cycles and deliver consistently attractive return opportunities with lower correlation to public markets.

- 4. Could you please include a slide in your presentation that shows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

Please refer to meeting presentation materials.

# MWRA Employees' Retirement System

## Portfolio Update



**Apogem Capital**

A NEW YORK LIFE INVESTMENTS COMPANY

The information contained herein has been prepared by Apogem Capital LLC and speaks only as of the date hereof. This information discusses an investment vehicle managed by Apogem Capital LLC ("Apogem"). Investors should carefully read the investment vehicle's offering documents in their entirety prior to investing. Distribution of these materials to any persons other than the persons receiving these materials directly from Apogem is unauthorized. Any photocopying, disclosure or alteration of the contents of these materials is prohibited. By accepting delivery of these materials, the recipient agrees to the foregoing.

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Apogem (f.k.a. New York Life Investments Alternatives LLC), integrated and combined its three relying advisers PA Capital, LLC, GoldPoint Partners, LLC, and Madison Capital Funding, (collectively, the “Former Relying Advisers”), to create a singular and unified alternative investment firm in early 2022. This presentation contains information related to the historical advisory businesses of the Former Relying Advisers, including assets under management, number of GP relationships, investment performance, employee tenure, and other metrics. This information is being provided to demonstrate the Former Relying Adviser’s investment process, underlying manager/sponsor relationships, and the contributions of each Former Relying Adviser’s investment professionals. There can be no assurance that similar investment opportunities that resulted in the performance presented herein will be identified, available for investment, bear the same characteristics, pass due diligence, and/or replicate past performance. The integration of the Former Relying Advisers represents a change in ownership and branding, not a change in advisory services. The integration and combination of the Former Relying Advisers did not result in material changes in the functions or personnel of the investment committees which make investment decisions on a consensus basis.

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**Forward-looking statements.** Certain statements provided in this presentation are not historical facts and may contain forward-looking statements. These forward-looking statements are based on the current beliefs and expectations of the investment manager and are subject to significant risks and uncertainties. If underlying assumptions prove inaccurate, or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements. Please see the offering documents for various risks inherent with these investments which could cause actual results to differ materially from those in any forward-looking statements. While we believe that our assumptions are reasonable as of the date of this presentation, we caution that it is very difficult to predict the impact of known factors, and, of course, it is impossible for us to anticipate all factors that could affect our actual results. Apogem undertakes no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

**Risk Factors.** Notwithstanding the foregoing, please note the following with respect to investment funds managed by Apogem Capital: Investments in the funds are meant only for sophisticated investors and involve a high degree of risk. Investors can lose all or a substantial portion of their investment. Investment returns may be volatile. Investments in underlying funds may not be diversified. Funds of funds have substantial fees and expenses that will offset profits, if any. Investments in the funds are subject to significant restrictions on transfers. There is no secondary market for interests in the funds and none is expected to develop. The underlying funds’ use of leverage in the course of their trading could exacerbate losses.

**Target Returns.** Any targeted returns included are for illustrative purposes only and are inherently forward-looking statements. Accordingly, no assumptions or comparisons should be made based upon these returns. Projected returns are subject to inherent limitations. For example, the returns do not take into account the impact of overall market and economic risks. In addition, target returns are subject to risks and uncertainties that may change at any time, and, therefore, actual results may differ materially from those expected. In no circumstances should the targeted returns be regarded as a representation, warranty, or prediction that the fund will reflect any particular performance or that it will achieve or is likely to achieve any particular result or that investors will be able to avoid losses, including total loss of their investment. Inherent in any investment is the potential for loss. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and, of course, it is impossible for us to anticipate all factors that could affect our actual results.

**Past Performance.** Past performance is not indicative of future returns. Rate of return information is provided solely as an indicator as to how the fund will be managed and is not intended to be viewed as an indicator of likely performance returns to investors in the fund. Where past performance has been aggregated across a strategy, these results should not be interpreted as a single fund in which an investment could have been made.

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- Organizational Update & Team Overview
- Current Investments Overview
- PA Small Company Coinvestment Fund

# Organizational Update & Team Overview





**Experience**

**30+**  
Years  
Investing

**Scale**

**\$39B**  
Firm-wide  
AUM<sup>1</sup>

**Alignment<sup>2</sup>**



**Relationships  
& Data**

**320+**  
Active  
Sponsor  
Relationships<sup>3</sup>

**Stability**

**200+**  
Employees

**Deep Experience & Access Across the Middle and Lower Middle Market**

**\$75B+ Committed**

**2,700+ Investments**

 **Private Credit**

Direct Lending | Junior Debt

 **Private Equity**

Funds | Direct Co-Investments | Secondaries | Emerging & Diverse

 **GP Stakes**

Direct Minority Investments

 **Private Real Assets**

Direct Co-Investments | Opportunistic Investments

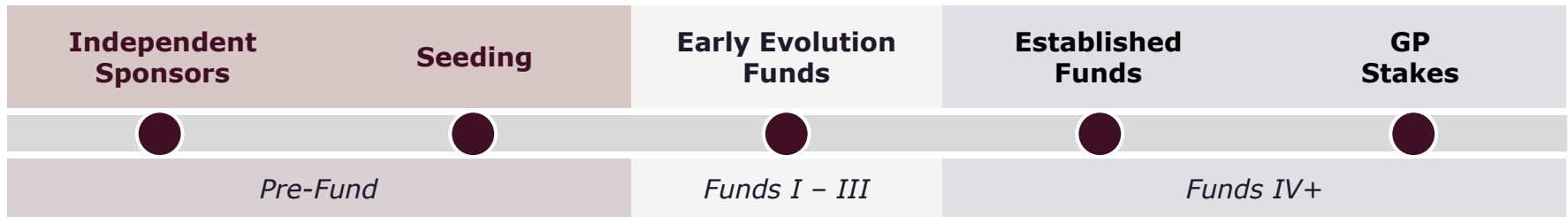
Data as of March 31, 2023, unless otherwise noted. 1. AUM is estimated and unaudited as of March 31, 2023. AUM includes non-discretionary and co-advised assets, as well as assets managed for New York Life and certain of its subsidiaries. 2. Apogem Capital is a wholly owned subsidiary of New York Life Insurance Company ("NYL") through New York Life Investment Management Holdings, LLC ("NYLIM"). 3. "GP Relationship" for Madison represents the number of PE sponsors with which Madison made an investment from 2016 through September 30, 2021. PA and GPP relationships include private equity GPs where PA or GPP have an active investment relationship as of September 30, 2021, across funds, co-investments, or secondaries.



## Apogem Capital has developed robust investment capabilities across the GP lifecycle & private equity and private credit capital structures

- **Enhanced Value Proposition to GPs:** potential to continue backing top performing private equity sponsors as they grow makes Apogem a more desirable partner resulting in improved access to sought-after deal flow
- **Deeper Data & Investment Insights:** ability to invest across a GP's life cycle and capital structures enhances lifetime value of Apogem's relationship with GPs and strengthens insights into track records and acumen, potentially improving investment decisions

### Robust Capabilities Across GP Lifecycle











### Range of Portfolio Company, Fund & GP Capital Solutions






















### Experienced, Cross-Strategy Investment Committee

 Chris Stringer Funds / Co-invest Interim CEO & Head of PE 25+ years	 Chaz Cocuzza Funds / Co-invest Managing Director 18 years	 Todd Milligan GP Stakes Managing Director 20 years	 Chip Moelchert Senior Advisor 30+ years
 Bart Shirley Secondaries Managing Director 25+ years	 Kee Rabb Funds / Co-invest Managing Director 22 years	 Richard Wiltshire Funds / Co-invest Managing Director 22 years	 Louise Woltz Smith Funds / Co-invest Managing Director 17 years

### Additional Fund & Co-investment Focused Investment Professionals

 Bryan Pendleton Managing Director	 Richard Eddison Director	 Ken Foskett Vice President	 Stephanie Park Vice President	 Will Raul Vice President
 Jimmy Sestilio Vice President	 Sarah McManus Senior Associate	 Maria Melchor Senior Associate	 Mitali Marwaha Associate (September start)	 Q Pollart Associate
 Aidan Robinson Associate (September start)	 Olivia Schilsky Associate	 Catherine Zysk Associate	 Michael Pilkington Analyst	 Ryan Silverman Analyst
 Trib Singh Analyst	 Max Weaver Analyst			

**+ 10-person** dedicated Secondaries team

**Supported by 100+ professionals**  
across Finance & Operations, Legal & Compliance,  
Business Development & Investor Relations

As of September 2023. "# of Years" represents years of experience for each team member across Apogem.



# Current Investments Overview





## MWRA Employees' Retirement System – Current Investments Overview

**As of June 30, 2023** unless otherwise noted

<i>\$ in millions</i>	<b>PASCCIF</b>
<b>Vintage Year</b>	2016
<b>Fund Size</b>	\$97.2
<b>Commitment</b>	\$4.0
<b>Called % (as of September 25, 2023)<sup>1</sup></b>	96%
<b>Distributed to Paid-in (as of September 25, 2023)<sup>1</sup></b>	92%
<b>Unfunded % (as of September 25, 2023)<sup>1,2</sup></b>	17%
<b>Net MOIC<sup>1,3,4</sup></b>	2.2x
<b>Net IRR<sup>1,4</sup></b>	23%
<b>Rolling Performance</b>	
<b>1 Year Net IRR<sup>4</sup></b>	17%
<b>3 Year Net IRR<sup>4</sup></b>	24%
<b>5 Year Net IRR<sup>4</sup></b>	26%

Note: Performance data is estimated and unaudited as of June 30, 2023. These funds are managed by Apogem Capital, LLC ("Apogem"). 1. Estimated and unaudited as of June 30, 2023. Called and distributed figures are shown at the fund-level and are to date, as portrayed above. 2. Unfunded commitment includes distributions subject to recall at the Apogem and underlying fund-level. 3. Computed as follows: (Distributed Capital + Capital Account Value)/Contributed Capital. MOICs are presented gross of distributions subject to recall. 4. Performance figures presented at the fund-level. Please see Valuation Methodology Disclosure at the end of the presentation for information related to the computation of estimated Capital Account Value and estimated IRR.

# PA Small Company Coinvestment Fund ("PASCCIF")





## Diversified Portfolio of North American Low Mid Market Companies

### Target Net Returns<sup>1</sup>

**2.0x+**  
Net MOIC

**20%+**  
Net IRR

### Program Size

**\$164M**  
Total Program  
Size

**\$97M**  
PASCCIF Size<sup>2</sup>

### Investment Strategy

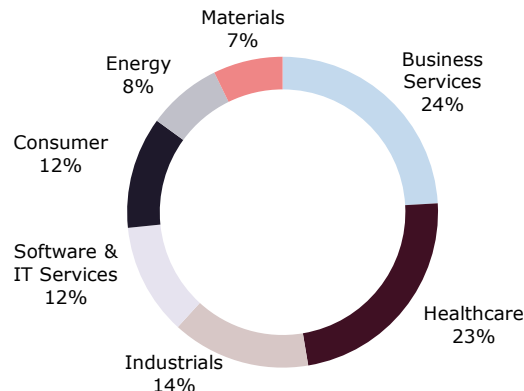
- ▶ Target founder-owned companies with enterprise value <\$250M
- ▶ Partner with Low Mid Market fund managers and independent sponsors

### Investment Diversification

- ▶ **Strategies:** Buyout, growth equity, turnaround / distressed
- ▶ **Vintage Years:** 2016 - 2020
- ▶ **Industries:** Diversified

## High-Quality Portfolio of Diversified Investments<sup>3</sup>

### PASCCIF Exposure by Industry



- **Diversified:** 30 portfolio companies; average position size of 3.3%
- **Highly Selective:** 3% investment rate
- **Attractive Fees:** no management fee charged by sponsors historically

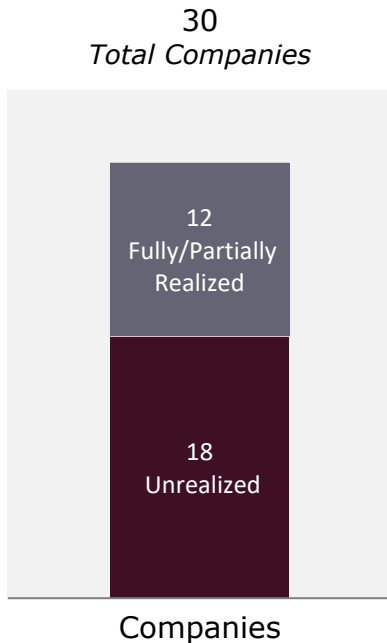
1. Performance data is estimated and unaudited as of March 31, 2023. Please see Valuation Methodology Disclosure at the end of the presentation for information related to the computation of estimated Capital Account Value and estimated IRR. 2. Includes both Private Advisors Small Company Coinvestment Fund, LP, and Private Advisors Small Company Coinvestment Fund-ERISA, LP. 3. All data as of June 30, 2023. Exposure by industry and investment year based on invested capital.



## Key Statistics

MWRA Commitment	\$4.0M
Total Fund / Program Size	\$97.2M / \$163.6M
Current Net Performance <sup>1</sup>	23% IRR   2.2x MOIC
Expected Net Performance <sup>2</sup>	20% – 24% IRR   2.1x – 2.5x MOIC

## Realized vs. Unrealized Portfolio Companies<sup>3</sup>



### Fully/Partially Realized Investments

**92%**

Of agg. called capital returned

**3.4x**

Gross MOIC

**3.1x**

Implied Net MOIC<sup>5</sup>

### Performance Momentum

**17%**

1-year net IRR<sup>1</sup>

**\$20.2 million**

Distributed LTM<sup>4</sup>

## Update<sup>3</sup>

- ▶ Fund life = 7 years (since first cash flow)
- ▶ Maturing portfolio; transitioning into harvest stage
- ▶ Accelerating financial performance with LTM revenue and EBITDA growth of 10% and 18%, respectively
- ▶ 5.1 year average hold period of remaining companies
- ▶ Unrealized portfolio conservatively capitalized at 3.9x net debt/EBITDA and valued at 1.7x capital weighted MOIC
- ▶ Strong liquidity expected over next twelve months as portfolio continues to mature

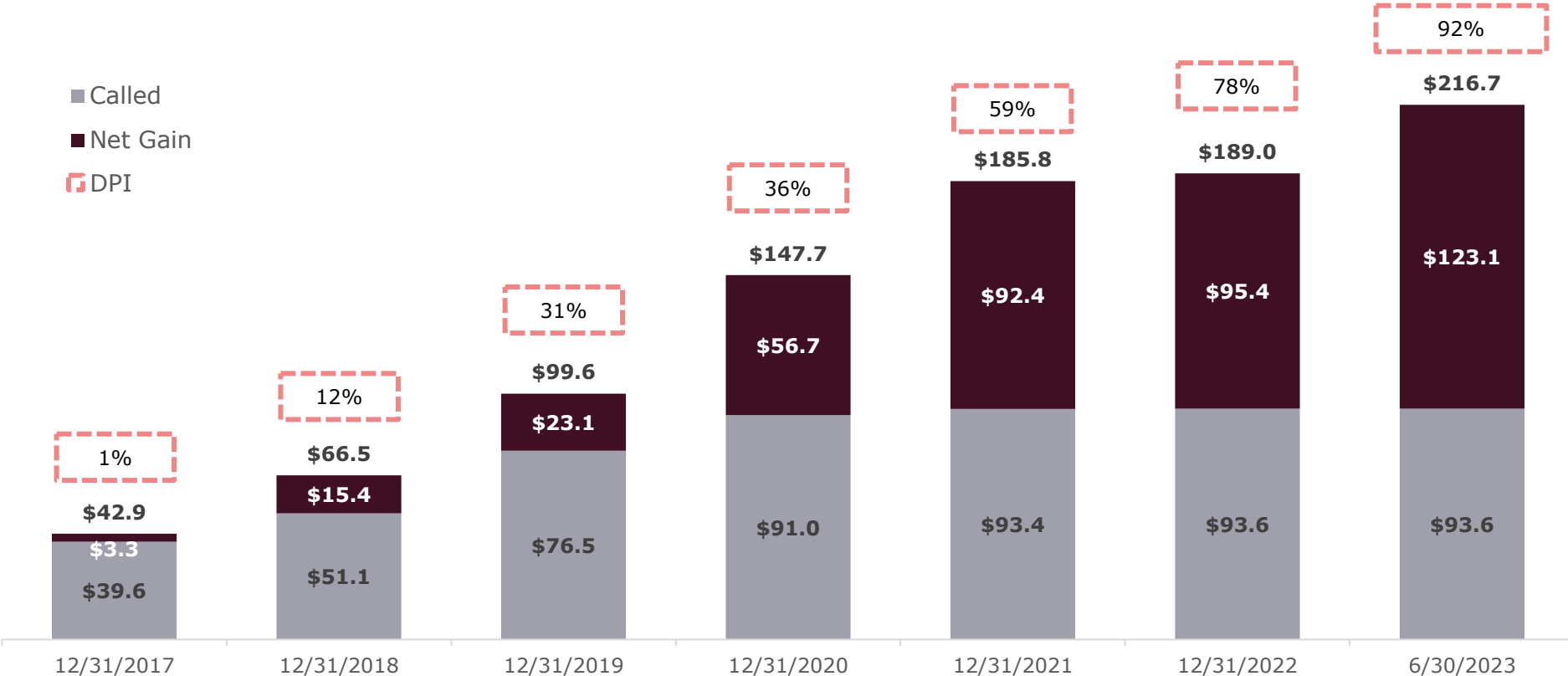
1. Performance data is estimated and unaudited as of June 30, 2023. Please see Valuation Methodology Disclosure at the end of the presentation for information related to the computation of estimated Capital Account Value and estimated IRR.. 2. There can be no assurance projected performance will be achieved. See Target Returns disclosure for more information. 3. Realized and partially realized portfolio company statistics as of June 30, 2023. Partially realized investments include those that have returned at least 100% of invested capital. Unless otherwise noted, unrealized portfolio company financial performance data is NAV weighted and as of June 30, 2023. 4. Includes prior twelve month period from time of most recent distribution. 5. Please refer to the implied net performance disclosure in the appendix for additional information.



# Performance Development

12/31/17 <sup>1</sup>	12/31/18 <sup>1</sup>	12/31/19 <sup>1</sup>	12/31/20 <sup>1</sup>	12/31/21 <sup>1</sup>	12/31/22 <sup>1</sup>	06/30/23 <sup>1</sup>
Net MOIC: <b>1.1x</b>	Net MOIC: <b>1.3x</b>	Net MOIC: <b>1.3x</b>	Net MOIC: <b>1.6x</b>	Net MOIC: <b>2.0x</b>	Net MOIC: <b>2.0x</b>	Net MOIC: <b>2.2x</b>
Net IRR: <b>11%</b>	Net IRR: <b>20%</b>	Net IRR: <b>17%</b>	Net IRR: <b>24%</b>	Net IRR: <b>26%</b>	Net IRR: <b>22%</b>	Net IRR: <b>23%</b>
	<b>27%</b> 1-yr Net IRR	<b>13%</b> 1-yr Net IRR	<b>41%</b> 1-yr Net IRR	<b>33%</b> 1-yr Net IRR	<b>2%</b> 1-yr Net IRR	<b>17%</b> 1-yr Net IRR

- Called
- Net Gain
- ▭ DPI



1. Please see Valuation Methodology Disclosure at the end of the presentation for information related to the computation of estimated Capital Account Value and estimated IRR.



# Portfolio Company Performance

## Portfolio Valuation Summary(1) As of June 30, 2023

Company	Sponsor	Entry Date	Invested Capital	Realized Proceeds	Estimated Residual Value	Multiple of Cost	Estimated Gross IRR	Exit Date	Implied Net MOIC	Implied Net IRR
<b><u>PACIF IV Program Co-investments</u></b>										
<i>Fully / Partially Realized</i>										
Confidential #1	Confidential	12/17	\$3.5	\$15.2	\$0.0	4.3x	163.6%	6/19	3.9x	152.1%
Confidential #2	Confidential	12/15	2.2	0.6	0.0	0.3x	(64.5%)	9/21	0.2x	(60.0%)
Confidential #3	Confidential	12/15	4.3	6.9	7.6	3.4x	24.0%		3.1x	22.3%
Confidential #4	Confidential	7/18	2.3	2.8	0.0	1.2x	29.6%	12/22	1.1x	27.5%
Confidential #5	Confidential	7/19	3.4	7.1	32.8	11.8x	109.5%		10.7x	101.8%
Confidential #6	Confidential	4/17	3.2	10.9	0.0	3.3x	33.1%	10/21	3.0x	30.8%
Confidential #7	Confidential	6/19	3.5	0.0	0.0	0.0x	(100.0%)	10/21	0.0x	(93.0%)
Confidential #8	Confidential	10/19	4.0	4.0	4.4	2.1x	31.0%		1.9x	28.9%
Confidential #9	Confidential	8/16	2.2	8.0	0.2	3.8x	27.7%	6/22	3.4x	25.7%
Confidential #10	Confidential	6/18	2.4	7.5	0.1	3.1x	34.9%	4/22	2.8x	32.5%
Confidential #11	Confidential	7/19	3.2	12.5	0.2	4.0x	45.6%	5/23	3.6x	42.4%
<b>Total Fully / Partially Realized PA</b>			<b>\$34.1</b>	<b>\$75.4</b>	<b>\$45.3</b>	<b>3.5x</b>	<b>38.8%</b>		<b>3.2x</b>	<b>36.0%</b>
<i>Unrealized</i>										
Confidential #12	Confidential	11/16	2.2	0.0	2.8	1.3x	4.0%		1.2x	3.7%
Confidential #13	Confidential	1/17	2.7	0.7	10.2	4.0x	27.1%		3.6x	25.2%
Confidential #14	Confidential	2/17	3.0	0.0	1.4	0.5x	(11.0%)		0.4x	(10.3%)
Confidential #15	Confidential	9/17	2.7	0.1	1.3	0.5x	(10.7%)		0.5x	(9.9%)
Confidential #16	Confidential	12/17	8.0	0.4	12.9	1.7x	13.1%		1.5x	12.2%
Confidential #17	Confidential	8/18	3.1	0.0	7.8	2.5x	20.9%		2.3x	19.4%
Confidential #18	Confidential	8/18	3.5	0.0	8.5	2.4x	19.9%		2.2x	18.5%
Confidential #19	Confidential	1/19	1.6	0.0	4.1	2.5x	23.6%		2.3x	21.9%
Confidential #20	Confidential	2/19	2.7	0.6	5.9	2.4x	22.6%		2.2x	21.0%
Confidential #21	Confidential	5/19	2.3	0.0	2.6	1.1x	3.0%		1.0x	2.8%
Confidential #22	Confidential	12/19	2.2	0.0	5.0	2.3x	26.3%		2.1x	24.5%
Confidential #23	Confidential	9/20	3.0	1.2	10.2	3.8x	67.9%		3.4x	63.1%
<b>Total Unrealized PACIF IV Program Co-investments</b>			<b>\$37.0</b>	<b>\$3.0</b>	<b>\$72.8</b>	<b>2.1x</b>	<b>16.3%</b>		<b>1.9x</b>	<b>15.1%</b>
<b>Total PACIF IV Program Co-investments</b>			<b>\$71.1</b>	<b>\$78.5</b>	<b>\$118.1</b>	<b>2.8x</b>	<b>28.0%</b>		<b>2.5x</b>	<b>26.1%</b>
<b><u>Middle Market Co-investments</u></b>										
<i>Fully / Partially Realized</i>										
Confidential #24	Confidential	10/19	3.0	7.3	0.0	2.4x	115.9%	12/20	2.2x	107.7%
<b>Total Fully / Partially Realized Middle Market Co-investments</b>			<b>\$3.0</b>	<b>\$7.3</b>	<b>\$0.0</b>	<b>2.4x</b>	<b>115.9%</b>		<b>2.2x</b>	<b>107.7%</b>
<i>Unrealized</i>										
Confidential #25	Confidential	6/16	2.6	0.0	2.2	0.9x	(2.1%)		0.8x	(2.0%)
Confidential #26	Confidential	11/16	2.9	1.9	0.7	0.9x	(3.7%)		0.8x	(3.4%)
Confidential #27	Confidential	11/17	3.2	0.0	1.4	0.4x	(15.8%)		0.4x	(14.7%)
Confidential #28	Confidential	1/18	2.0	0.0	0.1	0.0x	(44.0%)		0.0x	(40.9%)
Confidential #29	Confidential	10/18	3.3	0.0	4.7	1.4x	7.8%		1.3x	7.3%
Confidential #30	Confidential	10/19	2.6	0.1	3.4	1.4x	11.2%		1.2x	10.4%
<b>Total Unrealized Middle Market Co-investments</b>			<b>\$16.6</b>	<b>\$2.0</b>	<b>\$12.6</b>	<b>0.9x</b>	<b>0.0%</b>		<b>0.8x</b>	<b>0.0%</b>
<b>Total Middle Market Co-investments</b>			<b>\$19.6</b>	<b>\$9.4</b>	<b>\$12.6</b>	<b>1.1x</b>	<b>3.2%</b>		<b>1.0x</b>	<b>3.0%</b>
<b>Total PASCIF</b>			<b>\$90.7</b>	<b>\$87.8</b>	<b>\$130.7</b>	<b>2.4x</b>	<b>24.2%</b>			
<b>Total Estimated PASCIF Net IRR<sup>(2)</sup></b>					<b>22.5%</b>					
<b>Total Estimated PASCIF Net MOIC<sup>(2)</sup></b>					<b>2.2x</b>					

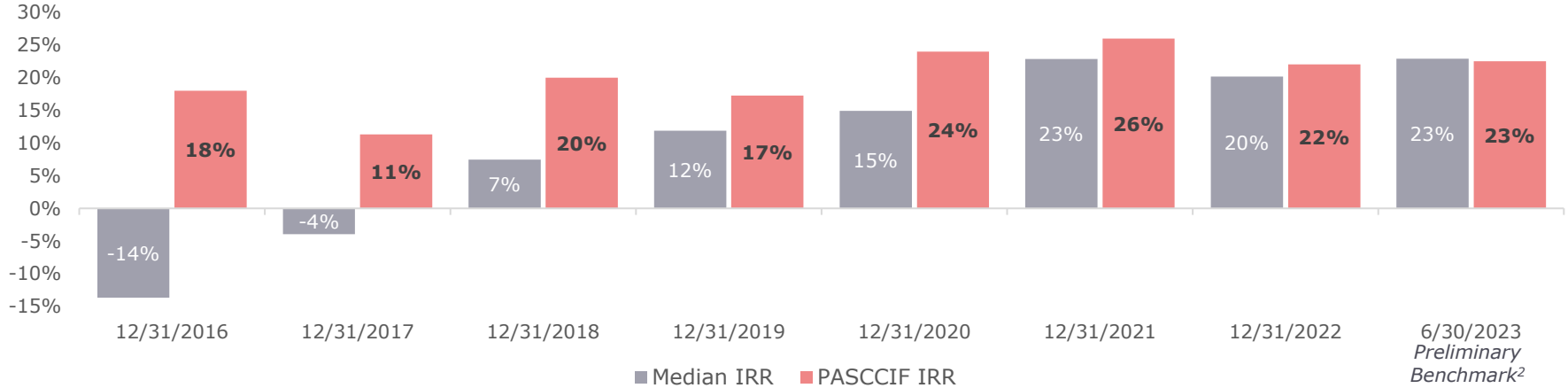
**Note:** Please refer to the implied net performance disclosure herein for additional information. All underlying co-investment company data contained herein is based upon information provided by the underlying co-investment company and is provided solely for illustrative purposes. The multiple on invested capital and IRR for each underlying company are estimated and derived from information provided by the lead equity sponsor. While we believe the data to be reliable, we cannot guarantee the accuracy of such information. <sup>(1)</sup> All data is estimated and unaudited. **Neither past performance, estimated values, nor estimated IRRs are necessarily indicative of the future results.** Please see Appendix for important disclosures regarding valuation methodology. Co-investments are generally valued at cost for the first year after investment unless a material event occurs. After the first year, values may be estimated higher or lower which could significantly impact performance. <sup>(2)</sup> Net of management fees, expenses, and estimated carried interest.



# Performance Relative to Benchmark

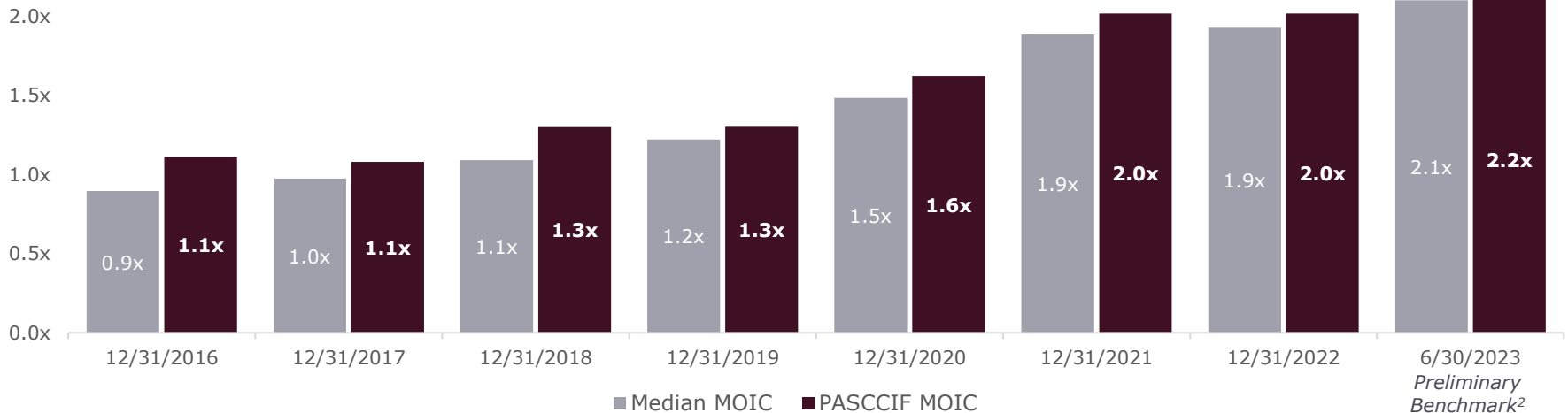
## PASCCIF Net IRR Development vs. 2015 Vintage Year Median Benchmark

As of June 30, 2023<sup>1,2</sup>



## PASCCIF Net MOIC / DPI Development vs. 2015 Vintage Year Median Benchmark

As of June 30, 2023<sup>1,2</sup>



(1) Estimated and unaudited as of the date shown. Please see Co-investment Disclosures at the end of this presentation for information related to performance. Figures include both Private Advisors Small Company Coinvestment Fund, LP, and Private Advisors Small Company Coinvestment Fund-ERISA, LP. (2) Source for PE benchmark: Cambridge Associates, 50 US buyout funds, vintage year 2015 as of June 30, 2023. Cambridge benchmark data as of 6/30/23 is preliminary and subject to change. The benchmark is ~50% reported at 6/30/23 compared to prior quarters.



# Disclosures



## Valuation Methodology for Apogem Capital Co-investment Funds

### Important disclosures regarding valuation methodology for Apogem Co-investment Funds:

There can be no assurances that the actual IRR will not be materially different from the estimates presented here. The estimated IRR is calculated by Apogem Capital based on information provided in part by the underlying co-investment companies and upon Apogem Capital's own valuations of the underlying co-investment companies. To the extent the actual Residual Value is materially lower than the estimate provided herein, the actual IRR will also be materially lower. The estimated residual value may never be realized. **There can be no assurances that unrealized value included in the estimated Residual Value calculations will be realized at the time the underlying funds liquidate their investments. Investments which are currently reflecting unrealized gain may realize a loss when actually liquidated. Neither past performance, estimated values, nor estimated IRRs are necessarily indicative of future results.**

Co-investments are generally valued at cost for the first year after investment unless a material event occurs. After the first year, values may be estimated higher or lower which could significantly impact performance.

All figures are estimated, unaudited and subject to change unless otherwise noted and are shown net of all expenses, management fees, and estimated carried interest.

Certain co-investment funds have credit lines available for short-term financing to decrease the overall frequency of capital calls, which may have an impact on the IRR of the funds. **Please see Effects of Leverage on Gross and Net IRR disclosure for additional information.**

All underlying co-investment company data contained herein is based upon information provided by the underlying co-investment company and is provided solely for illustrative purposes.

### Implied Net Performance

"Implied Net Returns" (including "Implied Net IRR" and "Implied Net MOIC") for individual or aggregate investment-level performance are provided in an attempt to demonstrate the impact which fund-level fees, expenses, and carried interest could have at the investment level, as instructed in the U.S. Securities and Exchange Commission's ("SEC") "New Marketing Rule." Where Implied Net Returns are included for individual or aggregate investments, the Implied Net Returns have been calculated by multiplying the ratio of fund-level net returns to fund-level gross returns times the investment-level gross returns (the "ratio method"). For example, if the gross IRR is 20% and the net IRR is 18%, the "ratio" would be 90% (18% divided by 20%), which would be multiplied by the gross IRR to arrive at the "implied net". In the case of aggregate returns, an average ratio of multiple funds may be used, as specified in the footnote associated with the calculation. This calculation is performed separately for the IRR and the MOIC performance metrics, and as such the ratio may vary between these return metrics. Please note, none of the information in this presentation, including the Implied Net Returns, has been reviewed or approved by the SEC.

### Effects of Leverage on Gross and Net IRRs Disclosure

Calculations of net and gross IRRs in respect of investment and performance data included and/or referred to herein are based on the payment date of capital contributions received from limited partners, even in instances where a fund or account utilizes borrowings under a subscription-based credit facility. The use of a subscription-based credit facility (or other fund-level leverage) with respect to investments may result in a higher or lower reported gross IRR and net IRR at the fund-level than if such subscription facility (or other fund-level leverage) had not been used and instead the investors' capital had been contributed at the inception of each such investment. This is due to the fact that calculations of gross IRR and net IRR are based on the period of time between (a) the date of limited partner contributions for a relevant investment (and not the date the investment was made) and (b) the date of distribution from the applicable fund or account to investors.

Therefore, if a subscription facility is used to fund an investment, capital may be called more slowly from the limited partners to repay such borrowings, which would shorten the time between such contribution and distribution and consequently increase or decrease gross IRR and net IRR. Additionally, early in a fund or account's life, the use of a subscription-based credit facility could cause the amount of invested capital to exceed drawn capital.

### Prior Performance Disclosure

The Partnership is managed by Apogem Capital LLC ("Apogem Capital"). Apogem is responsible for sourcing and diligence for the investments in the Partnership, however, investment decisions are made by the investment committee referenced in this presentation. Thus, it should be noted the historical performance information discussed in this presentation is that of PA Capital and GoldPoint Partners, now a part of Apogem Capital. Both predecessor firms managed co-investment strategies focused on the lower middle and middle markets, primarily or exclusively investing in co-investment opportunities where the firm has an existing fund investment. The addition of investment committee members from other affiliated boutiques, now under Apogem Capital, may have affected the past performance in an unknown manner. In considering the prior performance information contained herein, prospective investors should bear in mind that past performance is not indicative of future results and there can be no assurance that the Partnership will achieve its objective or will not incur substantial losses. The Partnership is not required by law to follow any standard methodology when calculating and presenting performance data. The performance of the Partnership may not be directly comparable to the performance of other private investment funds. In addition, there can be no assurance that unrealized investments will be realized at the valuations shown as actual realized returns. Most of such unrealized investments are in privately-held companies for which there is no trading market. Prospective investors are cautioned not to rely on the prior returns set forth herein in making a decision whether or not to purchase the interests offered hereby. The return information contained herein has not been audited or verified by any independent party and should not be considered representative of the returns that may be received by an investor in the Partnership. Actual returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations contained herein are based. Nothing contained herein should be deemed to be a prediction or projection of future performance of the Partnership.

### Target Returns Disclosure

The targeted returns included are for illustrative purposes only. Accordingly, no assumptions or comparisons should be made based upon these returns. Projected returns are subject to inherent limitations. One limitation is that the returns do not take into account the impact that market and economic risks, such as defaults, prepayments, and reinvestment rates. In addition, target returns are subject to risks and uncertainties that may change at any time, and, therefore, actual results may differ materially from those expected. In no circumstances should the targeted returns be regarded as a representation, warranty or prediction that the Fund will reflect any particular performance or that it will achieve or is likely to achieve any particular result or that investors will be able to avoid losses, including total loss of their investment. Inherent in any investment is the potential for loss. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and, of course, it is impossible for us to anticipate all factors that could affect our actual results.

### Index Definitions

**Cambridge Associates North America Buyout Benchmark** – Cambridge Associates North America Buyout Benchmark Statistics represents a robust collection of institutional quality private fund performance and are based on data compiled from institutional-quality global buyout and growth equity funds formed since 1986. The benchmark aggregates portfolio-level performance information. Fund and investment-level performance information is drawn from the quarterly and audited annual financial statements of the fund managers and each manager's reported performance numbers are independently recreated from the financial statements and verified by Cambridge Associates.

**Note:** *Performance of broad public market indices, such as the S&P 500, are for informational purposes only and do not provide a basis of comparison for private equity fund investments as the market volatility, liquidity and other characteristics of private equity fund investments are materially different from those of broad public market indices. Comparisons to alternative investment indices/benchmarks are subject to material inherent limitations. Data included in alternative investment indices or benchmarks generally do not represent the returns of all funds but rather only those to which the index/benchmark provider has access. The number of funds included in the index/benchmark data for a specific vintage year will likely vary. Moreover, performance information for all funds within a specific category may differ from those reported by the index/benchmark provider. Additionally, the universe from which the components of an alternative investment index/benchmark are selected include a significant element of "survivor bias" into the reported levels of an index/benchmark, as generally only successful funds will continue to report for the required period. Accordingly, indexation of alternative investment strategies tends to overstate the beneficial aspects of these strategies while obscuring certain risks, including the "risk of ruin."*



NEPC, LLC

**Firm: Hamilton Lane Advisors, LLC**

**Strategy/Product: Hamilton Lane Secondary Fund V, L.P**

**Client: Massachusetts Water Resources Authority Retirement System**

### **NEPC Manager Due Diligence Questionnaire - Update**

#### **Instructions**

In support of our upcoming meeting we ask that you please complete this due diligence questionnaire. Please provide your responses in the form of brief descriptions, lists or tables added directly to this Word document.

Thank you for taking the time to complete this questionnaire. Please note that all materials submitted in relation to MWRA Retirement System may be subject to disclosure consistent with Massachusetts Public Record laws.

#### **Firm/Organization**

**1. Have there been any changes in ownership or management in the past year?**

We are a publicly-traded independent firm. In 2003, Hamilton Lane began the process of transitioning the company from being a firm owned by a few to that of a firm with broad ownership across senior management. Prior to 2003, Hamilton Lane was majority owned by its founders, and over time transitioned to broader employee equity ownership. In early 2017, we conducted an initial public offering through our holding company, Hamilton Lane Incorporated (HLI), whose shares are listed on NASDAQ.

**2. List firm AUM, net flows and accounts gained/lost for the past 5 years.**

As of June 30, 2023, our firm AUM totals to \$817.7 billion (Note: Clients with multiple discretionary or non-discretionary portfolios are counted only once in the total number of clients. 62 clients have both private markets' discretionary and non-discretionary investments. AUM equals assets under management for active accounts.). Our existing client accounts and information is confidential.

**3. Have there been any new or discontinued products in the past year?**

None of Hamilton Lane's products have been discontinued. Over the past year, we have launched Hamilton Lane Strategic Opportunities Fund VIII L.P, Hamilton Lane Infrastructure Opportunities Fund II, Hamilton Lane Senior Credit Opportunities Fund, Hamilton Lane Venture Access Fund I and Hamilton Lane Genesis Equity Fund I.

**4. Are any products capacity constrained?**

No. Our aim is always to achieve the highest level of client service and to ensure that investment capacity keeps pace with the best investment opportunities. Our discretionary service line includes customized separate accounts, as well as dedicated commingled funds. We intend to



further develop our solutions offerings to meet our clients' evolving needs and respond to changing market conditions. To achieve this, we evaluate prospective business relationships according to many factors, including managing access/allocation as well as firm coverage capabilities. Within our commingled fund offerings specifically, we offer a wide array of solutions so that investors can access the market. We are dedicated to continuing these service lines with current and future funds that are designed to the growing needs of clients and investors.

To support our efforts, our deal flow is at the core of our process. We have maintained a consistent and expansive level of deal flow across strategies. This ensures that we have the ability to not only access those deals that we feel are best in class, but also a diversified mix of opportunities.

**5. Describe any current or pending regulatory, compliance or litigation issues and the expected business impact.**

There is no material business-related litigation or regulatory action against the firm, affiliates or employees at this time. Such matters would be found in our Form 10-K, Form 10-Q and/or subsequent filings that we submit to the U.S. Securities and Exchange Commission (SEC) as required by the SEC's disclosure rules. For ease of reference, please refer to: Hamilton Lane INC CIK#: [0001433642](#) (See: [all company filings](#)).

**6. Describe your diversity, equity and inclusion efforts with regard to the firm and its employees.**

Diversity, Equity and Inclusion has been at the core of Hamilton Lane's culture since our firm inception in 1991. Fulfilling our corporate mission of 'Enriching Lives and Safeguarding Futures' requires tapping into the collective sum of the individual and unique life experiences, knowledge, self-expression, capabilities and talent that each of our employees bring to their work every single day.

To that end, Hamilton Lane fosters, cultivates and preserves a culture of diversity, equity and inclusion where employees are able to do their best work because they are encouraged to bring their entire selves into the workplace.

We embrace our employees' differences across age, color, ethnicity, family or marital status, gender identity or expression, language, national origin, physical and mental ability, political affiliation, race, religion, sexual orientation, socio-economic status, veteran status, and other characteristics that make our employees – and, by extension, our firm – unique.

Our commitment to diversity, equity and inclusion extends from our workplace into the communities in which we live and the industry in which we operate. Guided by our corporate value of 'Do the Right Thing,' we have an obligation to work toward a more inclusive and equitable Private Markets asset class, and toward social justice across all the geographies we serve.

"The Hamilton Lane All" Policy ("HL All") sets out a comprehensive framework to intentionally embed diversity, equity and inclusion into our company values, culture and practices.

HL All is a five-pillar strategy that includes:



*Workforce Diversity:* Ensure that diversity, equity and inclusion is supported by Hamilton Lane's recruiting, hiring, development and retention practices.

*Training and Development:* Incorporate learning and awareness of cultural competency, implicit bias and inclusion into all employee lifecycle experiences.

*Workplace Inclusion:* Strive for a work environment in which all individuals are treated fairly and respectfully, have equal access to opportunities and resources, and can contribute fully to the organization's success.

*Culture and Accountability:* Foster a culture of inclusion and engagement by clearly setting expectations, and rewarding and recognizing actions that promote DE&I as indelible components of our employment and commercial brand.

*Supplier Diversity:* Build relationships with, and purchase goods and services from, certified diverse enterprises owned by minorities, women, veterans and LGBTQ+ that can help Hamilton Lane succeed and achieve our growth and strategic objectives.

All Hamilton Lane employees share a responsibility to promote workplace civility and treat others with dignity and respect at all times. All employees are expected to exhibit conduct that reflects inclusion during work, at work functions, events, and meetings on or off the work site, and at all other company-sponsored and participative events.

Any employee found to have exhibited any inappropriate conduct or behavior against others will be subject to disciplinary action, up to and including termination.

Employees who believe they have been subjected to any kind of discrimination or harassment that conflicts with Hamilton Lane's policies and initiatives should seek immediate assistance from a member of management or the HR team.

Additionally, Hamilton Lane Women's Exchange (HLWe) is a firm committee that creates experiences designed to connect Hamilton Lane women together to support their development and success. The team plans a variety of career development events throughout the year.



## Firm Initiatives & Results



Council focused on driving D&I initiatives



Series provides outside perspectives on D&I issues



Event introducing undergraduate women to our industry



HL Women's Exchange is an Employee-led organization for peer-to-peer mentoring



Program dedicated to hiring recent college grads



Mentorship program open to all employees

### Portfolio Management Team

#### 1. Have there been any changes in the portfolio management team in the past year?

There have not been any departures at the Managing Director level nor any senior individuals managing the portfolio in the last year as of June 30, 2023.

#### 2. Are there any expected changes to the team in the future (planned additions or departures)?

There are no expected departures at this time. In terms of additions to the team, we generally seek to expand our team as needed and opportunistically throughout the various levels. Within the past year, we have expanded our global team by hiring several junior members to both the investment and legal teams focused on Secondaries.

### Process

#### 1. Have there been significant changes in any of the areas below in the past year?

- Identification of investment ideas
- Process for exploring and vetting ideas
- Portfolio trading practices including buy/sell rules
- Approach to portfolio monitoring and risk management

There have been no significant changes to any of the areas listed in the past year ending June 30, 2023.

### Philosophy

#### 1. Describe recent changes in investment philosophy, if any.

There have been no significant changes in investment philosophy. Hamilton Lane's Secondary Team has maintained a consistent investment philosophy over the years, focused on purchasing



high quality assets managed by leading General Partners, at what we believe to be attractive prices.

## Portfolio

- 1. If not included in your meeting presentation, provide portfolio holdings, sector exposure, geographic exposure and common characteristics (yield, duration, market cap, P/E, etc.).**

Please refer to the presentation.

- 2. List strategy AUM, net flows and accounts gained/lost for the past 5 years.**

Fund Name	Status	Commitments (M)	Commitments (#)	Final Close Date
Hamilton Lane Secondary Fund I	Inactive	\$360	17	8/1/2008
Hamilton Lane Secondary Fund II	Liquidating	\$591	47	8/5/2009
Hamilton Lane Secondary Fund III	Realization	\$909	71	9/3/2013
Hamilton Lane Secondary Fund IV	Post-Investment	\$1,916	115	6/23/2017
Hamilton Lane Secondary Fund V	Portfolio Construction Complete	\$3,929	153	2/15/2021
Hamilton Lane Secondary Fund VI	Fundraising/Investing	\$5,000*	TBD	TBD

\*Represents target fund size for Secondary Fund VI.

- 3. Describe investor concentration for the strategy and note the percent of AUM attributable to the top five investors.**

Our existing client accounts and information is confidential.

## Performance / Market Outlook

- 1. If not included in your meeting presentation, provide trailing returns as of the most recent quarter-end and calendar year returns for the past 10 years, both relative to benchmark.**

Please refer to the presentation for the Fund's most recent performance & outperformance. Hamilton Lane's Secondary Funds have consistently outperformed their public index benchmarks on a public market equivalent basis.

- 2. Briefly discuss recent performance trends and identify environments in which the strategy is likely to be in or out of favor.**

Overall, the Fund continues to perform well & the portfolio has experienced a few notable realizations that have helped performance & boosted DPI. Our secondary strategy is focused on delivering consistent & strong risk adjusted returns to our investors. Our approach to diligence & underwriting considers various economic environments & potential for adverse scenarios. Hamilton Lane Secondary Fund V represents a well-diversified portfolio of high-quality private assets that should fair well, no matter the environment.





**3. Describe your market outlook and how strategy positioning is impacted by your views.**

We believe the private equity secondary market is thriving as LPs and GPs continue to bring attractive assets to the market. While 1H 2023 closed deal volume was down modestly versus the record levels in 2022, the overall supply of deals continues to grow. In other words, there continues to be a big gap between supply of deal flow and converted activity. Hamilton Lane YTD 2023 deal flow remains on pace to match or exceed the 2022 record, allowing us to be highly selective in the transactions we pursue.

On the LP side, while overallocation concerns have been somewhat relieved by the rebound in public markets, there continues to be motivation to clean up portfolios and free up allocation for new investments. Average pricing of LP deals across strategies rose modestly in 1H 2023 to 84% of NAV but remains well below 2021 pricing of 92%. We believe the stabilization of pricing is good for the market as LPs shift to bringing newer, higher quality funds to market & investors are more comfortable with go forward return expectations than in 2022.

As for GP-led deals, historically a market where deals have been executed at NAV, those NAVs were in question in 2022, which led to a wider bid/ask spread. However, the combination of higher prices for LP secondaries in 1H 2023 and the increased openness to discounts in GP-led secondaries has made GP-leds more attractive than they were in 2022. With the continued slump in general M&A and IPO markets, GPs continue to use the secondary market to realize some of their best assets which traditionally would seek alternative forms of exit.

Overall, as the secondary market continues to grow and evolve, we believe our unique position & access in the private markets will continue to allow us to see the market broadly, setting up our platform to capitalize on the highest quality of opportunities. Additionally, our flexible approach and well-rounded team of investment professionals will allow us to adapt to any shifts in the market & lean in or out of certain market segments (LP led or GP led/Complex).

**4. Could you please include a slide in your presentation that sows the MWRA's account history, initial contribution, cumulative subsequent contributions, cumulative subsequent distributions, gain/loss and current value.**

Please see the experience slide in our presentation that shows the MWRA's account history.

**HAMILTON LANE  
CONFIDENTIAL & PROPRIETARY INFORMATION**

Access and/or use of these materials ("Confidential Information") by you and/or your authorized representatives who have a need to know (together, "You"), is solely for the purpose of evaluating our investment solutions ("Review"). You shall keep the Confidential Information strictly confidential and shall not disclose, in whole or in part, or use, directly or indirectly, any of the Confidential Information in any other manner and/or for any other purpose. You shall be responsible for any breaches of this provision.

Hamilton Lane provides investment management services through Hamilton Lane Advisors, LLC, an SEC-registered investment advisor.



Hamilton Lane®

# Secondary Fund V Update

Presentation to: Massachusetts Water Resource Authority Retirement System  
September 2023

# Investing exclusively in the private markets for 31 years

\$818.0B

Assets under management & supervision\*

1,400+

Clients and investors across 50+ countries

23

Global offices

~\$41B<sup>1</sup>

Capital deployed in 2022

140,000+

Portfolio companies monitored

51,000+

Funds across all private markets

## OUR MISSION & VALUES

### We enrich lives & safeguard futures



Do the right thing



Integrity, candor and collaboration



A spirit of competition that inspires innovation



Pursuit of excellence



Promoting equity and inclusion from within

As of June 30, 2023

\*Inclusive of \$117.3B in assets under management and \$700.7B in assets under supervision as of June 30, 2023.

<sup>1</sup>The 2022 capital committed includes all primary commitments that closed during the year 2022 for which Hamilton Lane retains a level of discretion as well as nondiscretionary advisory client commitments for which Hamilton Lane performed due diligence and made an investment recommendation. Direct Investments includes all discretionary and nondiscretionary advisory direct equity and direct credit investments that closed during 2022. Secondaries includes all discretionary and nondiscretionary advisory secondary investments with a signing date during 2022.

# HAMILTON LANE HAS A 23+ YEAR HISTORY INVESTING IN SECONDARIES

## Secondaries Platform

We are a long-standing, successful secondary franchise that benefits from being attached to one of the world's leading private markets platforms.

Our investment teams collaborate across our platform sharing meaningful communication and real-time information

✓ Experience

✓ Credibility

✓ Integrated & aligned investment teams

\$17.7B+  
Secondary AUM\*

350+  
Secondary Transactions Completed<sup>3</sup>

39  
Team Members\*\*

Global Presence<sup>1</sup>



### PLATFORM DRIVES DEAL FLOW

Secondary Deal Flow Since 2019<sup>2</sup>

\$839B+  
Reviewed

~2,300  
Diligenced

~1%  
Selection Rate

*We see the market, have the tools and expertise to execute and the flexibility to invest in all segments and geographies.*

\* Total Secondary AUM = (discretionary and non-discretionary active commitments). As of 3/31/2023.

\*\*Includes Secondary Investment Committee Members. As of 8/15/23

<sup>1</sup> Offices where Secondary Investment Team members are located

<sup>2</sup> January 1, 2019 – June 30, 2023

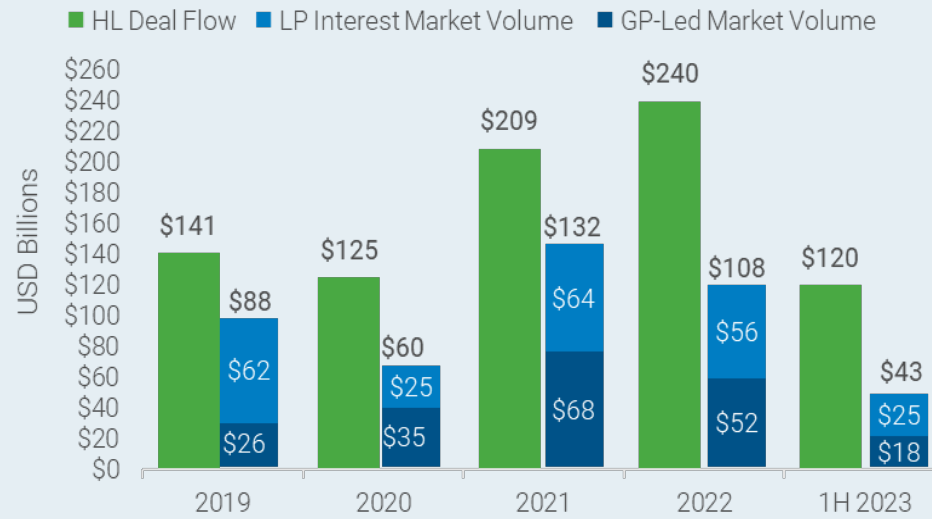
<sup>3</sup> As of June 30, 2023

# Secondary Market Update

## Market Volume

- Secondary market volume was \$43 billion in 1H 2023, a slight decline from 1H 2022. However, HL saw \$120B of deal flow in 1H 2023, on pace with 1H 2022.
- Record deal flow shows pent-up supply as public markets stabilized and pricing improved.

### Secondary Deal Flow vs Market Volume



Source: Jefferies Secondary Market Review (July 2023), HL Database (July 2023)

\*Trailing Twelve Months June 2022- June 2023

## Supply/Demand

- With broad market acceptance continuing to drive secondary supply growth, the secondary market continues to be undercapitalized.
- While deal flow and market volume continue at a strong pace, dry powder has not been able to keep up, despite increasing investor appetite and growing fund sizes for secondary managers.

### Secondary Market Annual Capital Overhang

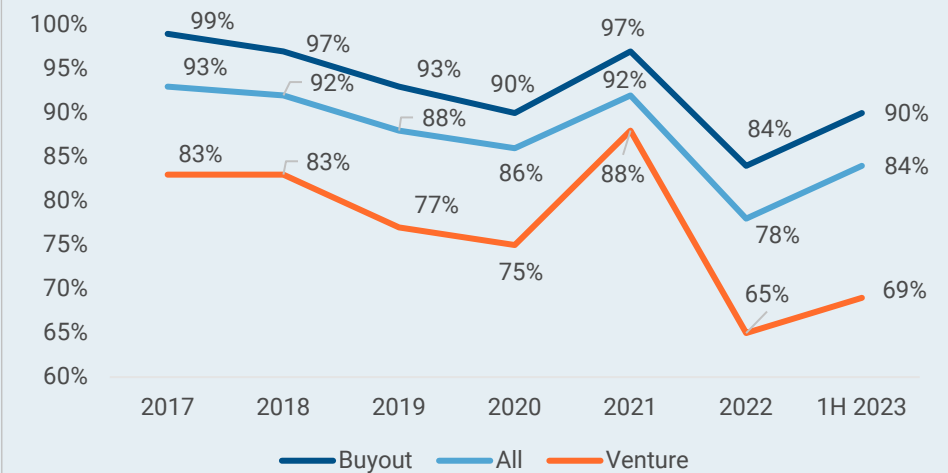


Source: Hamilton Lane Database (July 2023), Evercore Secondary Market Review (July 2023)

## LP Interest Pricing

- Secondary pricing for LP portfolios increased by 600 bps in 1H 2023 to 84% of NAV across all strategies.
- The rebound in public markets & the continued shift to higher quality/newer funds has led LP sellers to demand higher prices, while increasing stability in the macro-environment is helping to boost investor confidence.

### LP Portfolio Pricing (% of NAV)



Source: Jefferies Global Secondary Market Review (July 2023)

# Secondary Fund V Update

# Relationship Overview

MWRA Employees' Retirement System made a commitment to Hamilton Lane Secondary Fund V in 2020



## Investor Experience

- Net IRR<sup>1</sup>: 27.2%
- TVPI<sup>1</sup>: 1.4x
- DPI<sup>2</sup>: 0.2x
- Contributions<sup>2</sup>: \$6.2M | Percent Funded: 69%
- Distributions<sup>2</sup>: \$1.4M
- Net Asset Value<sup>1</sup>: \$7.8M

## Cash Flow Activity

- During Q2 2023, Fund V issued a distribution for \$149K.
- There have been a few meaningful realizations in the portfolio that could lead to additional distribution activity for investors in Q4.

<sup>1</sup> As of March 31, 2023  
<sup>2</sup> As of September 21, 2023

# HLSF V | 2019

End of Investment Period

\$3.9B

Fund Size

\$4.2B

Committed

20%

Average Discount

77

Investments

185

Underlying Funds

4,300+

Underlying Companies

## Secondary Fund V - Overview

### Performance Summary

Invested \$3.7 billion

Realized \$1.2 billion

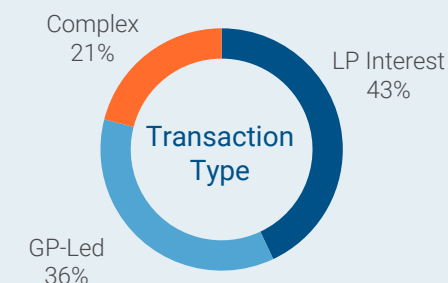
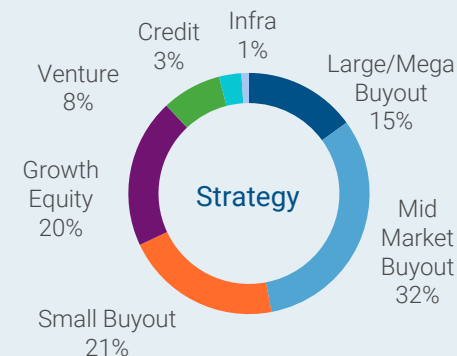
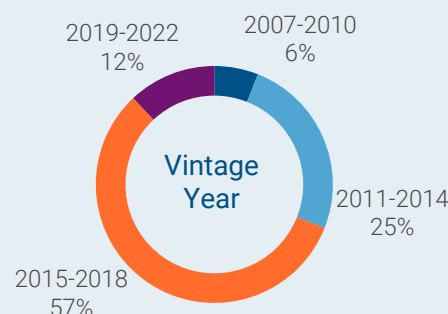
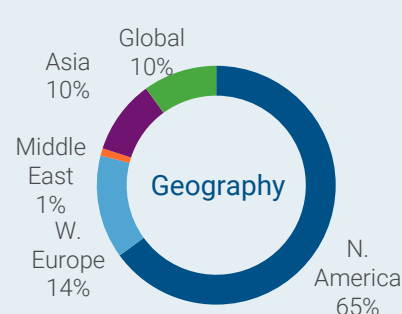
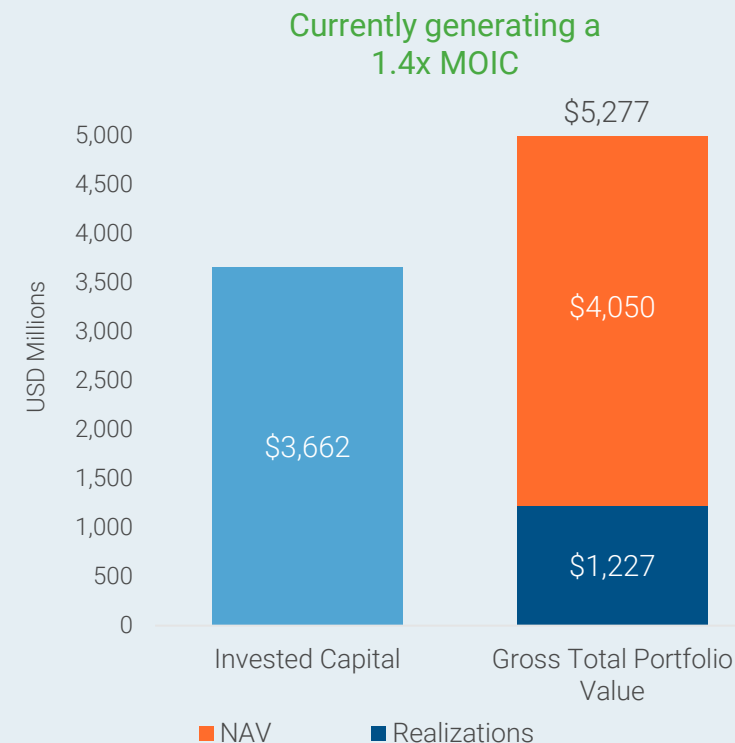
NAV \$4.1 billion

Gross / Net DPI<sup>1</sup> 0.3x / 0.2x

Gross / Net TVPI<sup>2</sup> 1.4x / 1.4x

Gross / Net IRR<sup>3</sup> 27.4% / 27.2%

MSCI World PME (Net)<sup>4</sup> 1.9%



As of March 31, 2023, unless otherwise noted.

Diversification based on committed capital. Due to rounding, diversification may not precisely reflect absolute figures.

Please refer to endnotes in the Appendix.



# Appendix

# Endnotes

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1 Distributed Paid-In ("DPI") represents total distributions from underlying investments to the fund divided by total contributed capital.

2 Total Value Paid-In ("TVPI") represents total distributions from underlying investments to the fund plus the fund's market value divided by total contributed capital.

3 Internal Rate of Return ("IRR") is calculated on a pooled basis using daily cash flows. Gross IRR is presented net of management fees, carried interest and expenses charged by the general partners of the underlying investments, but does not include Hamilton Lane management fees, carried interest or expenses. Net IRR is presented net of management fees, carried interest and expenses charged by the general partners of the underlying investments as well as net of Hamilton Lane management fees, carried interest and expenses. IRR is calculated on a pooled basis using daily cash flows. It should be noted that the IRRs of Fund I, Fund II, Fund III, and Fund IV are initially impacted by the purchase discounts (or premiums) paid at the closing of a transaction, the impact of which will diminish over time as the IRRs reflect subsequent changes in the valuations of the underlying investments. Note that secondary portfolio IRRs can be initially impacted by purchase discounts (or premiums) paid at the closing of a transaction, the impact of which will diminish over time.

4 The index presented for comparison is the MSCI World, calculated on a Public Market Equivalent (PME) basis. The PME calculation methodology assumes that capital is being invested in, or withdrawn from, the index on the days the capital was called and distributed from the underlying fund managers. Contributions were scaled by a factor such that the ending portfolio balance would be equal to the private equity net asset value. The scaling factor is found by taking the sum of all shares sold (SS), the sum of all shares purchased (SP) and calculating the number of shares the ending value is worth (SEV). Dividing SEV + SS by SP solves for the PME scaling factor. The scaling of contributions prevents shorting of the public market equivalent portfolio in order to match the performance of an outperforming private equity portfolio. Realized and unrealized amounts were not scaled by this factor. The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The index is presented merely to show general trends in the markets for the relevant periods shown. The comparison between Hamilton Lane performance and the index is not intended to imply that a fund's or separate account's portfolio is benchmarked to the index either in composition or level of risk. The index is unmanaged, has no expenses and reflects the reinvestment of dividends and distributions. The spreads are provided for comparative purposes only. A variety of factors may cause an index to be an inaccurate benchmark for any particular fund or separate account and the indices do not necessarily reflect the actual investment strategy of a fund or separate account.

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