

MWRA Employees' Retirement System

Total Fund Performance Detail (Net) - Preliminary

December 31, 2015

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Composite	446,845,856	100.0	100.0	-1.6	1.3	-4.2	0.4	7.0	6.9	6.2		Jan-86
Allocation Index				-1.0	3.0	-1.8	0.6	7.0	6.5	5.3	--	Jan-86
Policy Index				-1.1	3.0	-2.2	0.6	6.8	6.7	5.7	--	Jan-86
Total Balanced	68,630,394	15.4	16.0	-1.9	0.5	-7.1	-5.0	0.6	1.9	--	2.5	Dec-10
PRIT Core Fund	2,872,031	0.6										
60% S&P 500 / 40% BC Agg												
Wellington Opportunistic Investment	25,932,011	5.8	6.0	-1.8	2.2	-4.6	0.2	3.8	1.6	--	8.2	Nov-08
65% MSCI ACWI (Net) / 35% BC Agg				-1.3	3.1	-2.8	-1.1	5.6	5.3	5.0	8.5	Nov-08
PIMCO All Asset	22,681,471	5.1	6.0	-1.6	0.0	-8.6	-8.7	-2.5	1.9	--	7.5	Dec-08
PIMCO All Asset Index				-0.8	0.2	-0.8	0.0	1.7	4.1	5.1	7.0	Dec-08
William Blair	17,144,881	3.8	4.0	-2.9	-1.8	-9.8	--	--	--	--	-10.5	Mar-15
60% MSCI ACWI (Net)/40% CITI WGBI				-0.7	2.6	-2.6	-2.6	3.6	3.8	4.6	-4.3	Mar-15
Total Domestic Equity	93,090,222	20.8	20.0	-2.8	5.0	-3.2	0.5	14.4	11.8	8.0	5.9	May-99
Large Cap	65,657,856	14.7	14.0	-1.9	6.2	-0.4	1.6	15.2	12.4	--	13.5	Dec-10
Rhumbline Advisors S&P 500 Index Fund	24,384,106	5.5	6.0	-1.6	7.0	0.1	1.3	15.0	12.4	7.3	7.5	Apr-97
S&P 500				-1.6	7.0	0.2	1.4	15.1	12.6	7.3	7.4	Apr-97
MFS Large Cap Value	20,362,522	4.6	4.0	-2.5	5.6	-2.1	-1.4	14.4	11.3	7.4	7.2	Apr-01
Russell 1000 Value				-2.2	5.6	-3.2	-3.8	13.1	11.3	6.2	6.4	Apr-01
Intech Broad Large Cap Growth	20,911,228	4.7	4.0	-1.8	5.9	0.8	4.7	16.3	13.3	--	15.7	Feb-10
Russell 1000 Growth				-1.5	7.3	1.6	5.7	16.8	13.5	8.5	15.1	Feb-10
Small Cap	27,432,366	6.1	6.0	-4.8	2.5	-8.7	-1.9	12.5	10.7	--	12.2	Dec-10
Robeco Boston Partners Small Cap Value	13,645,480	3.1	3.0	-5.3	1.2	-9.5	-5.9	9.6	9.1	7.1	10.7	Feb-97
Russell 2000 Value				-5.3	2.9	-8.2	-7.5	9.1	7.7	5.6	8.6	Feb-97
Loomis Sayles Small Cap Growth	13,786,886	3.1	3.0	-4.3	3.6	-8.0	2.2	15.3	12.2	10.3	5.1	Jan-97
Russell 2000 Growth				-4.8	4.3	-9.3	-1.4	14.3	10.7	8.0	6.1	Jan-97
Total International Equity	68,725,423	15.4	17.0	-2.1	2.3	-10.8	-7.4	2.3	0.4	1.2	3.6	Mar-99
Schroder International Alpha Fund	26,056,529	5.8	6.0	-1.1	5.2	-5.2	0.1	4.5	--	--	4.7	Mar-12
MSCI EAFE				-1.3	4.7	-6.0	-0.8	5.0	3.6	3.0	5.3	Mar-12
The Boston Company	23,438,561	5.2	6.0	-2.8	1.7	-11.1	-5.1	2.7	0.2	1.4	2.2	Sep-05
MSCI EAFE				-1.3	4.7	-6.0	-0.8	5.0	3.6	3.0	3.8	Sep-05

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Emerging Markets Equity	19,230,333	4.3	5.0	-2.7	-0.8	-17.6	-18.6	--	--	--	-9.1	Nov-13
Lee Munder Emerging Market Equity	19,230,333	4.3	5.0	-2.7	-0.8	-17.6	-18.6	--	--	--	-9.5	Dec-13
<i>MSCI Emerging Markets</i>				-2.2	0.7	-17.4	-14.9	-6.8	-4.8	3.6	-9.1	Dec-13
Total Fixed Income	98,197,865	22.0	22.0	-1.2	-0.7	-2.6	-3.4	1.9	4.5	6.2	6.9	Mar-99
Invesco Core Bonds	44,467,429	10.0	10.0	-0.6	-0.6	-0.3	-0.4	1.5	3.9	5.0	5.2	Dec-98
<i>Barclays Aggregate</i>				-0.3	-0.6	0.7	0.5	1.4	3.2	4.5	5.0	Dec-98
Loomis Sayles - Multi Sector Bonds	51,583,536	11.5	12.0	-1.8	-0.7	-4.7	-6.0	1.7	4.8	6.8	8.1	Mar-99
<i>Barclays Aggregate</i>				-0.3	-0.6	0.7	0.5	1.4	3.2	4.5	5.1	Mar-99
<i>Barclays High Yield</i>				-2.5	-2.1	-6.8	-4.5	1.7	5.0	7.0	6.4	Mar-99
Invesco Mortgage Fund	2,146,900	0.5		0.0	0.0	0.0	6.5	16.3	10.3	--	20.3	Apr-10
<i>Barclays Aggregate</i>				-0.3	-0.6	0.7	0.5	1.4	3.2	4.5	3.6	Apr-10
Total Hedge Fund	39,143,452	8.8	9.0	-1.0	-0.7	-5.2	-3.6	3.8	3.3	--	3.1	Oct-06
PRIM Absolute Return Fund	17,822,777	4.0	5.0									
<i>91 Day T-Bill + 3%</i>												
<i>HFRI Fund of Funds Composite Index</i>												
Permal Fixed Income Holdings	10,799,179	2.4	2.0	-1.8	-1.5	-4.9	-3.9	3.4	--	--	4.8	Oct-11
<i>HFRI Fund of Funds Composite Index</i>				-0.5	0.6	-3.0	-0.3	3.9	2.1	2.3	3.8	Oct-11
EnTrust	10,521,496	2.4	2.0	-2.0	-2.6	-8.0	-7.5	1.4	--	--	2.8	Jan-12
<i>HFRI Fund of Funds Composite Index</i>				-0.5	0.6	-3.0	-0.3	3.9	2.1	2.3	4.1	Jan-12
Other	4,254,466	1.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	--	0.1	Dec-10
Cash Account	4,254,466	1.0		0.0	0.0	0.0	0.1	0.2	0.1	1.4	2.0	Feb-00
<i>91 Day T-Bills</i>				0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.7	Feb-00
Total Real Estate	34,837,734	7.8	7.0	0.0	0.5	3.8	10.0	12.4	12.8	6.1	7.7	Apr-99
PRIT Core Real Estate	16,058,350	3.6										
Morgan Stanley Prime Property	6,892,006	1.5		0.0	0.0	3.6	11.2	14.2	14.1	6.7	8.7	Sep-95
Intercontinental Real Estate Investment Fund IV	243,674	0.1		0.0	0.0	2.4	28.7	19.0	12.8	-3.3	-4.6	Jun-05
Invesco Mortgage Recovery II (\$3M commitment in '15)	1,174,556	0.3		0.0	0.0	--	--	--	--	--	0.0	Oct-15
Landmark VI (\$2m commitment in '11)	937,052	0.2		0.0	0.0	0.0	5.3	13.2	--	--	15.4	Jul-11
Mesirow MFire Global (\$2m commitment in '11)	1,498,886	0.3		0.0	0.0	2.4	7.0	12.8	--	--	2.1	May-12
Cerberus (\$1.5m commitment in '12)	1,734,098	0.4		0.0	0.0	6.6	18.9	--	--	--	20.7	May-13
Realty Associates Fund X LP (\$3.5m commitment in '12)	3,650,151	0.8		0.0	0.0	3.7	11.0	--	--	--	10.5	May-13
TerraCap Partners III (Institutional), LP	2,648,961	0.6		0.0	0.0	3.8	--	--	--	--	3.8	Jul-15
<i>NCREIF Property Index 1 Qtr Lag</i>				3.1	3.1	6.3	13.5	11.9	12.5	8.0	6.3	Jul-15

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Total Private Equity	39,966,299	8.9	9.0	0.0	-0.1	1.7	41.0	24.5	19.2	13.5	10.3	Apr-99
PRIM Vintage Year 2008 (\$3m commitment in '08)	1,857,129	0.4										
PRIM Vintage Year 2009 (\$1m commitment in '09)	303,826	0.1										
PRIM Vintage Year 2010 (\$1m commitment in '10)	779,517	0.2										
PRIM Vintage Year 2011 (\$1.5m commitment in '11)	1,058,090	0.2										
PRIM Vintage Year 2012 (\$1m commitment in '12)	465,990	0.1										
PRIM Vintage Year 2014 (\$2m commitment in '14)	400,774	0.1										
Alcentra European DLF (\$5m commitment in '14)	4,552,159	1.0		0.0	0.0	0.0	9.1	--	--	--	9.1	Jan-15
Ascent Fund II	86,084	0.0		0.0	0.0	-0.8	23.5	27.7	16.6	15.5	15.0	Jan-99
Ascent Fund IV (\$2m commitment in '04)	776,317	0.2		0.0	0.0	-3.0	-40.7	-14.1	-14.4	-6.8	-6.2	Jul-04
Ascent Fund V (\$2m commitment in '08)	2,145,913	0.5		0.0	0.0	-6.3	-6.8	3.6	10.6	--	6.5	Oct-08
Ascent VI (\$3m commitment in '15)	240,000	0.1										
Boston Capital	16,733	0.0		0.0	0.0	0.0	-5.4	-9.0	-0.1	16.6	8.8	Apr-99
Castile Ventures III, L.P. (\$3m commitment in '07)	1,072,599	0.2		0.0	0.0	-1.4	-17.8	-14.3	-9.0	--	-10.3	Jan-08
Invesco Fund IV (\$3m commitment in '03)	1,465,198	0.3		0.0	0.0	0.0	2.3	15.5	14.2	15.0	11.1	Feb-04
Invesco Fund VI (\$5m commitment in '13)	3,894,351	0.9		0.0	0.0	0.0	9.2	--	--	--	16.0	Jul-13
Kayne Energy Fund VII (\$5m commitment in '15)	442,210	0.1										
Foundry 2007 (\$3m commitment in '07)	12,402,809	2.8		0.0	0.0	0.0	216.4	81.0	50.2	--	51.6	Dec-07
Foundry 2010 (\$3m commitment in '10)	3,679,158	0.8		0.0	0.0	2.6	6.2	14.4	12.4	--	12.7	Jan-11
Foundry 2010 Annex	188,520	0.0		0.0	0.0	--	--	--	--	--	0.0	Sep-15
Pinebridge PEP V (\$6m commitment in '07)	3,268,007	0.7		0.0	0.0	15.3	36.0	22.4	16.0	--	7.4	Mar-08
Landmark XV (\$3m commitment in '13)	870,915	0.2		0.0	0.0	0.0	15.8	--	--	--	18.4	Nov-13

Notes:

1 - Results for periods longer than one year are annualized.

2 - Total Balanced, Large Cap, Small Cap, and Other Composite performance starts 12/1/2010.

3 - Fiscal YTD begins July 1st.

4 - Preliminary Total Composite gross of fee since inception return is 8.5% for the month of current month.

5 - Market values for Real Estate, with the exception of PRIT Core Real Estate, are as of 9/30/2015 adjusted for cash flows. PRIT Core Real Estate's market values are as of 11/30/2015.

6 - Market values for Private Equity managers, with the exception of PRIM Vintage Year accounts and Ascent Funds (II, IV, V), are as of 6/30/2015 adjusted for cash flows. PRIM Vintage Year accounts market values are as of 11/30/15. Ascent Fund market values are as of 9/30/2015.

Information Disclaimer and Reporting Methodology

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
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