

# Fresno County Employees' Retirement Association

Investment Performance Review

Period Ending: September 30, 2015



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SEATTLE 206-622-3700

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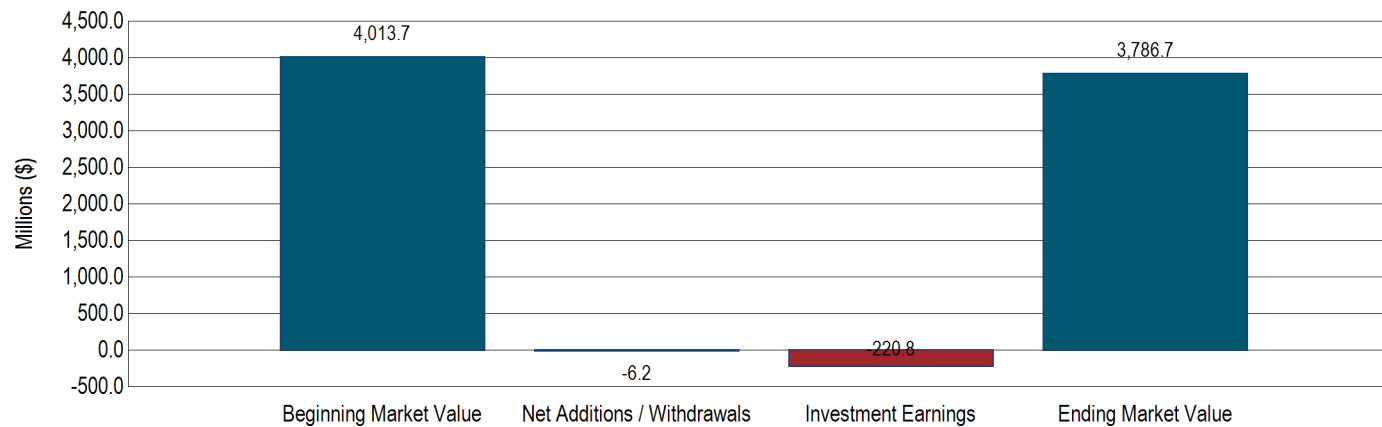
Total Fund  
Portfolio Reconciliation

Period Ending: September 30, 2015

Portfolio Reconciliation

Sources of Portfolio Growth	Last Three Months	Year-To-Date
Beginning Market Value	\$4,013,682,551	\$3,973,404,368
Net Additions/Withdrawals	-\$6,230,008	-\$28,265,051
Investment Earnings	-\$220,797,370	-\$158,484,144
Ending Market Value	\$3,786,655,173	\$3,786,655,173

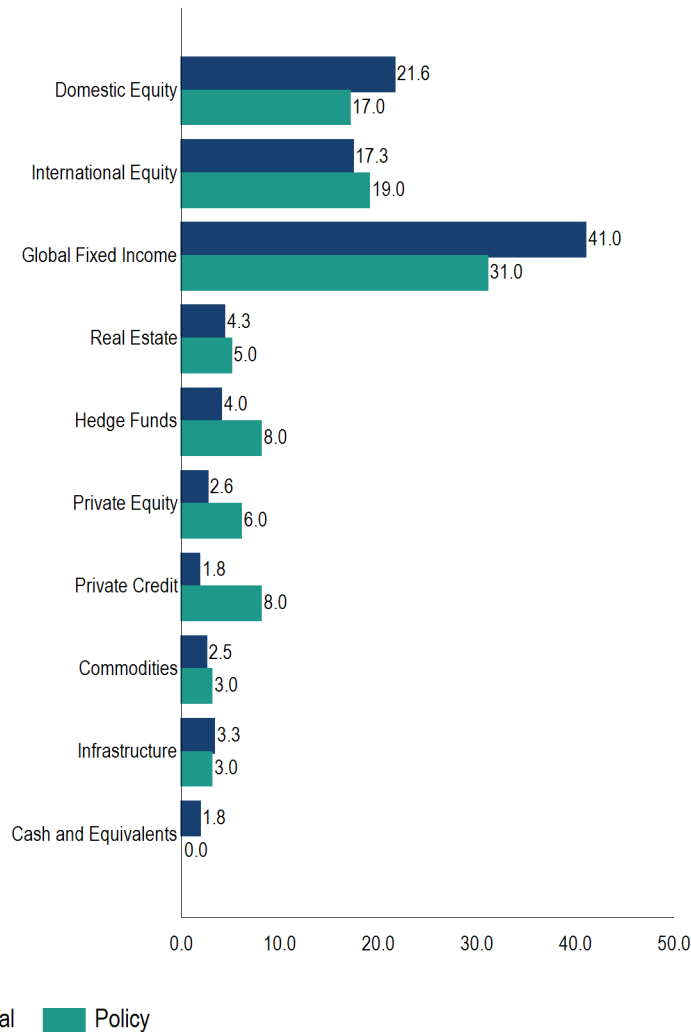
Change in Market Value  
Last Three Months



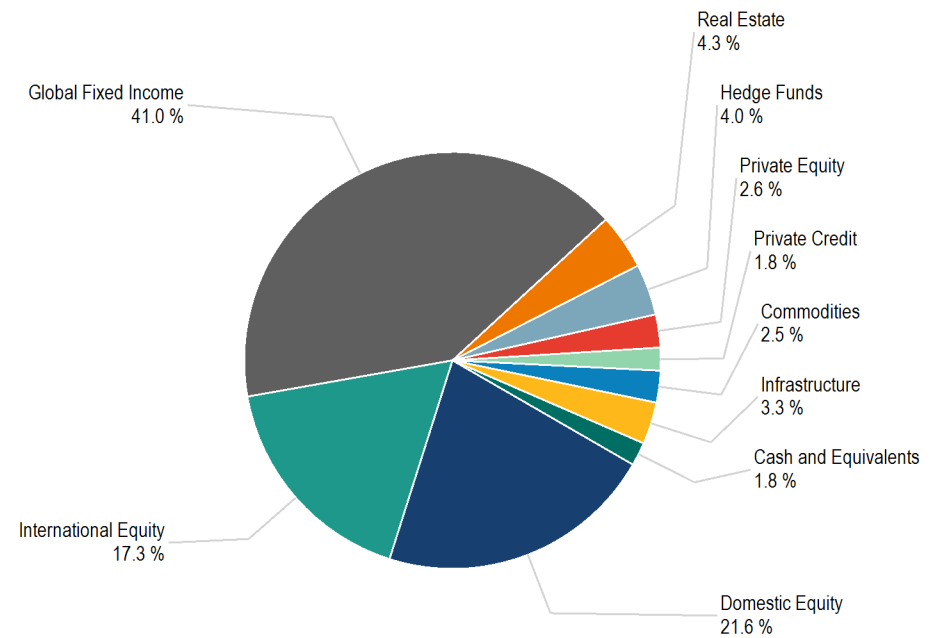
# Total Fund Asset Allocation

Period Ending: September 30, 2015

Actual vs Target Allocation (%)



Current Allocation



# Total Fund Manager Allocation

Period Ending: September 30, 2015

	Market Value	% of Portfolio
<b>Total Fund</b>	<b>3,786,655,173</b>	<b>100.0</b>
<b>Domestic Equity</b>	<b>816,279,500</b>	<b>21.6</b>
SSgA S&P 500 Flagship Fund	220,815,783	5.8
Waddell & Reed	241,278,009	6.4
Aronson Johnson Ortiz	229,617,113	6.1
Systematic Small/Mid Cap Value	64,660,228	1.7
Kalmar Investments Management	59,908,367	1.6
<b>International Equity</b>	<b>656,226,614</b>	<b>17.3</b>
Artisan International Growth	162,430,349	4.3
Research Affiliates International Equity	148,752,354	3.9
Mondrian International Small Cap	113,637,264	3.0
Mondrian Emerging Markets	231,406,647	6.1
<b>Global Fixed Income</b>	<b>1,550,921,891</b>	<b>41.0</b>
Western Asset Investment Grade Credit	200,936,783	5.3
Loomis Sayles High Yield	197,696,407	5.2
Eaton Vance Senior Loan Fund	201,769,143	5.3
SSgA TIPS	154,245,890	4.1
Barclays U.S. Aggregate Index Fund	373,251,179	9.9
Brandywine Global Sovereign	271,762,149	7.2
PIMCO Emerging Local Bond Ins	151,260,340	4.0
<b>Real Estate</b>	<b>162,959,435</b>	<b>4.3</b>
Invesco Core Real Estate	135,817,861	3.6
TA Realty IX	27,141,574	0.7
<b>Hedge Funds</b>	<b>150,535,055</b>	<b>4.0</b>
Grosvenor	150,535,055	4.0
<b>Private Equity</b>	<b>96,911,135</b>	<b>2.6</b>
Landmark Equity XIV, L.P.	17,319,520	0.5
New Mountain Partners III	10,162,278	0.3
Hamilton Lane VI	39,534,001	1.0
WP Private Equity X, L.P.	15,433,346	0.4
Blackstone IV	5,652,495	0.1
WP Private Equity VIII, L.P.	7,073,151	0.2

	Market Value	% of Portfolio
Landmark Equity X, L.P.	980,518	0.0
New Mountain Partners, L.P.	479,844	0.0
WP Equity Partners, L.P.	275,982	0.0
<b>Private Credit</b>	<b>67,047,296</b>	<b>1.8</b>
GSO European Senior Debt	200,686	0.0
CVI Credit Value Fund III	6,160,949	0.2
Colony Distressed Credit III, L.P.	7,178,857	0.2
Oaktree Opportunities IX, L.P.	13,546,877	0.4
KKR Mezzanine Partners	19,771,366	0.5
Angelo Gordon VII	8,882,443	0.2
Colony Distressed Credit I, L.P.	10,533,321	0.3
Lone Star Fund IV	198,207	0.0
TCW Shop IV	9,450	0.0
TCW Shop III	565,140	0.0
<b>Commodities</b>	<b>93,385,903</b>	<b>2.5</b>
Invesco Commodities	93,385,903	2.5
<b>Infrastructure</b>	<b>123,587,320</b>	<b>3.3</b>
IFM Infrastructure	123,587,320	3.3
<b>Cash and Equivalents</b>	<b>68,801,025</b>	<b>1.8</b>
Benefits Payment Cash	315,956	0.0
Custodied	12,491,354	0.3
Internal	55,714,672	1.5
Transition	279,044	0.0

# Total Fund Executive Summary (Gross of Fees)

Period Ending: September 30, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>Total Fund</b>	<b>3,786,655,173</b>	<b>100.0</b>	<b>-5.5</b>	<b>-3.9</b>	<b>-3.4</b>	<b>6.0</b>	<b>7.0</b>	<b>6.0</b>	<b>3.8</b>	<b>16.6</b>	<b>13.5</b>	<b>0.1</b>	<b>16.3</b>
Policy Index			-4.0	-3.4	-3.5	5.2	6.6	4.9	2.6	15.6	12.3	0.1	13.2
InvestorForce Public DB > \$1B Gross Rank			68	95	95	77	77	31	93	29	42	76	2
<b>Total Domestic Equity</b>	<b>816,279,500</b>	<b>21.6</b>	<b>-7.5</b>	<b>-4.4</b>	<b>0.4</b>	<b>13.4</b>	<b>13.8</b>	<b>6.9</b>	<b>10.1</b>	<b>37.2</b>	<b>16.1</b>	<b>0.9</b>	<b>20.9</b>
Russell 3000			-7.2	-5.4	-0.5	12.5	13.3	6.9	12.6	33.6	16.4	1.0	16.9
eA US All Cap Equity Gross Rank			42	40	39	40	35	68	50	34	40	37	32
<b>Total International Equity</b>	<b>656,226,614</b>	<b>17.3</b>	<b>-12.8</b>	<b>-10.6</b>	<b>-12.5</b>	<b>3.8</b>	<b>3.3</b>	<b>4.6</b>	<b>-2.1</b>	<b>19.3</b>	<b>19.5</b>	<b>-11.3</b>	<b>14.9</b>
MSCI ACWI ex USA Gross			-12.1	-8.3	-11.8	2.8	2.3	3.5	-3.4	15.8	17.4	-13.3	11.6
eA ACWI ex-US All Cap Equity Gross Rank			87	96	93	80	83	56	51	51	53	48	52
<b>Total Fixed Income</b>	<b>1,550,921,891</b>	<b>41.0</b>	<b>-2.7</b>	<b>-3.5</b>	<b>-3.2</b>	<b>0.6</b>	<b>3.3</b>	<b>5.4</b>	<b>5.1</b>	<b>-0.9</b>	<b>9.9</b>	<b>6.9</b>	<b>11.4</b>
Barclays Aggregate*			0.9	-2.3	-3.3	-1.3	1.2	3.7	0.0	-2.0	4.2	7.8	6.5
eA Global Fixed Inc Unhedged Gross Rank			74	82	56	50	36	31	15	55	47	25	22
<b>Total Real Estate</b>	<b>286,546,755</b>	<b>7.6</b>	<b>2.8</b>	<b>9.7</b>	<b>13.5</b>	<b>12.1</b>	<b>11.4</b>	<b>8.1</b>	<b>12.9</b>	<b>12.4</b>	<b>8.5</b>	<b>11.1</b>	<b>14.0</b>
NCREIF-ODCE			3.7	11.3	14.9	13.4	14.0	6.7	12.5	13.9	10.9	16.0	16.4
<b>Total Hedge Funds</b>	<b>150,535,055</b>	<b>4.0</b>	<b>-2.2</b>	<b>0.6</b>	<b>1.3</b>	<b>4.8</b>	<b>4.1</b>	<b>--</b>	<b>4.2</b>	<b>9.0</b>	<b>3.5</b>	<b>1.8</b>	<b>2.8</b>
HFRI Fund of Funds Composite Index			-3.6	-0.9	0.0	4.2	2.7	--	3.4	9.0	4.8	-5.7	5.7
<b>Total Commodities</b>	<b>93,385,903</b>	<b>2.5</b>	<b>-9.8</b>	<b>-8.8</b>	<b>-19.7</b>	<b>-13.4</b>	<b>-7.1</b>	<b>--</b>	<b>-16.7</b>	<b>-9.0</b>	<b>-0.6</b>	<b>-13.2</b>	<b>--</b>
Bloomberg Commodity Index TR USD			-14.5	-15.8	-26.0	-16.0	-8.9	--	-17.0	-9.5	-1.1	-13.3	--
<b>Total Private Equity</b>	<b>96,911,135</b>	<b>2.6</b>	<b>-5.6</b>	<b>1.8</b>	<b>2.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Russell 3000 + 2.5%			-6.7	-3.7	2.0	--	--	--	15.3	--	--	--	--
<b>Total Private Credit</b>	<b>67,047,296</b>	<b>1.8</b>	<b>-2.9</b>	<b>-3.3</b>	<b>-5.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Barclays Global Aggregate +2.5%			1.5	-0.4	-0.8	--	--	--	3.1	--	--	--	--
<b>Total Cash</b>	<b>68,801,025</b>	<b>1.8</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>1.7</b>	<b>0.1</b>	<b>0.4</b>	<b>0.1</b>	<b>0.4</b>	<b>2.1</b>
91 Day T-Bills			0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.1	0.0	0.1

Policy Index (effective 3/19/2014 Q2 floating policy until rebalance is complete, weights shown are as of 9/30/2015. See Data Sources and Methodology for monthly policy breakout): 21.3% Russell 3000 Index, 40.4% BC Global Aggregate Index, 19% MSCI ACWI ex US, 2.5% Russell 3000 Index + 250 BP, 1.8% BC Global Agg + 250 BP, 4.0% HFRI FoF Composite, 8% NFI ODCE, & 3% Bloomberg Commodity Index. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014.

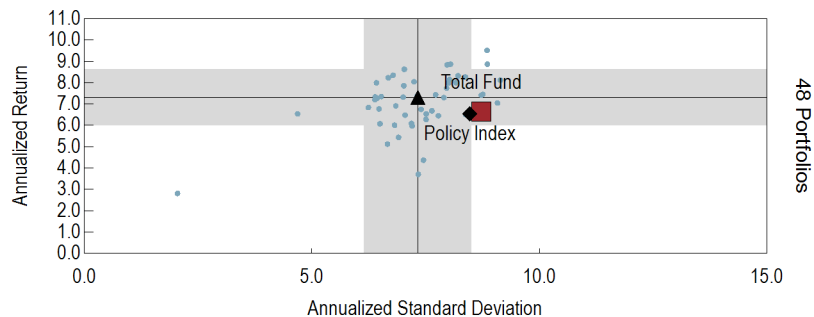
\*Prior to 3/31/2014 Barclays U.S. Aggregate Index and as of 4/1/2014 Barclays Global Aggregate Index.

# Total Fund Executive Summary (Net of Fees)

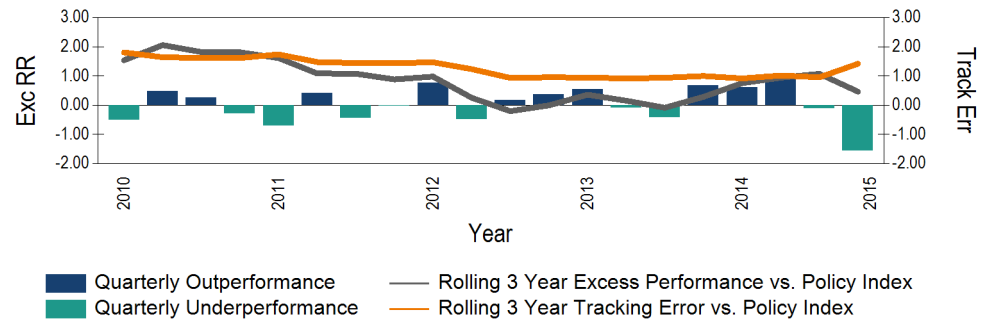
Period Ending: September 30, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>Total Fund</b>	<b>3,786,655,173</b>	<b>100.0</b>	<b>-5.6</b>	<b>-4.2</b>	<b>-3.7</b>	<b>5.6</b>	<b>6.7</b>	<b>5.7</b>	<b>3.5</b>	<b>16.3</b>	<b>13.1</b>	<b>-0.2</b>	<b>15.9</b>
<i>Policy Index</i>			-4.0	-3.4	-3.5	5.2	6.6	4.9	2.6	15.6	12.3	0.1	13.2
<b>Total Domestic Equity</b>	<b>816,279,500</b>	<b>21.6</b>	<b>-7.6</b>	<b>-4.6</b>	<b>0.1</b>	<b>13.1</b>	<b>13.5</b>	<b>--</b>	<b>9.8</b>	<b>36.8</b>	<b>15.8</b>	<b>0.6</b>	<b>20.5</b>
<i>Russell 3000</i>			-7.2	-5.4	-0.5	12.5	13.3	--	12.6	33.6	16.4	1.0	16.9
<b>Total International Equity</b>	<b>656,226,614</b>	<b>17.3</b>	<b>-12.9</b>	<b>-10.9</b>	<b>-12.9</b>	<b>3.3</b>	<b>2.9</b>	<b>--</b>	<b>-2.5</b>	<b>18.7</b>	<b>19.0</b>	<b>-11.7</b>	<b>14.2</b>
<i>MSCI ACWI ex USA Gross</i>			-12.1	-8.3	-11.8	2.8	2.3	--	-3.4	15.8	17.4	-13.3	11.6
<b>Total Fixed Income</b>	<b>1,550,921,891</b>	<b>41.0</b>	<b>-2.8</b>	<b>-3.7</b>	<b>-3.4</b>	<b>0.4</b>	<b>3.1</b>	<b>--</b>	<b>5.0</b>	<b>-1.1</b>	<b>9.6</b>	<b>6.6</b>	<b>11.1</b>
<i>Barclays Aggregate*</i>			0.9	-2.3	-3.3	-1.3	1.2	--	0.0	-2.0	4.2	7.8	6.5
<b>Total Real Estate</b>	<b>286,546,755</b>	<b>7.6</b>	<b>2.5</b>	<b>9.1</b>	<b>12.6</b>	<b>11.4</b>	<b>10.7</b>	<b>--</b>	<b>12.1</b>	<b>11.8</b>	<b>8.0</b>	<b>10.7</b>	<b>13.5</b>
<i>NCREIF-ODCE</i>			3.7	11.3	14.9	13.4	14.0	--	12.5	13.9	10.9	16.0	16.4
<b>Total Hedge Funds</b>	<b>150,535,055</b>	<b>4.0</b>	<b>-2.4</b>	<b>-0.1</b>	<b>0.5</b>	<b>3.8</b>	<b>3.0</b>	<b>3.2</b>	<b>3.1</b>	<b>7.8</b>	<b>2.2</b>	<b>0.4</b>	<b>1.5</b>
<i>HFRI Fund of Funds Composite Index</i>			-3.6	-0.9	0.0	4.2	2.7	2.4	3.4	9.0	4.8	-5.7	5.7
<b>Total Commodities</b>	<b>93,385,903</b>	<b>2.5</b>	<b>-9.9</b>	<b>-9.1</b>	<b>-20.1</b>	<b>-13.8</b>	<b>-7.4</b>	<b>--</b>	<b>-16.9</b>	<b>-9.4</b>	<b>-0.9</b>	<b>-13.2</b>	<b>--</b>
<i>Bloomberg Commodity Index TR USD</i>			-14.5	-15.8	-26.0	-16.0	-8.9	--	-17.0	-9.5	-1.1	-13.3	--
<b>Total Private Equity</b>	<b>96,911,135</b>	<b>2.6</b>	<b>-5.6</b>	<b>1.7</b>	<b>2.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000 + 2.5%</i>			-6.7	-3.7	2.0	--	--	--	15.3	--	--	--	--
<b>Total Private Credit</b>	<b>67,047,296</b>	<b>1.8</b>	<b>-3.0</b>	<b>-4.0</b>	<b>-5.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Barclays Global Aggregate +2.5%</i>			1.5	-0.4	-0.8	--	--	--	3.1	--	--	--	--

Annualized Return vs. Annualized Standard Deviation  
Total Fund vs. InvestorForce Public DB > \$1B Net Universe



Annualized Excess Performance and Tracking Error



Policy Index (effective 3/19/2014 Q2 floating policy until rebalance is complete, weights shown are as of 9/30/2015. See Data Sources and Methodology for monthly policy breakout): 21.3% Russell 3000 Index, 40.4% BC Global Aggregate Index, 19% MSCI ACWI ex US, 2.5% Russell 3000 Index + 250 BP, 1.8% BC Global Agg + 250 BP, 4.0% HFRI FoF Composite, 8% NFI ODCE, & 3% Bloomberg Commodity Index. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014.

\*Prior to 3/31/2014 Barclays U.S. Aggregate Index and as of 4/1/2014 Barclays Global Aggregate Index.

# Total Fund

## Attribution Analysis - Asset Class Level (Gross of Fees)

Period Ending: September 30, 2015

### Attribution Effects Last Three Months



### Performance Attribution

	Quarter	YTD
Wtd. Actual Return	-5.47%	-3.94%
Wtd. Index Return *	-4.09%	-3.66%
<b>Excess Return</b>	<b>-1.37%</b>	<b>-0.28%</b>
Selection Effect	-1.60%	-0.49%
Allocation Effect	0.14%	0.17%
Interaction Effect	0.07%	0.03%

\*Calculated from benchmark returns and weightings of each component.

### Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	-7.55%	-7.25%	-0.30%	-0.07%	-0.04%	0.00%	-0.11%
Total International Equity	-12.77%	-12.10%	-0.67%	-0.14%	0.06%	0.00%	-0.08%
Total Fixed Income	-2.69%	0.85%	-3.54%	-1.50%	-0.17%	0.12%	-1.55%
Total Real Estate	2.75%	3.68%	-0.93%	-0.04%	0.16%	-0.02%	0.10%
Total Hedge Funds	-2.22%	-3.55%	1.34%	0.05%	0.00%	0.00%	0.05%
Total Commodities	-9.75%	-14.47%	4.72%	0.15%	0.04%	-0.02%	0.17%
Total Private Equity	-5.64%	-6.66%	1.02%	0.03%	0.02%	-0.01%	0.04%
Total Private Credit	-2.90%	1.48%	-4.37%	-0.08%	-0.01%	0.00%	-0.09%
Total Cash	0.00%	0.01%	-0.01%	0.00%	0.07%	0.00%	0.07%
<b>Total</b>	<b>-5.47%</b>	<b>-4.09%</b>	<b>-1.37%</b>	<b>-1.60%</b>	<b>0.14%</b>	<b>0.07%</b>	<b>-1.39%</b>

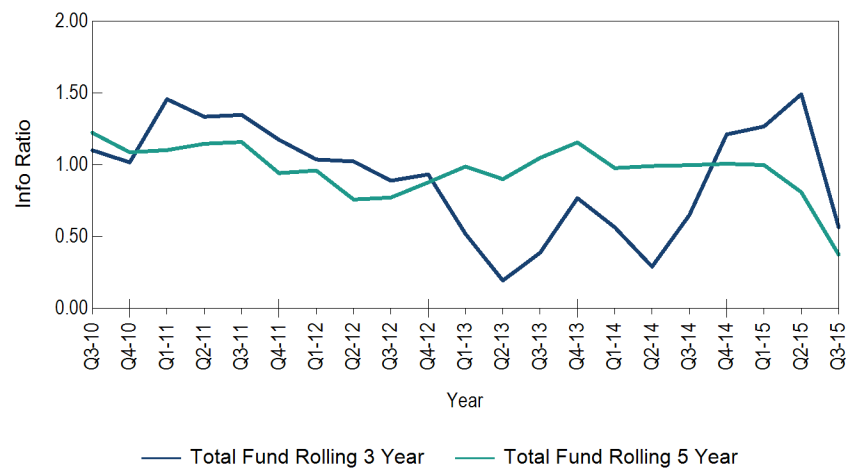
Weighted returns shown in attribution analysis may differ from actual returns.

# Total Fund Risk Analysis - 5 Years (Gross of Fees)

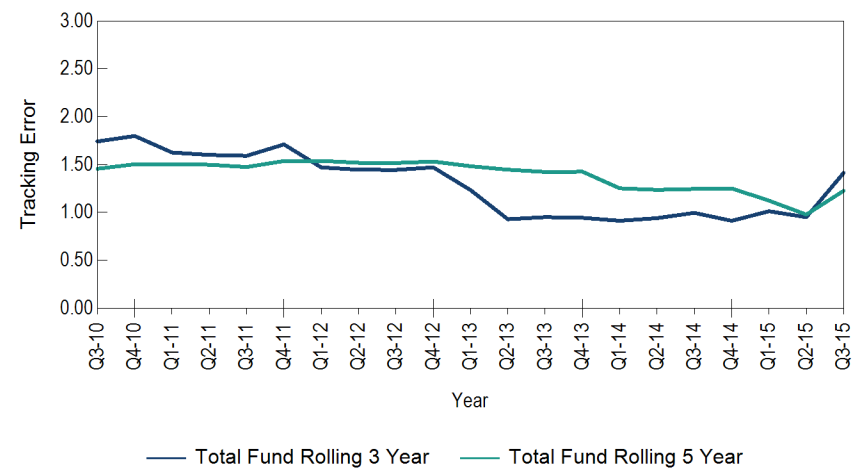
Period Ending: September 30, 2015

	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	8.74%	0.32%	1.02	0.98	106.52%	102.07%	0.37	1.22%	0.80	0.93
Total Domestic Equity	15.12%	-0.50%	1.08	0.99	109.96%	110.36%	0.28	1.97%	0.91	1.01
Total International Equity	14.88%	1.13%	0.97	0.98	101.36%	93.70%	0.56	1.90%	0.22	0.26
Total Domestic Fixed Income	3.08%	2.21%	0.67	0.41	116.55%	53.61%	0.46	2.55%	1.37	2.02
Total Real Estate	2.40%	7.60%	0.27	0.02	76.99%	--	-1.02	2.58%	4.71	--
Total Hedge Funds	2.71%	2.89%	0.46	0.62	85.14%	19.69%	0.47	3.05%	1.50	2.19
Total Alternative Illiquids	6.92%	4.01%	0.34	0.47	42.50%	40.86%	-0.63	10.54%	1.36	1.78

Rolling Information Ratio



Rolling Tracking Error





# Total Fund (Historical)

## Risk Analysis by Manager - 5 Years (Gross of Fees)

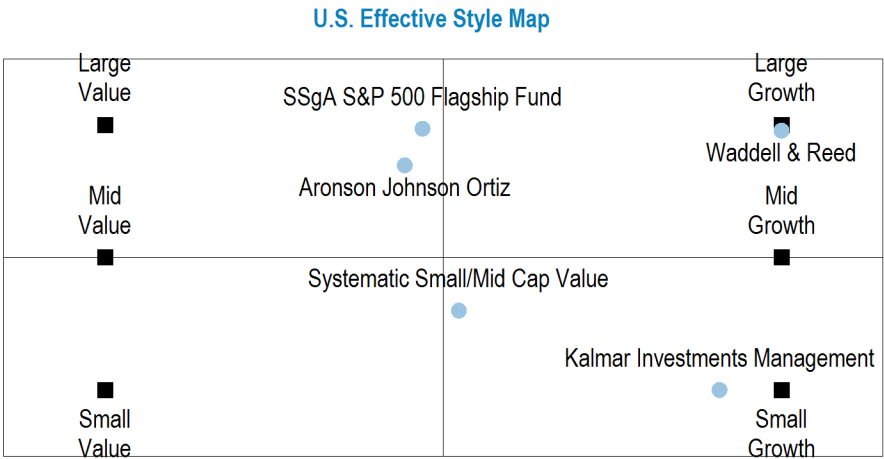
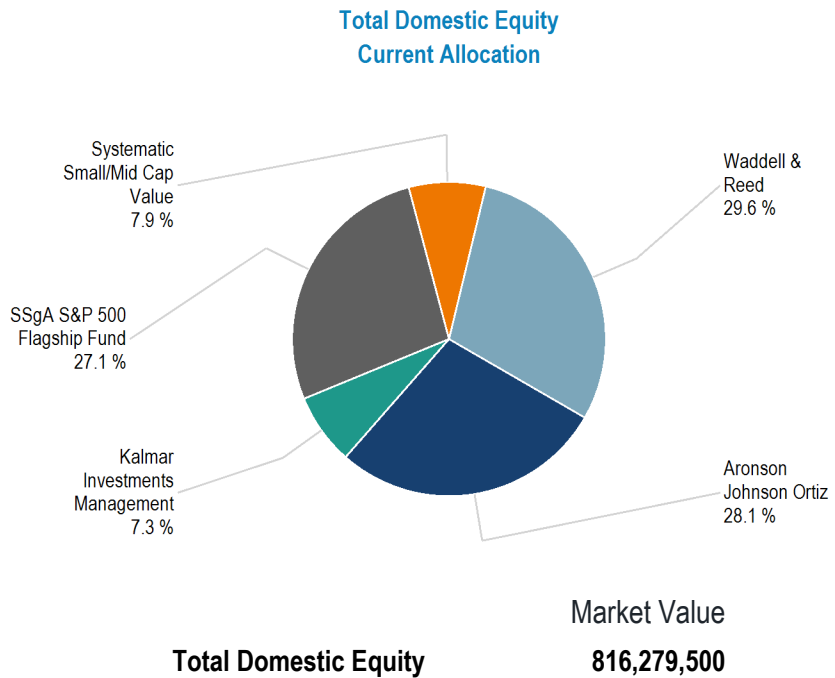
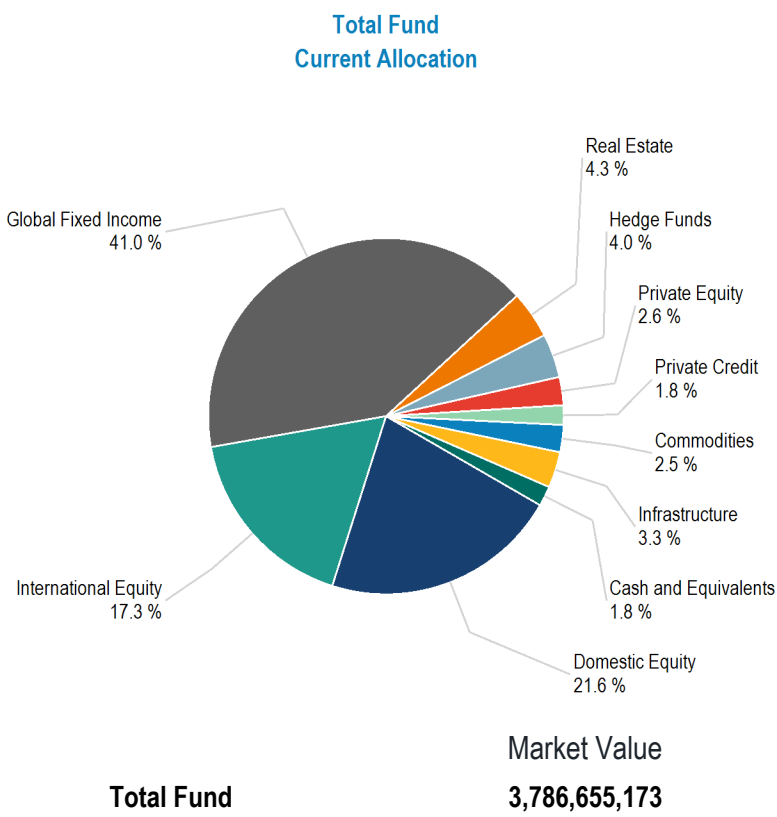
Period Ending: September 30, 2015

	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
SSgA S&P 500 Flagship Fund	13.12%	0.05%	1.00	1.00	100.18%	99.72%	1.33	0.03%	1.02	1.13
Waddell & Reed	13.84%	-0.19%	1.03	0.97	104.25%	104.72%	0.12	2.24%	1.06	1.38
Aronson Johnson Ortiz	14.83%	1.42%	1.03	0.97	107.42%	90.13%	0.68	2.53%	0.94	1.05
Systematic Small/Mid Cap Value	19.58%	-0.80%	1.11	0.97	111.97%	109.10%	0.10	3.90%	0.61	0.66
Kalmar Investments Management	19.53%	-1.18%	0.97	0.96	88.49%	97.96%	-0.38	4.06%	0.60	0.81
Artisan International Growth	15.92%	4.09%	1.03	0.93	124.68%	86.76%	0.96	4.38%	0.51	0.56
Research Affiliates International Equity	16.09%	0.36%	1.06	0.96	108.84%	102.23%	0.17	3.49%	0.28	0.38
Mondrian International Small Cap	15.11%	0.63%	0.88	0.95	89.31%	91.74%	-0.04	4.06%	0.43	0.55
Mondrian Emerging Markets	15.83%	0.91%	0.87	0.92	79.98%	84.01%	0.26	5.14%	-0.12	-0.15
Brandywine Global Sovereign	5.04%	1.85%	0.71	0.41	83.20%	41.60%	0.46	4.10%	0.33	0.59
Western Asset Investment Grade Credit	3.90%	0.80%	0.98	0.93	109.11%	87.54%	0.67	1.05%	1.22	1.70
Loomis Sayles High Yield	8.20%	0.11%	1.20	0.89	126.13%	117.02%	0.44	3.02%	0.91	1.03
Eaton Vance Senior Loan Fund	2.82%	1.11%	0.76	0.96	89.83%	56.81%	0.05	1.01%	1.60	2.30
SSgA TIPS	5.31%	-0.02%	1.00	1.00	99.68%	100.14%	-0.77	0.03%	0.47	0.56
PIMCO Emerging Local Bond Ins	10.20%	0.09%	1.03	0.99	105.73%	102.45%	-0.01	1.28%	-0.35	-0.47
Invesco Core Real Estate	2.63%	-6.42%	1.44	0.58	98.07%	--	-0.12	1.81%	5.24	--
Grosvenor	4.95%	3.48%	0.99	0.88	154.18%	63.54%	2.05	1.68%	1.23	1.32

Manager risk analysis statistics are run against historical composite returns prior to manager since inception.

# Total Domestic Equity Performance Summary

Period Ending: September 30, 2015



Style map is based on gross of fee returns.

Total Domestic Equity  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>Domestic Equity</b>	<b>816,279,500</b>											
SSgA S&P 500 Flagship Fund	220,815,783	-6.4	-5.2	-0.5	12.5	13.4	6.8	13.7	32.4	16.0	2.1	15.1
S&P 500		-6.4	-5.3	-0.6	12.4	13.3	6.8	13.7	32.4	16.0	2.1	15.1
eA US Large Cap Equity Gross Rank		38	52	52	56	47	69	35	61	44	33	46
Waddell & Reed	241,278,009	-5.4	-0.8	3.8	15.2	--	--	12.9	36.9	12.5	3.0	--
Russell 1000 Growth		-5.3	-1.5	3.2	13.6	--	--	13.0	33.5	15.3	2.6	--
eA US Large Cap Growth Equity Gross Rank		33	36	46	20	--	--	39	28	84	20	--
Aronson Johnson Ortiz	229,617,113	-7.9	-5.0	-1.5	13.5	14.0	6.7	10.0	38.4	17.4	2.7	16.1
Russell 1000 Value		-8.4	-9.0	-4.4	11.6	12.3	5.7	13.5	32.5	17.5	0.4	15.5
eA US Large Cap Value Equity Gross Rank		43	17	26	28	17	60	81	17	32	30	27
Systematic Small/Mid Cap Value	64,660,228	-11.8	-6.1	-3.4	11.9	--	--	4.4	37.6	18.1	-4.4	--
Russell 2500 Value		-9.6	-8.0	-2.4	11.0	--	--	7.1	33.3	19.2	-3.4	--
eA US Small-Mid Cap Value Equity Gross Rank		76	48	66	59	--	--	69	37	35	70	--
Kalmar Investments Management	59,908,367	-13.9	-9.5	-1.6	8.9	11.7	7.9	-4.5	44.9	14.8	1.7	37.3
Russell 2000 Growth		-13.1	-5.5	4.0	12.8	13.3	7.7	5.6	43.3	14.6	-2.9	29.1
eA US Small Cap Growth Equity Gross Rank		80	93	85	92	87	65	89	56	44	32	10

Winslow Capital Management and Wellington Management Large Cap Value were liquidated in Q2 2015.

# Total Domestic Equity Performance Summary (Net of Fees)

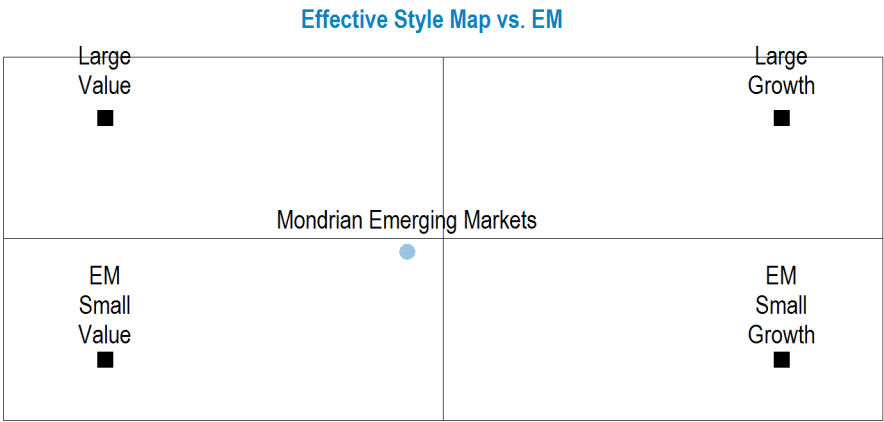
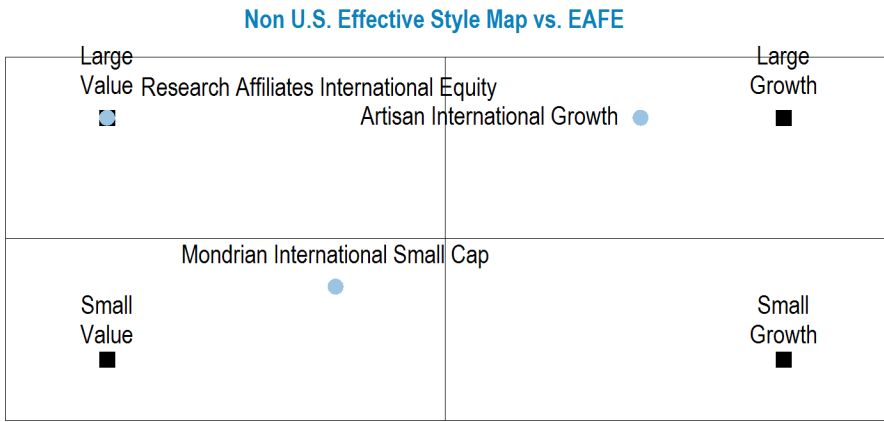
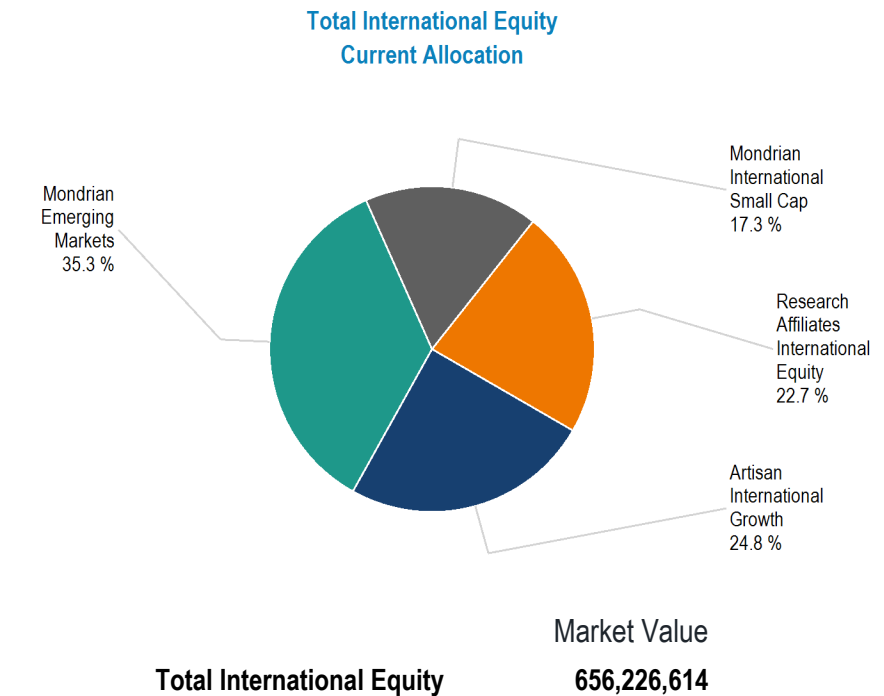
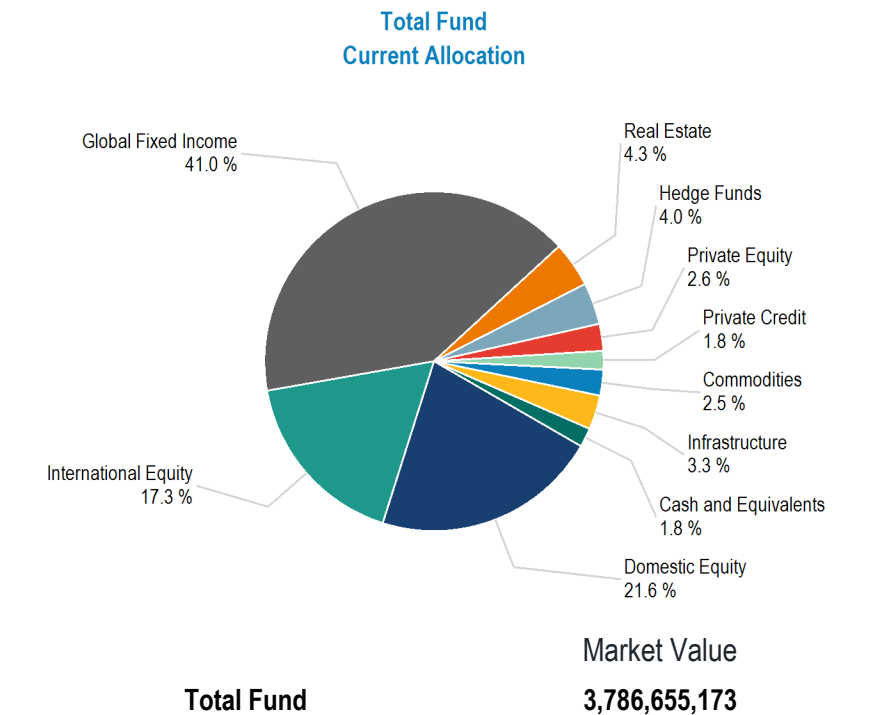
Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>Domestic Equity</b>	<b>816,279,500</b>													
SSgA S&P 500 Flagship Fund	220,815,783	-6.4	-5.3	-0.6	12.4	13.3	6.8	13.7	32.4	16.0	2.1	15.0	6.9	Mar-04
<i>S&amp;P 500</i>		-6.4	-5.3	-0.6	12.4	13.3	6.8	13.7	32.4	16.0	2.1	15.1	6.9	Mar-04
Waddell & Reed	241,278,009	-5.4	-1.0	3.5	14.9	--	--	12.7	36.6	12.3	2.7	--	12.6	Dec-10
<i>Russell 1000 Growth</i>		-5.3	-1.5	3.2	13.6	--	--	13.0	33.5	15.3	2.6	--	12.6	Dec-10
Aronson Johnson Ortiz	229,617,113	-7.9	-5.2	-1.8	13.2	13.7	6.4	9.6	38.0	17.0	2.4	15.8	10.3	Dec-95
<i>Russell 1000 Value</i>		-8.4	-9.0	-4.4	11.6	12.3	5.7	13.5	32.5	17.5	0.4	15.5	8.3	Dec-95
Systematic Small/Mid Cap Value	64,660,228	-11.8	-6.3	-3.8	11.5	--	--	4.0	37.2	17.6	-4.7	--	10.9	Oct-10
<i>Russell 2500 Value</i>		-9.6	-8.0	-2.4	11.0	--	--	7.1	33.3	19.2	-3.4	--	11.2	Oct-10
Kalmar Investments Management	59,908,367	-14.1	-10.0	-2.4	8.1	10.9	7.0	-5.3	43.9	13.9	0.9	36.3	7.3	Nov-04
<i>Russell 2000 Growth</i>		-13.1	-5.5	4.0	12.8	13.3	7.7	5.6	43.3	14.6	-2.9	29.1	7.7	Nov-04

Winslow Capital Management and Wellington Management Large Cap Value were liquidated in Q2 2015.

# Total International Equity Performance Summary

Period Ending: September 30, 2015



Style maps are based on gross of fee returns.

Total International Equity  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>International Equity</b>	<b>656,226,614</b>											
Artisan International Growth	162,430,349	-12.3	-8.7	-7.5	--	--	--	0.6	--	--	--	--
<i>MSCI EAFE</i>		-10.2	-5.3	-8.7	--	--	--	-4.9	--	--	--	--
<i>eA EAFE All Cap Equity Gross Rank</i>		89	95	78	--	--	--	12	--	--	--	--
Research Affiliates International Equity	148,752,354	-11.7	-8.8	-12.5	6.3	--	--	-5.5	29.2	18.7	--	--
<i>MSCI EAFE</i>		-10.2	-5.3	-8.7	5.6	--	--	-4.9	22.8	17.3	--	--
<i>eA EAFE All Cap Equity Gross Rank</i>		87	95	97	74	--	--	74	13	63	--	--
Mondrian International Small Cap	113,637,264	-9.7	-3.5	-4.0	5.1	6.6	--	-4.2	18.1	25.5	-8.1	30.3
<i>S&amp;P Developed Ex-U.S. SmallCap</i>		-7.8	0.7	-1.9	8.8	6.7	--	-3.4	26.1	18.6	-14.5	22.0
<i>eA EAFE All Cap Equity Gross Rank</i>		58	66	36	86	41	--	63	93	9	19	1
Mondrian Emerging Markets	231,406,647	-15.2	-16.1	-19.0	-5.2	-1.9	--	0.7	-6.4	23.1	-11.2	18.4
<i>MSCI Emerging Markets</i>		-17.9	-15.5	-19.3	-5.3	-3.6	--	-2.2	-2.6	18.2	-18.4	18.9
<i>eA Emg Mkts Equity Gross Rank</i>		30	78	71	80	54	--	41	96	24	6	70

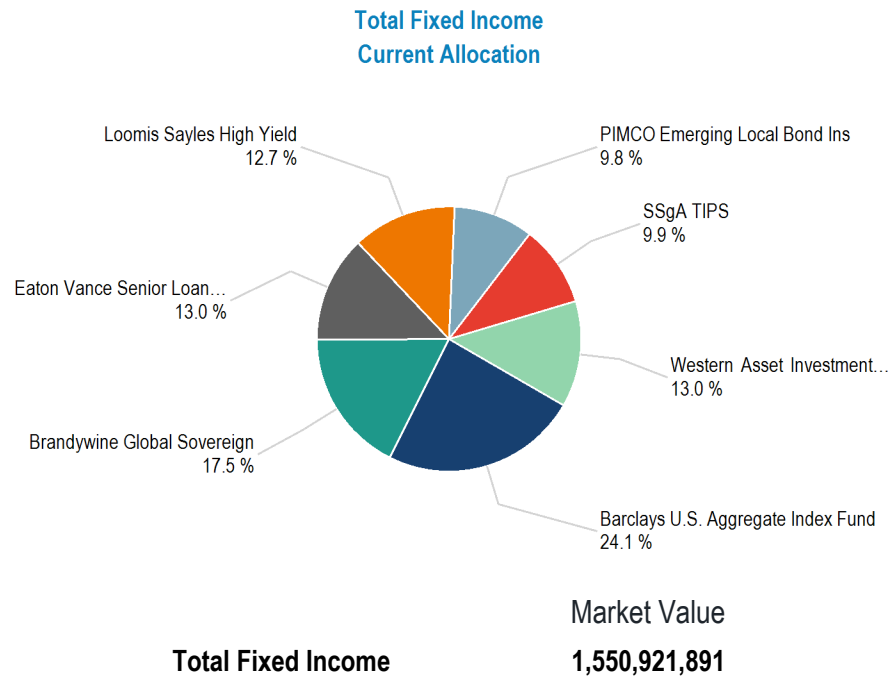
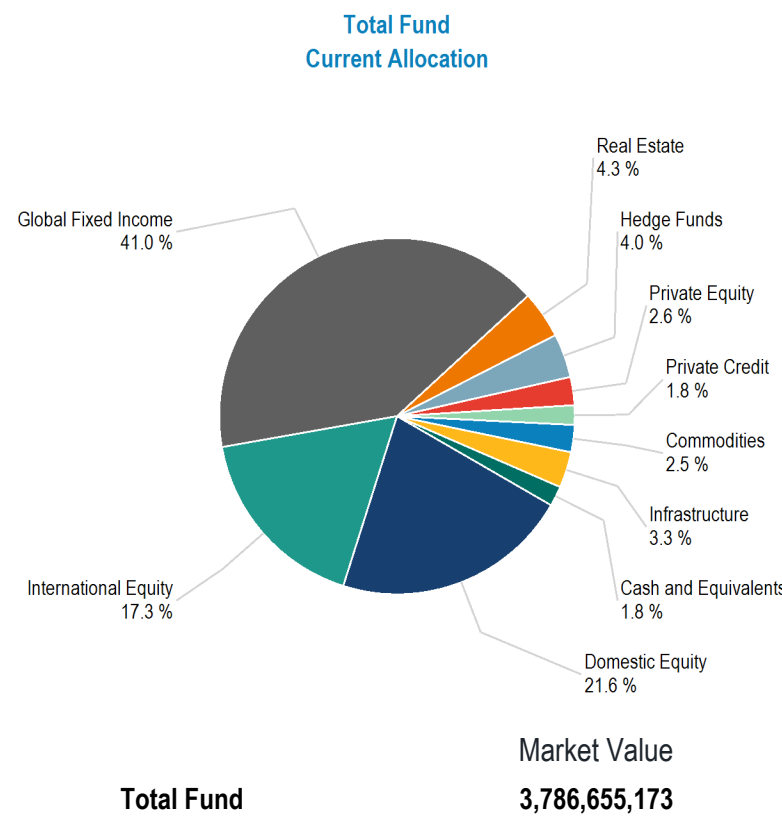
Total International Equity  
Performance Summary (Net of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>International Equity</b>	<b>656,226,614</b>													
Artisan International Growth	162,430,349	-12.4	-9.1	-8.2	--	--	--	-0.1	--	--	--	--	3.2	Apr-13
MSCI EAFE		-10.2	-5.3	-8.7	--	--	--	-4.9	--	--	--	--	2.0	Apr-13
Research Affiliates International Equity	148,752,354	-11.7	-8.9	-12.6	6.0	--	--	-5.8	28.9	18.5	--	--	1.0	Apr-11
MSCI EAFE		-10.2	-5.3	-8.7	5.6	--	--	-4.9	22.8	17.3	--	--	0.9	Apr-11
Mondrian International Small Cap	113,637,264	-9.8	-4.0	-4.7	4.4	5.8	--	-4.9	17.3	24.7	-8.8	29.4	9.1	Nov-09
S&P Developed Ex-U.S. SmallCap		-7.8	0.7	-1.9	8.8	6.7	--	-3.4	26.1	18.6	-14.5	22.0	7.8	Nov-09
Mondrian Emerging Markets	231,406,647	-15.3	-16.5	-19.5	-5.9	-2.6	--	0.0	-7.1	22.3	-12.0	17.6	4.5	Nov-05
MSCI Emerging Markets		-17.9	-15.5	-19.3	-5.3	-3.6	--	-2.2	-2.6	18.2	-18.4	18.9	4.2	Nov-05

Total Fixed Income  
Performance Summary

Period Ending: September 30, 2015





Total Fixed Income  
Performance Summary (Gross of Fees)

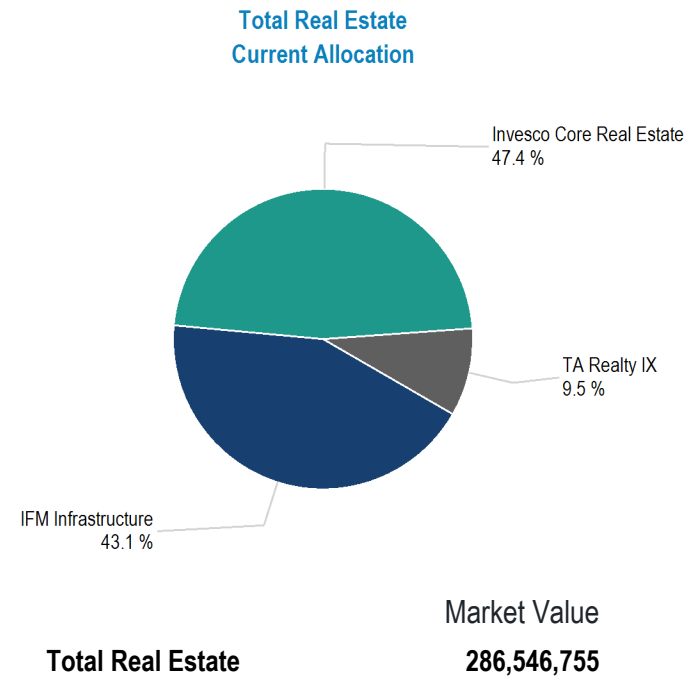
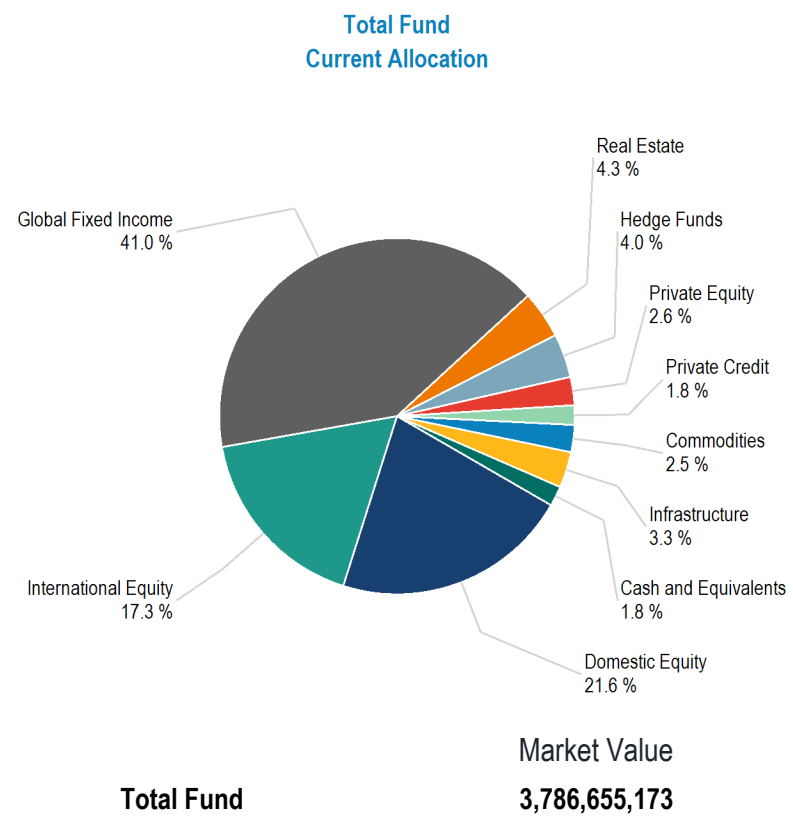
Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>Domestic Fixed Income</b>	<b>728,433,852</b>											
Western Asset Investment Grade Credit	200,936,783	-0.2	-0.6	1.2	--	--	--	--	--	--	--	--
<i>Barclays Credit</i>		0.5	-0.3	1.5	--	--	--	--	--	--	--	--
<i>eA All US Fixed Inc Gross Rank</i>		76	81	70	--	--	--	--	--	--	--	--
SSgA TIPS	154,245,890	-1.1	-0.8	-0.8	-1.8	2.5	--	3.6	-8.6	6.9	13.5	6.3
<i>Barclays US TIPS</i>		-1.1	-0.8	-0.8	-1.8	2.5	--	3.6	-8.6	7.0	13.6	6.3
<i>eA TIPS / Infl Indexed Fixed Inc Gross Rank</i>		56	52	51	78	55	--	44	77	67	51	63
Barclays U.S. Aggregate Index Fund	373,251,179	1.2	1.2	3.0	--	--	--	--	--	--	--	--
<i>Barclays Aggregate</i>		1.2	1.1	2.9	--	--	--	--	--	--	--	--
<i>eA US Passive Fixed Inc Gross Rank</i>		26	16	23	--	--	--	--	--	--	--	--
<b>Domestic Fixed Income High Yield</b>	<b>197,696,407</b>											
Loomis Sayles High Yield	197,696,407	-5.8	-3.2	-3.2	--	--	--	--	--	--	--	--
<i>Barclays High Yield</i>		-4.9	-2.5	-3.4	--	--	--	--	--	--	--	--
<i>eA US High Yield Fixed Inc Gross Rank</i>		84	86	69	--	--	--	--	--	--	--	--
<b>Domestic Fixed Income Bank Loans</b>	<b>201,769,143</b>											
Eaton Vance Senior Loan Fund	201,769,143	-1.0	1.4	1.4	--	--	--	--	--	--	--	--
<i>S&amp;P/LSTA Leveraged Loan Index</i>		-1.4	1.4	0.9	--	--	--	--	--	--	--	--
<i>eA Float-Rate Bank Loan Gross Rank</i>		63	81	67	--	--	--	--	--	--	--	--
<b>International Fixed Income</b>	<b>151,260,340</b>											
PIMCO Emerging Local Bond Ins	151,260,340	-11.2	-15.2	-20.4	--	--	--	-5.0	--	--	--	--
<i>JP Morgan GBI EM Diversified</i>		-10.5	-14.9	-19.8	--	--	--	-5.7	--	--	--	--
<i>eA Emg Mkt Fixed Inc Unhedged Gross Rank</i>		93	90	95	--	--	--	82	--	--	--	--
<b>Global Fixed Income</b>	<b>271,762,149</b>											
Brandywine Global Sovereign	271,762,149	-4.2	-9.0	--	--	--	--	--	--	--	--	--
<i>Citi WGBI</i>		1.7	-2.4	--	--	--	--	--	--	--	--	--
<i>eA All Global Fixed Inc Gross Rank</i>		85	96	--	--	--	--	--	--	--	--	--

Total Fixed Income  
Performance Summary (Net of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>Domestic Fixed Income</b>	<b>728,433,852</b>													
Western Asset Investment Grade Credit	200,936,783	-0.3	-0.8	0.9	--	--	--	--	--	--	--	--	0.9	Oct-14
Barclays Credit		0.5	-0.3	1.5	--	--	--	--	--	--	--	--	1.5	Oct-14
SSgA TIPS	154,245,890	-1.2	-0.8	-0.9	-1.9	2.5	--	3.6	-8.6	6.9	13.2	6.2	4.7	Feb-09
Barclays US TIPS		-1.1	-0.8	-0.8	-1.8	2.5	--	3.6	-8.6	7.0	13.6	6.3	4.7	Feb-09
Barclays U.S. Aggregate Index Fund	373,251,179	1.2	1.2	3.0	--	--	--	--	--	--	--	--	3.1	Apr-14
Barclays Aggregate		1.2	1.1	2.9	--	--	--	--	--	--	--	--	3.0	Apr-14
<b>Domestic Fixed Income High Yield</b>	<b>197,696,407</b>													
Loomis Sayles High Yield	197,696,407	-5.9	-3.6	-3.7	--	--	--	--	--	--	--	--	-3.7	Oct-14
Barclays High Yield		-4.9	-2.5	-3.4	--	--	--	--	--	--	--	--	-3.4	Oct-14
<b>Domestic Fixed Income Bank Loans</b>	<b>201,769,143</b>													
Eaton Vance Senior Loan Fund	201,769,143	-1.1	1.1	0.9	--	--	--	--	--	--	--	--	0.9	Oct-14
S&P/LSTA Leveraged Loan Index		-1.4	1.4	0.9	--	--	--	--	--	--	--	--	0.9	Oct-14
<b>International Fixed Income</b>	<b>151,260,340</b>													
PIMCO Emerging Local Bond Ins	151,260,340	-11.3	-15.6	-20.8	--	--	--	-5.4	--	--	--	--	-10.6	Jul-13
JP Morgan GBI EM Diversified		-10.5	-14.9	-19.8	--	--	--	-5.7	--	--	--	--	-10.3	Jul-13
<b>Global Fixed Income</b>	<b>271,762,149</b>													
Brandywine Global Sovereign	271,762,149	-4.3	-9.2	--	--	--	--	--	--	--	--	--	-9.6	Jan-15
Citi WGBI		1.7	-2.4	--	--	--	--	--	--	--	--	--	-2.1	Jan-15



# Total Real Estate Performance Summary (Gross of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>Real Estate</b>	<b>162,959,435</b>													
Invesco Core Real Estate	135,817,861	3.0	11.9	15.8	13.6	13.8	--	12.4	14.2	8.7	16.9	16.7	4.3	Oct-07
NCREIF-ODCE		3.7	11.3	14.9	13.4	14.0	--	12.5	13.9	10.9	16.0	16.4	4.1	Oct-07
<b>Infrastructure</b>	<b>123,587,320</b>													
IFM Infrastructure	123,587,320	2.2	--	--	--	--	--	--	--	--	--	--	3.6	May-15
CPI + 5%		0.9	--	--	--	--	--	--	--	--	--	--	2.6	May-15

## Real Estate - Closed End Funds

Inception Date	Manager Name/Fund Name	Total Commitment	Contributions	Distributions	Market Value	One Quarter Return	One Year Return	Three Years Return	Five Years Return	(IRR) Since Inception
2009	TA Realty IX*	\$30,000,000	\$30,000,000	\$18,059,982	\$27,141,574	4.1%	15.8%	13.5%	14.5%	23.2%

% of Total Fund (Market Value)

0.7%

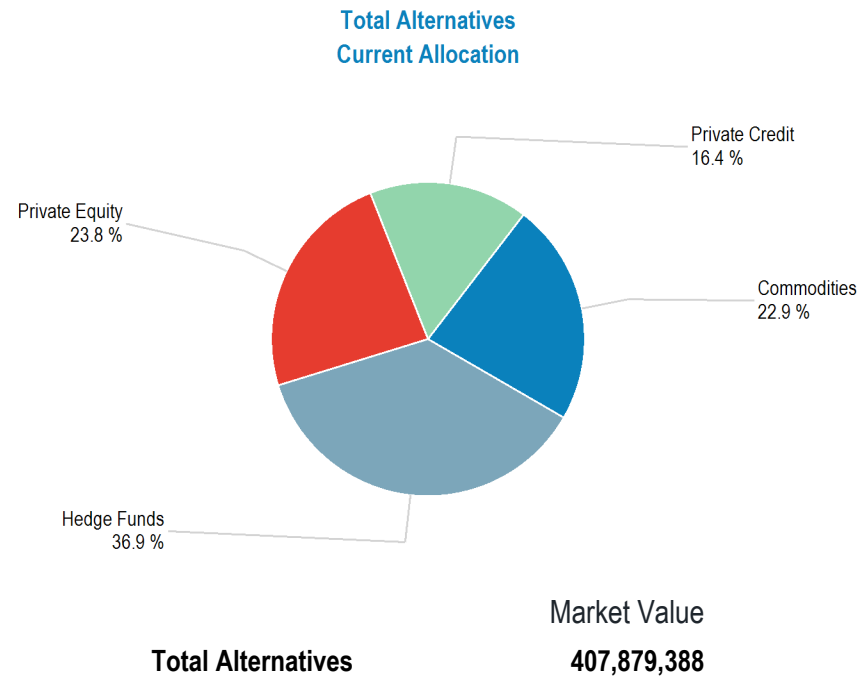
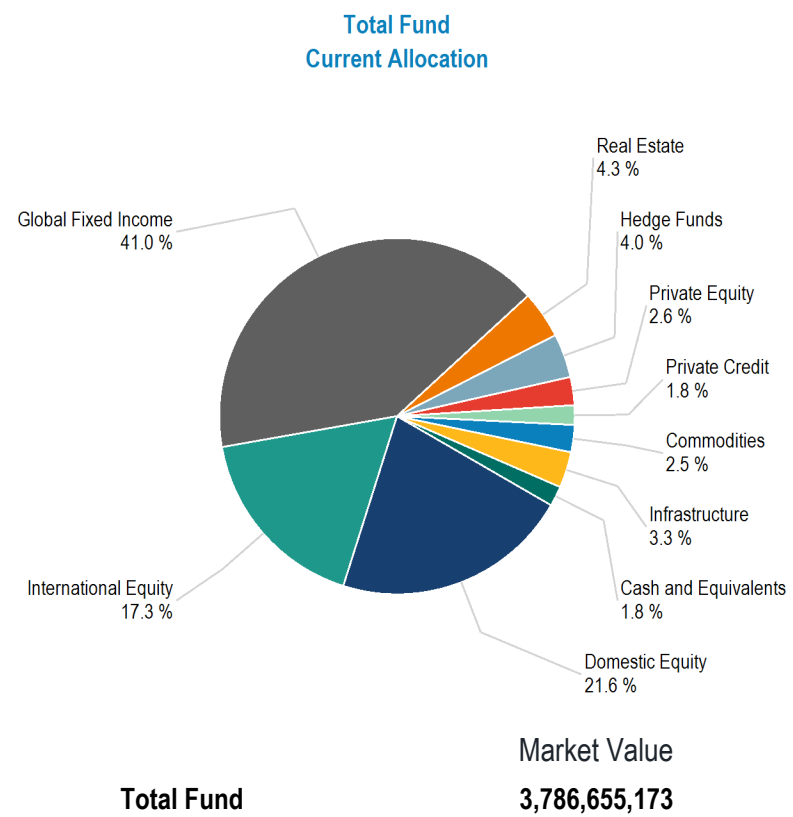
\*Balance, performance, and IRR as of 9/30/2015.

Total Real Estate  
Performance Summary (Net of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>Real Estate</b>	<b>162,959,435</b>													
Invesco Core Real Estate	135,817,861	2.7	11.2	14.8	12.7	12.9	--	11.4	13.4	7.7	15.9	15.7	3.4	Oct-07
NCREIF-ODCE		3.7	11.3	14.9	13.4	14.0	--	12.5	13.9	10.9	16.0	16.4	4.1	Oct-07
<b>Infrastructure</b>	<b>123,587,320</b>													
IFM Infrastructure	123,587,320	2.0	--	--	--	--	--	--	--	--	--	--	3.2	May-15
CPI + 5%		0.9	--	--	--	--	--	--	--	--	--	--	2.6	May-15

\*Balance, performance, and IRR as of 9/30/2015.



Total Liquid Alternatives  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010
<b>Hedge Funds</b>	<b>150,535,055</b>											
Grosvenor	150,535,055	-2.2	0.5	1.3	7.8	6.1	--	4.3	16.3	9.7	-2.6	7.6
<i>HFRI Fund of Funds Composite Index</i>		-3.6	-0.9	0.0	4.2	2.7	--	3.4	9.0	4.8	-5.7	5.7
<b>Commodities</b>	<b>93,385,903</b>											
Invesco Commodities	93,385,903	-9.8	--	--	--	--	--	--	--	--	--	--
<i>Bloomberg Commodity Index TR USD</i>		-14.5	--	--	--	--	--	--	--	--	--	--

Total Liquid Alternatives  
Performance Summary (Net of Fees)

Period Ending: September 30, 2015

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2014	2013	2012	2011	2010	Return	Since
<b>Hedge Funds</b>	<b>150,535,055</b>													
Grosvenor	150,535,055	-2.4	-0.1	0.6	6.9	5.1	--	3.5	15.2	8.6	-3.7	6.7	5.3	Oct-09
<i>HFRI Fund of Funds Composite Index</i>		-3.6	-0.9	0.0	4.2	2.7	--	3.4	9.0	4.8	-5.7	5.7	2.9	Oct-09
<b>Commodities</b>	<b>93,385,903</b>													
Invesco Commodities	93,385,903	-9.9	--	--	--	--	--	--	--	--	--	--	-8.6	May-15
<i>Bloomberg Commodity Index TR USD</i>		-14.5	--	--	--	--	--	--	--	--	--	--	-13.0	May-15



# Total Alternative Illiquids Non Marketable Securities Overview

Period Ending: September 30, 2015

Verus Internal Analysis										Manager Reported		
Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 9/30/15 <sup>3</sup>	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Distrib./ Paid-In (DPI) <sup>1</sup>	Tot. Value/ Paid-In (TVPI) <sup>2</sup>	Market Value as of IRR Date	Net IRR Since Inception <sup>6</sup>	IRR Date
<b>Private Equity</b>												
2008	Landmark Equity XIV, L.P.	\$17,319,520	\$30,000,000	\$27,294,704	91%	\$2,705,296	\$20,643,939	75.6%	139.1%	\$17,658,916	16.2%	06/30/15
2007	New Mountain Partners III	\$10,162,278	\$15,000,000	\$14,693,039	98%	\$306,961 <sup>7</sup>	\$8,732,421	59.4%	128.6%	\$15,184,124	10.4%	06/30/15
2007	Hamilton Lane VI	\$39,534,001	\$70,000,000	\$60,965,305	87%	\$9,034,695	\$51,790,578	85.0%	149.8%	\$39,534,001	10.1%	09/30/15
2007	WP Private Equity X, L.P.	\$15,433,346	\$25,000,000	\$25,000,000	100%	\$0	\$19,666,114	78.7%	140.4%	\$15,433,346	7.7%	09/30/15
2002	Blackstone IV	\$5,652,495	\$20,000,000	\$22,334,412	112%	\$0 <sup>8</sup>	\$46,419,479	207.8%	233.1%	\$5,652,495	29.8%	09/30/15
2001	WP Private Equity VIII, L.P.	\$7,073,151	\$25,000,000	\$25,000,000	100%	\$0	\$49,916,250	199.7%	228.0%	\$7,073,151	14.7%	09/30/15
2000	Landmark Equity X, L.P.	\$980,518	\$20,000,000	\$19,009,543	95%	\$990,457	\$22,116,406	116.3%	121.5%	\$1,165,377	4.3%	06/30/15
1999	New Mountain Partners, L.P.	\$479,844	\$20,000,000	\$19,543,507	98%	\$456,493 <sup>9</sup>	\$26,966,378	138.0%	140.4%	\$479,844	12.3%	06/30/15
1998	WP Equity Partners, L.P. <sup>10</sup>	\$275,982	\$20,000,000	\$20,000,000	100%	\$0	\$32,790,907	164.0%	165.3%	\$275,982	10.3%	09/30/15
<b>Private Credit</b>												
2015	GSO European Senior Debt	\$200,686 <sup>*</sup>	\$30,000,000	\$0	0%	\$30,000,000	\$0	N/A	N/A	N/A	N/A	N/A
2015	CVI Credit Value Fund III	\$6,160,949	\$30,000,000	\$6,000,000	20%	\$24,000,000	\$0	0.0%	102.7%	\$6,160,949	17.2%	09/30/15
2014	Colony Distressed Credit III, L.P.	\$7,178,857	\$20,000,000	\$9,904,612	50%	\$10,095,388 <sup>11</sup>	\$3,227,881	32.6%	105.1%	\$7,617,000	10.0%	06/30/15
2012	Oaktree Opportunities IX, L.P.	\$13,546,877	\$15,000,000	\$14,250,000	95%	\$750,000	\$0	0.0%	95.1%	\$13,546,877	-3.4%	09/30/15
2010	KKR Mezzanine Partners	\$19,771,366	\$30,000,000	\$30,709,437	102%	\$0 <sup>12</sup>	\$17,060,590	55.6%	119.9%	\$19,771,366	8.2%	09/30/15
2010	Angelo Gordon VII	\$8,882,443	\$30,000,000	\$30,000,000	100%	\$0	\$27,891,070	93.0%	122.6%	\$8,882,443	5.3%	09/30/15
2009	Colony Distressed Credit I, L.P. <sup>13</sup>	\$10,533,321	\$40,000,000	\$44,487,400	111%	\$0	\$54,827,341	123.2%	146.9%	\$13,747,900	19.6%	06/30/15
2002	Lone Star Fund IV	\$198,207	\$20,000,000	\$19,045,199	95%	\$954,801	\$43,786,403	229.9%	230.9%	\$356,814	30.7%	09/30/15
2002	TCW Shop IV	\$9,450	\$15,000,000	\$22,661,307	151%	\$0	\$27,613,153	121.9%	121.9%	\$9,450	6.0%	12/31/14
1998	TCW Shop III	\$565,140	\$15,000,000	\$15,000,000	100%	\$0	\$17,925,302	119.5%	123.3%	\$565,140	3.4%	12/31/13

<b>Total Alternative Illiquids</b>	<b>\$163,958,431</b>	\$490,000,000	\$425,898,464	87%	\$79,294,091	\$471,374,212	110.7%	149.2%
<b>% of Portfolio (Market Value)</b>	<b>4.3%</b>							

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Last known market value + capital calls - distributions

<sup>4</sup>IRR currently unavailable for these funds.

<sup>5</sup>Investment period ended, no further capital to be called.

<sup>6</sup>Gross IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest.

<sup>7</sup>Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

<sup>8</sup>\$1,366,953 capital returned but subject to recall

<sup>9</sup>\$2,996,127 capital returned but subject to recall

<sup>10</sup>\$2,338,987 capital returned but subject to recall

<sup>11</sup>On June 11, 2012 \$1,029,076 was transferred from the Partnership to a Liquidation Trust.

<sup>12</sup>\$458,333 capital returned but subject to recall

<sup>13</sup>\$4,649,882 capital returned but subject to recall and \$879,385 return of unused capital subject to recall

<sup>14</sup>Balance, performance, and IRR as of 6/30/2014. Colony Capital reflects a FCERA-specific IRR.

<sup>15</sup>GSO market value represents income to the fund. No capital calls have occurred.

BCI Growth V, L.P. was fully liquidated on 12/31/2013.

# Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2015

Account	Fee Schedule	Market Value As of 9/30/2015	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSgA S&P 500 Flagship Fund	0.03% of First \$150.0 Mil, 0.02% Thereafter	\$220,815,783	\$57,747	0.03%
Waddell & Reed	0.25% of Assets	\$241,278,009	\$603,195	0.25%
Aronson Johnson Ortiz	0.30% of Assets	\$229,617,113	\$688,851	0.30%
Systematic Small/Mid Cap Value	0.35% of Assets	\$64,660,228	\$226,311	0.35%
Kalmar Investments Management	1.00% of First \$10.0 Mil, 0.88% of Next \$10.0 Mil, 0.75% Thereafter	\$59,908,367	\$486,813	0.81%
Artisan International Growth	0.30% of Assets	\$162,430,349	\$487,291	0.30%
Research Affiliates International Equity	0.12% of Assets	\$148,752,354	\$178,503	0.12%
Mondrian International Small Cap	0.85% of First \$25.0 Mil, 0.65% of Next \$50.0 Mil, 0.63% of Next \$50.0 Mil, 0.60% Thereafter	\$113,637,264	\$778,983	0.69%
Mondrian Emerging Markets	1.00% of First \$25.0 Mil, 0.75% of Next \$50.0 Mil, 0.60% Thereafter	\$231,406,647	\$1,563,440	0.68%
Western Asset Investment Grade Credit	0.30% of First \$100.0 Mil, 0.15% Thereafter	\$200,936,783	\$451,405	0.22%
Loomis Sayles High Yield	0.50% of Assets	\$197,696,407	\$988,482	0.50%
Eaton Vance Senior Loan Fund	0.55% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.40% Thereafter	\$201,769,143	\$932,077	0.46%
SSgA TIPS	0.04% of Assets	\$154,245,890	\$61,698	0.04%
Barclays U.S. Aggregate Index Fund	0.02% of Assets	\$373,251,179	\$74,650	0.02%

*This fee analysis only reflects base fees for investment management, does not incorporate performance-based fees, and excludes fees paid to real estate and private equity managers. Real estate and private equity fees have other components which cannot be easily captured in this simplified format.*

*\* Managers with incentive fee include: Waddell, Systematic, Research Affiliates, Western Asset, Artisan, Brandywine, and Invesco Commodities. Performance based fees are not included in the fee analysis.*

# Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2015

Account	Fee Schedule	Market Value As of 9/30/2015	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Brandywine Global Sovereign	0.36% of Assets	\$271,762,149	\$978,344	0.36%
PIMCO Emerging Local Bond Ins	0.50% of First \$100.0 Mil, 0.45% Thereafter	\$151,260,340	\$730,672	0.48%
IFM Infrastructure	0.97% of Assets	\$123,587,320	\$1,198,797	0.97%
Grosvenor	1.15% of First \$25.0 Mil, 1.00% of Next \$25.0 Mil, 0.80% of Next \$50.0 Mil, 0.60% Thereafter	\$150,535,055	\$1,240,710	0.82%
Invesco Commodities	0.70% of First \$100.0 Mil, 0.55% Thereafter	\$93,385,903	\$653,701	0.70%
<b>Investment Management Fee</b>		<b>\$3,390,936,283</b>	<b>\$12,381,670</b>	<b>0.37%</b>

*This fee analysis only reflects base fees for investment management, does not incorporate performance-based fees, and excludes fees paid to real estate and private equity managers. Real estate and private equity fees have other components which cannot be easily captured in this simplified format.*

*\* Managers with incentive fee include: Waddell, Systematic, Research Affiliates, Western Asset, Artisan, Brandywine, and Invesco Commodities. Performance based fees are not included in the fee analysis.*

## Total Fund Watch List (Gross of Fees)

Period Ending: September 30, 2015

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
Waddell & Reed	Domestic Equity Large Cap Growth	No Issues	⌂	✓	✓	⌂	✓	✓
Aronson Johnson Ortiz	Domestic Equity Large Cap Value	No Issues	✓	✓	✓	⌂	✓	✓
Systematic Small/Mid Cap Value	Domestic Equity Small/Mid Cap Value	No Issues	✓	⌂	⌂	⌂	⌂	✓
Kalmar Investments Management	Domestic Equity Small/Mid Cap Growth	No Issues	⌂	⌂	⌂	⌂	⌂	✓
Artisan International Growth	International Equity	No Issues	✓	✓	✓	✓	✓	✓
Research Affiliates International Equity	International Equity	No Issues	⌂	✓	⌂	⌂	⌂	⌂
Mondrian International Small Cap	International Equity Small Cap	No Issues	⌂	⌂	✓	✓	✓	✓
Mondrian Emerging Markets	Emerging Markets Equity	No Issues	✓	⌂	✓	⌂	⌂	✓

Rule 1 - Manager has underperformed the benchmark index more than half the time over the last 20 quarters

Rule 2 - Equity manager has returned less than 110% of the benchmark index for the three year period.

Rule 3 - Manager has underperformed the 50th percentile in the appropriate style universe in more than two of the last five years of consecutive returns.

Rule 4 - Manager's Sharpe Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period  $[(\text{five year return minus five year risk free rate})/(\text{standard deviation})]$ .

Rule 5 - Manager's Information Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period  $[(\text{excess return over benchmark})/(\text{tracking error})]$ .

Rule 6 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.

Watch List standards are run against historical composite returns prior to manager since inception.

## Total Fund Watch List (Gross of Fees)

Period Ending: September 30, 2015

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
Brandywine Global Sovereign	Global Fixed Income	No Issues	✓	✓	✗	✗	✗	✗
Western Asset Investment Grade Credit	Domestic Fixed Income	No Issues	✓	✓	✓	✗	✓	✓
Loomis Sayles High Yield	Domestic Fixed Income High Yield	No Issues	✓	✓	✓	✗	✓	✓
Eaton Vance Senior Loan Fund	Domestic Fixed Income High Yield	No Issues	✗	✗	✗	✓	✗	✗
PIMCO Emerging Local Bond Ins	Emerging Markets Fixed Income	Watch	✓	✗	✗	✗	✗	✗
Invesco Core Real Estate	Real Estate	No Issues	✓	✗	✗	--	--	✓
Grosvenor	Hedge Funds	No Issues	✓	✓	✗	--	--	✓
Invesco Commodities	Commodities	No Issues	✓	✓	✗	--	--	✓

Rule 1 - Manager has underperformed the benchmark index more than half the time over the last 20 quarters

Rule 2 - Manager has returned less than 105% of the benchmark index for the three year period.

Rule 3 - Manager has underperformed the 50th percentile in the appropriate style universe in more than two of the last five years of consecutive returns.

Rule 4 - Manager's Sharpe Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period  $(\text{five year return minus five year risk free rate})/(\text{standard deviation})$ .

Rule 5 - Manager's Information Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period  $(\text{excess return over benchmark})/(\text{tracking error})$ .

Rule 6 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.

Watch List standards are run against historical composite returns prior to manager since inception.

**Performance Return Calculations**

Returns calculated in the performance summary tables are time-weighted rates of return (TWRR). TWRR are calculated from changes in monthly market values, adjusted for weighted cash flows between months. Our performance methodology assumes that cash flows occur at the end of day for modified dietz calculations. Returns are linked geometrically and annualized for periods longer than one year.

**Data Source**

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

**Illiquid Alternatives**

Closed end funds including but not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit may lag performance and market value data due to delayed reporting. Verus will show market values for closed end funds as of the most recent reported performance adjusted for capital calls and distributions. Closed end fund managers report performance using an internal rate of return (IRR), which differs from the TWRR calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

**Manager Line Up**

<b>Manager</b>	<b>Fund Incepted</b>	<b>Data Source</b>	<b>Manager</b>	<b>Fund Incepted</b>	<b>Data Source</b>
SSgA S&P 500 Flagship Fund	04/01/2004	State Street	Hamilton Lane VI	2007	Hamilton Lane
Waddell & Reed	12/20/2010	Northern Trust	Warburg Pincus X	2007	Warburg Pincus
Aronson Johnson Ortiz	12/04/1995	Northern Trust	Blackstone IV	2002	Blackstone
Systematic Small/Mid Value	10/08/2010	Northern Trust	Warburg Pincus VIII	2001	Warburg Pincus
Kalmar Investments	11/18/2004	Northern Trust	Landmark Equity Partners X	2000	Landmark
Artisan International Growth	04/01/2013	Northern Trust	New Mountain	1999	New Mountain
RAFI International Equity	04/30/2011	Northern Trust	Warburg Pincus	1998	Warburg Pincus
Mondrian Int'l Small Cap	11/02/2009	Mondrian	GSO European Senior Debt	2015	GSO
Mondrian Emerging Markets	11/17/2005	Mondrian	CVI Credit Value Fund III	2015	CarVal
Brandywine Global Sovereign	01/31/2015	Northern Trust	Colony Distressed Credit III	2014	Colony
WAMCO Credit Index	10/01/2014	Northern Trust	Oaktree Opportunities Fund IX	2012	Oaktree
Loomis Sayles High Yield	10/01/2014	Northern Trust	KKR Mezzanine Partners I	2010	KKR
Eaton Vance Senior Loan	10/01/2014	Eaton Vance	Angelo Gordon Cap. Recov. VII	2010	Angel Gordon
SSgA TIPS	02/27/2009	State Street	Colony Distressed Credit I	2009	Colony
Barclays U.S. Aggregate Bond	04/30/2014	Northern Trust	Lonestar IV	2002	Lonestar
PIMCO Emerging Local Bond	07/31/2013	Northern Trust	TCW Shop IV	2002	TCW
Invesco Core Real Estate	10/01/2007	Invesco	TCW Shop III	1998	TCW
TA Associates Realty 9	2009	TA Associates	Invesco Commodities	05/27/2015	Invesco
IFM Global Infrastructure	05/13/2015	IFM	Benefits Payment Cash	N/A	Northern Trust
Grosvenor	10/31/2009	Grosvenor	Custodied	N/A	Northern Trust
Landmark Equity Partners XIV	2008	Landmark	Internal	N/A	FCERA
New Mountain III	2007	New Mountain	Transition	N/A	Northern Trust

**Policy & Custom Index Composition**

Floating Policy Index (9/1/2015-9/30/2015)	21.3% Russell 3000 Index, 40.4% Barclays Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.5% Russell 3000 Index + 250 bps, 1.8% Barclays Global Aggregate Index + 250 bps, 4.0% HFRI Fund of Funds Composite, 8.0% NFI ODCE, 3.0% Bloomberg Commodity Index.
(8/1/2015-8/31/2015)	21.0% Russell 3000 Index, 40.3% Barclays Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.8% Russell 3000 Index + 250 bps, 1.9% Barclays Global Aggregate Index + 250 bps, 4.0% HFRI Fund of Funds Composite, 8.0% NFI ODCE, 3.0% Bloomberg Commodity Index.
(7/1/2015-7/31/2015)	21.0% Russell 3000 Index, 40.5% Barclays Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.8% Russell 3000 Index + 250 bps, 1.8% Barclays Global Aggregate Index + 250 bps, 3.9% HFRI Fund of Funds Composite, 8.0% NFI ODCE, 3.0% Bloomberg Commodity Index.
Barclays Aggregate*	Prior to 3/31/2014 Barclays U.S. Aggregate Index and as of 4/1/2014 Barclays Global Aggregate Index.

**Other Disclosures**

Fresno County Employees' Retirement Association fiscal year end is June 30.



# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.



## Disclaimer

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