



# Quarterly Investment Performance Analysis

Water and Power Employees' Retirement Plan

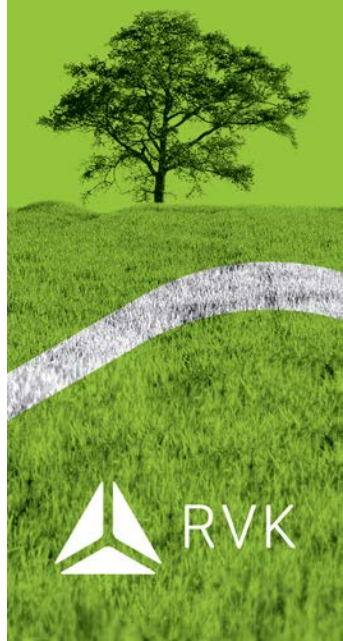
Period Ended: June 30, 2018



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# Executive Summary



### Capital Markets Review

The US dollar strengthened significantly relative to a trade weighted basket of currencies during the second quarter of 2018, reversing a trend of weakening that began over a year earlier. This tightening dollar liquidity environment and the escalating trade tensions between the United States and its global trading partners put significant pressure on non-US assets. Emerging market equities fell 8.0% during the quarter, and local currency-denominated emerging market debt fell more than 10.0%. Developed international equities also declined, further exacerbating losses experienced in Q1. As has often been the case over the last several years, US equities were a bright spot. The heightened equity market volatility that characterized the first quarter of 2018 softened to a degree during Q2, as the S&P 500 produced three straight months of positive returns. US high yield credit markets produced positive returns as well, though the investment grade market declined as the yield curve flattened.

Economic data released during the quarter continue to indicate a strong economic expansion in the United States. According to the Bureau of Economic Analysis, first quarter GDP grew at an annual rate of 2.0%. The GDP Nowcast, an indicator tracked by the Federal Reserve Bank of Atlanta to measure GDP growth in real time, recently forecasted second quarter GDP growth of nearly 4.0%. The labor market remains strong as well. Though unemployment rose to 4.0% during the quarter from its recent lows of 3.8%, the increase was largely tied to a rise in labor force participation. Non-farm payroll growth averaged in excess of 210,000 jobs per month during the quarter. Despite what appear to be relatively tight labor market conditions, wage growth has remained subdued. With this backdrop, the Federal Open Market Committee (“FOMC”) raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The continued robust US economic activity also flowed through to heightened expectations for additional interest rate increases. By quarter-end, the market implied an over 50% probability of the FOMC raising the rate for a fourth time this year at its December meeting.

In other developed markets, the European Central Bank (“ECB”) projected slowing economic growth from 2.5% in 2017 to 1.7% by 2020, while Japan forecasted growth of 1.5% for fiscal year 2019, indicating more optimism than the average economist forecast of 0.8%. Despite signs of slowing growth in Europe, the ECB confirmed its plan to reduce its bond buying with a target to halt purchases by December while likely keeping the deposit rate of -0.04% steady until mid-2019. The Bank of Japan also confirmed that its deposit rate would remain unchanged at -0.01% while committing to continued asset buying.

### Total Fund

During the second quarter, the Retirement Plan outperformed its policy benchmark by 47 basis points and ranked in the 40<sup>th</sup> percentile among peers. The Health Plan outperformed its policy benchmark by 53 basis points and ranked in the 38<sup>th</sup> percentile among peers.

Over the one-year trailing period, the Retirement Plan outperformed its policy benchmark by 81 basis points, and ranked in the 34<sup>th</sup> percentile among peers. The Health Plan outperformed the policy benchmark by 99 basis points, and ranked in the 28<sup>th</sup> percentile among peers.

### Domestic Equity

The Domestic Equity Composite outperformed the Russell 3000 Index for the quarter, returning 4.57% versus 3.89% for the index. This performance ranked the composite in the 16<sup>th</sup> percentile among peers. Fred Alger Large Cap Growth had the highest absolute and relative performance for the quarter, returning 10.41% and outperforming the Russell 1000 Growth Index by 465 basis points. MFS Large Cap Value had the lowest absolute and relative performance, returning -0.64% for the quarter and underperforming the Russell 1000 Value Index by 182 basis points.

### International Equity

The International Equity Composite outperformed the MSCI ACW Ex US IM Index for the quarter, returning -2.45% versus -2.61% for the index. This performance ranked the composite in the 61<sup>st</sup> percentile among peers. MFS Developed International had the highest absolute and relative performance for the quarter, returning 0.61% and outperforming the MSCI World Ex US Index by 138 basis points. LA Capital Emerging had the lowest absolute and relative performance, returning -8.40% for the quarter and underperforming the MSCI Emerging Markets IM Index by 38 basis points.

### Fixed Income

The Fixed Income Composite outperformed the Fixed Income Custom Index for the quarter, returning -0.05% versus -0.19% for the index. This performance ranked the composite in the 53<sup>rd</sup> percentile among peers. Pacific Asset Bank Loans had the highest absolute performance for the quarter, returning 0.40%. Macquarie Unconstrained had the lowest absolute performance for the quarter, returning -0.37%.



## Alternative Asset Classes

### REAL RETURN

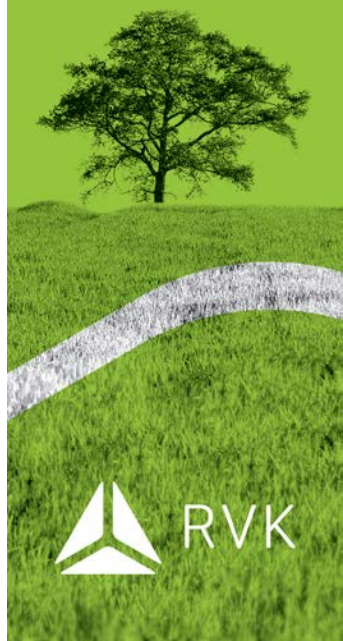
The Real Return Composite underperformed the Consumer Price Index+3% by 169 basis points during the second quarter. WAMCO was the largest driver of underperformance, returning -0.50% and underperforming its benchmark by 83 basis points. Hancock Timberland, Invesco Commodity, and Molpus IV also contributed to underperformance, returning -0.64%, -0.35%, and -0.34%, respectively.

### HEDGE FUNDS

The Hedge Funds Composite posted positive absolute returns but underperformed the ICE BofAML 3 Month US T-Bill Index+3% (1 Month Lag) by 32 basis points during the second quarter. Blackstone Hope St. returned 0.83% and underperformed the ICE BofAML 3 Month US T-Bill Index+3% (1 Month Lag) by 34 basis points. MS Convergent posted positive performance of 2.07%, but is undergoing liquidation and as such no longer represents a meaningful portion of the Hedge Funds Composite.



# Watch List



**Water and Power Employees' Retirement Plan**  
**Watch List Summary**

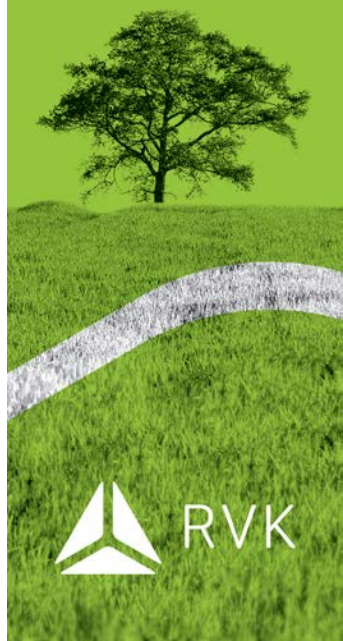
**As of June 30, 2018**

Watch List Managers	Date Qualified for Watch	Date Board Approved Manager for Watch	Recent Performance					Reasons on Watch	Recommendation
			MTD	YTD	1 Year	3 Year	5 Year		
Continue On Watch									
Fred Alger Large Cap Growth (SA) <i>Russell 1000 Growth Index</i>	12/31/2015	4/13/2016	1.13 <i>0.96</i>	15.60 <i>7.25</i>	28.56 <i>22.51</i>	12.16 <i>14.98</i>	16.22 <i>16.36</i>	Failure to meet performance criteria.	At the 07/25/2018 meeting, the Board selected a replacement manager pending contract negotiations.
Fidelity Developed Int'l (SA) <i>International Developed Blend</i>	9/30/2016	11/9/2016	-1.56 <i>-1.19</i>	-1.73 <i>-2.57</i>	7.66 <i>7.74</i>	5.13 <i>5.49</i>	6.71 <i>6.77</i>	Portfolio Manager turnover.	The manager last provided an update to the Board on 11/08/2017.
Macquarie Unconstrained (SA) <i>67% B Global Credit/33% B Global High Yield</i>	9/30/2016	11/9/2016	-0.16 <i>-0.27</i>	-2.08 <i>-1.65</i>	0.66 <i>0.95</i>	N/A <i>N/A</i>	N/A <i>N/A</i>	Organization concerns.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 06/13/2018.
WAMCO (SA) <i>Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)</i>	3/31/2017	4/12/2017	0.55 <i>0.40</i>	-0.05 <i>0.40</i>	2.81 <i>3.44</i>	3.93 <i>4.23</i>	3.99 <i>4.08</i>	Failure to meet performance criteria.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 01/24/2018.
MS Convergent (CF) (Lagged-1 Mo) - Net <i>ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)</i>	3/31/2016	6/8/2016	1.23 <i>0.40</i>	5.36 <i>2.25</i>	8.62 <i>4.31</i>	2.07 <i>3.64</i>	N/A <i>N/A</i>	Failure to meet performance criteria.	At the 04/12/17 meeting, the Board interviewed and selected a replacement manager for the Hedge Fund of Funds mandate.

Performance shown is gross of fees.



# Capital Markets Review

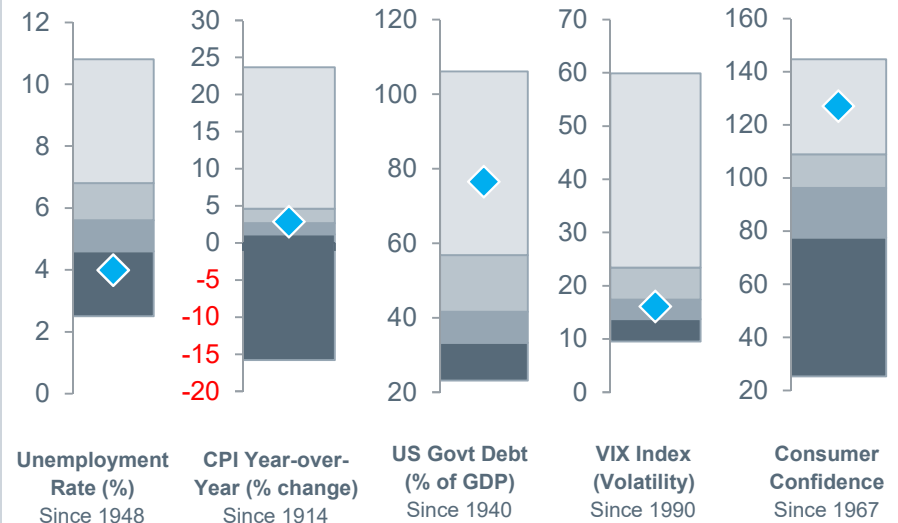


## Second Quarter Economic Environment

## Key Economic Indicators

The US dollar strengthened significantly relative to a trade weighted basket of currencies during the second quarter of 2018, reversing a trend of weakening that began over a year earlier. This tightening dollar liquidity environment and the escalating trade tensions between the United States and its global trading partners put significant pressure on non-US assets. Economic data released during the quarter continue to indicate a strong economic expansion in the United States. According to the Bureau of Economic Analysis, first quarter GDP grew at an annual rate of 2.0%. The heightened equity market volatility that characterized the first quarter of 2018 softened to a degree during Q2, as the S&P 500 produced three straight months of positive returns. Despite what appear to be relatively tight labor market conditions, wage growth has remained subdued. With this backdrop, the Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The continued robust US economic activity also flowed through to heightened expectations for additional interest rate increases.

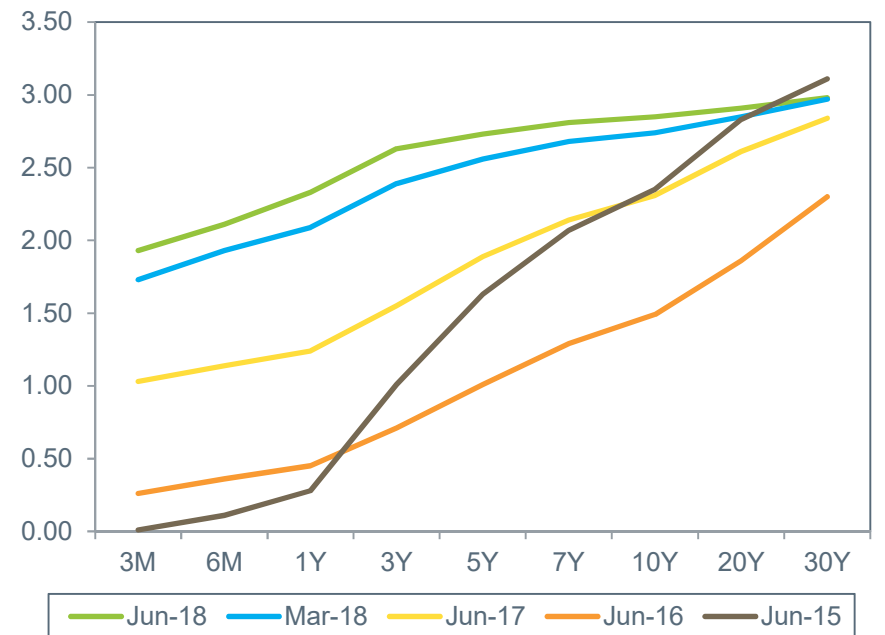
## Key Economic Indicators



Economic Indicators	Jun-18	Mar-18	Jun-17	Jun-15	20 Yr
Federal Funds Rate (%)	1.91 ▲	1.68	1.06	0.08	2.02
Breakeven Infl. - 1 Yr (%)	1.42 ▼	2.23	0.72	0.73	N/A
Breakeven Infl. - 10 Yr (%)	2.13 ▲	2.06	1.74	1.89	N/A
CPI YoY (Headline) (%)	2.9 ▲	2.4	1.6	0.1	2.2
Unemployment Rate (%)	4.0 ▼	4.1	4.3	5.3	5.9
Real GDP YoY (%)	2.8 ▲	2.6	2.1	3.4	2.3
PMI - Manufacturing	60.2 ▲	59.3	56.7	52.3	52.5
USD Total Wtd Idx	89.97 ▲	86.37	90.49	89.82	86.45
WTI Crude Oil per Barrel (\$)	74.2 ▲	64.9	46.0	59.5	58.8
Gold Spot per Oz (\$)	1,253 ▼	1,326	1,242	1,172	856

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	3.43	2.65	14.37	13.42	10.17
Russell 2000	7.75	7.66	17.57	12.46	10.60
MSCI EAFE (Net)	-1.24	-2.75	6.84	6.44	2.84
MSCI EAFE SC (Net)	-1.57	-1.33	12.45	11.32	6.81
MSCI Emg Mkts (Net)	-7.96	-6.66	8.20	5.01	2.26
Bloomberg US Agg Bond	-0.16	-1.62	-0.40	2.27	3.72
ICE BofAML 3 Mo US T-Bill	0.45	0.81	1.36	0.42	0.35
NCREIF ODCE (Gross)	2.05	4.30	8.44	11.04	5.29
Wilshire US REIT	7.33	-0.70	1.60	7.94	7.57
HFRI FOF Comp	0.40	0.67	5.12	3.45	1.40
Bloomberg Cmtty (TR)	0.40	0.00	7.35	-6.40	-9.04

## Treasury Yield Curve (%)



### Second Quarter Review

#### Broad Market

US equity markets delivered positive results across all market caps and styles for the quarter. The S&P 500 Index returned 3.4%, buoyed by strong performance in the energy sector as oil prices continued to rise throughout the quarter. Continuing a first quarter trend, technology and consumer discretionary sectors drove market performance as the S&P 500 Technology and Consumer Discretionary Indices returned 7.1% and 8.2%, respectively.

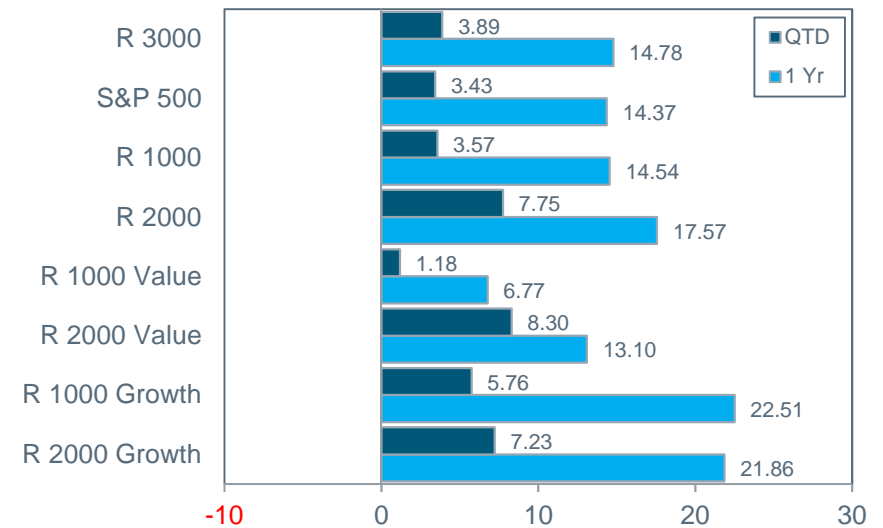
#### Market Cap

Increasing global trade tension pushed investors toward the more domestically-oriented small and micro cap segments of US equity markets and away from larger cap, multinational companies.

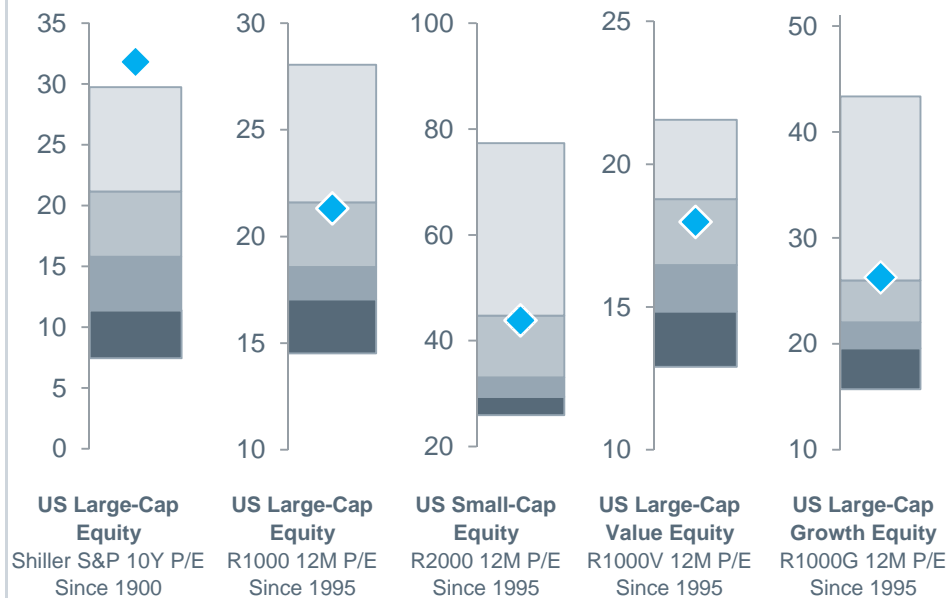
#### Style and Sector

Active large cap growth and value managers generally fared well as secular growth trends and continued strong corporate earnings provided a positive stock-picking environment.

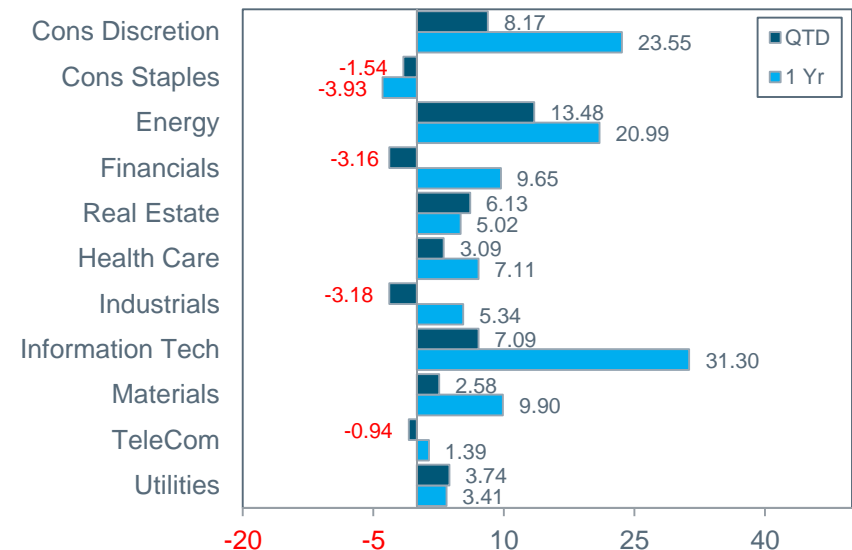
### Style and Capitalization Market Performance (%)



### Valuations



### S&P 500 Index Sector Performance (%)



## Second Quarter Review

## Developed Markets

The tightening dollar liquidity environment and the escalating trade tensions between the US and its global trading partners put significant pressure on non-US assets. Emerging market equities fell 7.96% during the quarter. Developed international equities also declined, further exacerbating losses experienced in Q1.

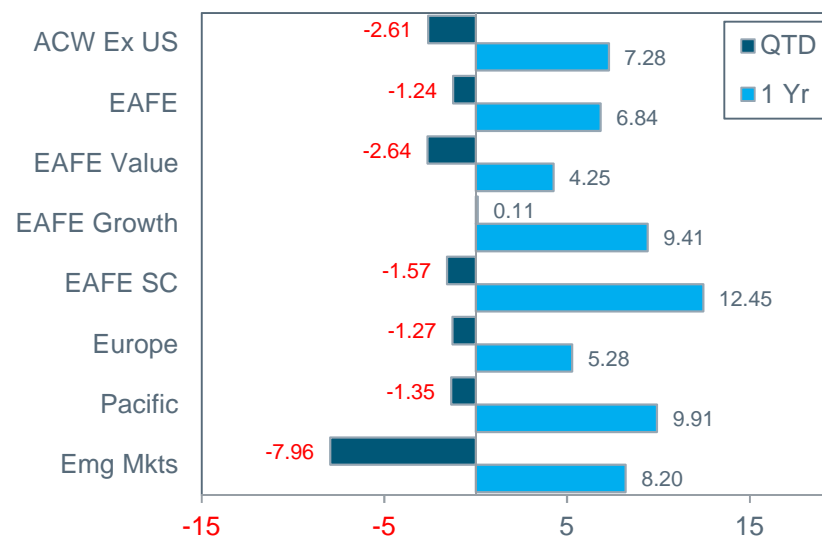
## Emerging Markets

Emerging markets had a challenging quarter, making it by far the worst performing equity class this year. The MSCI Emerging Markets Index trailed the MSCI EAFE Index by 672 basis points during the quarter.

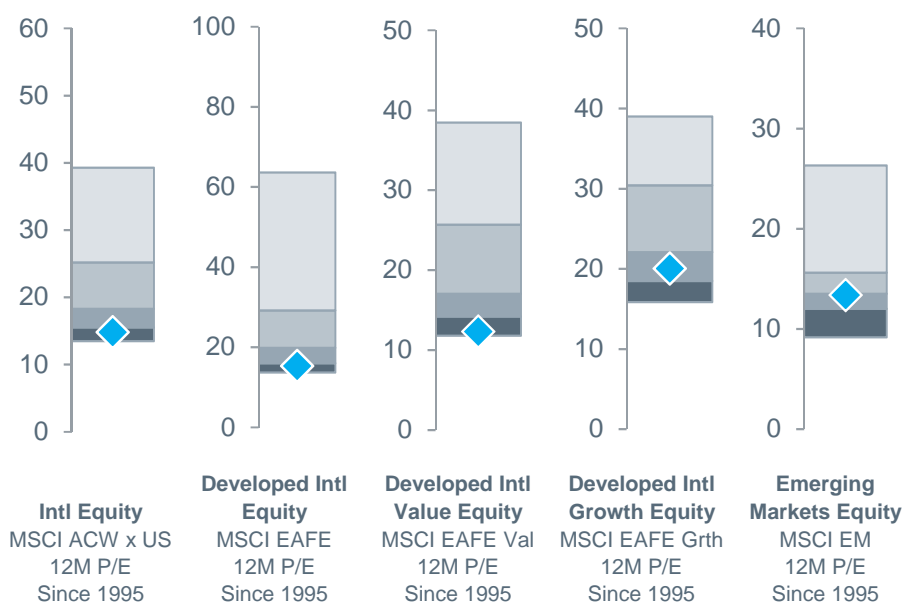
## Market Cap &amp; Style

While developed international growth stocks were slightly positive, value stocks brought down the overall market during the quarter. Small cap stocks fared worse than large cap stocks. Emerging markets growth stocks outperformed value stocks and large cap stocks outperformed small cap stocks.

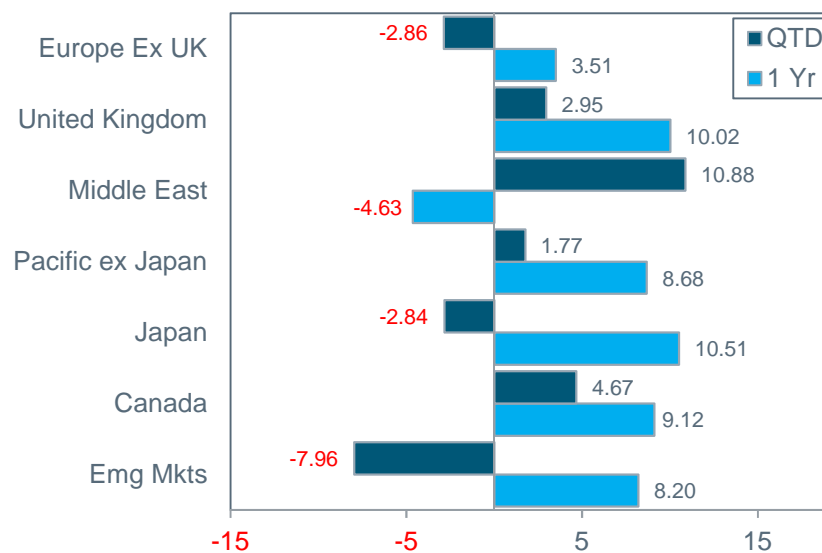
## MSCI Style and Capitalization Market Performance (%)



## Valuations



## MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

All returns are shown net of foreign taxes on dividends.

## Second Quarter Review

## Broad Market

The Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The Bloomberg Barclays US Aggregate Bond Index posted a return of -0.16% as interest rates slightly increased and the Treasury yield curve flattened during the quarter.

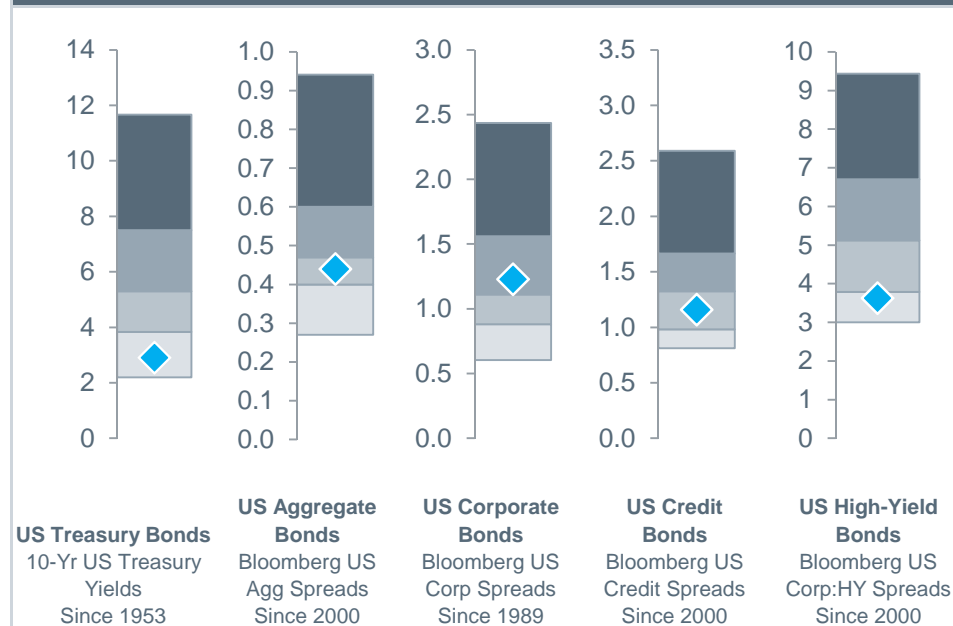
## Credit Market

The option-adjusted spread on investment grade corporate bonds increased from 1.17% to 1.30%. The Bloomberg Barclays US Corporate Credit returned -0.98% for the quarter and underperformed the Bloomberg Barclays Corporate High Yield Index which returned 1.03%.

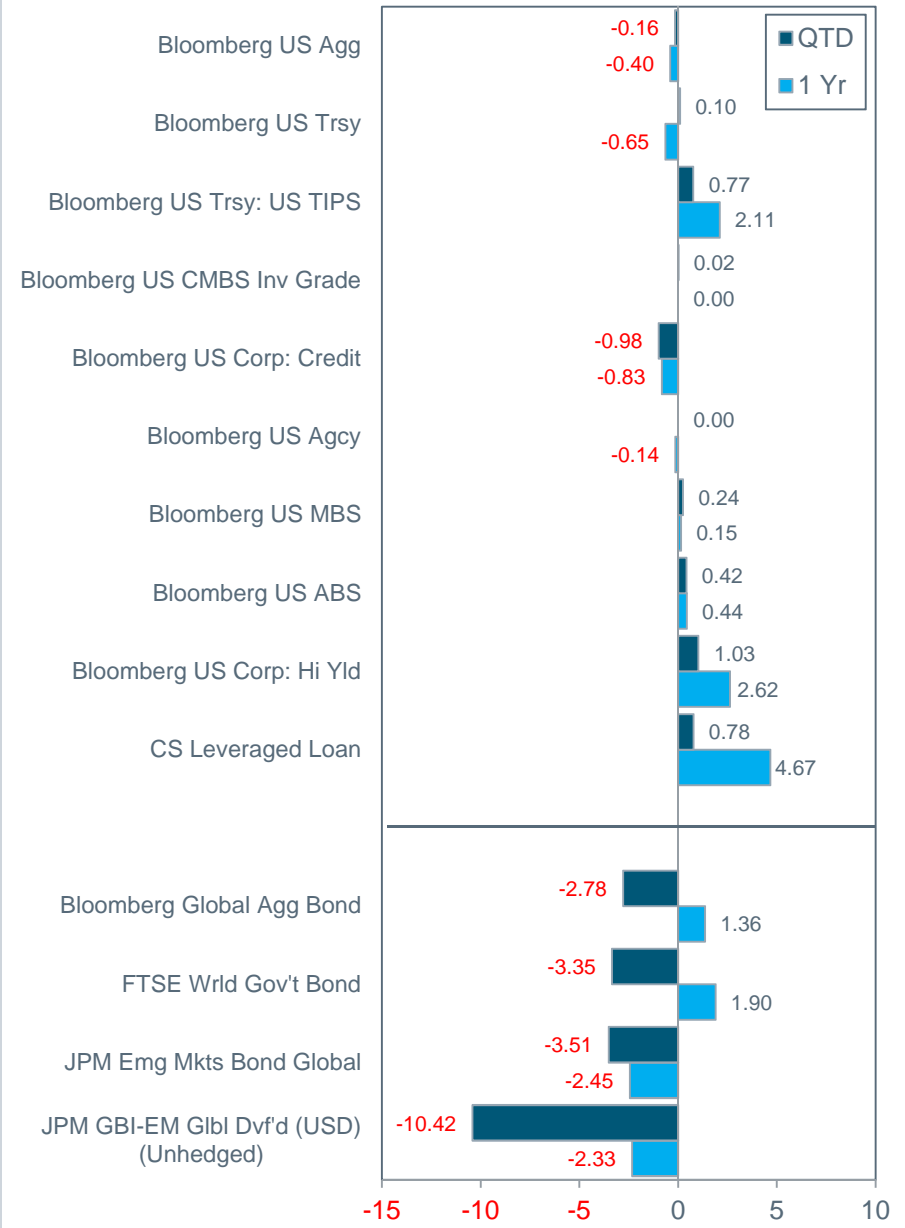
## Emerging Market Debt

The JP Morgan GBI-EM Global Diversified Index returned -10.42% for the quarter. Strengthening of the US dollar, turmoil in Turkey and Argentina, and escalating trade wars are all factors leading to a large loss in emerging market debt.

## Valuations



## Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

### Second Quarter Review - Absolute Return

#### General Market - Hedge Funds

Hedge funds produced marginally positive returns during the second quarter, building on the gains realized in Q1. Most FoHF managers have lowered net exposures and rotated away from traditional strategies such as long/short equity in favor of more diversifying exposures. Managers that have significant systematic macro or managed futures exposure have suffered as those strategies remain largely negative year-to-date.

#### General Market - Global Tactical Asset Allocation (GTAA)

GTAA managers mostly provided negative returns in the second quarter and most dramatically underperformed a static, US-centric 60/40 portfolio of stocks and bonds. Globally-oriented managers that rely on fundamental value based investment processes have increasingly allocated to emerging markets exposures, which are believed to be undervalued across asset classes. This positioning was a significant detractor during the quarter, as strong gains in the US dollar resulted in added pressure to certain emerging economies, leading to a difficult quarter for emerging markets equities and currencies.

### Second Quarter Review - Real Assets

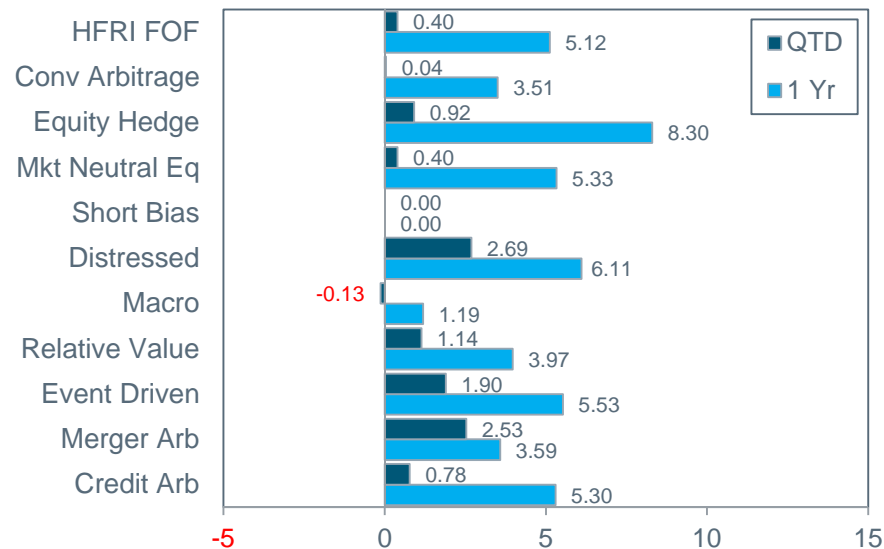
#### General Market - Diversified Inflation Strategies (DIS)

DIS portfolios mostly provided strong returns in Q2 as inflationary pressures persisted. Headline CPI increased to 2.90% YoY, and the spot price for West Texas Intermediate crude oil rose nearly 14% to \$74 per barrel over the quarter. In response, most other inflation-sensitive asset classes provided strong performance led by asset classes such as US REITs, energy related exposures in commodities, natural resources equities, MLPs, and global listed infrastructure.

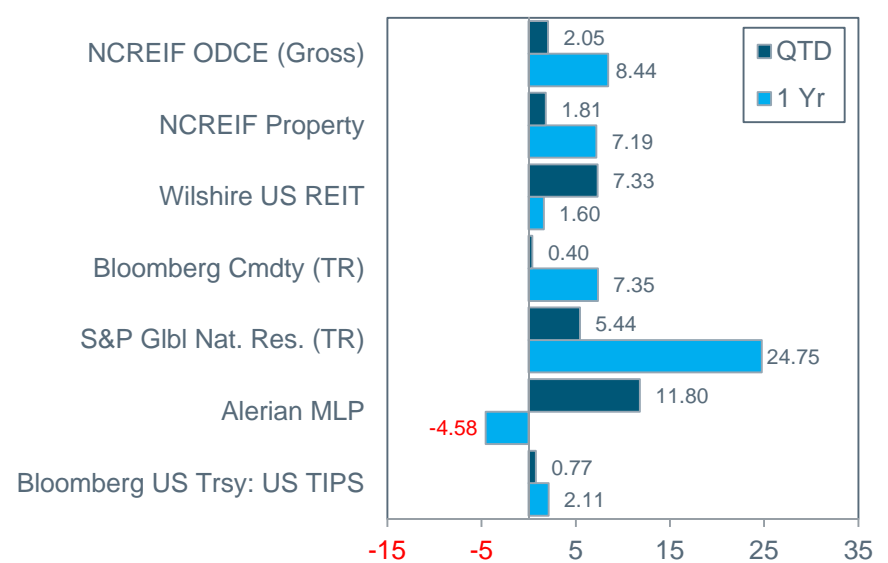
#### General Market - Real Estate

The core private real estate index, NCREIF-ODCE, returned 2.1% during Q2, with income and appreciation returns being about equal. This represented a slight decrease compared to last quarter's appreciation component of total return. Real estate valuations remain elevated, supported by continued strength in the overall economy with increases from personal consumption and business investment. The potential for increased discretionary spending by consumers due to the recent tax reform provides additional support for current valuations.

### HFRI Hedge Fund Performance (%)



### Real Asset Performance (%)





## Annual Asset Class Performance

As of June 30, 2018

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
Best	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	15.02	21.31	37.28	7.66
	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	4.30
	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	4.23	11.96	25.03	2.65
	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	1.38	11.77	21.83	0.81
	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	0.67
	13.06	13.54	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	0.16
	11.14	7.49	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	7.24	7.77	0.00
	10.88	5.34	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.37	-0.81	6.67	7.62	-0.02
	9.15	4.91	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-0.70
	8.56	4.55	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	4.18	-1.33
	8.46	3.07	4.34	1.87	-39.20	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-1.62
	6.86	2.84	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-2.75
	4.34	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-4.98
Worst	1.33	2.43	0.49	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-6.66
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp: Hi Yield - FI	Bloombrg US Trsy: US TIPS - FI	Bloombrg US Gov/Credit: Lng - FI	NCREIF ODCE (Gross) - Real Estate	Wilshire US REIT - REITs	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv	

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

# Total Fund - Retirement

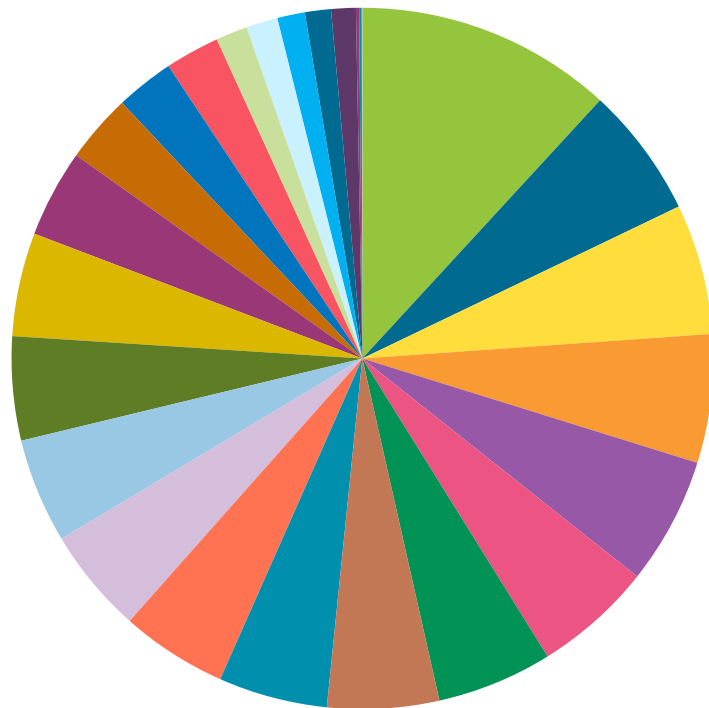


Water and Power Employees' Retirement Plan  
Asset Allocation by Manager and Schedule of Investable Assets - Retirement

As of June 30, 2018

Asset Allocation by Manager

June 30, 2018 : \$12,225,869,300



	Market Value (\$)	Allocation (%)
BlackRock Russell 1000 Index (CF)	1,447,327,844	11.84
Wells Principal Protection (SA)	736,783,128	6.03
JP Morgan Principal Protection (SA)	735,858,308	6.02
T. Rowe Price Large Cap Growth (SA)	724,231,143	5.92
Real Estate Composite	717,201,514	5.87
Fred Alger Large Cap Growth (SA)	669,693,691	5.48
Neuberger Unconstrained (SA)	651,540,121	5.33
Macquarie Unconstrained (SA)	629,165,945	5.15
MFS Developed Int'l (SA)	612,158,903	5.01
T. Rowe Price Large Cap Value (SA)	601,196,819	4.92
Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	594,340,055	4.86
Fidelity Developed Int'l (SA)	589,754,954	4.82
BlackRock Developed Int'l - Passive (CF)	584,504,762	4.78
MFS Large Cap Value (SA)	582,088,336	4.76
Private Equity Composite	494,778,720	4.05
WAMCO (SA)	387,309,850	3.17
Wellington Emerging (SA)	328,111,138	2.68
LA Capital Emerging (CF)	306,323,819	2.51
Earnest Partners Small Cap Value (SA)	178,463,312	1.46
Emerald Small Cap Growth (SA)	176,979,503	1.45
Cash Equivalents	156,672,537	1.28
Pacific Asset Bank Loans (SA)	146,276,377	1.20
Invesco Commodity (CF)	139,042,003	1.14
Molpus IV (CF) (Lagged-1 Qtr)	18,297,302	0.15
Hancock Timberland (CF) (Lagged-1 Qtr)	13,541,495	0.11
MS Convergent (CF) (Lagged-1 Mo)	4,227,729	0.03
Vontobel Emerging (SA)	-9	0.00

Schedule of Investable Assets - FYTD

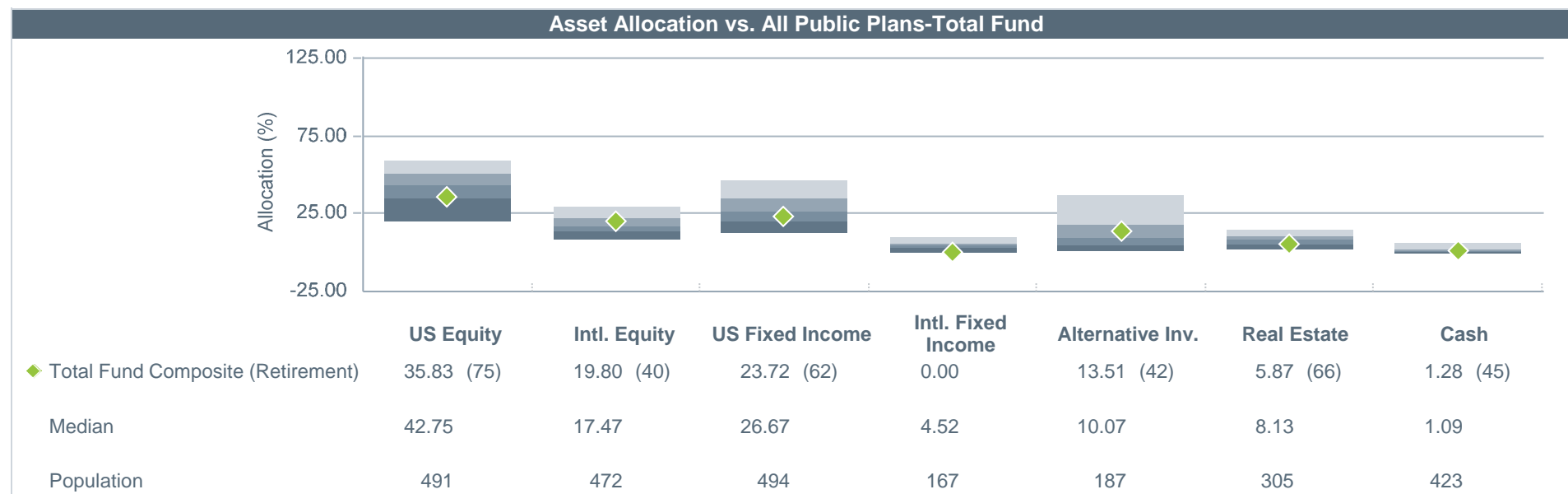
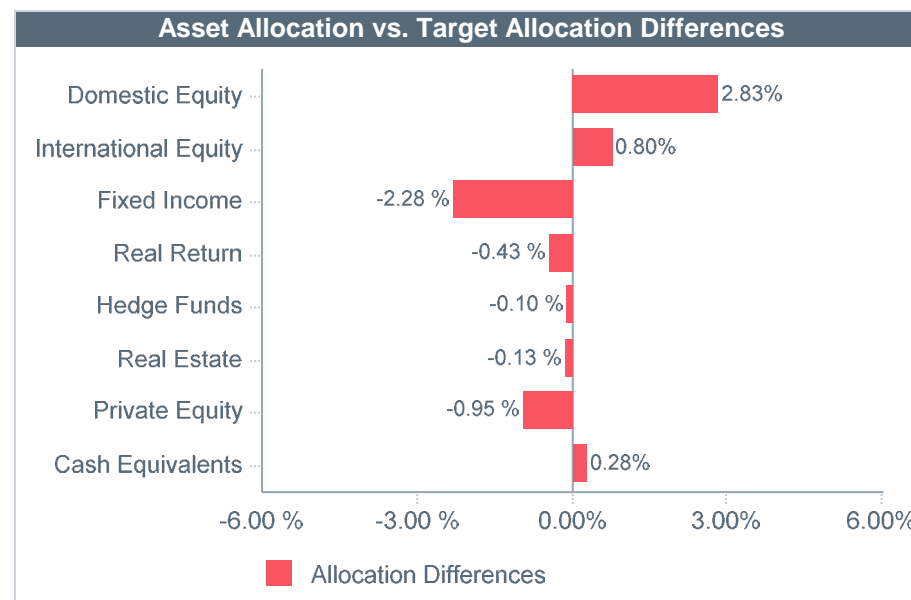
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
FYTD	11,250,100,561	975,768,739	12,225,869,300	9.20	109.20

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends 06/30. GAM Divergent (CF) was fully liquidated in 04/2018. Market value shown for Vontobel Emerging (SA) represents market associated costs.

**Water and Power Employees' Retirement Plan**  
**Total Fund Composite (Retirement) vs. All Public Plans-Total Fund**  
**Asset Allocation vs. Target and Plan Sponsor Peer Group - Retirement**

As of June 30, 2018

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
Domestic Equity	4,379,980,647	35.83	33.00
International Equity	2,420,853,567	19.80	19.00
Fixed Income	2,899,623,880	23.72	26.00
Real Return	558,190,650	4.57	5.00
Hedge Funds	598,567,784	4.90	5.00
Real Estate	717,201,514	5.87	6.00
Private Equity	494,778,720	4.05	5.00
Cash Equivalents	156,672,537	1.28	1.00
Total Fund	12,225,869,300	100.00	100.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding.

**Water and Power Employees' Retirement Plan  
Comparative Performance - Retirement**

**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Total Fund Composite (Retirement)</b>	<b>1.46</b>	<b>1.53</b>	<b>9.20</b>	<b>7.66</b>	<b>8.87</b>	<b>8.18</b>	<b>7.03</b>	<b>16.53</b>	<b>6.94</b>	<b>1.68</b>	<b>6.76</b>	<b>01/01/2005</b>
Retirement Policy Benchmark	0.99	1.00	8.39	7.29	8.41	7.99	6.80	15.21	8.40	0.71	6.53	
Difference	0.47	0.53	0.81	0.37	0.46	0.19	0.23	1.32	-1.46	0.97	0.23	
All Public Plans-Total Fund Median	1.25	0.98	8.56	6.93	8.17	7.70	6.87	15.51	7.38	0.17	6.65	
Rank	40	30	34	22	22	31	45	29	61	12	42	
<b>Domestic Equity Composite</b>	<b>4.57</b>	<b>4.80</b>	<b>16.72</b>	<b>12.56</b>	<b>14.52</b>	<b>13.72</b>	<b>10.57</b>	<b>23.44</b>	<b>11.68</b>	<b>1.96</b>	<b>8.11</b>	<b>04/01/2001</b>
Russell 3000 (Blended) (R)	3.89	3.22	14.78	11.58	13.29	13.01	10.23	21.13	12.74	0.48	7.48	
Difference	0.68	1.58	1.94	0.98	1.23	0.71	0.34	2.31	-1.06	1.48	0.63	
All Public Plans-US Equity Segment Median	3.84	3.52	14.76	11.20	12.95	12.60	9.85	20.32	12.98	0.21	N/A	
Rank	16	12	9	5	3	2	18	8	78	8	N/A	
<b>MFS Large Cap Value (SA)</b>	<b>-0.64</b>	<b>-3.63</b>	<b>4.25</b>	<b>9.06</b>	<b>11.30</b>	<b>12.08</b>	<b>9.25</b>	<b>17.82</b>	<b>15.80</b>	<b>-0.06</b>	<b>9.21</b>	<b>03/01/2004</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	7.60	
Difference	-1.82	-1.94	-2.52	0.80	0.96	0.81	0.76	4.16	-1.54	3.77	1.61	
IM U.S. Large Cap Value Equity (SA+CF) Median	1.69	-0.47	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	8.69	
Rank	95	95	96	58	56	47	60	44	38	28	31	
<b>MFS Large Cap Value (SA) - Net</b>	<b>-0.71</b>	<b>-3.78</b>	<b>3.94</b>	<b>8.73</b>	<b>10.97</b>	<b>11.74</b>	<b>8.90</b>	<b>17.46</b>	<b>15.45</b>	<b>-0.38</b>	<b>8.84</b>	<b>03/01/2004</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	7.60	
Difference	-1.89	-2.09	-2.83	0.47	0.63	0.47	0.41	3.80	-1.89	3.45	1.24	
<b>T. Rowe Price Large Cap Value (SA)</b>	<b>2.14</b>	<b>-0.43</b>	<b>9.12</b>	<b>10.42</b>	<b>11.85</b>	<b>12.49</b>	<b>10.02</b>	<b>16.74</b>	<b>17.14</b>	<b>-1.90</b>	<b>9.23</b>	<b>10/01/2004</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	7.82	
Difference	0.96	1.26	2.35	2.16	1.51	1.22	1.53	3.08	-0.20	1.93	1.41	
IM U.S. Large Cap Value Equity (SA+CF) Median	1.69	-0.47	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	8.98	
Rank	36	50	65	27	39	36	36	59	26	46	44	
<b>T. Rowe Price Large Cap Value (SA) - Net</b>	<b>2.07</b>	<b>-0.57</b>	<b>8.80</b>	<b>10.10</b>	<b>11.52</b>	<b>12.15</b>	<b>9.67</b>	<b>16.40</b>	<b>16.80</b>	<b>-2.19</b>	<b>8.87</b>	<b>10/01/2004</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	7.82	
Difference	0.89	1.12	2.03	1.84	1.18	0.88	1.18	2.74	-0.54	1.64	1.05	

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**Water and Power Employees' Retirement Plan  
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**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>BlackRock Russell 1000 Index (CF)</b>	<b>3.59</b>	<b>2.87</b>	<b>14.56</b>	<b>11.68</b>	<b>13.40</b>	<b>13.13</b>	<b>10.22</b>	<b>21.70</b>	<b>12.09</b>	<b>0.94</b>	<b>9.41</b>	<b>09/01/2003</b>
Russell 1000 Index	3.57	2.85	14.54	11.64	13.37	13.12	10.20	21.69	12.05	0.92	9.36	
Difference	0.02	0.02	0.02	0.04	0.03	0.01	0.02	0.01	0.04	0.02	0.05	
IM U.S. Large Cap Core Equity (SA+CF) Median	2.89	2.38	14.24	11.12	13.35	13.12	10.18	21.82	10.51	1.39	9.70	
Rank	26	40	46	38	49	50	49	52	30	56	70	
<b>BlackRock Russell 1000 Index (CF) - Net</b>	<b>3.59</b>	<b>2.87</b>	<b>14.56</b>	<b>11.68</b>	<b>13.39</b>	<b>13.12</b>	<b>10.19</b>	<b>21.70</b>	<b>12.09</b>	<b>0.93</b>	<b>9.35</b>	<b>09/01/2003</b>
Russell 1000 Index	3.57	2.85	14.54	11.64	13.37	13.12	10.20	21.69	12.05	0.92	9.36	
Difference	0.02	0.02	0.02	0.04	0.02	0.00	-0.01	0.01	0.04	0.01	-0.01	
<b>Fred Alger Large Cap Growth (SA)</b>	<b>10.41</b>	<b>15.60</b>	<b>28.56</b>	<b>12.16</b>	<b>16.22</b>	<b>13.19</b>	<b>10.89</b>	<b>29.32</b>	<b>0.38</b>	<b>1.73</b>	<b>10.08</b>	<b>03/01/2004</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	9.55	
Difference	4.65	8.35	6.05	-2.82	-0.14	-1.69	-0.94	-0.89	-6.70	-3.94	0.53	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22	7.36	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	9.70	
Rank	2	3	13	67	41	71	63	42	86	78	39	
<b>Fred Alger Large Cap Growth (SA) - Net</b>	<b>10.33</b>	<b>15.43</b>	<b>28.20</b>	<b>11.84</b>	<b>15.90</b>	<b>12.86</b>	<b>10.54</b>	<b>28.95</b>	<b>0.09</b>	<b>1.44</b>	<b>9.71</b>	<b>03/01/2004</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	9.55	
Difference	4.57	8.18	5.69	-3.14	-0.46	-2.02	-1.29	-1.26	-6.99	-4.23	0.16	
<b>T. Rowe Price Large Cap Growth (SA)</b>	<b>7.09</b>	<b>12.29</b>	<b>29.48</b>	<b>19.81</b>	<b>20.50</b>	<b>18.27</b>	<b>N/A</b>	<b>36.61</b>	<b>5.78</b>	<b>12.48</b>	<b>16.65</b>	<b>04/01/2010</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	14.90	
Difference	1.33	5.04	6.97	4.83	4.14	3.39	N/A	6.40	-1.30	6.81	1.75	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22	7.36	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	14.24	
Rank	18	16	7	3	2	2	N/A	5	41	7	7	
<b>T. Rowe Price Large Cap Growth (SA) - Net</b>	<b>7.01</b>	<b>12.11</b>	<b>29.07</b>	<b>19.42</b>	<b>20.11</b>	<b>17.89</b>	<b>N/A</b>	<b>36.17</b>	<b>5.42</b>	<b>12.11</b>	<b>16.26</b>	<b>04/01/2010</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	14.90	
Difference	1.25	4.86	6.56	4.44	3.75	3.01	N/A	5.96	-1.66	6.44	1.36	
<b>Earnest Partners Small Cap Value (SA)</b>	<b>4.01</b>	<b>2.10</b>	<b>16.99</b>	<b>13.90</b>	<b>14.92</b>	<b>14.04</b>	<b>11.52</b>	<b>23.07</b>	<b>24.79</b>	<b>-2.28</b>	<b>9.83</b>	<b>12/01/2004</b>
Russell 2000 Val Index	8.30	5.44	13.10	11.22	11.18	11.10	9.88	7.84	31.74	-7.47	7.77	
Difference	-4.29	-3.34	3.89	2.68	3.74	2.94	1.64	15.23	-6.95	5.19	2.06	
IM U.S. Small Cap Value Equity (SA+CF) Median	5.62	3.99	13.30	10.67	12.21	12.18	11.60	11.59	26.17	-4.29	9.71	
Rank	79	74	22	10	4	13	52	4	59	31	47	
<b>Earnest Partners Small Cap Value (SA) - Net</b>	<b>3.87</b>	<b>1.82</b>	<b>16.34</b>	<b>13.25</b>	<b>14.28</b>	<b>13.40</b>	<b>10.85</b>	<b>22.39</b>	<b>24.08</b>	<b>-2.83</b>	<b>9.14</b>	<b>12/01/2004</b>
Russell 2000 Val Index	8.30	5.44	13.10	11.22	11.18	11.10	9.88	7.84	31.74	-7.47	7.77	
Difference	-4.43	-3.62	3.24	2.03	3.10	2.30	0.97	14.55	-7.66	4.64	1.37	

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	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Emerald Small Cap Growth (SA)</b>	<b>9.18</b>	<b>7.39</b>	<b>23.80</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>29.53</b>	<b>10.02</b>	<b>N/A</b>	<b>15.44</b>	<b>12/01/2015</b>
Russell 2000 Grth Index	7.23	9.70	21.86	10.60	13.65	12.50	11.24	22.17	11.32	-1.38	14.56	
Difference	1.95	-2.31	1.94	N/A	N/A	N/A	N/A	7.36	-1.30	N/A	0.88	
IM U.S. Small Cap Growth Equity (SA+CF) Median	8.82	12.12	24.51	12.34	14.60	13.31	12.15	23.82	11.38	-0.74	16.42	
Rank	45	85	54	N/A	N/A	N/A	N/A	21	58	N/A	60	
<b>Emerald Small Cap Growth (SA) - Net</b>	<b>9.02</b>	<b>7.08</b>	<b>23.07</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>28.77</b>	<b>9.37</b>	<b>N/A</b>	<b>14.76</b>	<b>12/01/2015</b>
Russell 2000 Grth Index	7.23	9.70	21.86	10.60	13.65	12.50	11.24	22.17	11.32	-1.38	14.56	
Difference	1.79	-2.62	1.21	N/A	N/A	N/A	N/A	6.60	-1.95	N/A	0.20	
<b>International Equity Composite</b>	<b>-2.45</b>	<b>-2.93</b>	<b>8.20</b>	<b>6.93</b>	<b>7.58</b>	<b>5.14</b>	<b>4.00</b>	<b>29.34</b>	<b>3.09</b>	<b>-1.39</b>	<b>6.38</b>	<b>07/01/2004</b>
MSCI ACW Ex US IM Index (Blended)	-2.61	-3.65	7.75	5.46	6.39	4.08	3.00	27.81	4.41	-4.60	6.53	
Difference	0.16	0.72	0.45	1.47	1.19	1.06	1.00	1.53	-1.32	3.21	-0.15	
All Public Plans-Intl. Equity Segment Median	-2.07	-2.67	7.85	6.12	7.16	5.59	3.89	28.59	3.97	-2.60	7.33	
Rank	61	58	45	21	37	67	46	37	69	28	80	
<b>BlackRock Developed Int'l - Passive (CF)</b>	<b>-0.38</b>	<b>-2.24</b>	<b>8.24</b>	<b>5.96</b>	<b>7.17</b>	<b>N/A</b>	<b>N/A</b>	<b>25.71</b>	<b>3.45</b>	<b>-1.62</b>	<b>7.88</b>	<b>10/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	7.46	
Difference	0.39	0.33	0.50	0.47	0.40	N/A	N/A	0.54	0.50	0.33	0.42	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	8.40	
Rank	25	38	33	40	54	N/A	N/A	59	22	75	63	
<b>BlackRock Developed Int'l - Passive (CF) - Net</b>	<b>-0.38</b>	<b>-2.24</b>	<b>8.24</b>	<b>5.96</b>	<b>7.16</b>	<b>N/A</b>	<b>N/A</b>	<b>25.71</b>	<b>3.45</b>	<b>-1.64</b>	<b>7.87</b>	<b>10/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	7.46	
Difference	0.39	0.33	0.50	0.47	0.39	N/A	N/A	0.54	0.50	0.31	0.41	
<b>MFS Developed Int'l (SA)</b>	<b>0.61</b>	<b>-0.04</b>	<b>9.42</b>	<b>8.68</b>	<b>9.69</b>	<b>N/A</b>	<b>N/A</b>	<b>27.13</b>	<b>-0.22</b>	<b>7.17</b>	<b>11.98</b>	<b>08/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	8.34	
Difference	1.38	2.53	1.68	3.19	2.92	N/A	N/A	1.96	-3.17	9.12	3.64	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	9.24	
Rank	12	12	24	8	8	N/A	N/A	42	69	6	6	
<b>MFS Developed Int'l (SA) - Net</b>	<b>0.52</b>	<b>-0.21</b>	<b>9.05</b>	<b>8.32</b>	<b>9.33</b>	<b>N/A</b>	<b>N/A</b>	<b>26.70</b>	<b>-0.56</b>	<b>6.83</b>	<b>11.61</b>	<b>08/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	8.34	
Difference	1.29	2.36	1.31	2.83	2.56	N/A	N/A	1.53	-3.51	8.78	3.27	

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<b>Fidelity Developed Int'l (SA)</b>	<b>-0.75</b>	<b>-1.73</b>	<b>7.66</b>	<b>5.13</b>	<b>6.71</b>	<b>5.51</b>	<b>3.75</b>	<b>25.16</b>	<b>-0.70</b>	<b>0.99</b>	<b>6.17</b>	<b>12/01/2004</b>
International Developed Blend	-0.77	-2.57	7.74	5.49	6.77	4.84	4.49	25.17	2.95	-1.95	5.20	
Difference	0.02	0.84	-0.08	-0.36	-0.06	0.67	-0.74	-0.01	-3.65	2.94	0.97	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	6.37	
Rank	30	33	39	62	68	68	67	66	73	54	56	
<b>Fidelity Developed Int'l (SA) - Net</b>	<b>-0.82</b>	<b>-1.86</b>	<b>7.36</b>	<b>4.84</b>	<b>6.41</b>	<b>5.21</b>	<b>3.43</b>	<b>24.81</b>	<b>-0.98</b>	<b>0.73</b>	<b>5.82</b>	<b>12/01/2004</b>
International Developed Blend	-0.77	-2.57	7.74	5.49	6.77	4.84	4.49	25.17	2.95	-1.95	5.20	
Difference	-0.05	0.71	-0.38	-0.65	-0.36	0.37	-1.06	-0.36	-3.93	2.68	0.62	
<b>LA Capital Emerging (CF)</b>	<b>-8.40</b>	<b>-7.57</b>	<b>7.13</b>	<b>5.51</b>	<b>5.17</b>	<b>N/A</b>	<b>N/A</b>	<b>37.13</b>	<b>12.18</b>	<b>-15.10</b>	<b>4.21</b>	<b>10/01/2012</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	3.56	
Difference	-0.38	-0.71	-0.77	0.32	0.24	N/A	N/A	0.30	2.28	-1.24	0.65	
IM Emerging Markets Equity (SA+CF) Median	-8.40	-6.72	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	4.93	
Rank	50	63	50	65	63	N/A	N/A	49	35	72	65	
<b>LA Capital Emerging (CF) - Net</b>	<b>-8.54</b>	<b>-7.86</b>	<b>6.44</b>	<b>4.83</b>	<b>4.51</b>	<b>N/A</b>	<b>N/A</b>	<b>36.24</b>	<b>11.46</b>	<b>-15.65</b>	<b>3.54</b>	<b>10/01/2012</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	3.56	
Difference	-0.52	-1.00	-1.46	-0.36	-0.42	N/A	N/A	-0.59	1.56	-1.79	-0.02	
<b>Wellington Emerging (SA)</b>	<b>-8.28</b>	<b>-6.83</b>	<b>7.89</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>41.01</b>	<b>N/A</b>	<b>N/A</b>	<b>14.04</b>	<b>10/01/2016</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	11.91	
Difference	-0.26	0.03	-0.01	N/A	N/A	N/A	N/A	4.18	N/A	N/A	2.13	
IM Emerging Markets Equity (SA+CF) Median	-8.40	-6.72	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	12.37	
Rank	49	53	44	N/A	N/A	N/A	N/A	28	N/A	N/A	34	
<b>Wellington Emerging (SA) - Net</b>	<b>-8.41</b>	<b>-7.09</b>	<b>7.28</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>40.21</b>	<b>N/A</b>	<b>N/A</b>	<b>13.39</b>	<b>10/01/2016</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	11.91	
Difference	-0.39	-0.23	-0.62	N/A	N/A	N/A	N/A	3.38	N/A	N/A	1.48	

Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.

**Water and Power Employees' Retirement Plan  
Comparative Performance - Retirement**

**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Fixed Income Composite</b>	<b>-0.05</b>	<b>-0.89</b>	<b>0.89</b>	<b>2.90</b>	<b>3.38</b>	<b>3.78</b>	<b>4.97</b>	<b>4.88</b>	<b>5.00</b>	<b>0.78</b>	<b>5.21</b>	<b>04/01/2001</b>
Fixed Income Custom Index (R)	-0.19	-1.03	0.50	2.81	3.04	3.24	4.28	4.12	5.65	0.11	4.81	
Difference	0.14	0.14	0.39	0.09	0.34	0.54	0.69	0.76	-0.65	0.67	0.40	
All Public Plans-US Fixed Income Segment Median	-0.04	-1.18	0.51	2.44	2.98	3.30	4.50	4.54	4.54	0.26	N/A	
Rank	53	28	27	37	38	35	34	43	41	30	N/A	
<b>JP Morgan Principal Protection (SA)</b>	<b>0.13</b>	<b>-0.53</b>	<b>-0.11</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.86</b>	<b>2.02</b>	<b>N/A</b>	<b>1.22</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.01	0.28	0.21	N/A	N/A	N/A	N/A	0.06	0.62	N/A	0.33	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	2.12	
Rank	11	6	55	N/A	N/A	N/A	N/A	100	97	N/A	100	
<b>JP Morgan Principal Protection (SA) - Net</b>	<b>0.10</b>	<b>-0.58</b>	<b>-0.21</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.76</b>	<b>1.92</b>	<b>N/A</b>	<b>1.12</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.04	0.23	0.11	N/A	N/A	N/A	N/A	-0.04	0.52	N/A	0.23	
<b>Wells Principal Protection (SA)</b>	<b>0.16</b>	<b>-0.77</b>	<b>-0.24</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.94</b>	<b>1.86</b>	<b>N/A</b>	<b>1.10</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	0.02	0.04	0.08	N/A	N/A	N/A	N/A	0.14	0.46	N/A	0.21	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	2.12	
Rank	10	8	68	N/A	N/A	N/A	N/A	100	98	N/A	100	
<b>Wells Principal Protection (SA) - Net</b>	<b>0.13</b>	<b>-0.83</b>	<b>-0.35</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.83</b>	<b>1.73</b>	<b>N/A</b>	<b>0.98</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.01	-0.02	-0.03	N/A	N/A	N/A	N/A	0.03	0.33	N/A	0.09	
<b>Macquarie Unconstrained (SA)</b>	<b>-0.37</b>	<b>-2.08</b>	<b>0.66</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.86</b>	<b>8.37</b>	<b>N/A</b>	<b>4.24</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.29	-0.43	-0.29	N/A	N/A	N/A	N/A	1.13	-1.67	N/A	-0.62	
IM Global Fixed Income (SA+CF) Median	-1.05	-1.07	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	3.68	
Rank	39	81	77	N/A	N/A	N/A	N/A	46	35	N/A	39	
<b>Macquarie Unconstrained (SA) - Net</b>	<b>-0.42</b>	<b>-2.16</b>	<b>0.49</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.67</b>	<b>8.19</b>	<b>N/A</b>	<b>4.06</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.24	-0.51	-0.46	N/A	N/A	N/A	N/A	0.94	-1.85	N/A	-0.80	

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**Water and Power Employees' Retirement Plan**  
**Comparative Performance - Retirement**

As of June 30, 2018

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Neuberger Unconstrained (SA)</b>	<b>-0.27</b>	<b>-0.91</b>	<b>2.84</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.26</b>	<b>9.65</b>	<b>N/A</b>	<b>6.11</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.39	0.74	1.89	N/A	N/A	N/A	N/A	2.53	-0.39	N/A	1.25	
IM Global Fixed Income (SA+CF) Median	-1.05	-1.07	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	3.68	
Rank	37	49	26	N/A	N/A	N/A	N/A	27	31	N/A	14	
<b>Neuberger Unconstrained (SA) - Net</b>	<b>-0.33</b>	<b>-1.02</b>	<b>2.60</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.01</b>	<b>9.40</b>	<b>N/A</b>	<b>5.87</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.33	0.63	1.65	N/A	N/A	N/A	N/A	2.28	-0.64	N/A	1.01	
<b>Pacific Asset Bank Loans (SA)</b>	<b>0.40</b>	<b>2.02</b>	<b>4.65</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.48</b>	<b>9.18</b>	<b>N/A</b>	<b>5.60</b>	<b>09/01/2015</b>
CS Lvg'd Loan Index	0.78	2.38	4.67	4.33	4.24	4.59	5.00	4.25	9.88	-0.38	4.80	
Difference	-0.38	-0.36	-0.02	N/A	N/A	N/A	N/A	1.23	-0.70	N/A	0.80	
IM U.S. Bank Loans (SA+CF) Median	0.75	2.16	4.64	4.38	4.43	4.85	5.51	4.46	9.51	0.68	4.75	
Rank	99	64	50	N/A	N/A	N/A	N/A	8	59	N/A	15	
<b>Pacific Asset Bank Loans (SA) - Net</b>	<b>0.32</b>	<b>1.86</b>	<b>4.31</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.14</b>	<b>8.83</b>	<b>N/A</b>	<b>5.27</b>	<b>09/01/2015</b>
CS Lvg'd Loan Index	0.78	2.38	4.67	4.33	4.24	4.59	5.00	4.25	9.88	-0.38	4.80	
Difference	-0.46	-0.52	-0.36	N/A	N/A	N/A	N/A	0.89	-1.05	N/A	0.47	
<b>Real Return Composite</b>	<b>-0.39</b>	<b>-0.11</b>	<b>4.99</b>	<b>3.27</b>	<b>2.41</b>	<b>2.75</b>	<b>2.03</b>	<b>4.05</b>	<b>9.90</b>	<b>-2.56</b>	<b>2.72</b>	<b>02/01/2007</b>
CPI+3% (Blended)	1.30	2.70	5.88	4.88	4.58	4.15	3.94	5.17	5.15	3.68	4.34	
Difference	-1.69	-2.81	-0.89	-1.61	-2.17	-1.40	-1.91	-1.12	4.75	-6.24	-1.62	
<b>Invesco Commodity (CF)</b>	<b>-0.20</b>	<b>-0.58</b>	<b>12.56</b>	<b>1.09</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.09</b>	<b>14.61</b>	<b>-15.75</b>	<b>-4.26</b>	<b>09/01/2013</b>
Bloomberg Cmdty Index (TR)	0.40	0.00	7.35	-4.54	-6.40	-7.81	-9.04	1.70	11.77	-24.66	-7.52	
Difference	-0.60	-0.58	5.21	5.63	N/A	N/A	N/A	4.39	2.84	8.91	3.26	
<b>Invesco Commodity (CF) - Net</b>	<b>-0.35</b>	<b>-0.90</b>	<b>11.83</b>	<b>0.43</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.40</b>	<b>13.87</b>	<b>-16.32</b>	<b>-4.87</b>	<b>09/01/2013</b>
Bloomberg Cmdty Index (TR)	0.40	0.00	7.35	-4.54	-6.40	-7.81	-9.04	1.70	11.77	-24.66	-7.52	
Difference	-0.75	-0.90	4.48	4.97	N/A	N/A	N/A	3.70	2.10	8.34	2.65	
<b>Hancock Timberland (CF) (Lagged-1 Qtr) - Net</b>	<b>-0.64</b>	<b>1.37</b>	<b>0.26</b>	<b>2.91</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.65</b>	<b>4.81</b>	<b>-0.34</b>	<b>1.99</b>	<b>04/01/2014</b>
NCREIF Timberland Index (Lagged-1 Qtr)	0.92	2.46	3.79	3.44	6.10	5.79	4.06	3.28	3.28	9.26	5.28	
Difference	-1.56	-1.09	-3.53	-0.53	N/A	N/A	N/A	1.37	1.53	-9.60	-3.29	
<b>Molpus IV (CF) (Lagged-1 Qtr) - Net</b>	<b>-0.34</b>	<b>1.37</b>	<b>1.77</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.52</b>	<b>-1.91</b>	<b>N/A</b>	<b>-4.47</b>	<b>09/01/2015</b>
NCREIF Timberland Index (Lagged-1 Qtr)	0.92	2.46	3.79	3.44	6.10	5.79	4.06	3.28	3.28	9.26	3.65	
Difference	-1.26	-1.09	-2.02	N/A	N/A	N/A	N/A	1.24	-5.19	N/A	-8.12	

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**Water and Power Employees' Retirement Plan**  
**Comparative Performance - Retirement**

**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>WAMCO (SA)</b>	<b>-0.45</b>	<b>-0.05</b>	<b>2.81</b>	<b>3.93</b>	<b>3.99</b>	<b>3.88</b>	<b>N/A</b>	<b>3.33</b>	<b>9.37</b>	<b>-0.22</b>	<b>3.97</b>	<b>05/01/2010</b>
Bloomberg Wrld Gov't Infl Lnk'd Index (Hedged)	0.33	0.40	3.44	4.23	4.08	3.92	4.27	3.32	10.22	-1.12	4.26	
Difference	-0.78	-0.45	-0.63	-0.30	-0.09	-0.04	N/A	0.01	-0.85	0.90	-0.29	
<b>WAMCO (SA) - Net</b>	<b>-0.50</b>	<b>-0.14</b>	<b>2.63</b>	<b>3.75</b>	<b>3.82</b>	<b>3.70</b>	<b>N/A</b>	<b>3.15</b>	<b>9.18</b>	<b>-0.39</b>	<b>3.78</b>	<b>05/01/2010</b>
Bloomberg Wrld Gov't Infl Lnk'd Index (Hedged)	0.33	0.40	3.44	4.23	4.08	3.92	4.27	3.32	10.22	-1.12	4.26	
Difference	-0.83	-0.54	-0.81	-0.48	-0.26	-0.22	N/A	-0.17	-1.04	0.73	-0.48	
<b>Hedge Funds Composite - Net</b>	<b>0.85</b>	<b>1.65</b>	<b>3.08</b>	<b>0.32</b>	<b>1.95</b>	<b>2.66</b>	<b>2.09</b>	<b>3.92</b>	<b>-2.30</b>	<b>1.24</b>	<b>2.80</b>	<b>03/01/2007</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.82	
Difference	-0.32	-0.60	-1.24	-3.32	-1.45	-0.65	-1.28	0.11	-5.63	-1.78	-1.02	
<b>Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net</b>	<b>0.83</b>	<b>1.49</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.48</b>	<b>09/01/2017</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.63	
Difference	-0.34	-0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.15	
<b>MS Convergent (CF) (Lagged-1 Mo) - Net</b>	<b>2.07</b>	<b>5.36</b>	<b>8.62</b>	<b>2.07</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.39</b>	<b>-1.27</b>	<b>-1.34</b>	<b>2.43</b>	<b>03/01/2014</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.45	
Difference	0.90	3.11	4.30	-1.57	N/A	N/A	N/A	3.58	-4.60	-4.36	-1.02	

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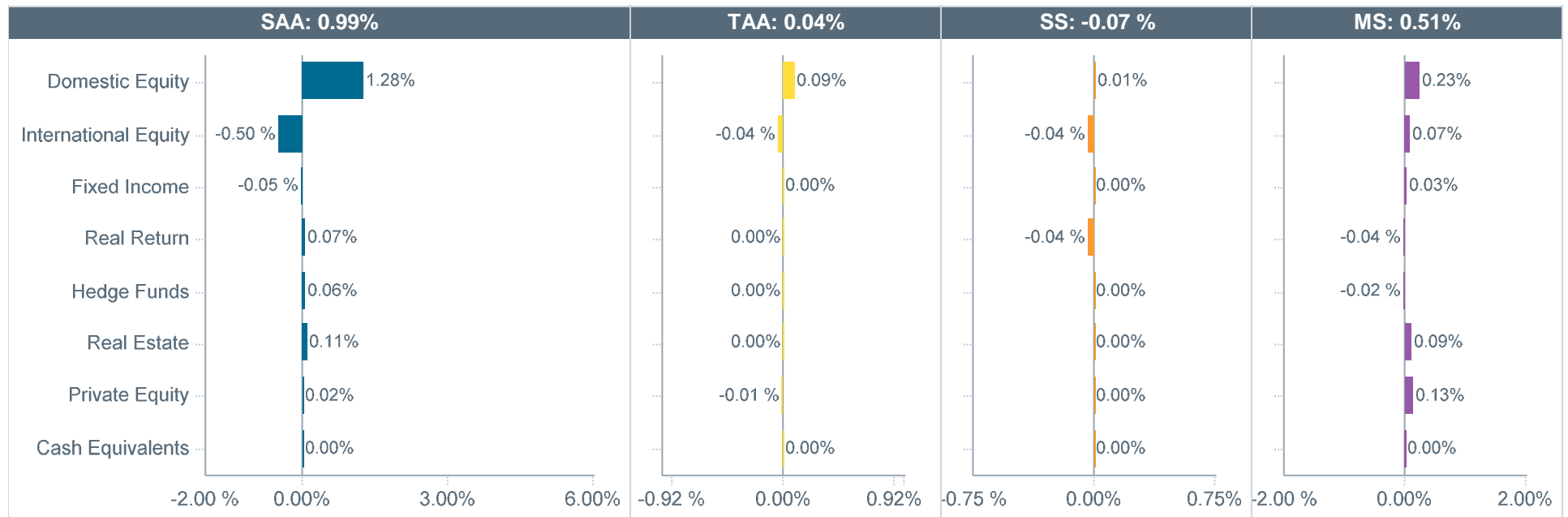
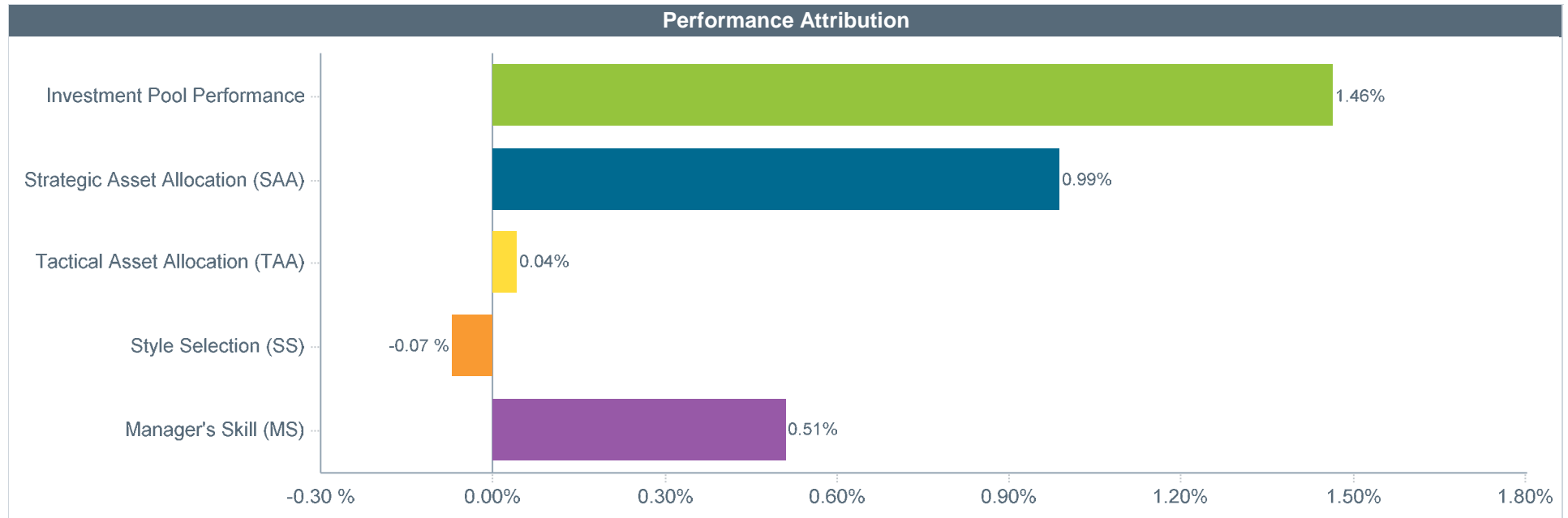
**Water and Power Employees' Retirement Plan**  
**Alternative Investment Fund Performance Listing - Retirement**

**As of March 31, 2018**

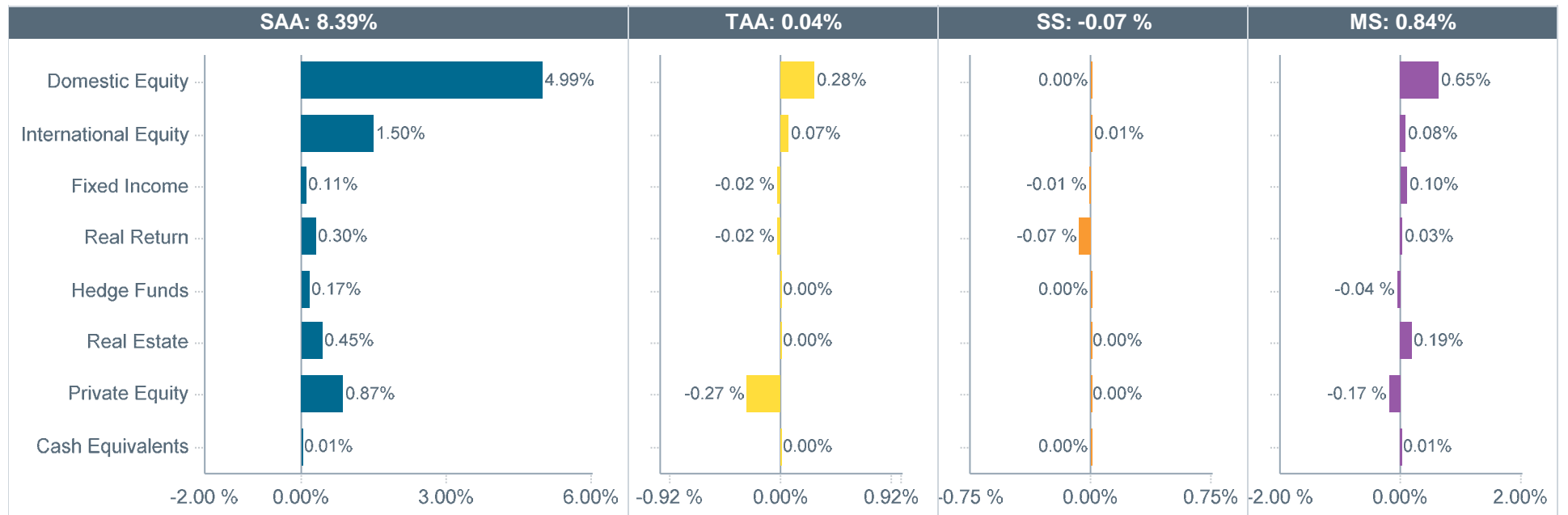
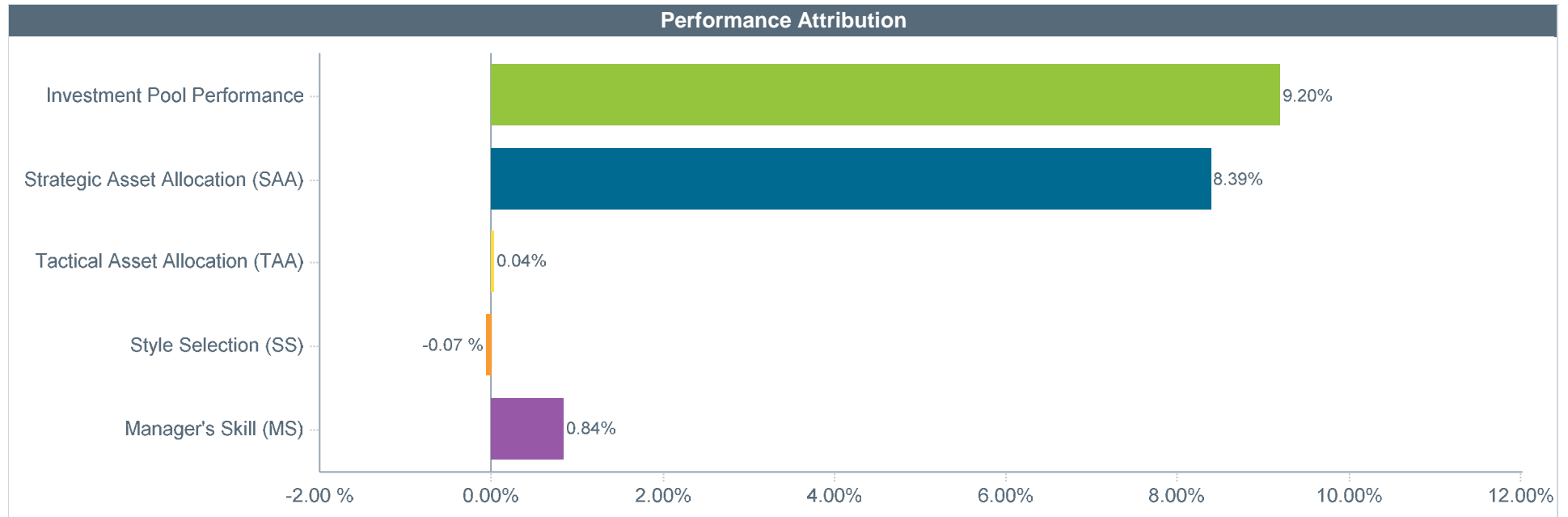
	Market Value (\$)	% of Alt. Inv. Group	% of Total Fund	Inception IRR	Inception Date
<b>Private Equity</b>	<b>463,047,038</b>	<b>40.02%</b>	<b>3.84%</b>	<b>12.36%</b>	<b>May-06</b>
Adams Street SMB I	11,440,595	0.99%	0.09%	-0.01%	Jan-17
Apollo VIII	29,942,710	2.59%	0.25%	19.50%	Jan-14
Ares IV	22,624,573	1.96%	0.19%	18.03%	Nov-12
Ares Special Situation IV	23,762,895	2.05%	0.20%	-12.07%	Jan-15
Ares V	16,843,577	1.46%	0.14%	7.68%	Jan-15
Audax III V	5,445,797	0.47%	0.05%	12.38%	Jan-11
Blackstone Tactical Opps II	32,421,890	2.80%	0.27%	18.97%	Apr-15
Clayton, Dubilier & Rice IX	18,092,741	1.56%	0.15%	19.96%	Apr-14
Clayton, Dubilier & Rice X	4,882,182	0.42%	0.04%	-2.81%	Mar-18
Crestview Partners III	21,982,104	1.90%	0.18%	18.38%	Feb-15
EnCap IX	12,795,768	1.11%	0.11%	17.49%	Jan-11
EnCap VIII	4,263,834	0.37%	0.04%	-1.22%	Jan-13
EnCap X	25,595,366	2.21%	0.21%	20.33%	Feb-15
EnCap XI	2,895,998	0.25%	0.02%	22%	Jun-17
Fisher Lynch II	15,926,039	1.38%	0.13%	11.47%	Mar-08
Harvest VII	9,263,959	0.80%	0.08%	19.31%	Nov-15
HRJ Special Opp II	6,636,025	0.57%	0.05%	8.14%	Feb-08
Industry Ventures VIII	4,115,818	0.36%	0.03%	41.01%	May-16
Landmark XIII	7,423,484	0.64%	0.06%	6.85%	Oct-06
Landmark XIV	8,436,936	0.73%	0.07%	12.86%	Aug-08
Landmark XV	16,148,316	1.40%	0.13%	17.09%	Feb-14
Lexington VI	3,830,114	0.33%	0.03%	8.24%	May-06
Lexington VII	9,958,775	0.86%	0.08%	17.96%	Aug-09
Oaktree PF V	7,535,535	0.65%	0.06%	5.34%	Jan-09
Silver Lake IV	19,749,799	1.71%	0.16%	31.77%	Sep-13
Vista IV	19,164,437	1.66%	0.16%	20.94%	Sep-11
Vista V	56,644,521	4.90%	0.47%	22.86%	Apr-14
Vista VI	45,223,250	3.91%	0.37%	13.37%	Jun-16
<b>Real Estate</b>	<b>693,960,054</b>	<b>59.98%</b>	<b>5.75%</b>	<b>9.21%</b>	<b>Nov-06</b>
AG Core Plus III	4,819,834	0.42%	0.04%	24.42%	Jan-12
Almanac VI	6,439,786	0.56%	0.05%	17.20%	Jun-12
Almanac VII	14,783,597	1.28%	0.12%	17.49%	Mar-15
BREP Europe IV	12,675,201	1.10%	0.11%	18.80%	Dec-13
BREP VII	16,804,689	1.45%	0.14%	20.37%	Jun-12
Bristol Value II	11,674,410	1.01%	0.10%	13.95%	Nov-12
Dimensional Global REIT	23,725,122	2.05%	0.20%	6.03%	Mar-13
DRA G&I IX	16,260,431	1.41%	0.13%	16.87%	Sep-16
DRA G&I VIII	17,292,949	1.49%	0.14%	13.24%	Jun-14
DRA VII	8,511,194	0.74%	0.07%	13.24%	Oct-11
FPA Core Plus III	37,596,560	3.25%	0.31%	4.11%	Jan-17
Harrison Street Core	59,414,355	5.14%	0.49%	9.77%	Aug-15
Heitman REIT	22,889,967	1.98%	0.19%	7.94%	Sep-13
Invesco Core Realty	55,693,924	4.81%	0.46%	11.15%	Jun-11
Jamestown Premier	38,309,326	3.31%	0.32%	10.83%	Mar-15
JPM Strategic	82,216,650	7.11%	0.68%	5.78%	Sep-07
LaSalle Asia V	2,682,838	0.23%	0.02%	-37.32%	Nov-17
Lone Star RE II	729,659	0.06%	0.01%	28.47%	May-11
Lone Star RE IV	24,385,358	2.11%	0.20%	18.55%	Jun-15
Lone Star V	6,389,761	0.55%	0.05%	12.96%	Aug-17
Lone Star VII	127,018	0.01%	0.00%	49.75%	May-11
Mesa West III	6,953,303	0.60%	0.06%	10.02%	Aug-13
Mesa West IV	15,612,461	1.35%	0.13%	4.72%	Feb-16
PCCP First Mtg II	33,334	0.00%	0.00%	7.17%	Jun-12
PRISA I	87,138,873	7.53%	0.72%	5.53%	Nov-06
PRISA II	39,668,219	3.43%	0.33%	7.10%	May-07
Prologis USLH	30,756,367	2.66%	0.25%	16.71%	Mar-15
Torchlight IV	13,497,638	1.17%	0.11%	12.52%	Aug-13
Torchlight V	15,818,961	1.37%	0.13%	14.04%	Mar-15
Torchlight VI	5,000,000	0.43%	0.04%	-4.46%	Feb-18
Westbrook X	16,058,268	1.39%	0.13%	24.23%	Feb-16

Market values and performance were provided by Northern Trust.





Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

**Water and Power Employees' Retirement Plan**  
**Growth of \$100 - Retirement**

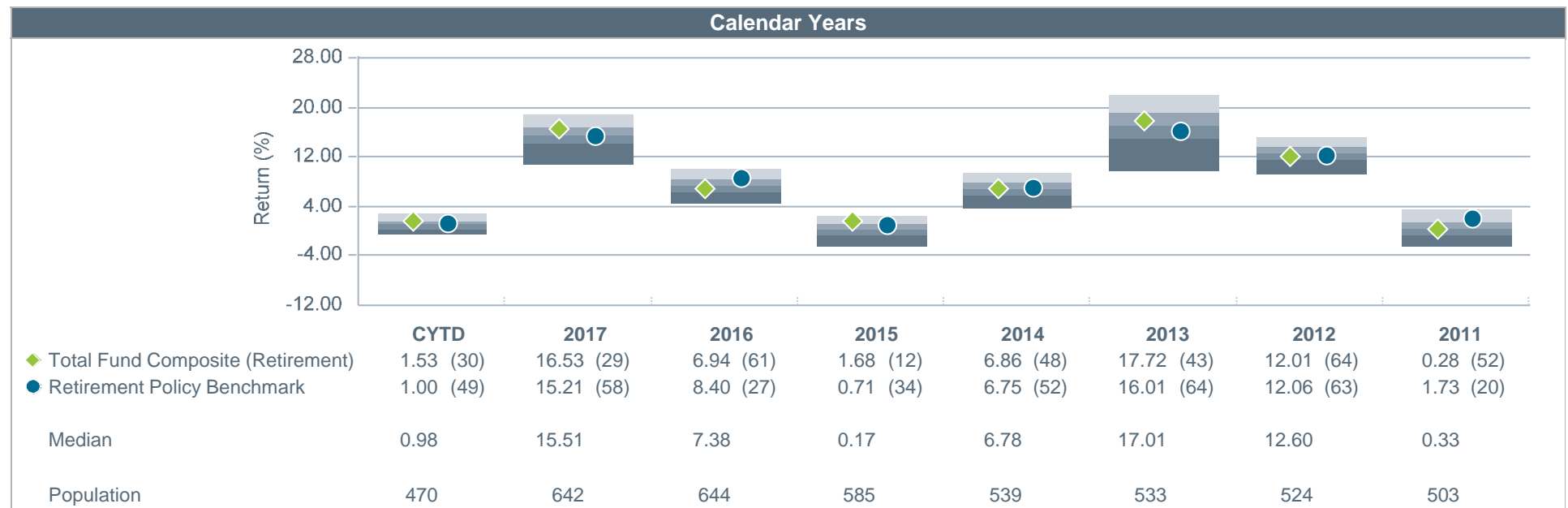
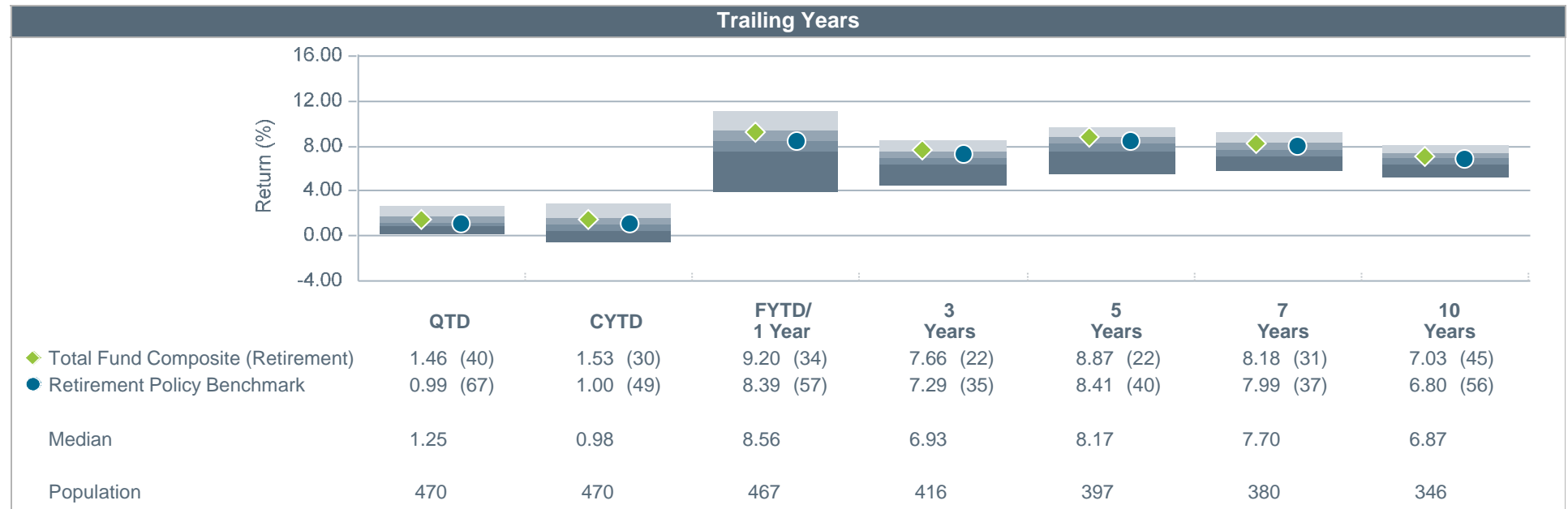
Since Inception Ending June 30, 2018



Performance shown is gross of fees. Calculation is based on monthly periodicity.

**Water and Power Employees' Retirement Plan**  
**Plan Sponsor Peer Group Analysis - Retirement**  
**All Public Plans-Total Fund**

As of June 30, 2018

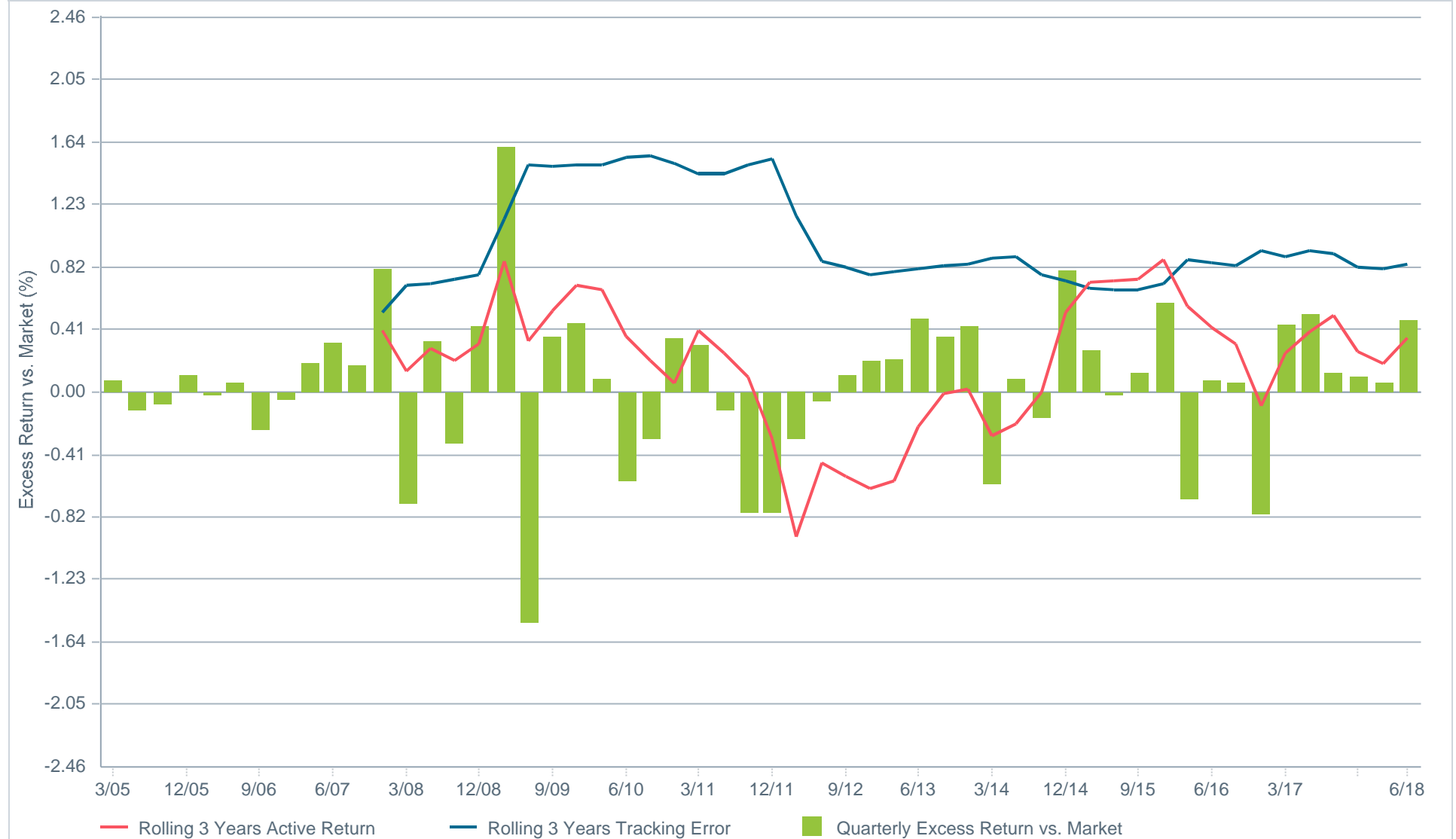


Performance shown is gross of fees. Parenthesis contain percentile ranks.

**Water and Power Employees' Retirement Plan**  
**Total Fund Composite (Retirement) vs. Retirement Policy Benchmark**  
**Comparative Performance & Rolling Return - Retirement**

As of June 30, 2018

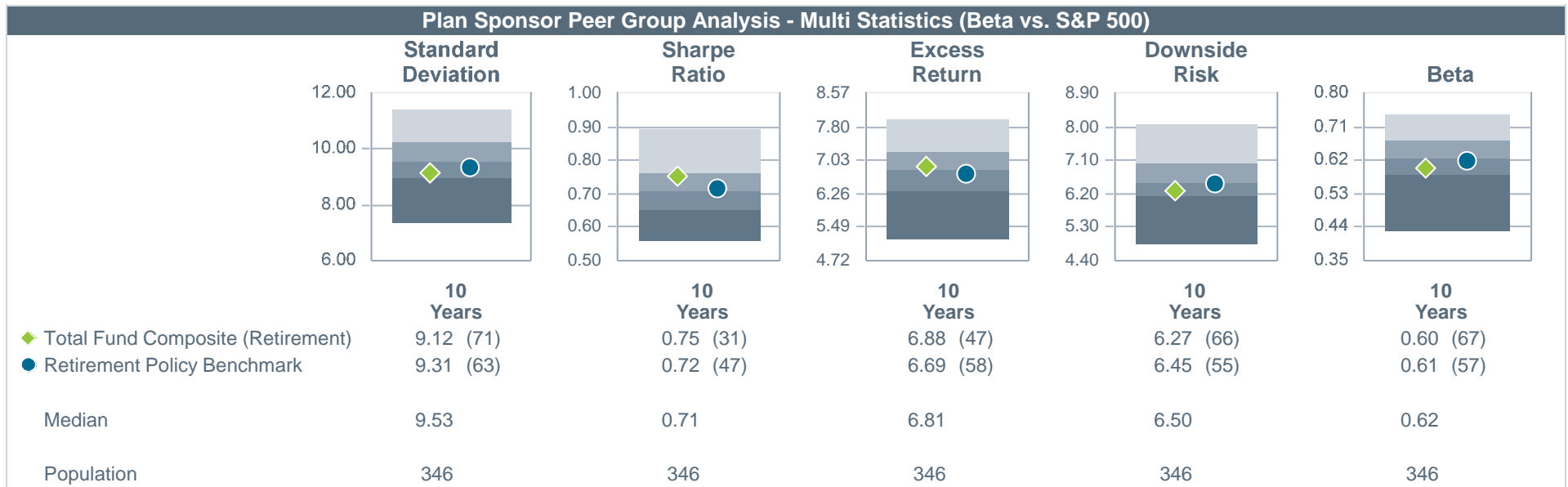
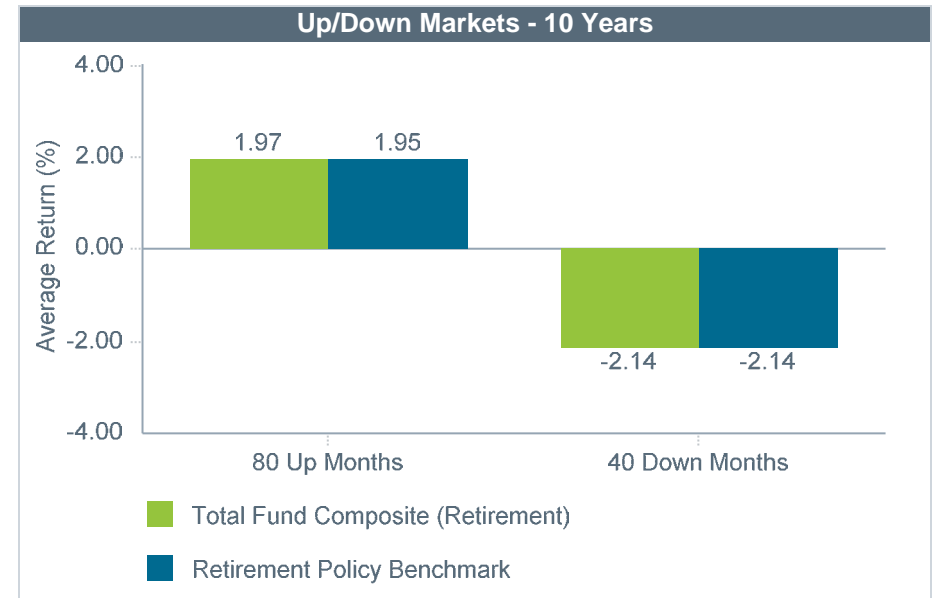
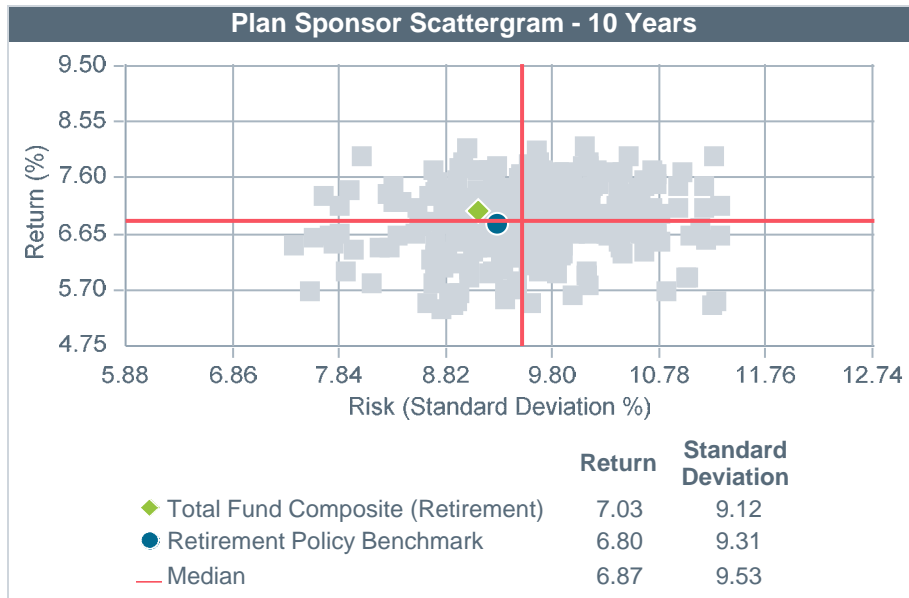
	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
<b>Total Fund Composite (Retirement)</b>	<b>1.46</b>	<b>1.53</b>	<b>9.20</b>	<b>7.66</b>	<b>8.87</b>	<b>8.18</b>	<b>7.03</b>	<b>16.53</b>	<b>6.94</b>	<b>1.68</b>	<b>6.86</b>	<b>17.72</b>
Retirement Policy Benchmark	0.99	1.00	8.39	7.29	8.41	7.99	6.80	15.21	8.40	0.71	6.75	16.01
Difference	0.47	0.53	0.81	0.37	0.46	0.19	0.23	1.32	-1.46	0.97	0.11	1.71



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Fiscal year ends 06/30.

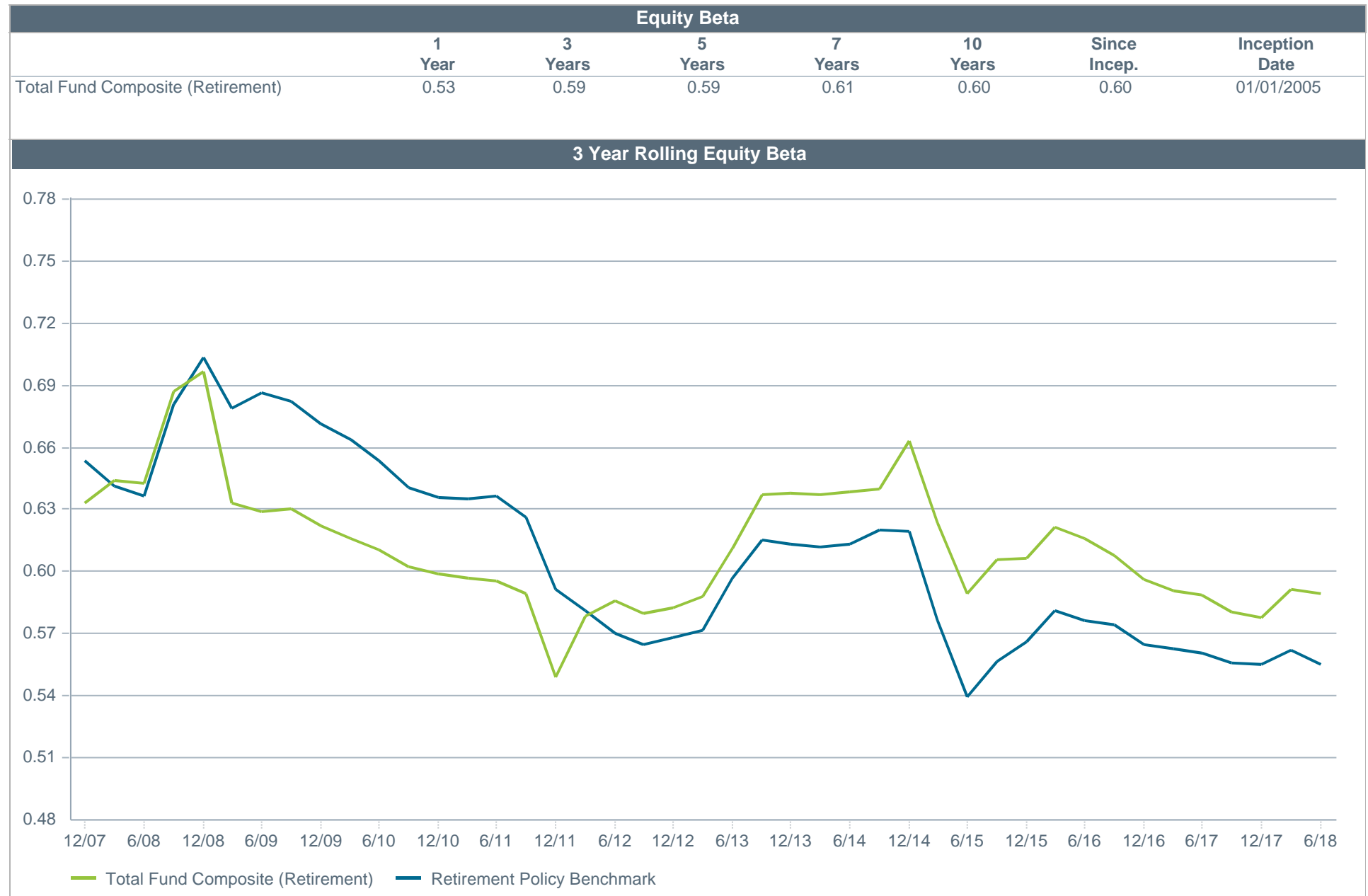
Water and Power Employees' Retirement Plan  
Total Fund Composite (Retirement) vs. All Public Plans-Total Fund

As of June 30, 2018



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.





Performance shown is gross of fees. The objective of the Total Fund Beta is to measure the aggregate level of non-diversifiable or systematic equity risk exposure of the Water and Power Employees' Retirement Plan - Retirement. The Total Fund Beta is calculated using the S&P 500 Index (Cap Wtd) as the benchmark and is based on monthly periodicity. It represents a measure of the sensitivity of the Total Fund to movements of the S&P 500 Index (Cap Wtd) over the preceding three year period.

# Total Fund - Health

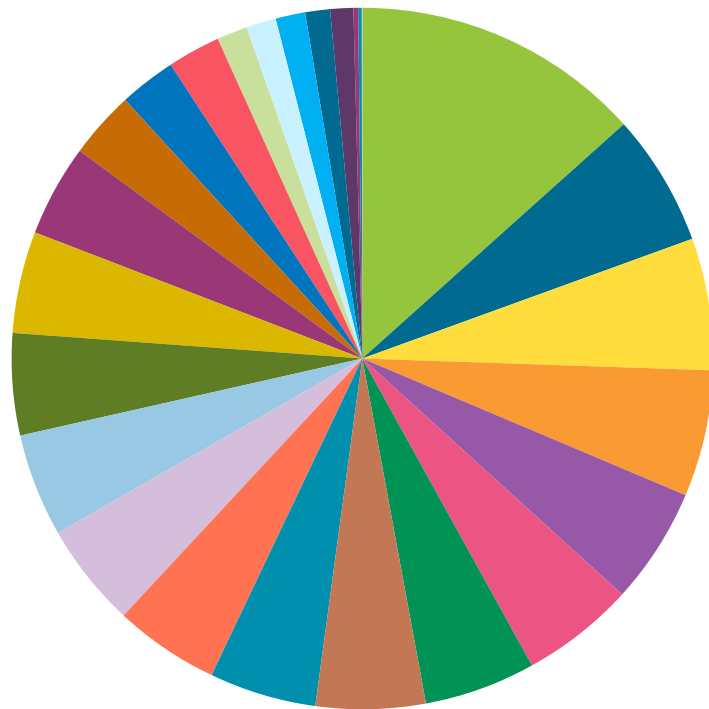


Water and Power Employees' Retirement Plan  
Asset Allocation by Manager and Schedule of Investable Assets - Health

As of June 30, 2018

Asset Allocation by Manager

June 30, 2018 : \$2,093,435,423



	Market Value (\$)	Allocation (%)
BlackRock Russell 1000 Index (CF)	279,827,664	13.37
Wells Principal Protection (SA)	127,578,356	6.09
JP Morgan Principal Protection (SA)	127,336,562	6.08
T. Rowe Price Large Cap Growth (SA)	121,925,836	5.82
Fred Alger Large Cap Growth (SA)	112,497,264	5.37
Neuberger Unconstrained (SA)	109,502,776	5.23
Real Estate Composite	107,492,384	5.13
Macquarie Unconstrained (SA)	105,599,985	5.04
MFS Developed Int'l (SA)	103,023,413	4.92
Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	101,264,481	4.84
T. Rowe Price Large Cap Value (SA)	100,741,207	4.81
Fidelity Developed Int'l (SA)	99,281,349	4.74
BlackRock Developed Int'l - Passive (CF)	98,379,330	4.70
MFS Large Cap Value (SA)	97,946,110	4.68
Private Equity Composite	88,847,203	4.24
WAMCO (SA)	64,898,991	3.10
Wellington Emerging (SA)	54,651,434	2.61
LA Capital Emerging (CF)	50,883,479	2.43
Earnest Partners Small Cap Value (SA)	29,633,318	1.42
Emerald Small Cap Growth (SA)	28,792,220	1.38
Cash Equivalents	28,575,424	1.37
Pacific Asset Bank Loans (SA)	24,000,140	1.15
Invesco Commodity (CF)	22,109,765	1.06
Molpus IV (CF) (Lagged-1 Qtr)	4,574,325	0.22
Hancock Timberland (CF) (Lagged-1 Qtr)	3,385,372	0.16
MS Convergent (CF) (Lagged-1 Mo)	687,006	0.03
Transition Account	31	0.00

Schedule of Investable Assets - FYTD

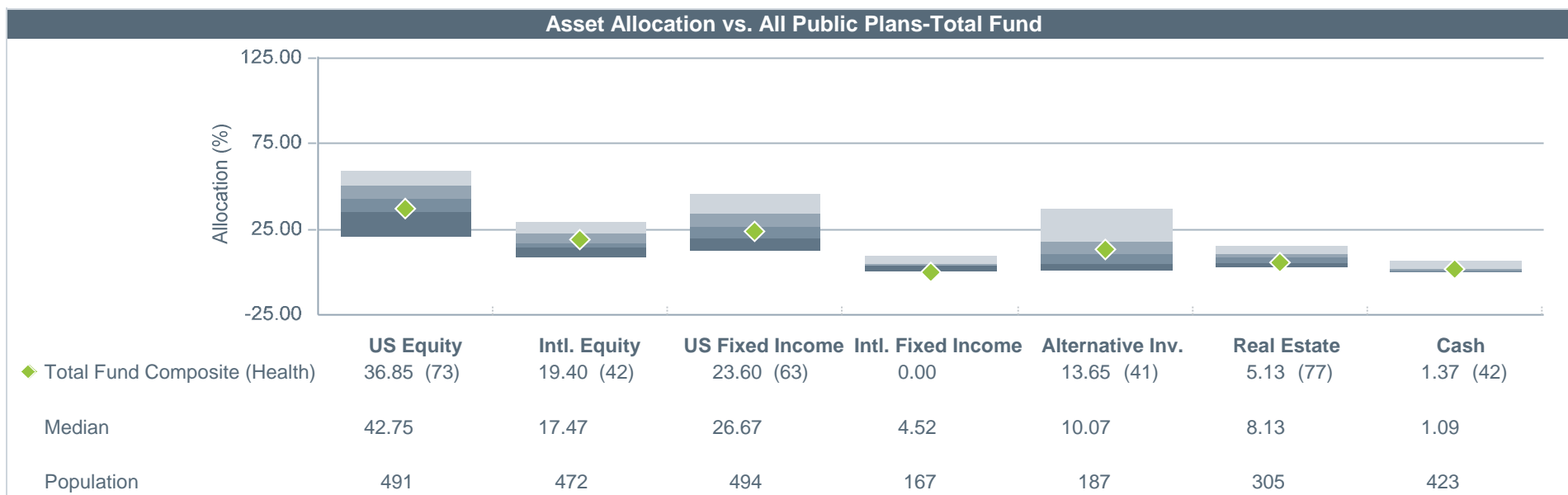
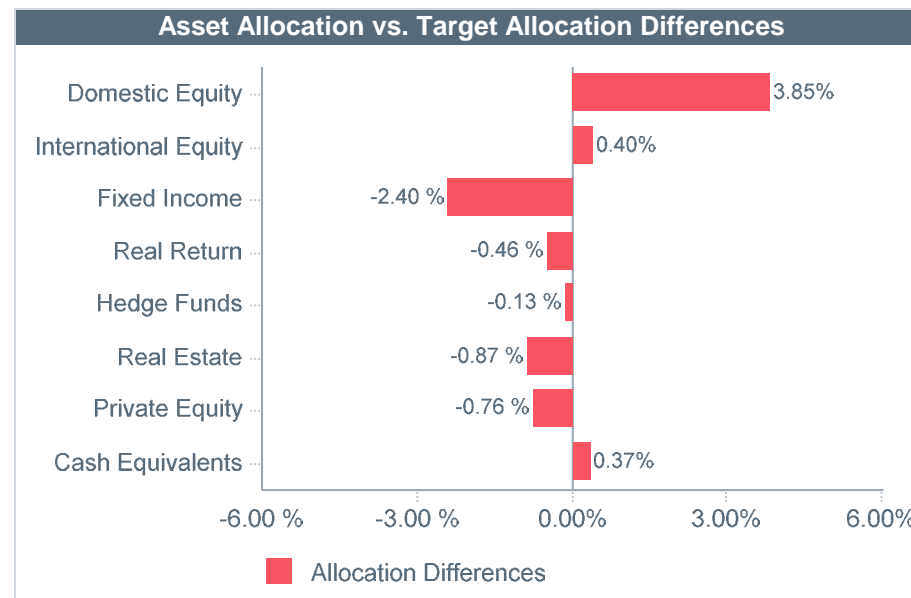
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
FYTD	1,916,571,489	176,863,934	2,093,435,423	9.38	109.38

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends 06/30. GAM Divergent (CF) was fully liquidated in 04/2018.

**Water and Power Employees' Retirement Plan**  
**Total Fund Composite (Health) vs. All Public Plans-Total Fund**  
**Asset Allocation vs. Target and Plan Sponsor Peer Group - Health**

As of June 30, 2018

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
Domestic Equity	771,363,619	36.85	33.00
International Equity	406,219,036	19.40	19.00
Fixed Income	494,017,819	23.60	26.00
Real Return	94,968,453	4.54	5.00
Hedge Funds	101,951,487	4.87	5.00
Real Estate	107,492,384	5.13	6.00
Private Equity	88,847,203	4.24	5.00
Cash Equivalents	28,575,424	1.37	1.00
Total Fund	2,093,435,423	100.00	100.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding.

**Water and Power Employees' Retirement Plan  
Comparative Performance - Health**

**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Total Fund Composite (Health)</b>	<b>1.52</b>	<b>1.60</b>	<b>9.38</b>	<b>7.70</b>	<b>8.85</b>	<b>8.28</b>	<b>7.55</b>	<b>16.75</b>	<b>6.93</b>	<b>1.46</b>	<b>6.53</b>	<b>01/01/2007</b>
Health Policy Benchmark	0.99	1.00	8.39	7.29	8.41	8.00	7.00	15.21	8.40	0.71	5.98	
Difference	0.53	0.60	0.99	0.41	0.44	0.28	0.55	1.54	-1.47	0.75	0.55	
All Public Plans-Total Fund Median	1.25	0.98	8.56	6.93	8.17	7.70	6.87	15.51	7.38	0.17	6.13	
Rank	38	29	28	20	23	27	17	23	62	15	25	
<b>Domestic Equity Composite</b>	<b>4.53</b>	<b>4.73</b>	<b>16.65</b>	<b>12.52</b>	<b>14.50</b>	<b>13.74</b>	<b>10.65</b>	<b>23.37</b>	<b>11.67</b>	<b>1.99</b>	<b>8.67</b>	<b>01/01/2007</b>
Russell 3000 (Blended) (H)	3.89	3.22	14.78	11.58	13.29	13.01	10.19	21.13	12.74	0.48	8.21	
Difference	0.64	1.51	1.87	0.94	1.21	0.73	0.46	2.24	-1.07	1.51	0.46	
All Public Plans-US Equity Segment Median	3.84	3.52	14.76	11.20	12.95	12.60	9.85	20.32	12.98	0.21	8.23	
Rank	16	14	9	6	3	1	16	8	78	8	17	
<b>MFS Large Cap Value (SA)</b>	<b>-0.60</b>	<b>-3.54</b>	<b>4.37</b>	<b>9.08</b>	<b>11.32</b>	<b>12.06</b>	<b>N/A</b>	<b>17.80</b>	<b>15.76</b>	<b>-0.06</b>	<b>12.38</b>	<b>10/01/2009</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	11.98	
Difference	-1.78	-1.85	-2.40	0.82	0.98	0.79	N/A	4.14	-1.58	3.77	0.40	
IM U.S. Large Cap Value Equity (SA+CF) Median	1.69	-0.47	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	12.77	
Rank	95	95	96	58	55	47	N/A	45	39	28	61	
<b>MFS Large Cap Value (SA) - Net</b>	<b>-0.68</b>	<b>-3.69</b>	<b>4.06</b>	<b>8.74</b>	<b>10.98</b>	<b>11.72</b>	<b>N/A</b>	<b>17.45</b>	<b>15.41</b>	<b>-0.38</b>	<b>12.03</b>	<b>10/01/2009</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	11.98	
Difference	-1.86	-2.00	-2.71	0.48	0.64	0.45	N/A	3.79	-1.93	3.45	0.05	
<b>T. Rowe Price Large Cap Value (SA)</b>	<b>2.13</b>	<b>-0.43</b>	<b>9.12</b>	<b>10.42</b>	<b>11.91</b>	<b>12.49</b>	<b>N/A</b>	<b>16.73</b>	<b>17.11</b>	<b>-1.77</b>	<b>13.17</b>	<b>10/01/2009</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	11.98	
Difference	0.95	1.26	2.35	2.16	1.57	1.22	N/A	3.07	-0.23	2.06	1.19	
IM U.S. Large Cap Value Equity (SA+CF) Median	1.69	-0.47	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	12.77	
Rank	37	50	65	27	36	36	N/A	59	26	46	38	
<b>T. Rowe Price Large Cap Value (SA) - Net</b>	<b>2.06</b>	<b>-0.57</b>	<b>8.80</b>	<b>10.10</b>	<b>11.58</b>	<b>12.16</b>	<b>N/A</b>	<b>16.38</b>	<b>16.77</b>	<b>-2.06</b>	<b>12.83</b>	<b>10/01/2009</b>
Russell 1000 Val Index	1.18	-1.69	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	11.98	
Difference	0.88	1.12	2.03	1.84	1.24	0.89	N/A	2.72	-0.57	1.77	0.85	

Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.



**Water and Power Employees' Retirement Plan**  
**Comparative Performance - Health**

As of June 30, 2018

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>BlackRock Russell 1000 Index (CF)</b>	<b>3.59</b>	<b>2.87</b>	<b>14.56</b>	<b>11.68</b>	<b>13.40</b>	<b>13.16</b>	<b>10.24</b>	<b>21.70</b>	<b>12.12</b>	<b>0.91</b>	<b>8.32</b>	<b>01/01/2007</b>
Russell 1000 Index	3.57	2.85	14.54	11.64	13.37	13.12	10.20	21.69	12.05	0.92	8.22	
Difference	0.02	0.02	0.02	0.04	0.03	0.04	0.04	0.01	0.07	-0.01	0.10	
IM U.S. Large Cap Core Equity (SA+CF) Median	2.89	2.38	14.24	11.12	13.35	13.12	10.18	21.82	10.51	1.39	8.48	
Rank	26	40	46	38	49	49	48	52	30	57	60	
<b>BlackRock Russell 1000 Index (CF) - Net</b>	<b>3.59</b>	<b>2.87</b>	<b>14.56</b>	<b>11.68</b>	<b>13.39</b>	<b>13.15</b>	<b>10.21</b>	<b>21.70</b>	<b>12.12</b>	<b>0.90</b>	<b>8.28</b>	<b>01/01/2007</b>
Russell 1000 Index	3.57	2.85	14.54	11.64	13.37	13.12	10.20	21.69	12.05	0.92	8.22	
Difference	0.02	0.02	0.02	0.04	0.02	0.03	0.01	0.01	0.07	-0.02	0.06	
<b>Fred Alger Large Cap Growth (SA)</b>	<b>10.40</b>	<b>15.59</b>	<b>28.56</b>	<b>12.16</b>	<b>16.26</b>	<b>13.24</b>	<b>N/A</b>	<b>29.33</b>	<b>0.37</b>	<b>1.77</b>	<b>14.74</b>	<b>10/01/2009</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	15.59	
Difference	4.64	8.34	6.05	-2.82	-0.10	-1.64	N/A	-0.88	-6.71	-3.90	-0.85	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22	7.36	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	14.83	
Rank	2	3	13	67	41	70	N/A	42	86	77	54	
<b>Fred Alger Large Cap Growth (SA) - Net</b>	<b>10.33</b>	<b>15.43</b>	<b>28.19</b>	<b>11.84</b>	<b>15.93</b>	<b>12.91</b>	<b>N/A</b>	<b>28.96</b>	<b>0.08</b>	<b>1.48</b>	<b>14.37</b>	<b>10/01/2009</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	15.59	
Difference	4.57	8.18	5.68	-3.14	-0.43	-1.97	N/A	-1.25	-7.00	-4.19	-1.22	
<b>T. Rowe Price Large Cap Growth (SA)</b>	<b>7.09</b>	<b>12.30</b>	<b>29.50</b>	<b>19.79</b>	<b>20.50</b>	<b>18.25</b>	<b>N/A</b>	<b>36.61</b>	<b>5.70</b>	<b>12.53</b>	<b>17.09</b>	<b>05/01/2010</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	14.91	
Difference	1.33	5.05	6.99	4.81	4.14	3.37	N/A	6.40	-1.38	6.86	2.18	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22	7.36	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	14.20	
Rank	18	16	7	3	2	2	N/A	5	41	7	6	
<b>T. Rowe Price Large Cap Growth (SA) - Net</b>	<b>7.00</b>	<b>12.12</b>	<b>29.09</b>	<b>19.40</b>	<b>20.12</b>	<b>17.87</b>	<b>N/A</b>	<b>36.17</b>	<b>5.35</b>	<b>12.16</b>	<b>16.70</b>	<b>05/01/2010</b>
Russell 1000 Grth Index	5.76	7.25	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	14.91	
Difference	1.24	4.87	6.58	4.42	3.76	2.99	N/A	5.96	-1.73	6.49	1.79	
<b>Earnest Partners Small Cap Value (SA)</b>	<b>4.01</b>	<b>2.10</b>	<b>17.01</b>	<b>13.90</b>	<b>14.91</b>	<b>13.97</b>	<b>N/A</b>	<b>23.09</b>	<b>24.78</b>	<b>-2.27</b>	<b>15.48</b>	<b>10/01/2009</b>
Russell 2000 Val Index	8.30	5.44	13.10	11.22	11.18	11.10	9.88	7.84	31.74	-7.47	12.47	
Difference	-4.29	-3.34	3.91	2.68	3.73	2.87	N/A	15.25	-6.96	5.20	3.01	
IM U.S. Small Cap Value Equity (SA+CF) Median	5.62	3.99	13.30	10.67	12.21	12.18	11.60	11.59	26.17	-4.29	14.11	
Rank	79	74	22	10	4	15	N/A	4	59	31	17	
<b>Earnest Partners Small Cap Value (SA) - Net</b>	<b>3.87</b>	<b>1.83</b>	<b>16.36</b>	<b>13.26</b>	<b>14.28</b>	<b>13.33</b>	<b>N/A</b>	<b>22.41</b>	<b>24.07</b>	<b>-2.82</b>	<b>14.81</b>	<b>10/01/2009</b>
Russell 2000 Val Index	8.30	5.44	13.10	11.22	11.18	11.10	9.88	7.84	31.74	-7.47	12.47	
Difference	-4.43	-3.61	3.26	2.04	3.10	2.23	N/A	14.57	-7.67	4.65	2.34	

Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.



**Water and Power Employees' Retirement Plan**  
**Comparative Performance - Health**

As of June 30, 2018

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Emerald Small Cap Growth (SA)</b>	<b>9.37</b>	<b>7.51</b>	<b>23.95</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>29.57</b>	<b>10.14</b>	<b>N/A</b>	<b>15.55</b>	<b>12/01/2015</b>
Russell 2000 Grth Index	7.23	9.70	21.86	10.60	13.65	12.50	11.24	22.17	11.32	-1.38	14.56	
Difference	2.14	-2.19	2.09	N/A	N/A	N/A	N/A	7.40	-1.18	N/A	0.99	
IM U.S. Small Cap Growth Equity (SA+CF) Median	8.82	12.12	24.51	12.34	14.60	13.31	12.15	23.82	11.38	-0.74	16.42	
Rank	42	83	54	N/A	N/A	N/A	N/A	21	55	N/A	60	
<b>Emerald Small Cap Growth (SA) - Net</b>	<b>9.20</b>	<b>7.20</b>	<b>23.22</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>28.81</b>	<b>9.49</b>	<b>N/A</b>	<b>14.87</b>	<b>12/01/2015</b>
Russell 2000 Grth Index	7.23	9.70	21.86	10.60	13.65	12.50	11.24	22.17	11.32	-1.38	14.56	
Difference	1.97	-2.50	1.36	N/A	N/A	N/A	N/A	6.64	-1.83	N/A	0.31	
<b>International Equity Composite</b>	<b>-2.43</b>	<b>-2.89</b>	<b>8.24</b>	<b>6.92</b>	<b>7.50</b>	<b>5.03</b>	<b>N/A</b>	<b>29.29</b>	<b>3.06</b>	<b>-1.40</b>	<b>6.06</b>	<b>09/01/2009</b>
MSCI ACW Ex US IM Index (Net)	-2.61	-3.65	7.75	5.46	6.39	4.08	2.93	27.81	4.41	-4.60	6.08	
Difference	0.18	0.76	0.49	1.46	1.11	0.95	N/A	1.48	-1.35	3.20	-0.02	
All Public Plans-Intl. Equity Segment Median	-2.07	-2.67	7.85	6.12	7.16	5.59	3.89	28.59	3.97	-2.60	7.22	
Rank	59	57	45	21	37	71	N/A	39	70	28	94	
<b>BlackRock Developed Int'l - Passive (CF)</b>	<b>-0.38</b>	<b>-2.24</b>	<b>8.24</b>	<b>5.96</b>	<b>7.21</b>	<b>N/A</b>	<b>N/A</b>	<b>25.71</b>	<b>3.45</b>	<b>-1.62</b>	<b>7.92</b>	<b>10/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	7.46	
Difference	0.39	0.33	0.50	0.47	0.44	N/A	N/A	0.54	0.50	0.33	0.46	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	8.40	
Rank	25	38	33	40	53	N/A	N/A	59	22	75	62	
<b>BlackRock Developed Int'l - Passive (CF) - Net</b>	<b>-0.38</b>	<b>-2.24</b>	<b>8.24</b>	<b>5.95</b>	<b>7.20</b>	<b>N/A</b>	<b>N/A</b>	<b>25.71</b>	<b>3.45</b>	<b>-1.65</b>	<b>7.90</b>	<b>10/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	7.46	
Difference	0.39	0.33	0.50	0.46	0.43	N/A	N/A	0.54	0.50	0.30	0.44	
<b>MFS Developed Int'l (SA)</b>	<b>0.63</b>	<b>0.01</b>	<b>9.47</b>	<b>8.67</b>	<b>9.69</b>	<b>N/A</b>	<b>N/A</b>	<b>27.12</b>	<b>-0.29</b>	<b>7.13</b>	<b>11.98</b>	<b>08/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	8.34	
Difference	1.40	2.58	1.73	3.18	2.92	N/A	N/A	1.95	-3.24	9.08	3.64	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	9.24	
Rank	12	11	24	8	8	N/A	N/A	42	70	7	6	
<b>MFS Developed Int'l (SA) - Net</b>	<b>0.54</b>	<b>-0.15</b>	<b>9.10</b>	<b>8.30</b>	<b>9.33</b>	<b>N/A</b>	<b>N/A</b>	<b>26.69</b>	<b>-0.64</b>	<b>6.79</b>	<b>11.61</b>	<b>08/01/2012</b>
MSCI Wrld Ex US IM Index (USD) (Net)	-0.77	-2.57	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	8.34	
Difference	1.31	2.42	1.36	2.81	2.56	N/A	N/A	1.52	-3.59	8.74	3.27	

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	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Fidelity Developed Int'l (SA)</b>	<b>-0.77</b>	<b>-1.75</b>	<b>7.64</b>	<b>5.14</b>	<b>6.62</b>	<b>5.46</b>	<b>N/A</b>	<b>25.16</b>	<b>-0.67</b>	<b>0.98</b>	<b>6.73</b>	<b>10/01/2009</b>
International Developed Blend	-0.77	-2.57	7.74	5.49	6.77	4.84	4.49	25.17	2.95	-1.95	5.86	
Difference	0.00	0.82	-0.10	-0.35	-0.15	0.62	N/A	-0.01	-3.62	2.93	0.87	
IM All EAFE (SA+CF) Median	-1.57	-2.93	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	7.27	
Rank	30	33	39	62	70	70	N/A	66	73	55	67	
<b>Fidelity Developed Int'l (SA) - Net</b>	<b>-0.83</b>	<b>-1.88</b>	<b>7.34</b>	<b>4.85</b>	<b>6.33</b>	<b>5.16</b>	<b>N/A</b>	<b>24.81</b>	<b>-0.94</b>	<b>0.71</b>	<b>6.41</b>	<b>10/01/2009</b>
International Developed Blend	-0.77	-2.57	7.74	5.49	6.77	4.84	4.49	25.17	2.95	-1.95	5.86	
Difference	-0.06	0.69	-0.40	-0.64	-0.44	0.32	N/A	-0.36	-3.89	2.66	0.55	
<b>LA Capital Emerging (CF)</b>	<b>-8.40</b>	<b>-7.57</b>	<b>7.13</b>	<b>5.49</b>	<b>5.16</b>	<b>N/A</b>	<b>N/A</b>	<b>37.13</b>	<b>12.11</b>	<b>-15.10</b>	<b>4.20</b>	<b>10/01/2012</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	3.56	
Difference	-0.38	-0.71	-0.77	0.30	0.23	N/A	N/A	0.30	2.21	-1.24	0.64	
IM Emerging Markets Equity (SA+CF) Median	-8.40	-6.72	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	4.93	
Rank	50	63	50	65	64	N/A	N/A	49	35	72	65	
<b>LA Capital Emerging (CF) - Net</b>	<b>-8.54</b>	<b>-7.86</b>	<b>6.44</b>	<b>4.81</b>	<b>4.49</b>	<b>N/A</b>	<b>N/A</b>	<b>36.24</b>	<b>11.39</b>	<b>-15.65</b>	<b>3.53</b>	<b>10/01/2012</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	3.56	
Difference	-0.52	-1.00	-1.46	-0.38	-0.44	N/A	N/A	-0.59	1.49	-1.79	-0.03	
<b>Wellington Emerging (SA)</b>	<b>-8.28</b>	<b>-6.67</b>	<b>8.09</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>40.87</b>	<b>N/A</b>	<b>N/A</b>	<b>14.08</b>	<b>10/01/2016</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	11.91	
Difference	-0.26	0.19	0.19	N/A	N/A	N/A	N/A	4.04	N/A	N/A	2.17	
IM Emerging Markets Equity (SA+CF) Median	-8.40	-6.72	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	12.37	
Rank	49	50	43	N/A	N/A	N/A	N/A	29	N/A	N/A	33	
<b>Wellington Emerging (SA) - Net</b>	<b>-8.41</b>	<b>-6.93</b>	<b>7.47</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>40.07</b>	<b>N/A</b>	<b>N/A</b>	<b>13.43</b>	<b>10/01/2016</b>
MSCI Emg Mkts IM Index (USD) (Net)	-8.02	-6.86	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	11.91	
Difference	-0.39	-0.07	-0.43	N/A	N/A	N/A	N/A	3.24	N/A	N/A	1.52	

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	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Fixed Income Composite</b>	<b>-0.03</b>	<b>-0.87</b>	<b>0.92</b>	<b>2.92</b>	<b>3.36</b>	<b>3.73</b>	<b>5.23</b>	<b>4.89</b>	<b>4.85</b>	<b>0.83</b>	<b>5.32</b>	<b>01/01/2007</b>
Fixed Income Custom Index (H)	-0.19	-1.03	0.50	2.81	3.04	3.24	4.30	4.12	5.65	0.11	4.44	
Difference	0.16	0.16	0.42	0.11	0.32	0.49	0.93	0.77	-0.80	0.72	0.88	
All Public Plans-US Fixed Income Segment Median	-0.04	-1.18	0.51	2.44	2.98	3.30	4.50	4.54	4.54	0.26	4.39	
Rank	49	28	26	37	38	36	28	43	42	27	20	
<b>JP Morgan Principal Protection (SA)</b>	<b>0.13</b>	<b>-0.54</b>	<b>-0.13</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.87</b>	<b>1.92</b>	<b>N/A</b>	<b>1.20</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.01	0.27	0.19	N/A	N/A	N/A	N/A	0.07	0.52	N/A	0.31	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	2.12	
Rank	11	6	56	N/A	N/A	N/A	N/A	100	97	N/A	100	
<b>JP Morgan Principal Protection (SA) - Net</b>	<b>0.11</b>	<b>-0.59</b>	<b>-0.23</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.77</b>	<b>1.81</b>	<b>N/A</b>	<b>1.10</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.03	0.22	0.09	N/A	N/A	N/A	N/A	-0.03	0.41	N/A	0.21	
<b>Wells Principal Protection (SA)</b>	<b>0.16</b>	<b>-0.77</b>	<b>-0.24</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.94</b>	<b>1.85</b>	<b>N/A</b>	<b>1.10</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	0.02	0.04	0.08	N/A	N/A	N/A	N/A	0.14	0.45	N/A	0.21	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	2.12	
Rank	10	8	68	N/A	N/A	N/A	N/A	100	98	N/A	100	
<b>Wells Principal Protection (SA) - Net</b>	<b>0.13</b>	<b>-0.83</b>	<b>-0.35</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.83</b>	<b>1.72</b>	<b>N/A</b>	<b>0.98</b>	<b>09/01/2015</b>
Bloomberg US Int Agg Ex Credit	0.14	-0.81	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	0.89	
Difference	-0.01	-0.02	-0.03	N/A	N/A	N/A	N/A	0.03	0.32	N/A	0.09	
<b>Macquarie Unconstrained (SA)</b>	<b>-0.41</b>	<b>-2.12</b>	<b>0.65</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.99</b>	<b>8.35</b>	<b>N/A</b>	<b>4.29</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.25	-0.47	-0.30	N/A	N/A	N/A	N/A	1.26	-1.69	N/A	-0.57	
IM Global Fixed Income (SA+CF) Median	-1.05	-1.07	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	3.68	
Rank	40	81	77	N/A	N/A	N/A	N/A	44	35	N/A	38	
<b>Macquarie Unconstrained (SA) - Net</b>	<b>-0.45</b>	<b>-2.20</b>	<b>0.48</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.81</b>	<b>8.17</b>	<b>N/A</b>	<b>4.11</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.21	-0.55	-0.47	N/A	N/A	N/A	N/A	1.08	-1.87	N/A	-0.75	

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<b>Neuberger Unconstrained (SA)</b>	<b>-0.16</b>	<b>-0.75</b>	<b>3.08</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.42</b>	<b>9.48</b>	<b>N/A</b>	<b>6.22</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.50	0.90	2.13	N/A	N/A	N/A	N/A	2.69	-0.56	N/A	1.36	
IM Global Fixed Income (SA+CF) Median	-1.05	-1.07	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	3.68	
Rank	32	45	23	N/A	N/A	N/A	N/A	25	32	N/A	13	
<b>Neuberger Unconstrained (SA) - Net</b>	<b>-0.21</b>	<b>-0.86</b>	<b>2.84</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.17</b>	<b>9.23</b>	<b>N/A</b>	<b>5.98</b>	<b>09/01/2015</b>
67% B Global Credit/33% B Global High Yield	-0.66	-1.65	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	4.86	
Difference	0.45	0.79	1.89	N/A	N/A	N/A	N/A	2.44	-0.81	N/A	1.12	
<b>Pacific Asset Bank Loans (SA)</b>	<b>0.47</b>	<b>1.98</b>	<b>4.74</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.40</b>	<b>9.37</b>	<b>N/A</b>	<b>5.62</b>	<b>09/01/2015</b>
CS Lvg'd Loan Index	0.78	2.38	4.67	4.33	4.24	4.59	5.00	4.25	9.88	-0.38	4.80	
Difference	-0.31	-0.40	0.07	N/A	N/A	N/A	N/A	1.15	-0.51	N/A	0.82	
IM U.S. Bank Loans (SA+CF) Median	0.75	2.16	4.64	4.38	4.43	4.85	5.51	4.46	9.51	0.68	4.75	
Rank	96	74	48	N/A	N/A	N/A	N/A	8	54	N/A	14	
<b>Pacific Asset Bank Loans (SA) - Net</b>	<b>0.39</b>	<b>1.82</b>	<b>4.41</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.06</b>	<b>9.02</b>	<b>N/A</b>	<b>5.29</b>	<b>09/01/2015</b>
CS Lvg'd Loan Index	0.78	2.38	4.67	4.33	4.24	4.59	5.00	4.25	9.88	-0.38	4.80	
Difference	-0.39	-0.56	-0.26	N/A	N/A	N/A	N/A	0.81	-0.86	N/A	0.49	
<b>Real Return Composite</b>	<b>-0.39</b>	<b>-0.06</b>	<b>4.77</b>	<b>3.16</b>	<b>2.37</b>	<b>2.74</b>	<b>N/A</b>	<b>3.97</b>	<b>9.56</b>	<b>-2.58</b>	<b>3.34</b>	<b>04/01/2010</b>
CPI+3% (Blended)	1.30	2.70	5.88	4.88	4.58	4.15	3.94	5.17	5.15	3.68	4.00	
Difference	-1.69	-2.76	-1.11	-1.72	-2.21	-1.41	N/A	-1.20	4.41	-6.26	-0.66	
<b>Invesco Commodity (CF)</b>	<b>-0.14</b>	<b>-0.57</b>	<b>12.45</b>	<b>0.93</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.95</b>	<b>14.05</b>	<b>-15.83</b>	<b>-4.44</b>	<b>09/01/2013</b>
Bloomberg Cmdty Index (TR)	0.40	0.00	7.35	-4.54	-6.40	-7.81	-9.04	1.70	11.77	-24.66	-7.52	
Difference	-0.54	-0.57	5.10	5.47	N/A	N/A	N/A	4.25	2.28	8.83	3.08	
<b>Invesco Commodity (CF) - Net</b>	<b>-0.30</b>	<b>-0.88</b>	<b>11.72</b>	<b>0.27</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.26</b>	<b>13.30</b>	<b>-16.41</b>	<b>-5.04</b>	<b>09/01/2013</b>
Bloomberg Cmdty Index (TR)	0.40	0.00	7.35	-4.54	-6.40	-7.81	-9.04	1.70	11.77	-24.66	-7.52	
Difference	-0.70	-0.88	4.37	4.81	N/A	N/A	N/A	3.56	1.53	8.25	2.48	
<b>Hancock Timberland (CF) (Lagged-1 Qtr) - Net</b>	<b>-0.64</b>	<b>1.37</b>	<b>0.26</b>	<b>2.91</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.65</b>	<b>4.81</b>	<b>-0.34</b>	<b>1.99</b>	<b>04/01/2014</b>
NCREIF Timberland Index (Lagged-1 Qtr)	0.92	2.46	3.79	3.44	6.10	5.79	4.06	3.28	3.28	9.26	5.28	
Difference	-1.56	-1.09	-3.53	-0.53	N/A	N/A	N/A	1.37	1.53	-9.60	-3.29	
<b>Molpus IV (CF) (Lagged-1 Qtr) - Net</b>	<b>-0.34</b>	<b>1.37</b>	<b>1.77</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.52</b>	<b>-1.91</b>	<b>N/A</b>	<b>-4.47</b>	<b>09/01/2015</b>
NCREIF Timberland Index (Lagged-1 Qtr)	0.92	2.46	3.79	3.44	6.10	5.79	4.06	3.28	3.28	9.26	3.65	
Difference	-1.26	-1.09	-2.02	N/A	N/A	N/A	N/A	1.24	-5.19	N/A	-8.12	

Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.



**Water and Power Employees' Retirement Plan**  
**Comparative Performance - Health**

**As of June 30, 2018**

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>WAMCO (SA)</b>	<b>-0.46</b>	<b>-0.05</b>	<b>2.78</b>	<b>3.90</b>	<b>4.05</b>	<b>3.88</b>	<b>N/A</b>	<b>3.29</b>	<b>9.36</b>	<b>-0.18</b>	<b>3.98</b>	<b>05/01/2010</b>
Bloomberg Wrld Gov't Infl Lnk'd Index (Hedged)	0.33	0.40	3.44	4.23	4.08	3.92	4.27	3.32	10.22	-1.12	4.26	
Difference	-0.79	-0.45	-0.66	-0.33	-0.03	-0.04	N/A	-0.03	-0.86	0.94	-0.28	
<b>WAMCO (SA) - Net</b>	<b>-0.51</b>	<b>-0.14</b>	<b>2.61</b>	<b>3.72</b>	<b>3.88</b>	<b>3.70</b>	<b>N/A</b>	<b>3.11</b>	<b>9.17</b>	<b>-0.35</b>	<b>3.79</b>	<b>05/01/2010</b>
Bloomberg Wrld Gov't Infl Lnk'd Index (Hedged)	0.33	0.40	3.44	4.23	4.08	3.92	4.27	3.32	10.22	-1.12	4.26	
Difference	-0.84	-0.54	-0.83	-0.51	-0.20	-0.22	N/A	-0.21	-1.05	0.77	-0.47	
<b>Hedge Funds Composite - Net</b>	<b>0.85</b>	<b>1.65</b>	<b>3.07</b>	<b>0.32</b>	<b>2.00</b>	<b>2.70</b>	<b>N/A</b>	<b>3.91</b>	<b>-2.30</b>	<b>1.24</b>	<b>3.30</b>	<b>09/01/2010</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.30	
Difference	-0.32	-0.60	-1.25	-3.32	-1.40	-0.61	N/A	0.10	-5.63	-1.78	0.00	
<b>Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net</b>	<b>0.83</b>	<b>1.50</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.49</b>	<b>09/01/2017</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.63	
Difference	-0.34	-0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.14	
<b>MS Convergent (CF) (Lagged-1 Mo) - Net</b>	<b>2.07</b>	<b>5.36</b>	<b>8.62</b>	<b>2.07</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.39</b>	<b>-1.27</b>	<b>-1.34</b>	<b>2.43</b>	<b>03/01/2014</b>
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.17	2.25	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.45	
Difference	0.90	3.11	4.30	-1.57	N/A	N/A	N/A	3.58	-4.60	-4.36	-1.02	

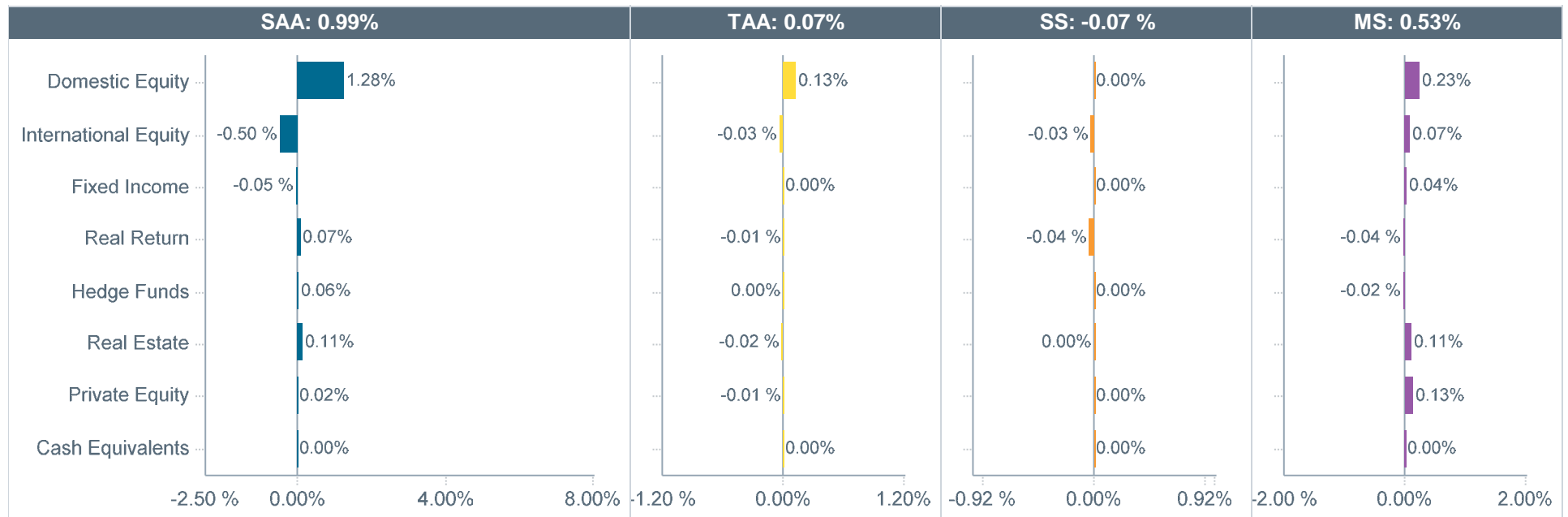
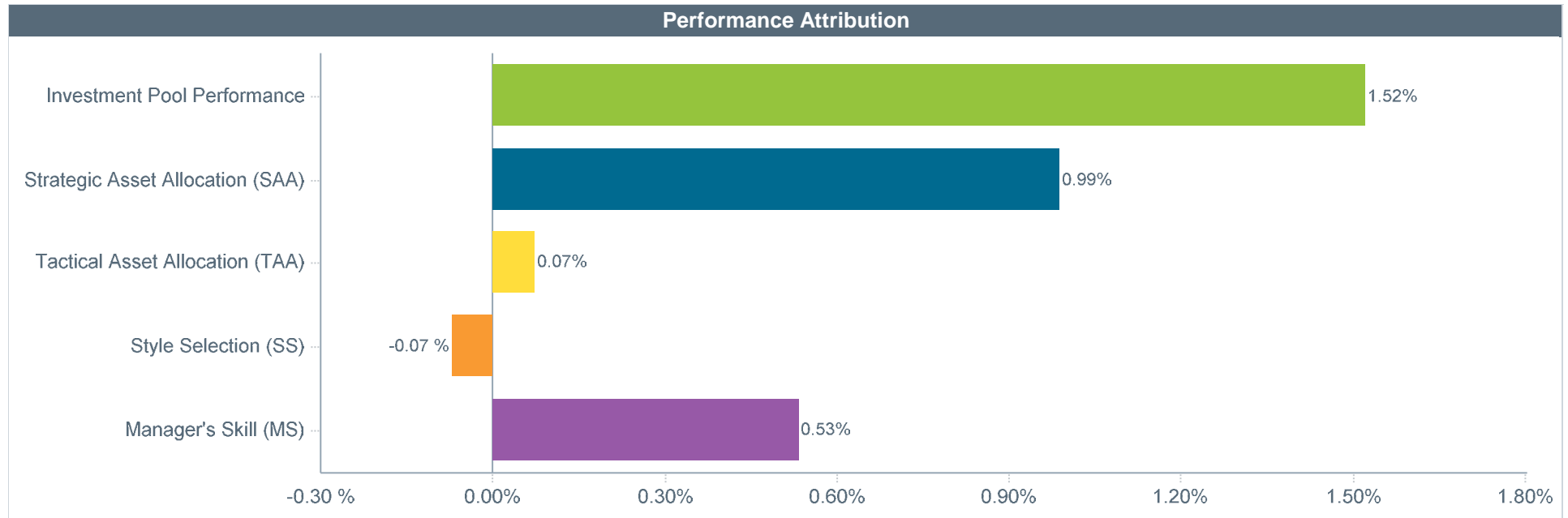
Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.

**Water and Power Employees' Retirement Plan**  
**Alternative Investment Fund Performance Listing - Health**

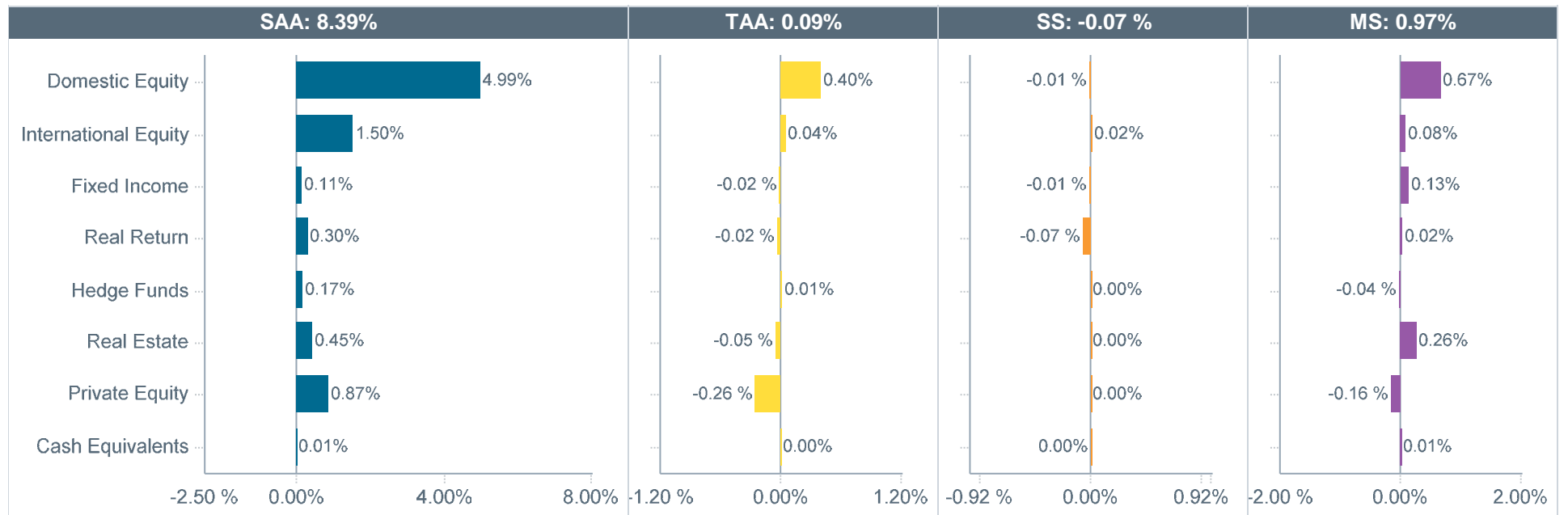
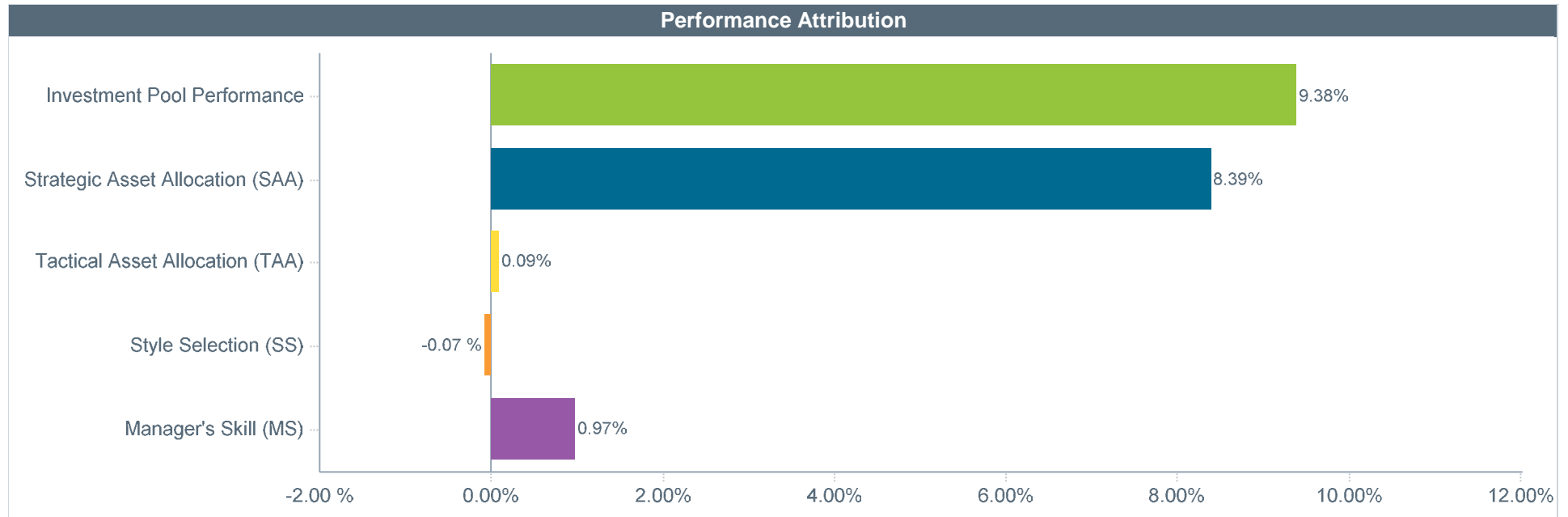
**As of March 31, 2018**

	Market Value (\$)	% of Alt. Inv. Group	% of Total Fund	Inception IRR	Inception Date
<b>Private Equity</b>	<b>82,449,062</b>	<b>44.33%</b>	<b>4.00%</b>	<b>15.62%</b>	<b>Aug-09</b>
Adams Street SMB I	2,288,119	1.23%	0.11%	-0.01%	Jan-17
Apollo VIII	5,284,008	2.84%	0.26%	19.50%	Jan-14
Ares IV	4,524,920	2.43%	0.22%	18.03%	Nov-12
Ares Special Situation IV	4,752,579	2.56%	0.23%	-12.07%	Jan-15
Ares V	3,368,715	1.81%	0.16%	7.68%	Jan-15
Audax Mezz III	961,021	0.52%	0.05%	12.25%	Jan-11
Blackstone Tactical Opps	6,484,379	3.49%	0.31%	19.00%	Apr-15
CDR IX	3,618,551	1.95%	0.18%	19.96%	Apr-14
CDR X	994,519	0.53%	0.05%	-2.81%	Mar-18
Crestview Partners III	4,396,420	2.36%	0.21%	18.38%	Feb-15
EnCap VIII	852,766	0.46%	0.04%	-1.22%	Jan-11
EnCap IX	2,258,077	1.21%	0.11%	17.49%	Jan-13
EnCap X	4,842,367	2.60%	0.23%	20.33%	Feb-15
EnCap XI	579,200	0.31%	0.03%	22.22%	Jun-17
Harvest VII	1,852,791	1.00%	0.09%	19.26%	Nov-15
Industry Ventures VIII	823,164	0.44%	0.04%	41.01%	Aug-16
Landmark XIV	1,406,153	0.76%	0.07%	12.87%	Aug-08
Landmark XV	2,825,964	1.52%	0.14%	17.09%	Feb-14
Lexington VII	1,659,836	0.89%	0.08%	17.50%	Aug-09
Oaktree V	1,177,433	0.63%	0.06%	5.43%	Jan-09
Silver Lake IV	3,291,642	1.77%	0.16%	31.32%	Sep-13
Vista IV	3,832,883	2.06%	0.19%	20.94%	Sep-11
Vista V	11,328,907	6.09%	0.55%	22.86%	Apr-14
Vista VI	9,044,648	4.86%	0.44%	13.37%	Jun-16
<b>Real Estate</b>	<b>103,556,325</b>	<b>55.67%</b>	<b>5.02%</b>	<b>13.18%</b>	<b>Jan-10</b>
AG Core Plus III	535,537	0.29%	0.03%	24.42%	Jan-12
Almanac VI	715,543	0.38%	0.03%	17.20%	Jun-12
Almanac VII	3,695,893	1.99%	0.18%	17.49%	Mar-15
BREP Europe IV	3,168,814	1.70%	0.15%	18.80%	Dec-13
BREP VII	4,201,186	2.26%	0.20%	20.37%	Jun-12
Bristol Value II	2,918,620	1.57%	0.14%	13.95%	Nov-12
Dimensional Global REIT	5,940,975	3.19%	0.29%	6.03%	Mar-13
DRA G&I IX	3,252,086	1.75%	0.16%	17.60%	Sep-16
DRA G&I VIII	2,029,593	1.09%	0.10%	13.56%	Jun-14
DRA VII	4,323,236	2.32%	0.21%	22.04%	Oct-11
FPA Core Plus III	7,519,312	4.04%	0.36%	4.11%	Jan-17
Harrison Street Core	11,882,872	6.39%	0.58%	9.77%	Aug-15
Heitman REIT	5,693,885	3.06%	0.28%	7.78%	Sep-13
Invesco Core Realty	9,281,432	4.99%	0.45%	10.57%	Jun-11
Jamestown Premier	7,661,865	4.12%	0.37%	10.83%	Mar-15
LaSalle Asia V	536,567	0.29%	0.03%	-37.32%	Nov-17
Lone Star RE II	81,078	0.04%	0.00%	-37.32%	May-11
Lone Star RE IV	4,877,071	2.62%	0.24%	28.47%	Jun-15
Lone Star VII	14,112	0.01%	0.00%	12.96%	May-11
Lone Star RE V	1,127,605	0.61%	0.05%	18.55%	Aug-17
Mesa West III	1,738,327	0.93%	0.08%	10.02%	Aug-13
Mesa West IV	3,122,492	1.68%	0.15%	4.72%	Feb-16
PCCP First Mtg II	8,332	0.00%	0.00%	7.17%	Jun-12
Prologis USLH	7,689,092	4.13%	0.37%	16.71%	Mar-15
Torchlight IV	3,374,413	1.81%	0.16%	12.47%	Aug-13
Torchlight V	3,954,730	2.13%	0.19%	14.04%	Mar-15
Torchlight VI	1,000,000	0.54%	0.05%	-4.46%	Feb-18
Westbrook X	3,211,656	1.73%	0.16%	24.23%	Feb-16

Market values and performance were provided by Northern Trust.



Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

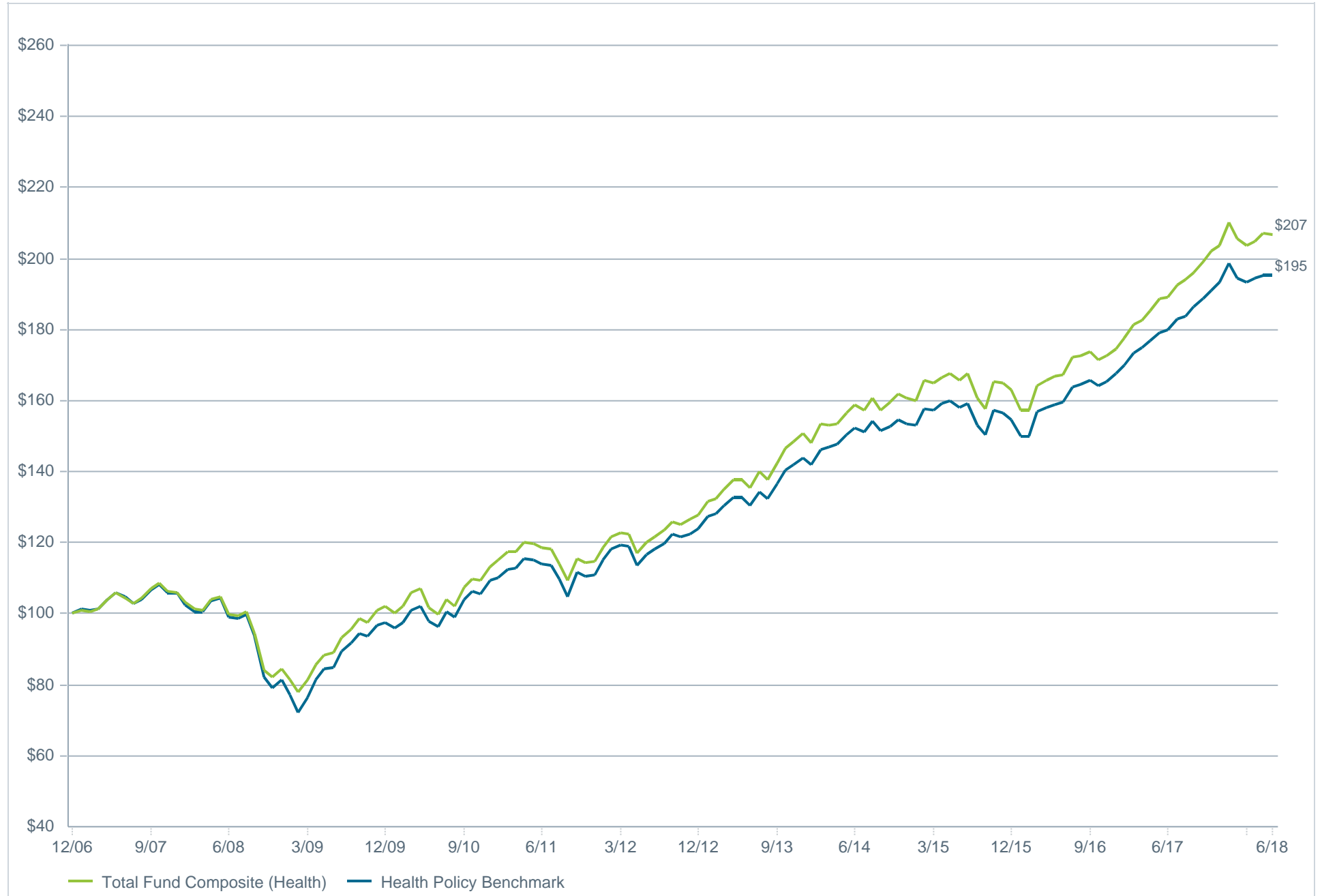


Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



**Water and Power Employees' Retirement Plan**  
**Growth of \$100 - Health**

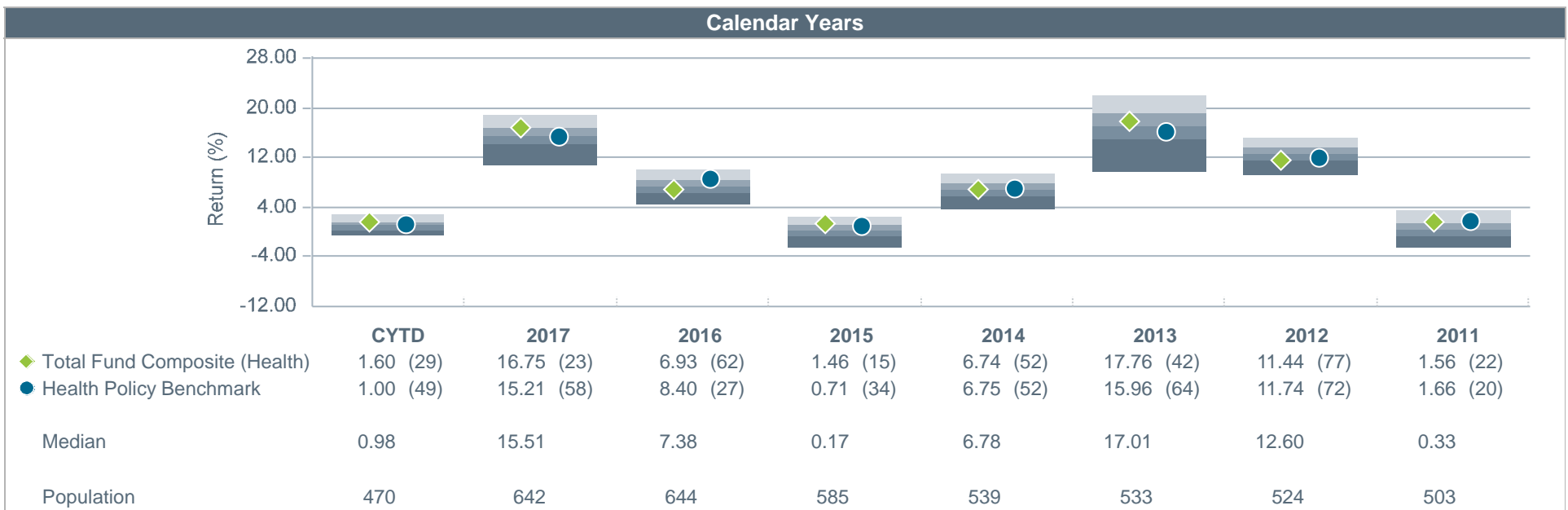
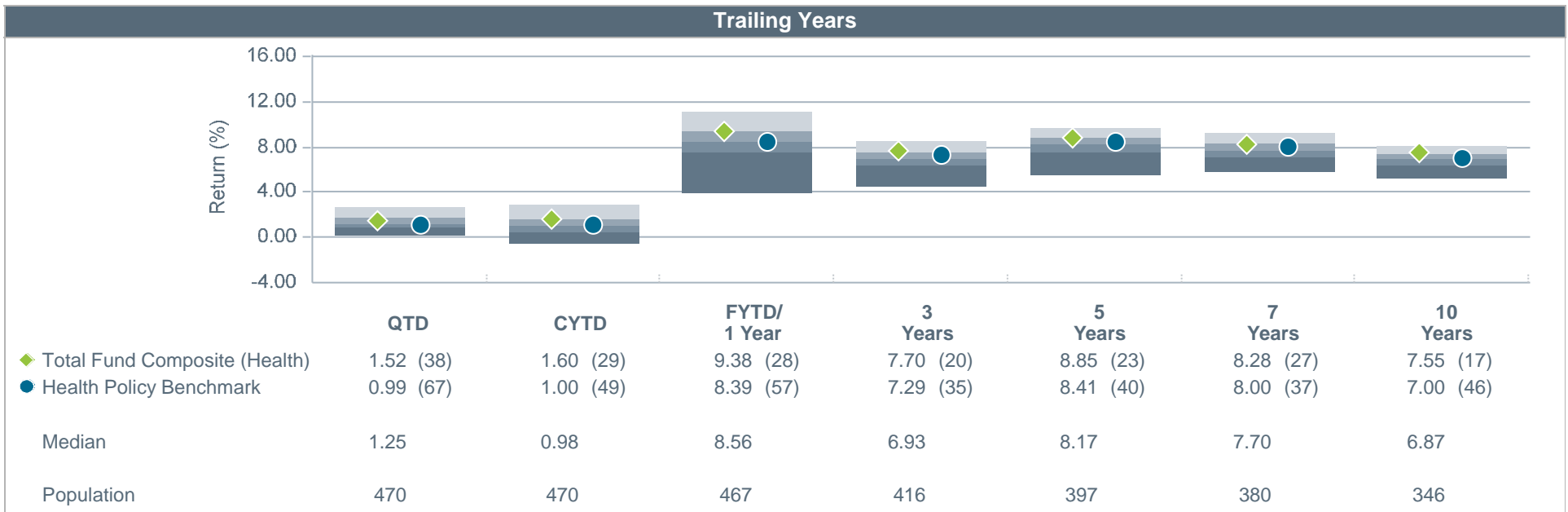
Since Inception Ending June 30, 2018



Performance shown is gross of fees. Calculation is based on monthly periodicity.

Water and Power Employees' Retirement Plan  
Plan Sponsor Peer Group Analysis - Health  
All Public Plans-Total Fund

As of June 30, 2018

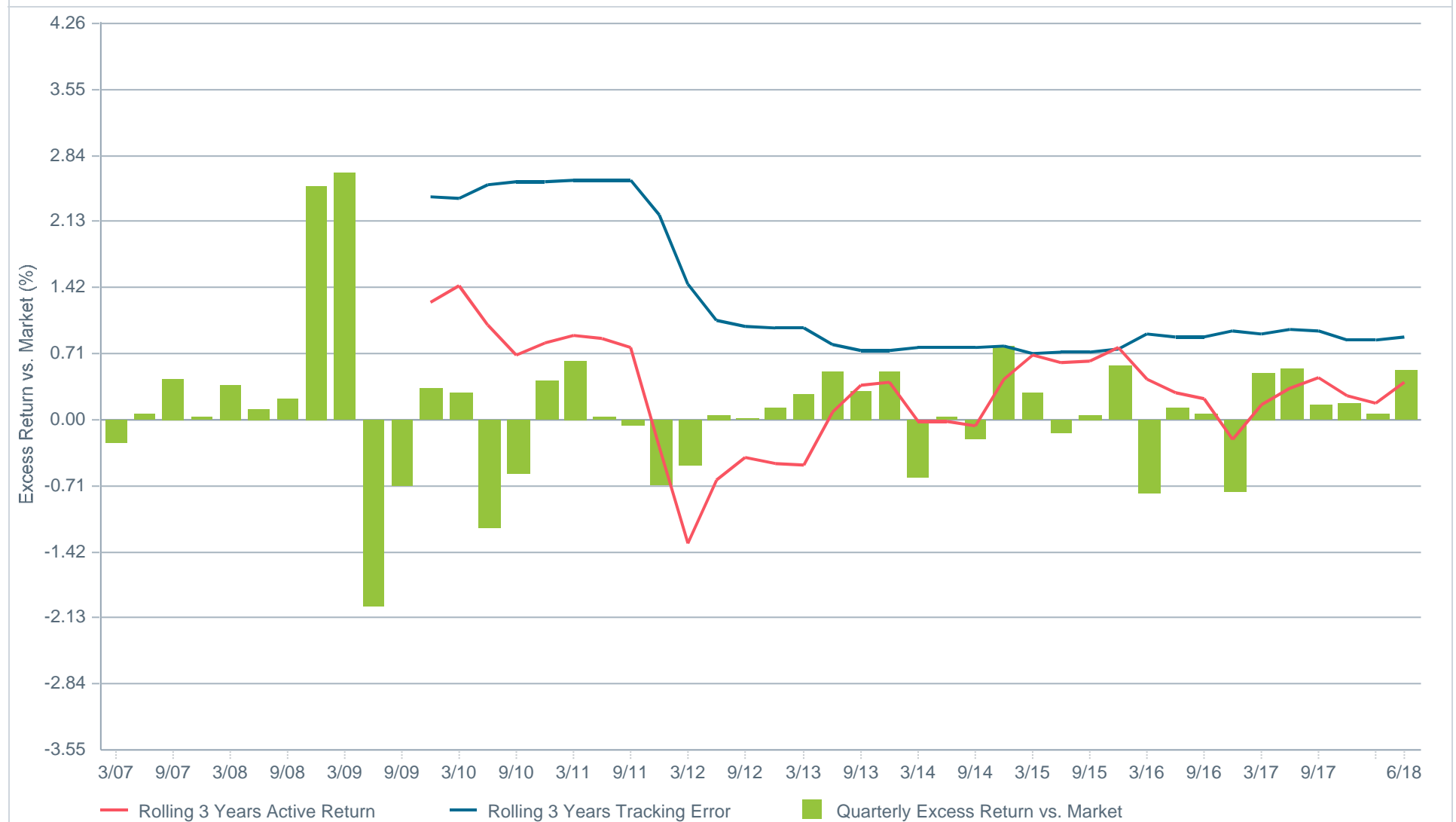


Performance shown is gross of fees. Parenthesis contain percentile ranks.

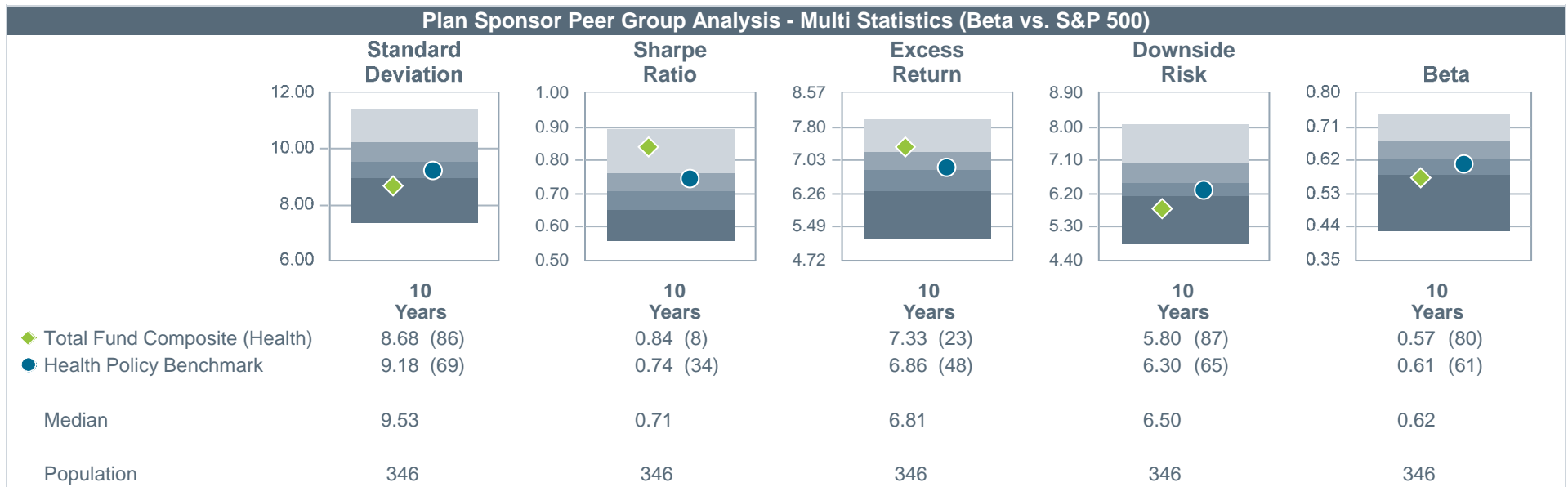
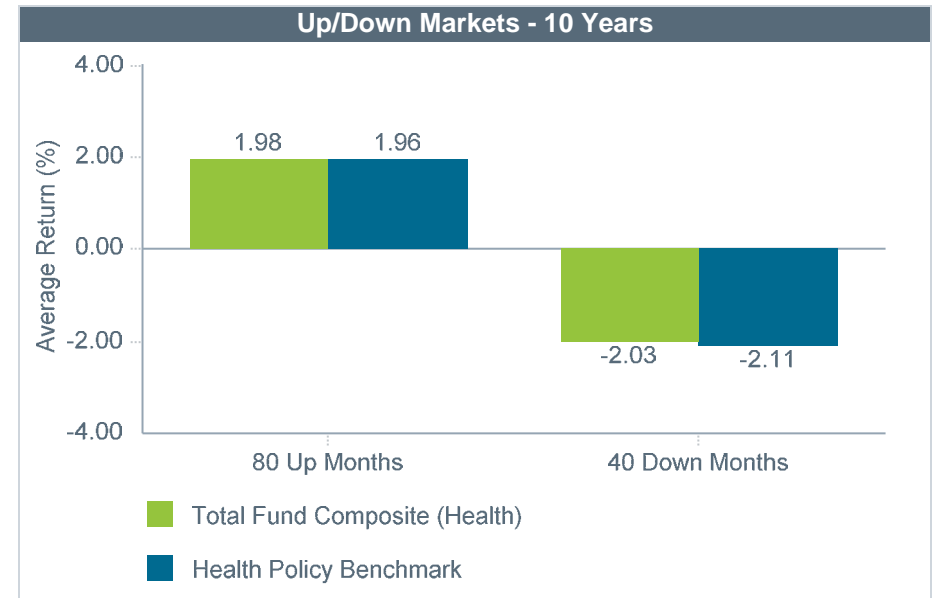
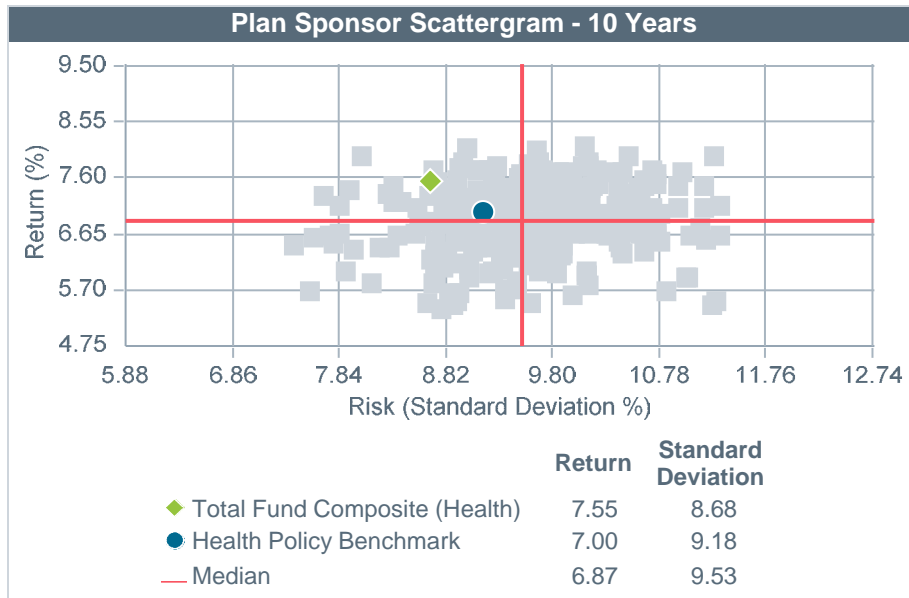
**Water and Power Employees' Retirement Plan**  
**Total Fund Composite (Health) vs. Health Policy Benchmark**  
**Comparative Performance & Rolling Return - Health**

As of June 30, 2018

	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
<b>Total Fund Composite (Health)</b>	<b>1.52</b>	<b>1.60</b>	<b>9.38</b>	<b>7.70</b>	<b>8.85</b>	<b>8.28</b>	<b>7.55</b>	<b>16.75</b>	<b>6.93</b>	<b>1.46</b>	<b>6.74</b>	<b>17.76</b>
Health Policy Benchmark	0.99	1.00	8.39	7.29	8.41	8.00	7.00	15.21	8.40	0.71	6.75	15.96
Difference	0.53	0.60	0.99	0.41	0.44	0.28	0.55	1.54	-1.47	0.75	-0.01	1.80



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Fiscal year ends 06/30.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

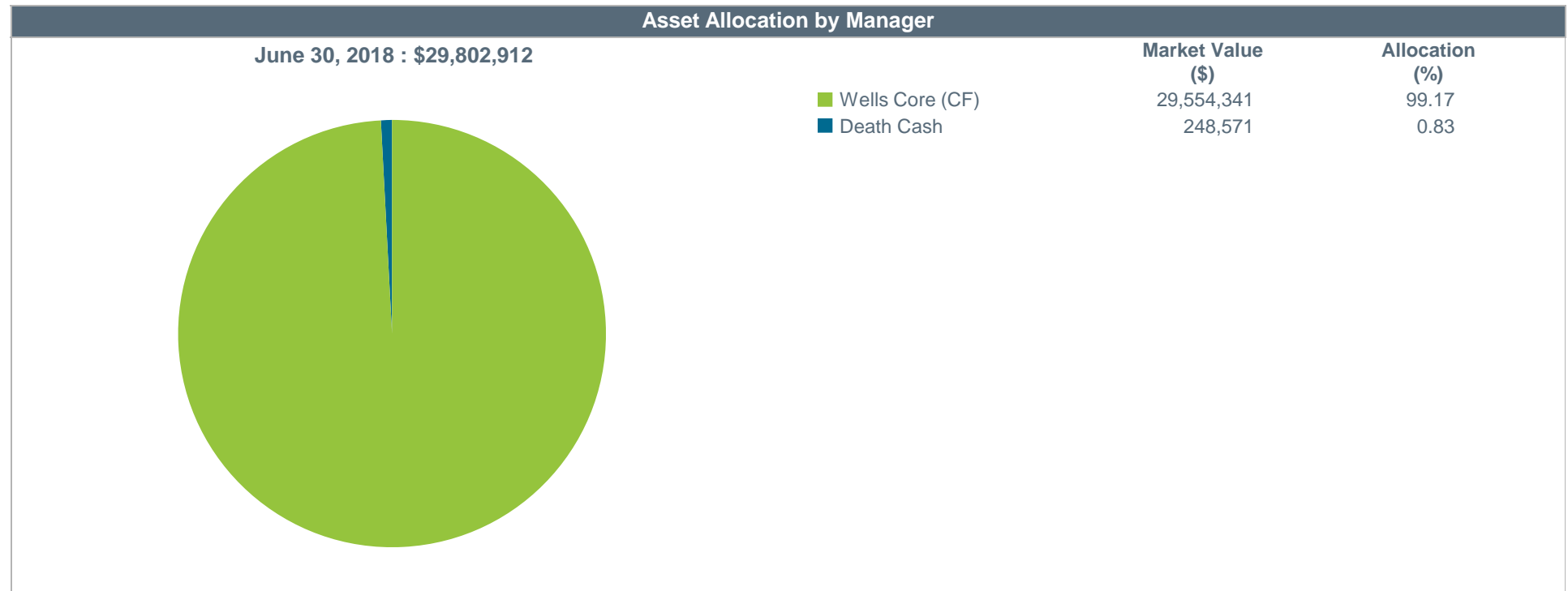


Performance shown is gross of fees. The objective of the Total Fund Beta is to measure the aggregate level of non-diversifiable or systematic equity risk exposure of the Water and Power Employees' Retirement Plan - Health. The Total Fund Beta is calculated using the S&P 500 Index (Cap Wtd) as the benchmark and is based on monthly periodicity. It represents a measure of the sensitivity of the total fund to movements of the S&P 500 Index (Cap Wtd) over the preceding three year period.

# Total Fund - Death and Disability

Water and Power Employees' Retirement Plan  
Asset Allocation by Manager and Comparative Performance - Death

As of June 30, 2018

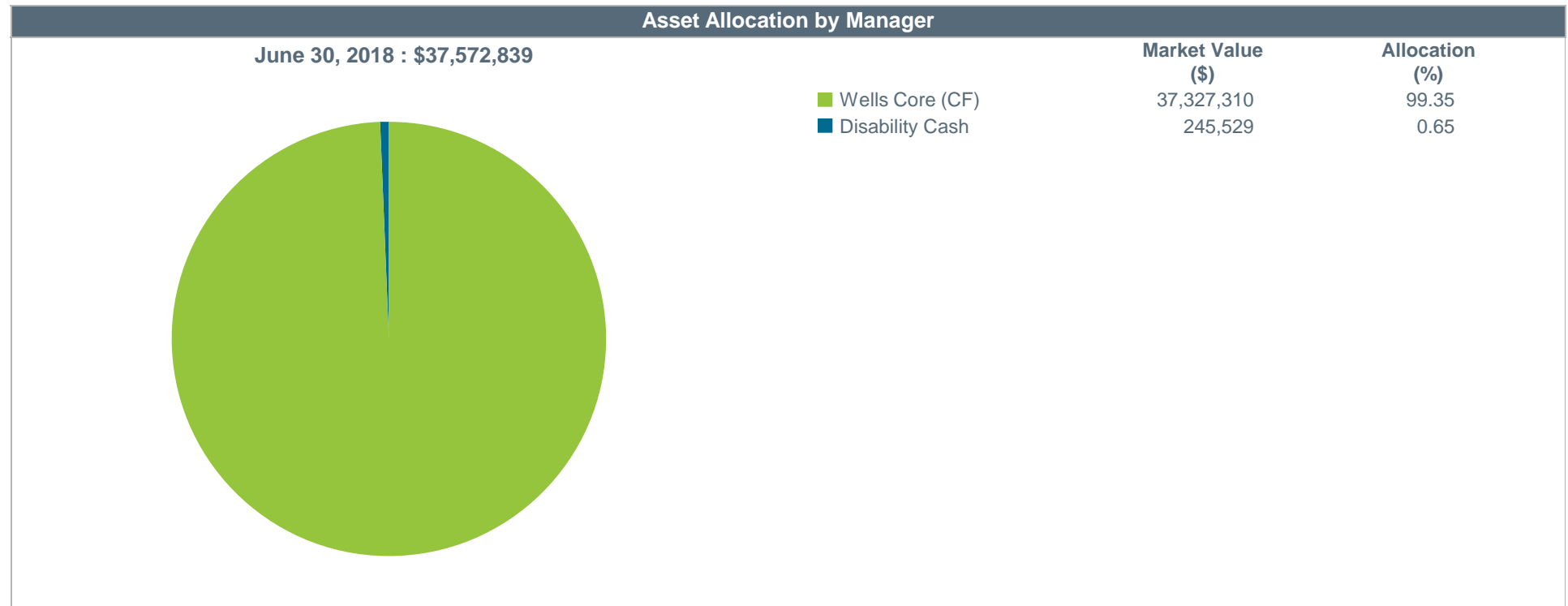


Comparative Performance												
	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Total Fund Composite (Death)</b>	<b>-0.12</b>	<b>-1.54</b>	<b>-0.30</b>	<b>1.78</b>	<b>2.54</b>	<b>3.11</b>	<b>4.33</b>	<b>3.41</b>	<b>2.92</b>	<b>1.08</b>	<b>5.21</b>	<b>12/01/1995</b>
Death Policy Benchmark	-0.13	-1.52	-0.33	1.68	2.20	2.48	3.58	3.43	2.55	0.53	4.88	
Difference	0.01	-0.02	0.03	0.10	0.34	0.63	0.75	-0.02	0.37	0.55	0.33	
<b>Wells Core (CF)</b>	<b>-0.13</b>	<b>-1.56</b>	<b>-0.31</b>	<b>1.80</b>	<b>2.59</b>	<b>3.20</b>	<b>4.77</b>	<b>3.46</b>	<b>2.98</b>	<b>1.06</b>	<b>4.84</b>	<b>07/01/2004</b>
Bloomberg US Agg Bond Index	-0.16	-1.62	-0.40	1.72	2.27	2.57	3.72	3.54	2.65	0.55	4.02	
Difference	0.03	0.06	0.09	0.08	0.32	0.63	1.05	-0.08	0.33	0.51	0.82	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	4.45	
Rank	63	65	74	80	58	40	23	88	58	27	20	
<b>Wells Core (CF) - Net</b>	<b>-0.13</b>	<b>-1.56</b>	<b>-0.31</b>	<b>1.80</b>	<b>2.59</b>	<b>3.20</b>	<b>4.77</b>	<b>3.46</b>	<b>2.98</b>	<b>1.06</b>	<b>4.59</b>	<b>07/01/2004</b>
Bloomberg US Agg Bond Index	-0.16	-1.62	-0.40	1.72	2.27	2.57	3.72	3.54	2.65	0.55	4.02	
Difference	0.03	0.06	0.09	0.08	0.32	0.63	1.05	-0.08	0.33	0.51	0.57	

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees, except where noted. Performance is annualized for periods greater than one year. Fiscal year ends 06/30. Please see the Addendum for custom index descriptions.

Water and Power Employees' Retirement Plan  
Asset Allocation by Manager and Comparative Performance - Disability

As of June 30, 2018

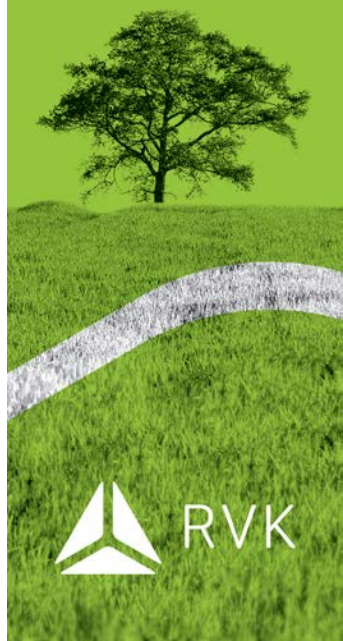


Comparative Performance												
	QTD	CYTD	FYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
<b>Total Fund Composite (Disability)</b>	<b>-0.13</b>	<b>-1.55</b>	<b>-0.31</b>	<b>1.81</b>	<b>2.58</b>	<b>3.19</b>	<b>4.50</b>	<b>3.44</b>	<b>2.97</b>	<b>1.10</b>	<b>5.55</b>	<b>12/01/1995</b>
Disability Policy Benchmark	-0.13	-1.50	-0.31	1.67	2.18	2.46	3.55	3.41	2.53	0.53	4.85	
Difference	0.00	-0.05	0.00	0.14	0.40	0.73	0.95	0.03	0.44	0.57	0.70	
<b>Wells Core (CF)</b>	<b>-0.13</b>	<b>-1.57</b>	<b>-0.32</b>	<b>1.80</b>	<b>2.58</b>	<b>3.20</b>	<b>4.77</b>	<b>3.46</b>	<b>2.98</b>	<b>1.06</b>	<b>4.83</b>	<b>07/01/2004</b>
Bloomberg US Agg Bond Index	-0.16	-1.62	-0.40	1.72	2.27	2.57	3.72	3.54	2.65	0.55	4.02	
Difference	0.03	0.05	0.08	0.08	0.31	0.63	1.05	-0.08	0.33	0.51	0.81	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-1.44	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	4.45	
Rank	64	66	74	80	58	40	23	88	58	27	21	
<b>Wells Core (CF) - Net</b>	<b>-0.13</b>	<b>-1.57</b>	<b>-0.32</b>	<b>1.80</b>	<b>2.58</b>	<b>3.20</b>	<b>4.78</b>	<b>3.46</b>	<b>2.98</b>	<b>1.06</b>	<b>4.54</b>	<b>07/01/2004</b>
Bloomberg US Agg Bond Index	-0.16	-1.62	-0.40	1.72	2.27	2.57	3.72	3.54	2.65	0.55	4.02	
Difference	0.03	0.05	0.08	0.08	0.31	0.63	1.06	-0.08	0.33	0.51	0.52	

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# Composite and Manager Reviews



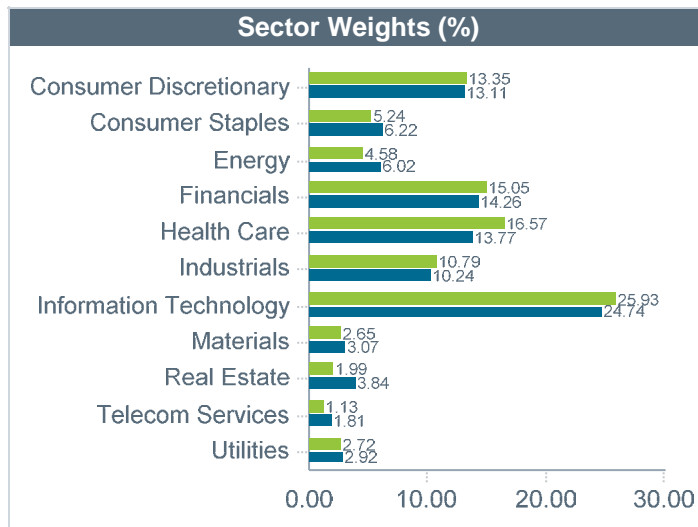
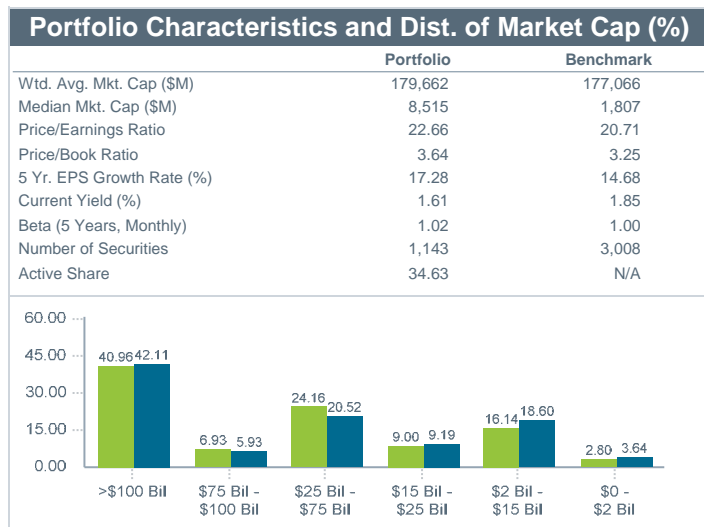
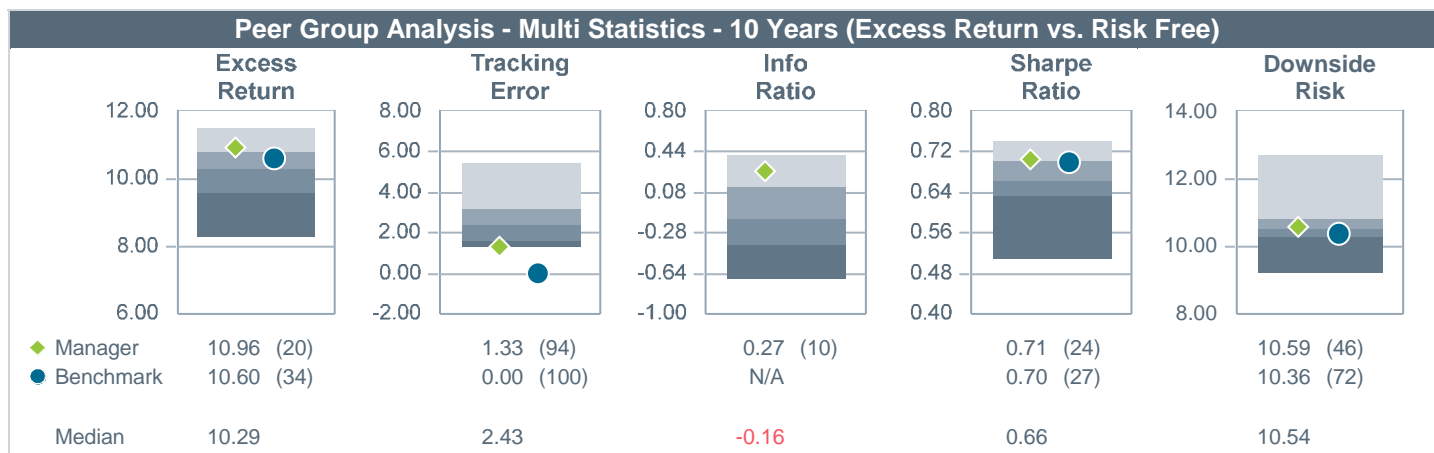
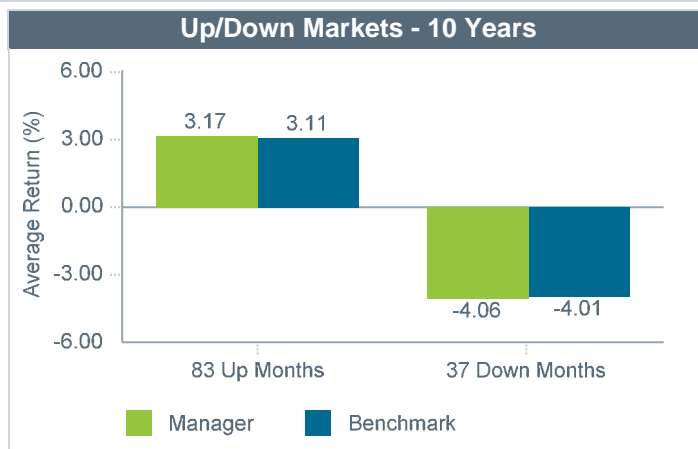
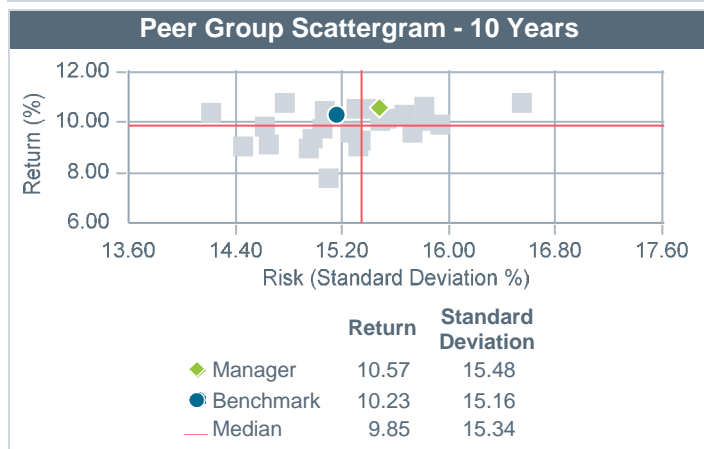
**Manager: Domestic Equity Composite - Retirement**

As of June 30, 2018

**Benchmark:** Russell 3000 (Blended) (R)

**Peer Group:** All Public Plans-US Equity Segment

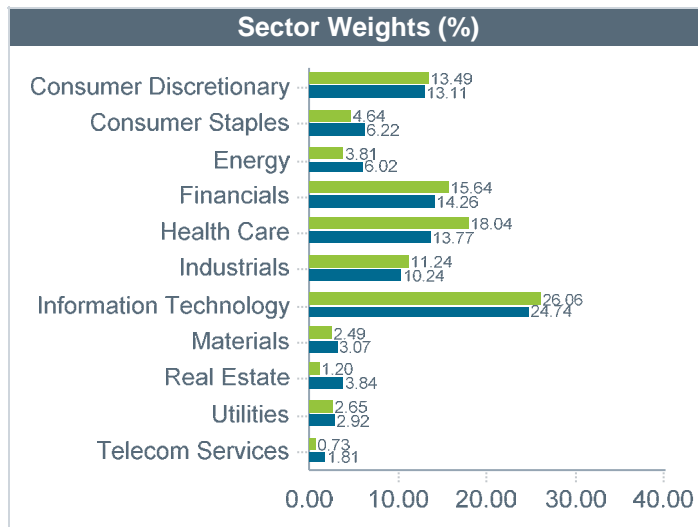
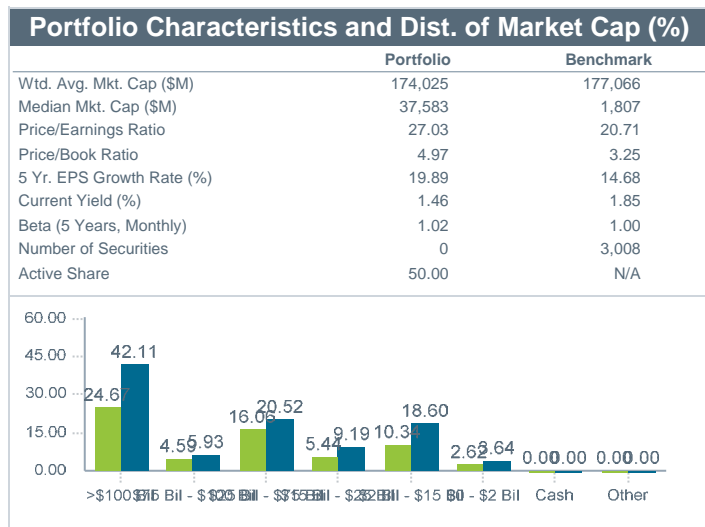
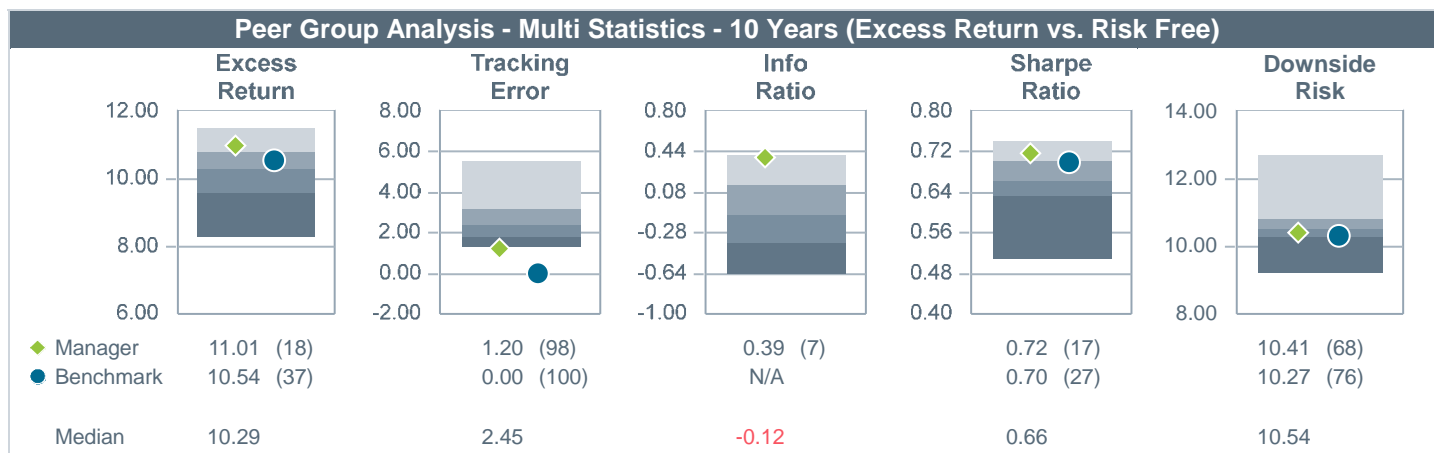
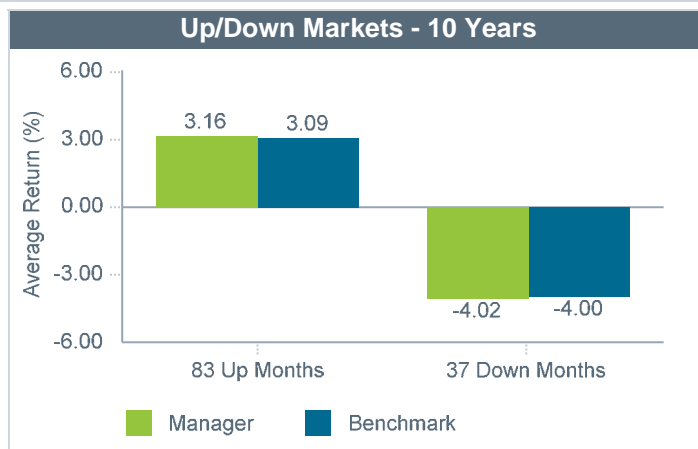
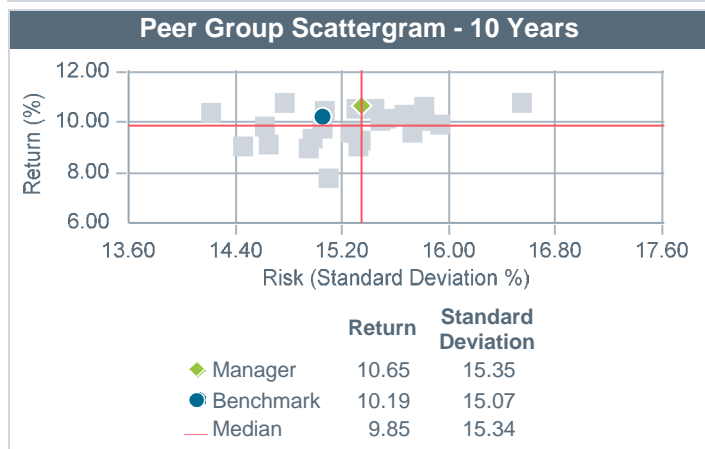
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	4.57	16.72	12.56	14.52	13.72	10.57	23.44	11.68	1.96	11.82	36.97
Benchmark	3.89	14.78	11.58	13.29	13.01	10.23	21.13	12.74	0.48	12.56	33.55
Difference	0.68	1.94	0.98	1.23	0.71	0.34	2.31	-1.06	1.48	-0.74	3.42
Peer Group Median	3.84	14.76	11.20	12.95	12.60	9.85	20.32	12.98	0.21	11.42	33.76
Rank	16	9	5	3	2	18	8	78	8	35	5
Population	72	66	63	56	47	30	93	95	86	48	46



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

**Manager: Domestic Equity Composite - Health**
**As of June 30, 2018**
**Benchmark: Russell 3000 (Blended) (H)**
**Peer Group: All Public Plans-US Equity Segment**

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	4.53	16.65	12.52	14.50	13.74	10.65	23.37	11.67	1.99	11.88	36.87
Benchmark	3.89	14.78	11.58	13.29	13.01	10.19	21.13	12.74	0.48	12.56	33.55
Difference	0.64	1.87	0.94	1.21	0.73	0.46	2.24	-1.07	1.51	-0.68	3.32
Peer Group Median	3.84	14.76	11.20	12.95	12.60	9.85	20.32	12.98	0.21	11.42	33.76
Rank	16	9	6	3	1	16	8	78	8	34	6
Population	72	66	63	56	47	30	93	95	86	48	46



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



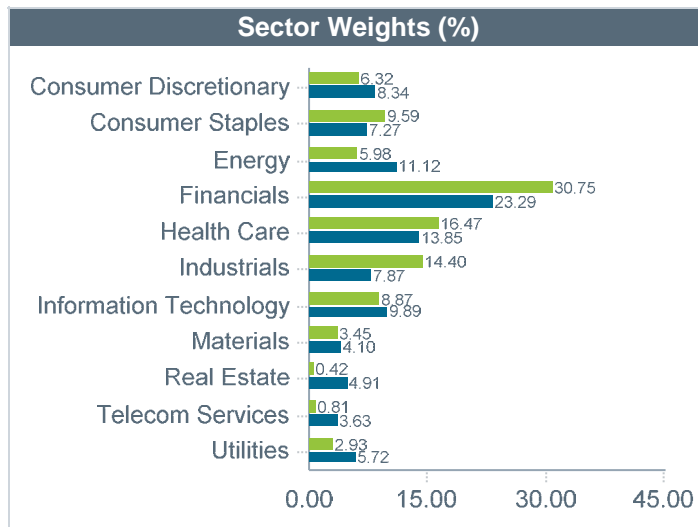
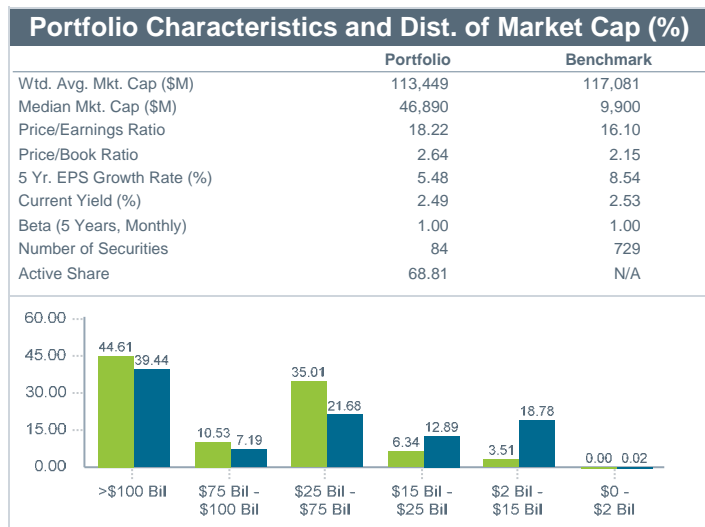
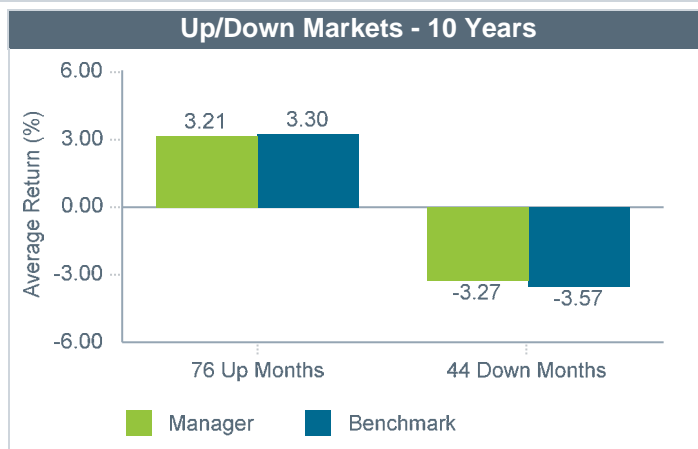
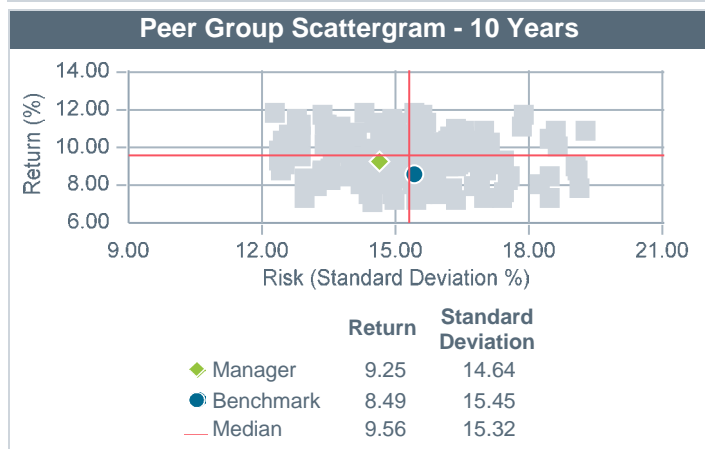
Manager: MFS Large Cap Value (SA)

As of June 30, 2018

Benchmark: Russell 1000 Val Index

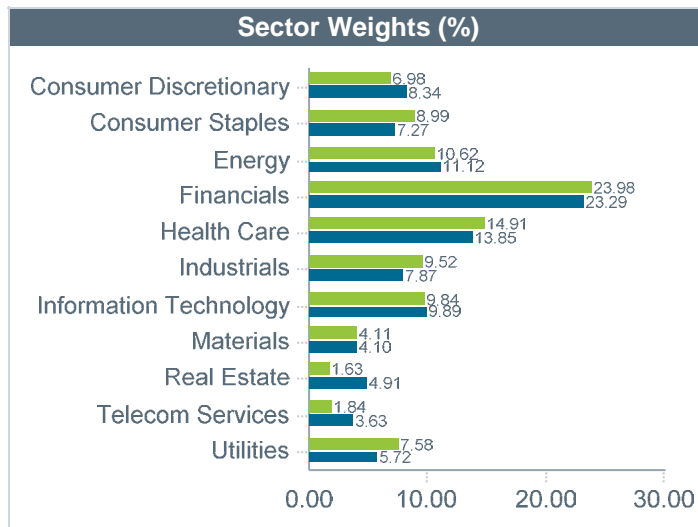
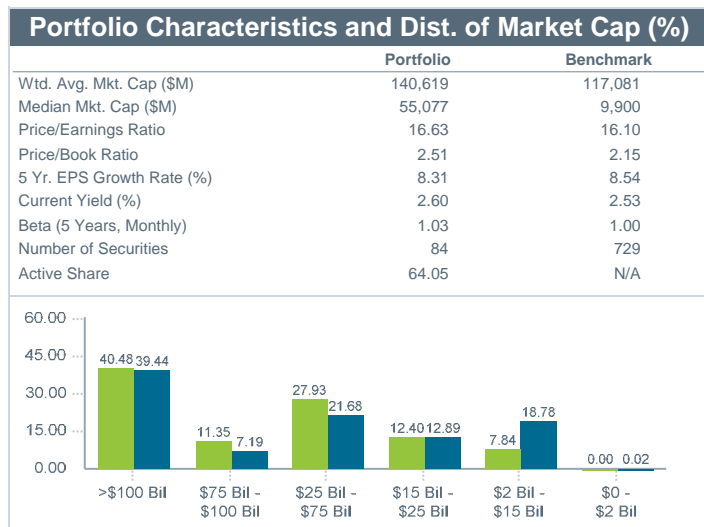
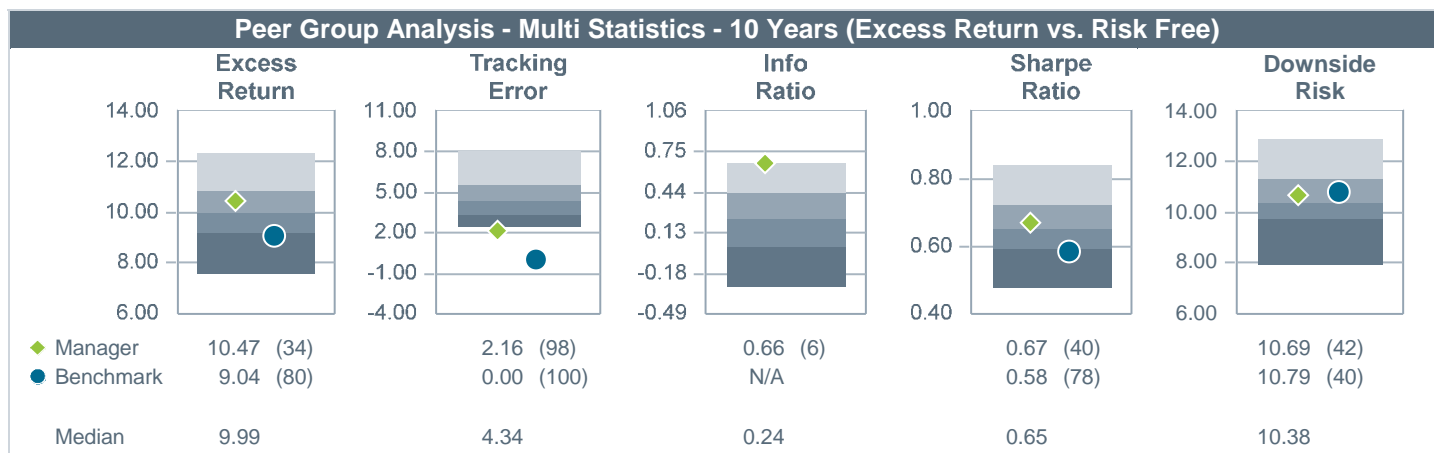
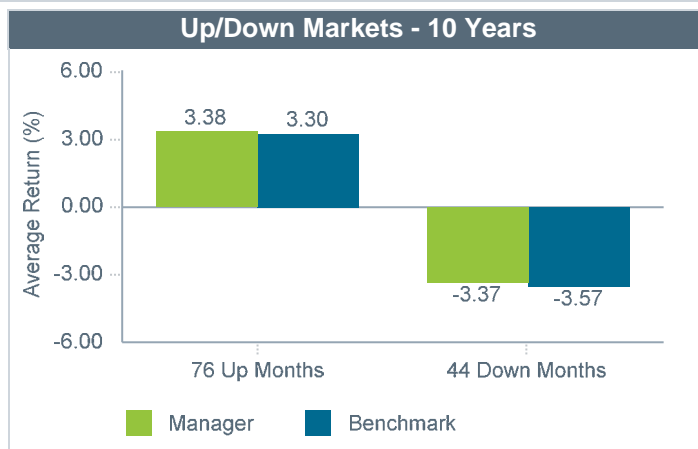
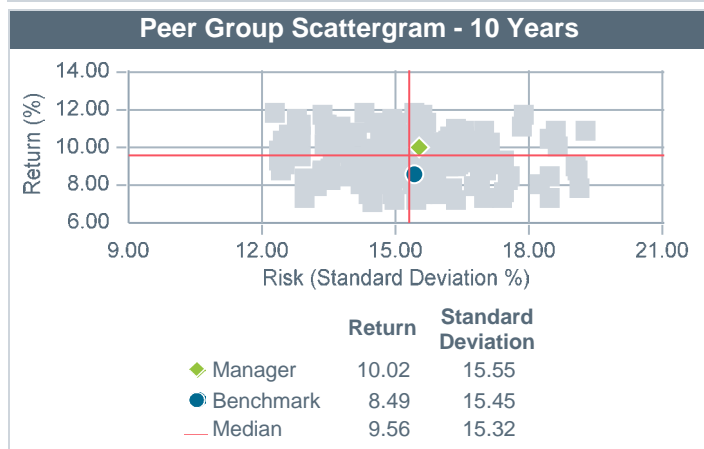
Peer Group: IM U.S. Large Cap Value Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.64	4.25	9.06	11.30	12.08	9.25	17.82	15.80	-0.06	11.86	36.41
Benchmark	1.18	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	13.45	32.53
Difference	-1.82	-2.52	0.80	0.96	0.81	0.76	4.16	-1.54	3.77	-1.59	3.88
Peer Group Median	1.69	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	12.26	34.27
Rank	95	96	58	56	47	60	44	38	28	57	34
Population	302	302	296	286	274	244	334	363	381	406	407



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	2.14	9.12	10.42	11.85	12.49	10.02	16.74	17.14	-1.90	13.43	35.32
Benchmark	1.18	6.77	8.26	10.34	11.27	8.49	13.66	17.34	-3.83	13.45	32.53
Difference	0.96	2.35	2.16	1.51	1.22	1.53	3.08	-0.20	1.93	-0.02	2.79
Peer Group Median	1.69	10.29	9.33	11.50	11.98	9.57	17.22	14.51	-2.25	12.26	34.27
Rank	36	65	27	39	36	36	59	26	46	36	42
Population	302	302	296	286	274	244	334	363	381	406	407



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

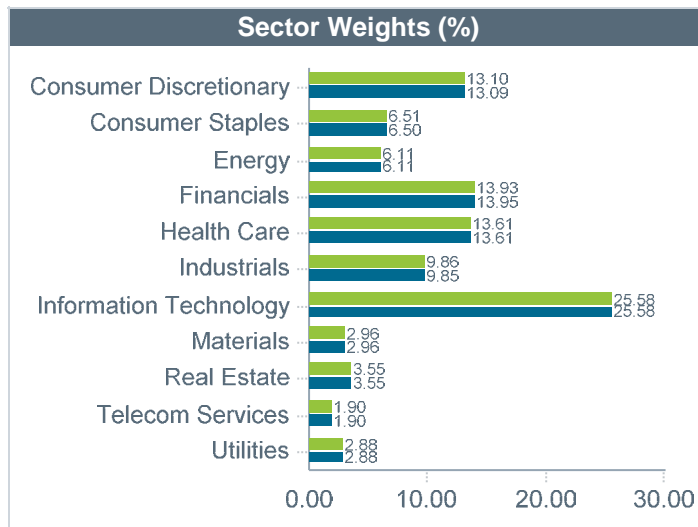
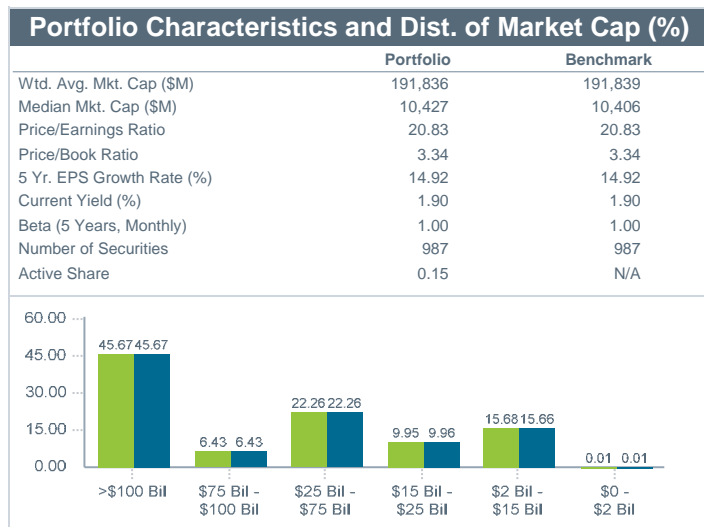
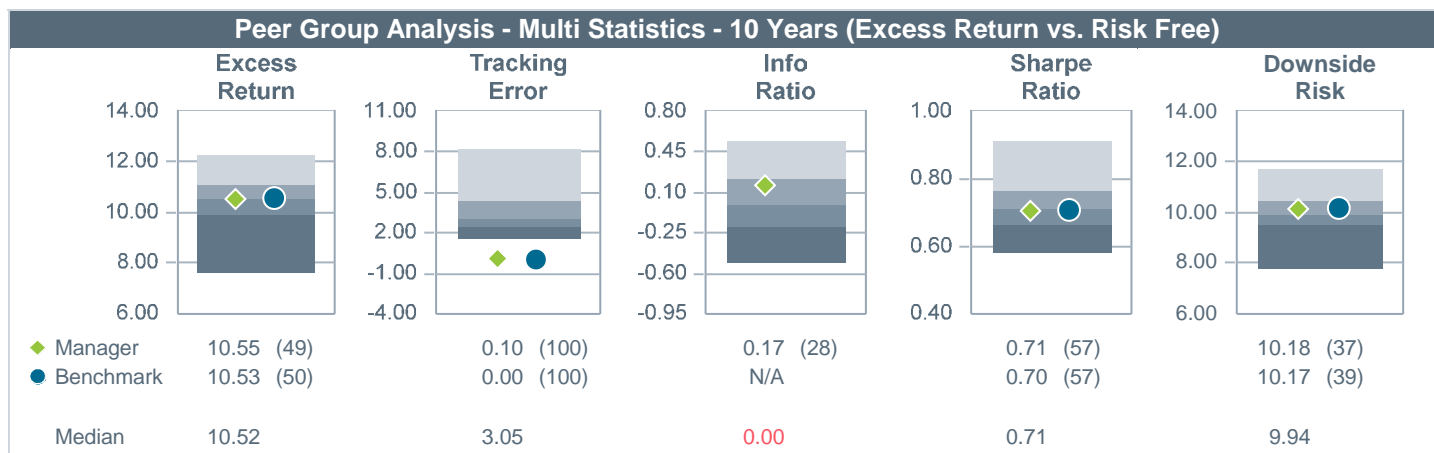
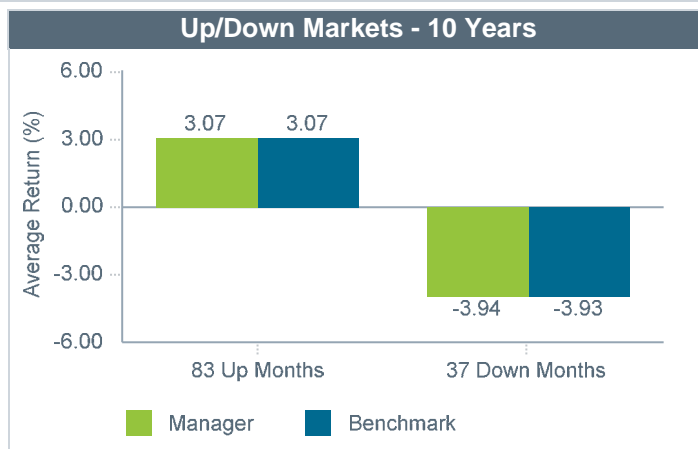
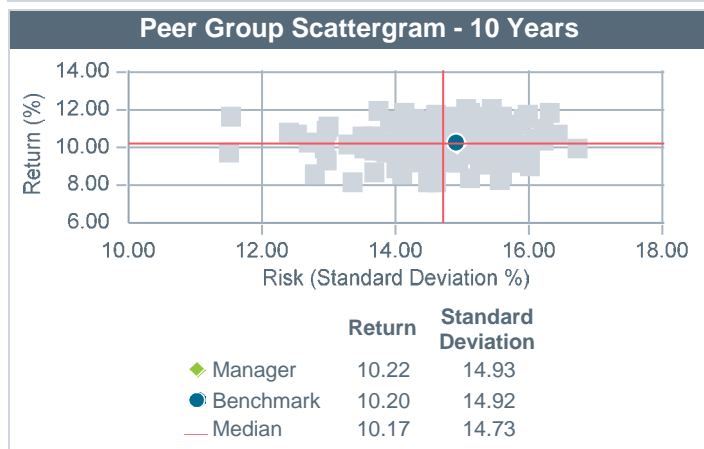
**Manager:** BlackRock Russell 1000 Index (CF)

**As of June 30, 2018**

**Benchmark:** Russell 1000 Index

**Peer Group:** IM U.S. Large Cap Core Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
<b>Manager</b>	<b>3.59</b>	<b>14.56</b>	<b>11.68</b>	<b>13.40</b>	<b>13.13</b>	<b>10.22</b>	<b>21.70</b>	<b>12.09</b>	<b>0.94</b>	<b>13.27</b>	<b>33.16</b>
Benchmark	3.57	14.54	11.64	13.37	13.12	10.20	21.69	12.05	0.92	13.24	33.11
Difference	0.02	0.02	0.04	0.03	0.01	0.02	0.01	0.04	0.02	0.03	0.05
Peer Group Median	2.89	14.24	11.12	13.35	13.12	10.18	21.82	10.51	1.39	13.43	32.98
Rank	26	46	38	49	50	49	52	30	56	52	49
Population	240	239	235	227	212	190	273	298	316	338	356



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

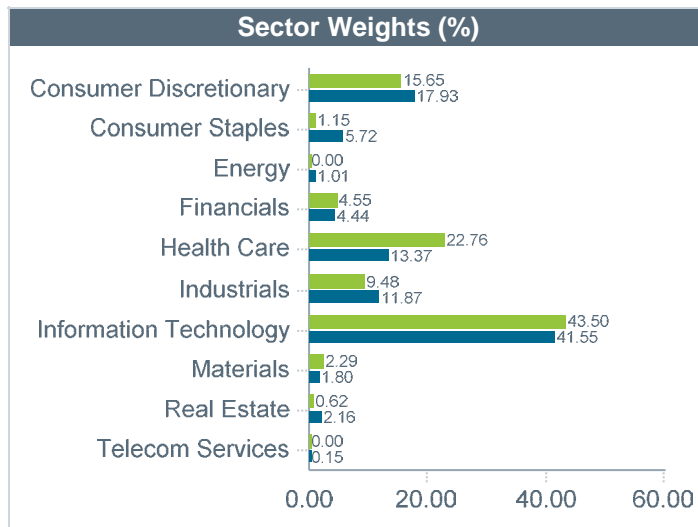
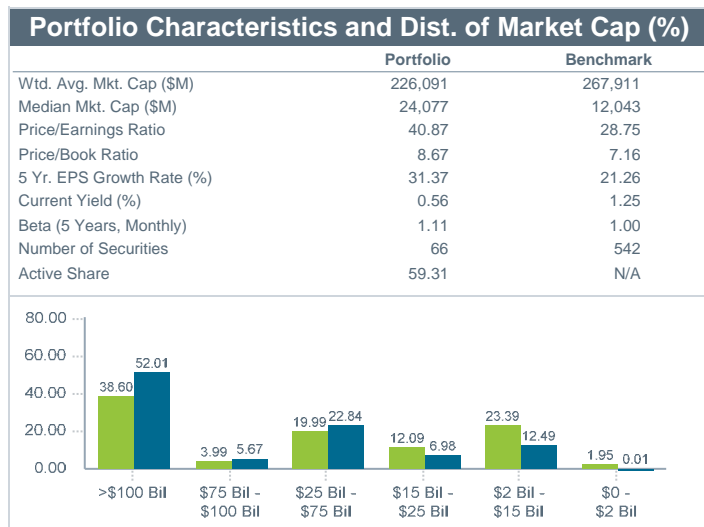
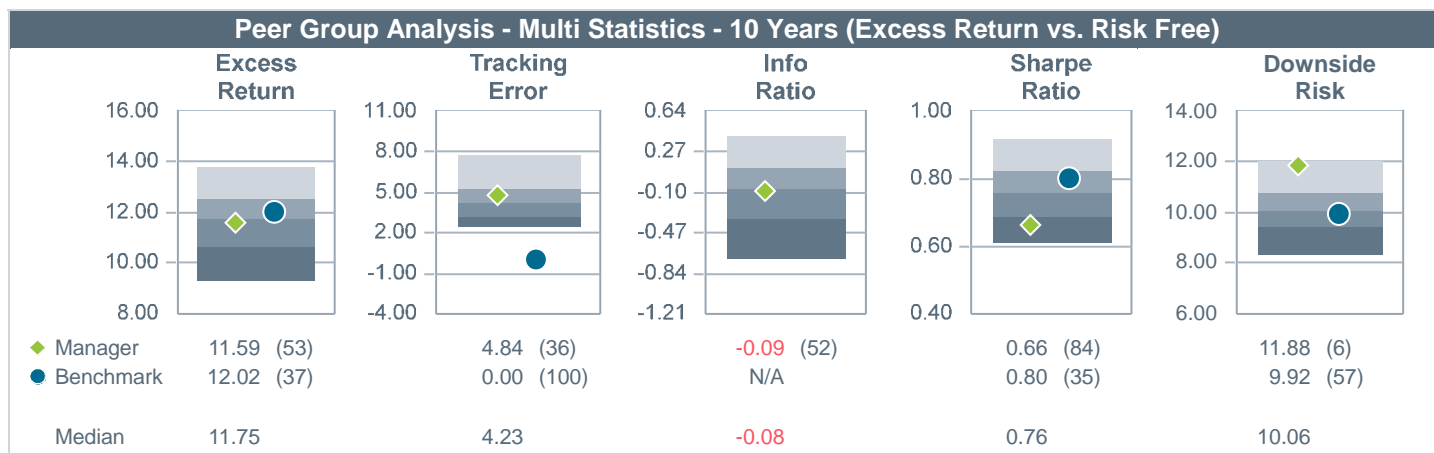
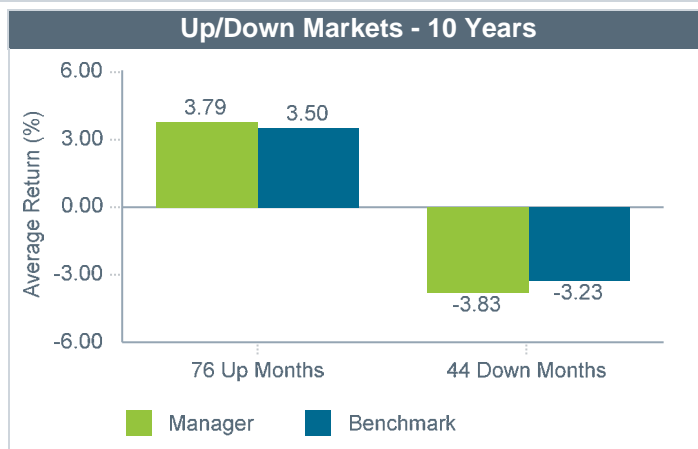
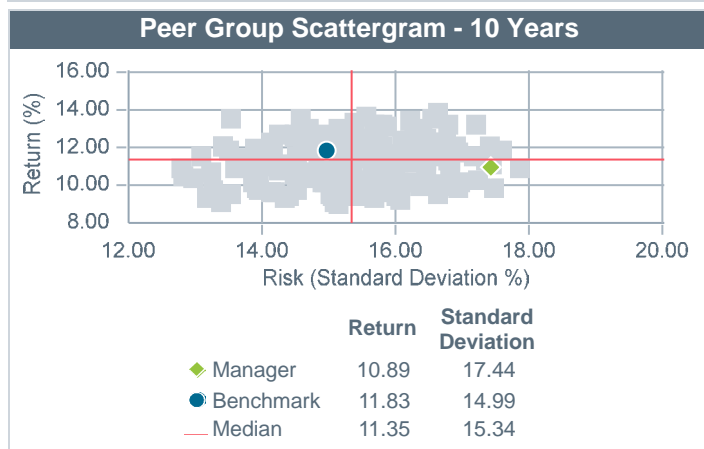
**Manager: Fred Alger Large Cap Growth (SA)**

**As of June 30, 2018**

**Benchmark: Russell 1000 Grth Index**

**Peer Group: IM U.S. Large Cap Growth Equity (SA+CF)**

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	10.41	28.56	12.16	16.22	13.19	10.89	29.32	0.38	1.73	11.75	37.29
Benchmark	5.76	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	13.05	33.48
Difference	4.65	6.05	-2.82	-0.14	-1.69	-0.94	-0.89	-6.70	-3.94	-1.30	3.81
Peer Group Median	5.22	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	12.02	34.55
Rank	2	13	67	41	71	63	42	86	78	54	27
Population	250	248	240	233	222	208	278	305	333	344	351



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

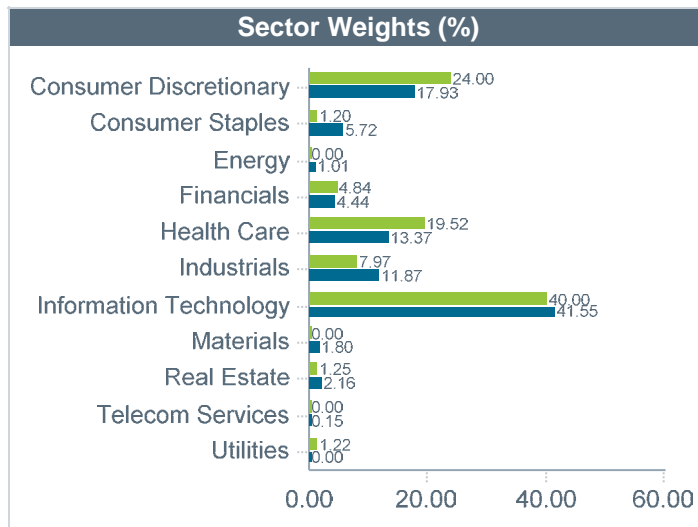
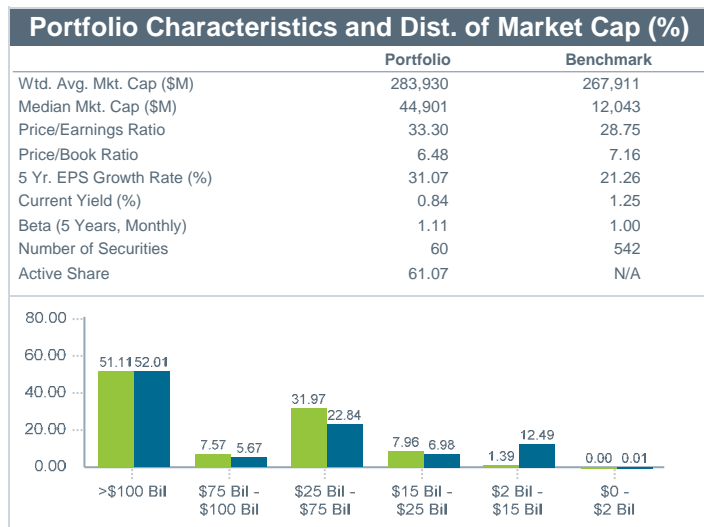
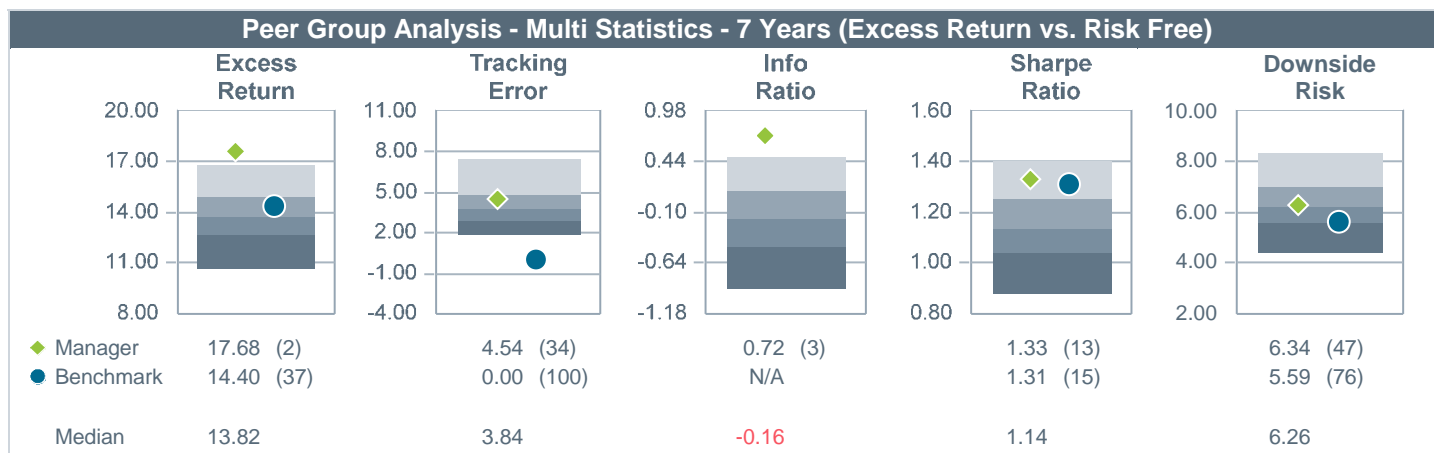
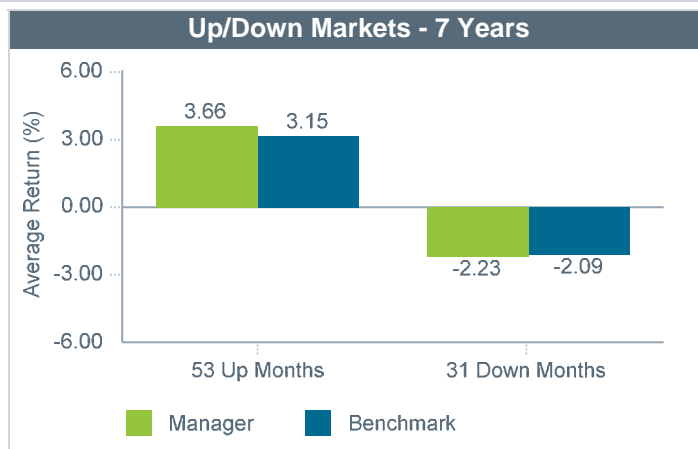
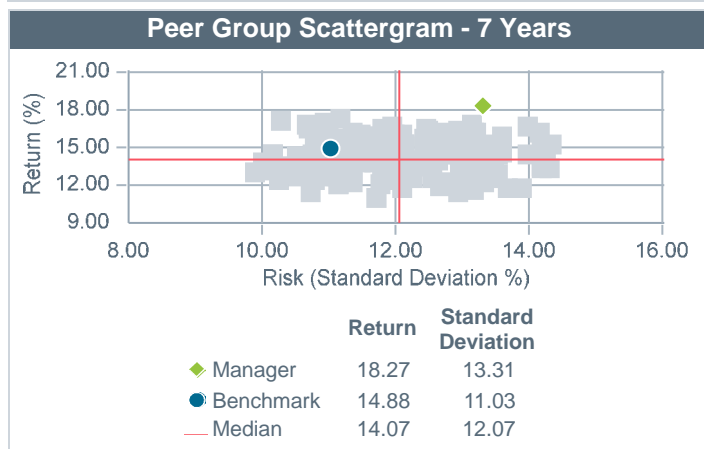
Manager: T. Rowe Price Large Cap Growth (SA)

As of June 30, 2018

Benchmark: Russell 1000 Grth Index

Peer Group: IM U.S. Large Cap Growth Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	7.09	29.48	19.81	20.50	18.27	N/A	36.61	5.78	12.48	9.31	44.58
Benchmark	5.76	22.51	14.98	16.36	14.88	11.83	30.21	7.08	5.67	13.05	33.48
Difference	1.33	6.97	4.83	4.14	3.39	N/A	6.40	-1.30	6.81	-3.74	11.10
Peer Group Median	5.22	21.27	13.42	15.61	14.07	11.35	28.26	4.66	5.07	12.02	34.55
Rank	18	7	3	2	2	N/A	5	41	7	80	6
Population	250	248	240	233	222	208	278	305	333	344	351



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parenthesis contain percentile ranks.



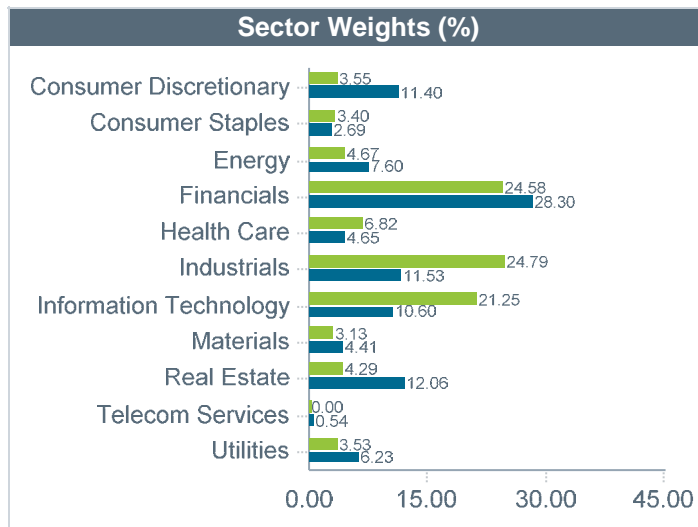
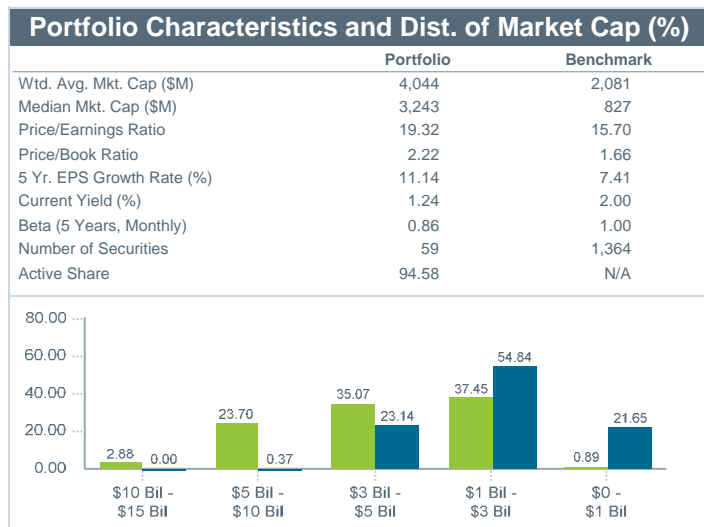
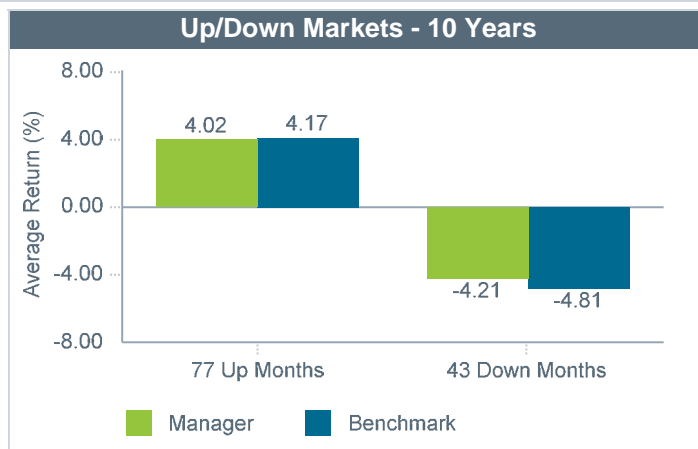
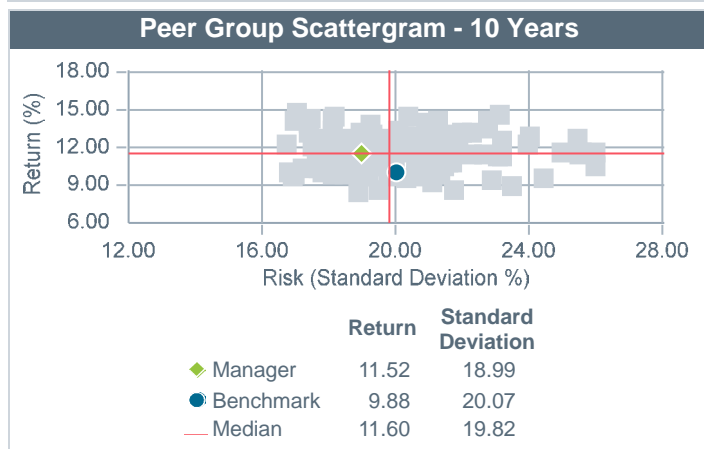
**Manager:** Earnest Partners Small Cap Value (SA)

As of June 30, 2018

**Benchmark:** Russell 2000 Val Index

**Peer Group:** IM U.S. Small Cap Value Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	4.01	16.99	13.90	14.92	14.04	11.52	23.07	24.79	-2.28	11.11	35.47
Benchmark	8.30	13.10	11.22	11.18	11.10	9.88	7.84	31.74	-7.47	4.22	34.52
Difference	-4.29	3.89	2.68	3.74	2.94	1.64	15.23	-6.95	5.19	6.89	0.95
Peer Group Median	5.62	13.30	10.67	12.21	12.18	11.60	11.59	26.17	-4.29	5.71	38.07
Rank	79	22	10	4	13	52	4	59	31	6	72
Population	209	209	204	195	187	170	223	233	242	253	255



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

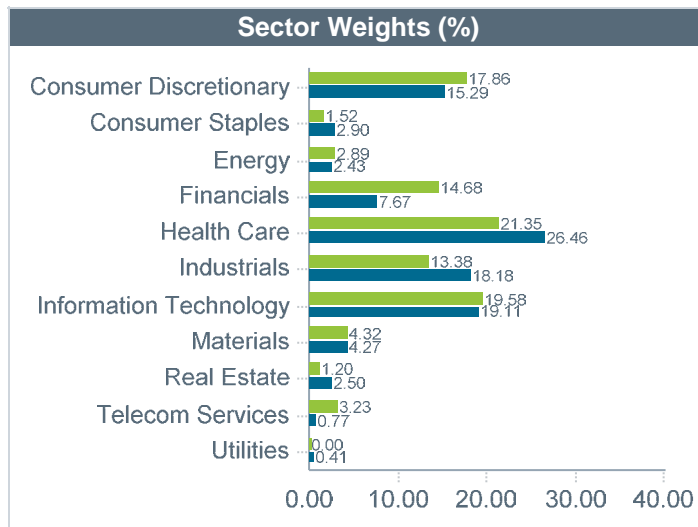
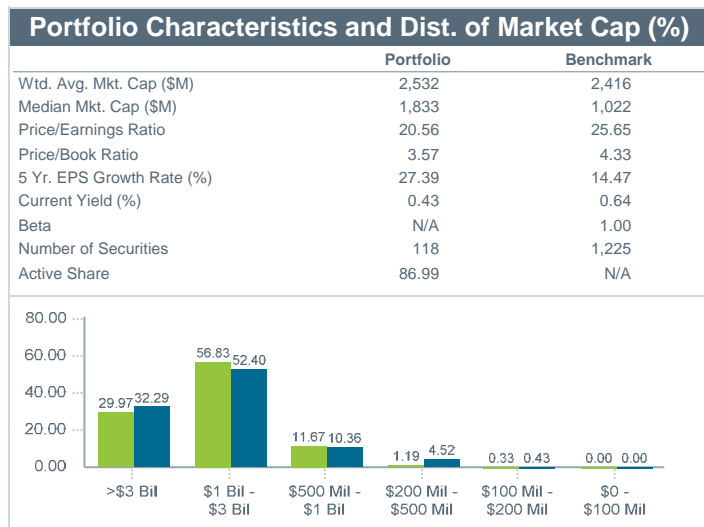
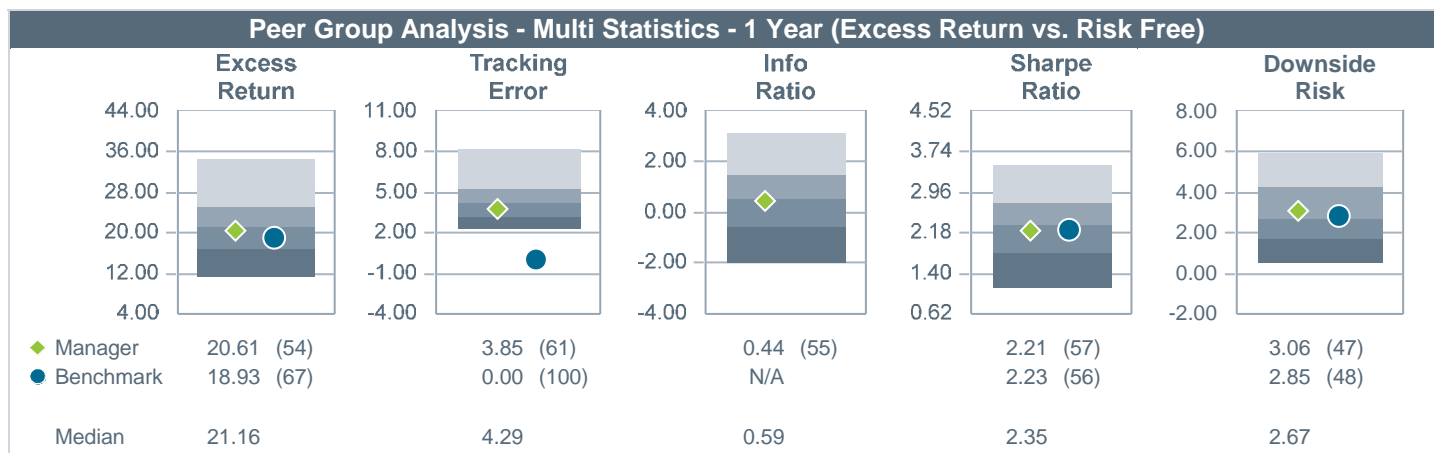
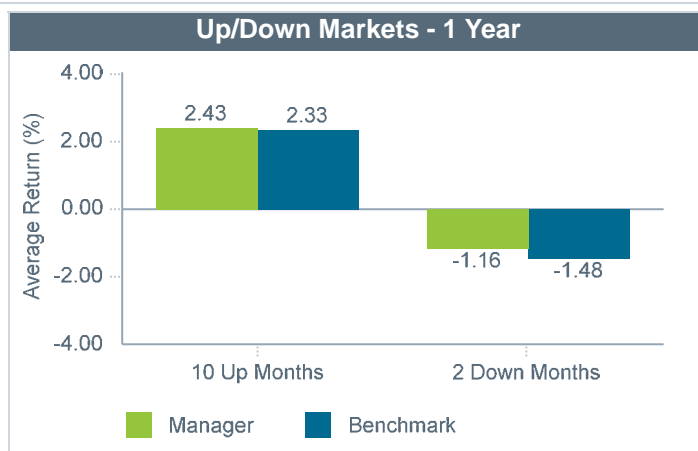
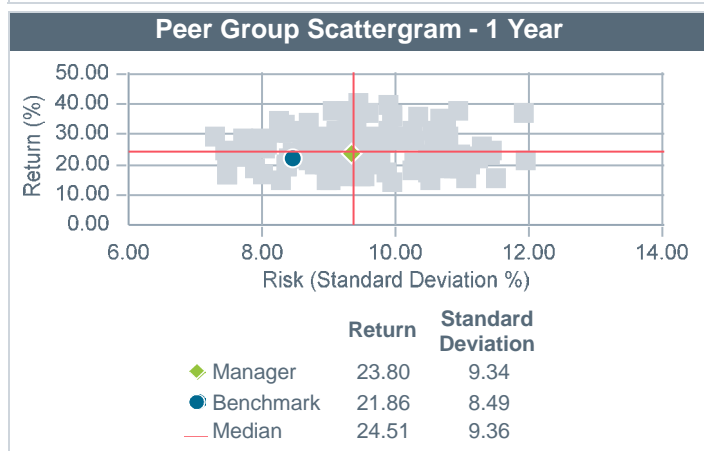
Manager: Emerald Small Cap Growth (SA)

As of June 30, 2018

Benchmark: Russell 2000 Grth Index

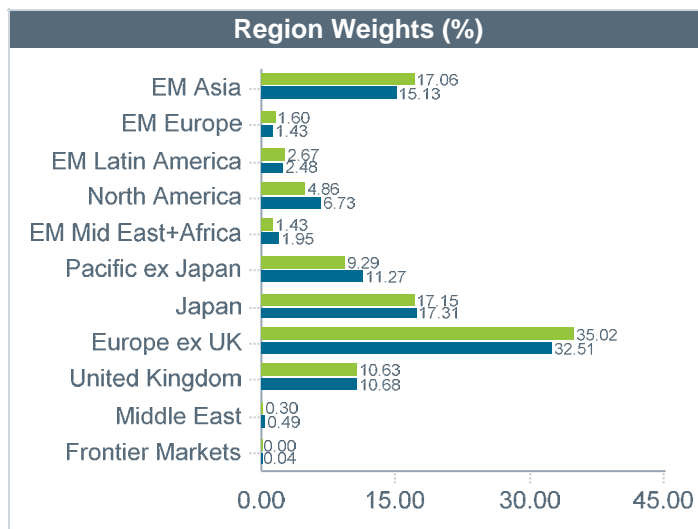
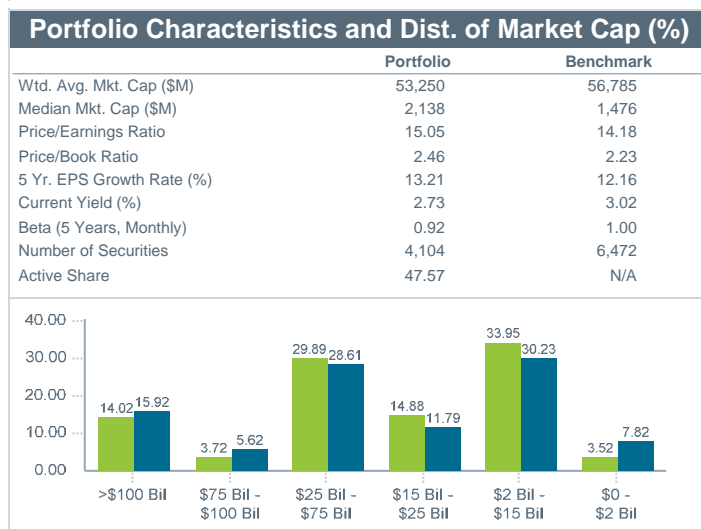
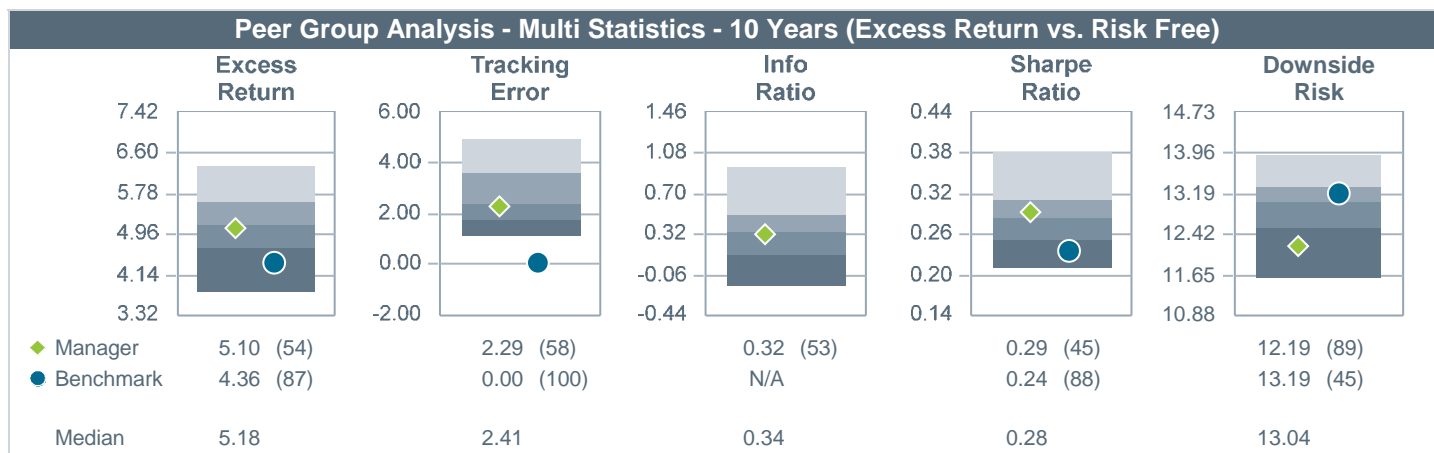
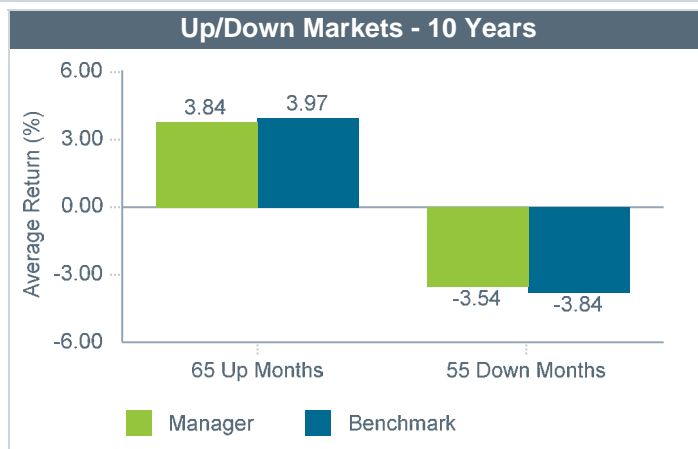
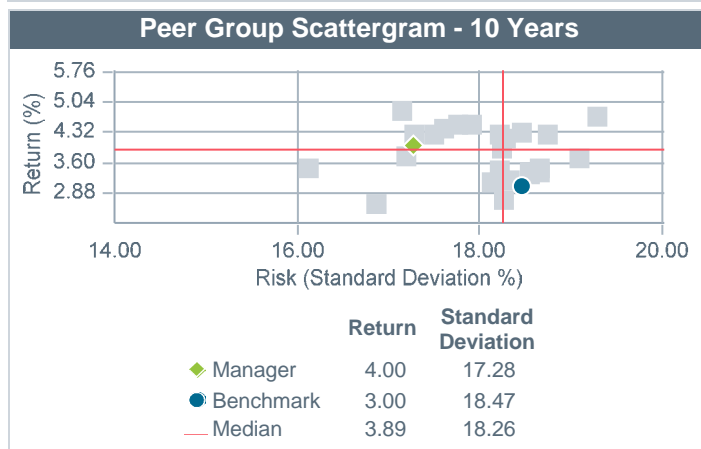
Peer Group: IM U.S. Small Cap Growth Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	9.18	23.80	N/A	N/A	N/A	N/A	29.53	10.02	N/A	N/A	N/A
Benchmark	7.23	21.86	10.60	13.65	12.50	11.24	22.17	11.32	-1.38	5.60	43.30
Difference	1.95	1.94	N/A	N/A	N/A	N/A	7.36	-1.30	N/A	N/A	N/A
Peer Group Median	8.82	24.51	12.34	14.60	13.31	12.15	23.82	11.38	-0.74	4.08	45.48
Rank	45	54	N/A	N/A	N/A	N/A	21	58	N/A	N/A	N/A
Population	166	165	163	157	151	138	174	184	202	212	218



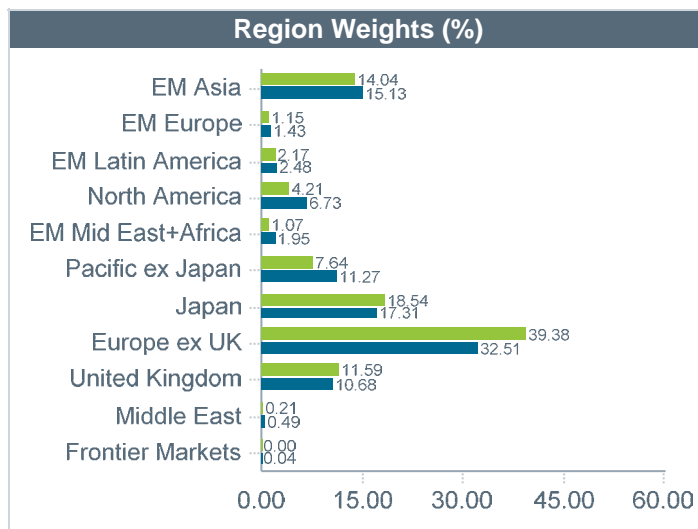
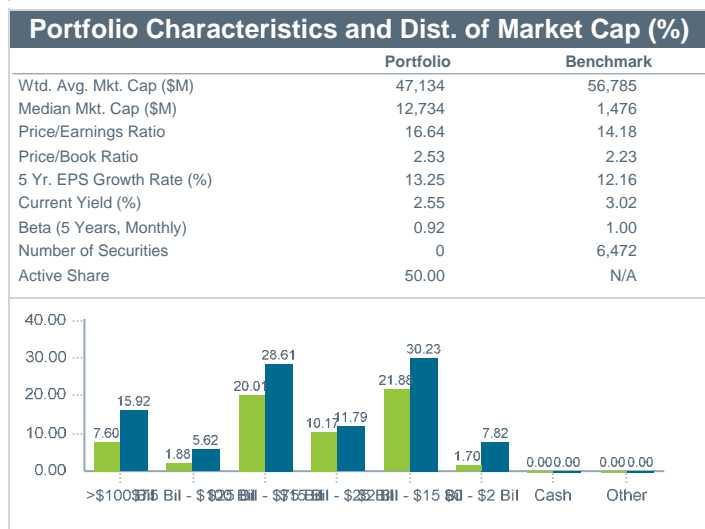
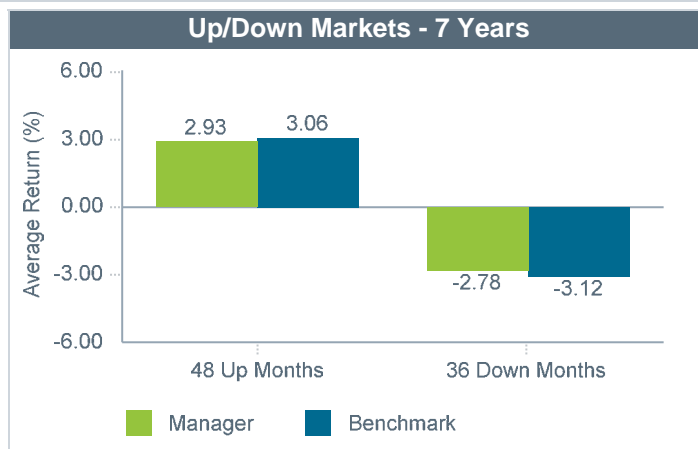
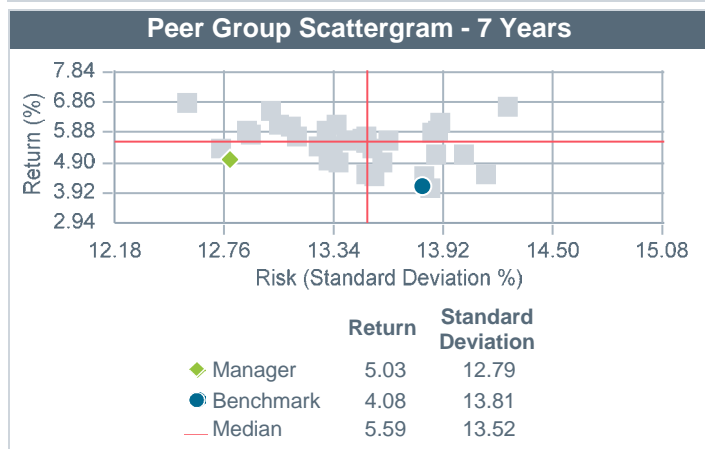
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Beta Calculation requires three years of performance history.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-2.45	8.20	6.93	7.58	5.14	4.00	29.34	3.09	-1.39	-1.15	19.16
Benchmark	-2.61	7.75	5.46	6.39	4.08	3.00	27.81	4.41	-4.60	-3.89	15.82
Difference	0.16	0.45	1.47	1.19	1.06	1.00	1.53	-1.32	3.21	2.74	3.34
Peer Group Median	-2.07	7.85	6.12	7.16	5.59	3.89	28.59	3.97	-2.60	-2.99	18.71
Rank	61	45	21	37	67	46	37	69	28	21	45
Population	74	70	66	55	43	31	90	92	80	46	43



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-2.43	8.24	6.92	7.50	5.03	N/A	29.29	3.06	-1.40	-1.14	18.81
Benchmark	-2.61	7.75	5.46	6.39	4.08	2.93	27.81	4.41	-4.60	-3.89	15.82
Difference	0.18	0.49	1.46	1.11	0.95	N/A	1.48	-1.35	3.20	2.75	2.99
Peer Group Median	-2.07	7.85	6.12	7.16	5.59	3.89	28.59	3.97	-2.60	-2.99	18.71
Rank	59	45	21	37	71	N/A	39	70	28	21	50
Population	74	70	66	55	43	31	90	92	80	46	43



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

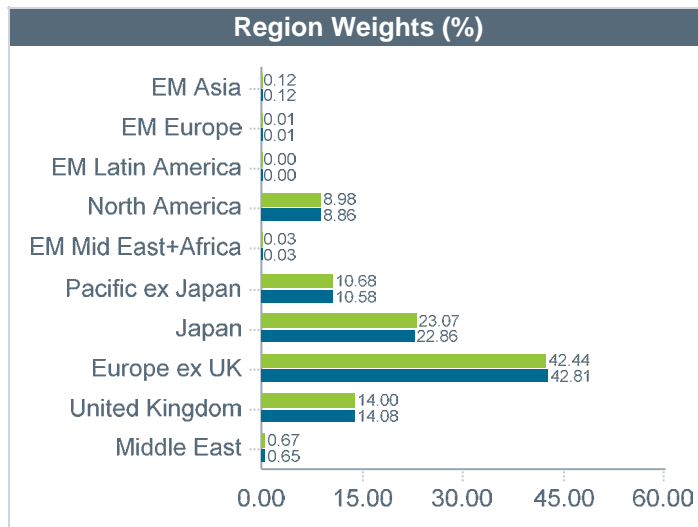
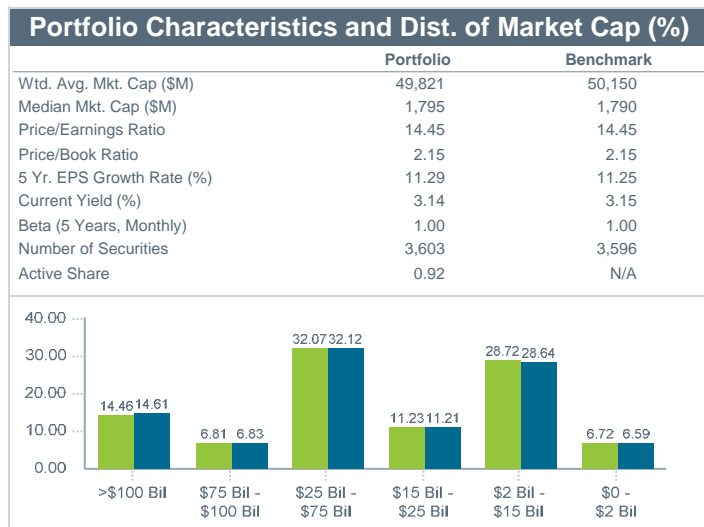
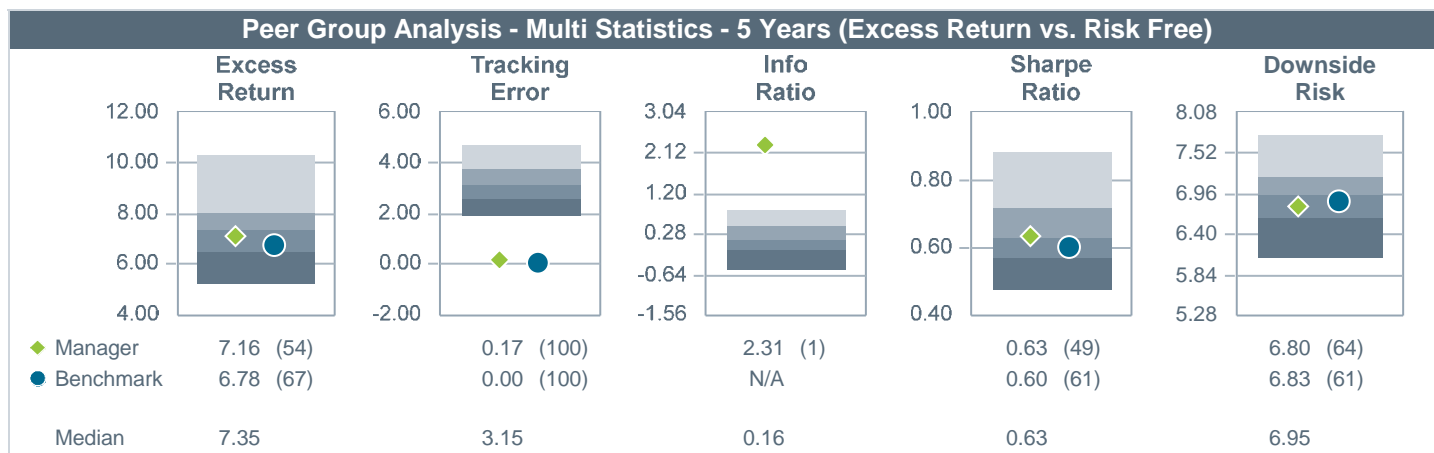
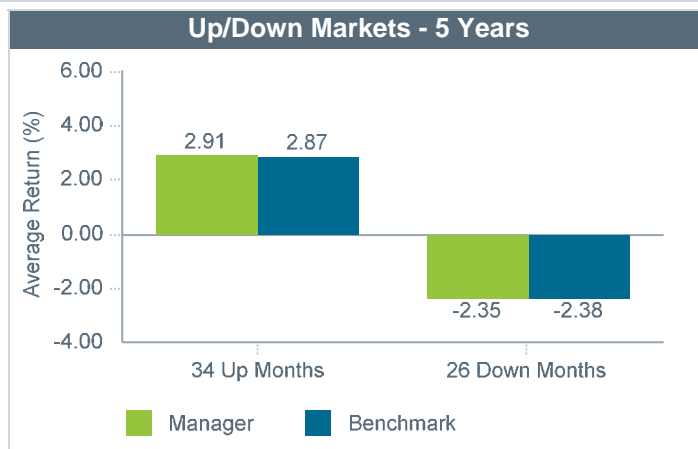
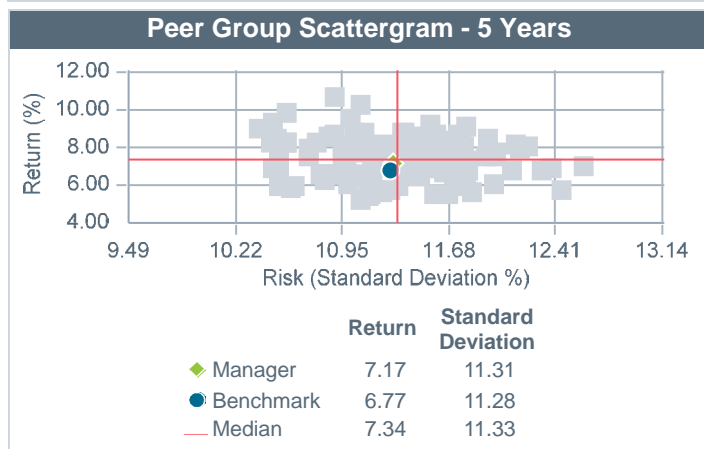
**Manager: BlackRock Developed Int'l - Passive (CF)**

**As of June 30, 2018**

**Benchmark: MSCI Wld Ex US IM Index (USD) (Net)**

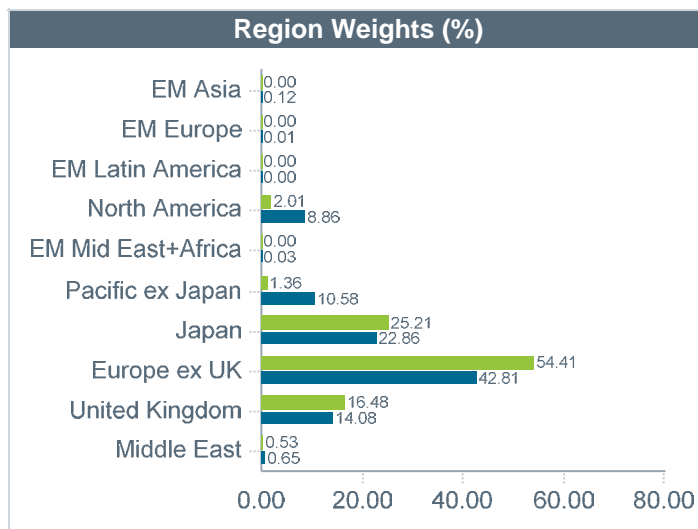
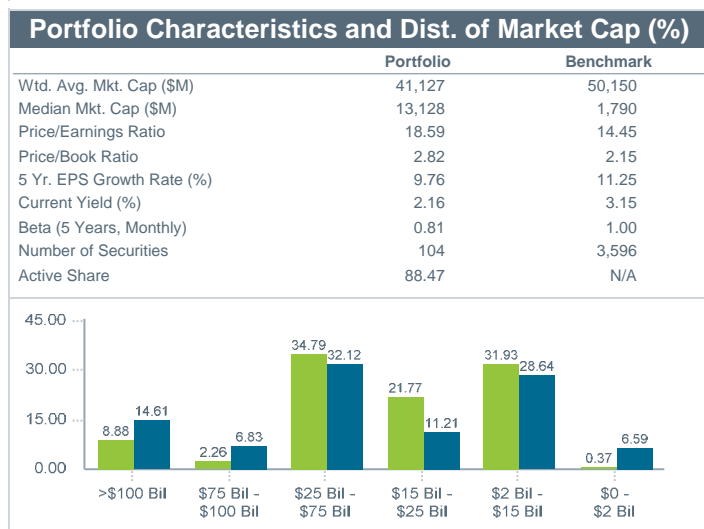
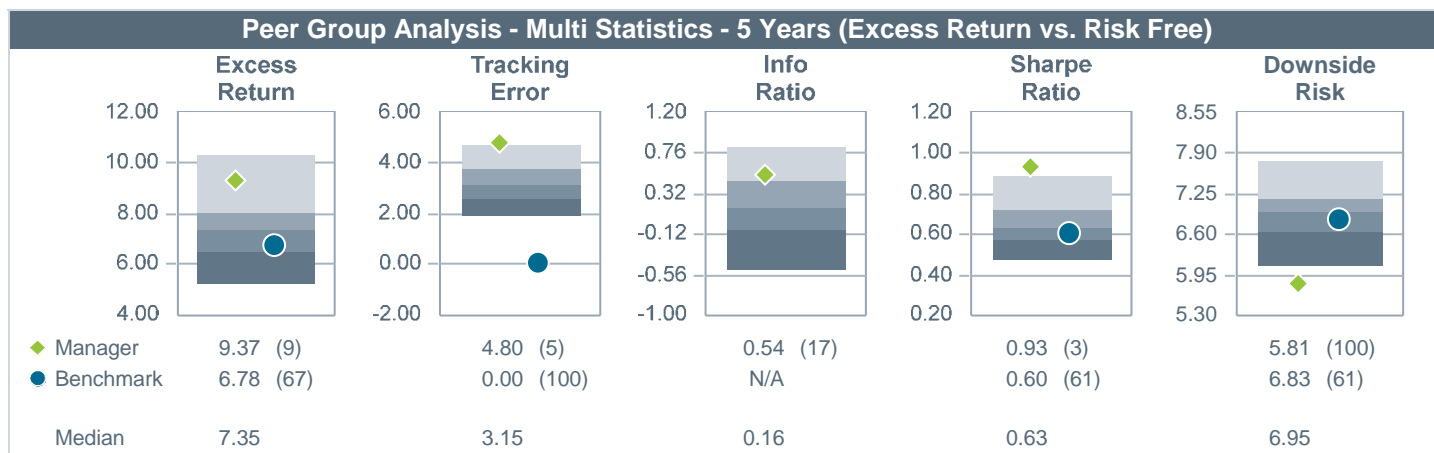
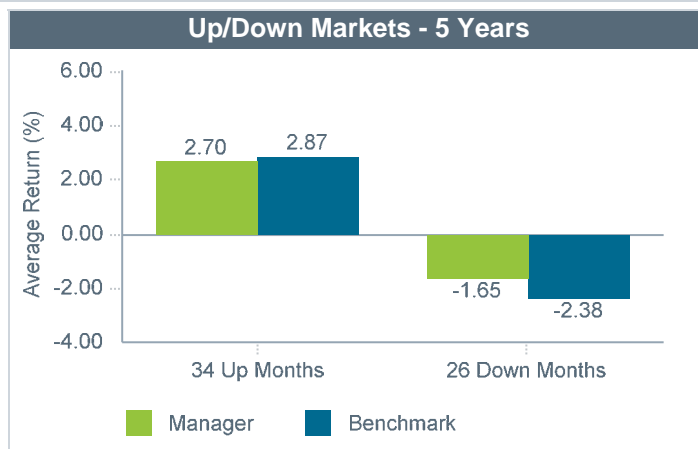
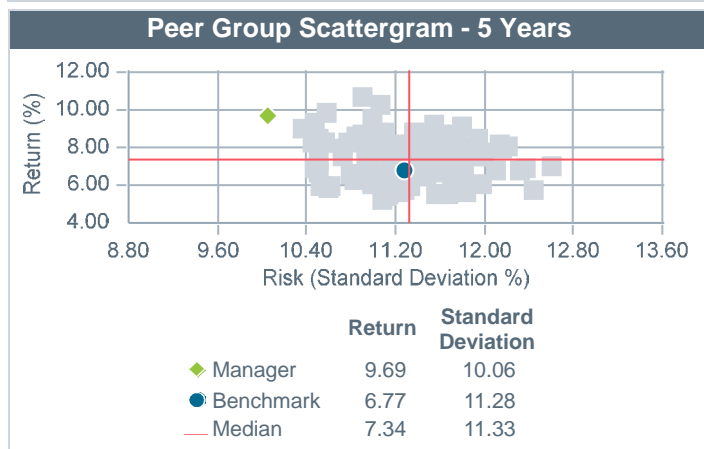
**Peer Group: IM All EAFE (SA+CF)**

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.38	8.24	5.96	7.17	N/A	N/A	25.71	3.45	-1.62	-4.13	21.90
Benchmark	-0.77	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	-4.45	21.57
Difference	0.39	0.50	0.47	0.40	N/A	N/A	0.54	0.50	0.33	0.32	0.33
Peer Group Median	-1.57	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	-4.26	24.32
Rank	25	33	40	54	N/A	N/A	59	22	75	50	71
Population	161	160	160	156	152	138	183	195	211	209	203



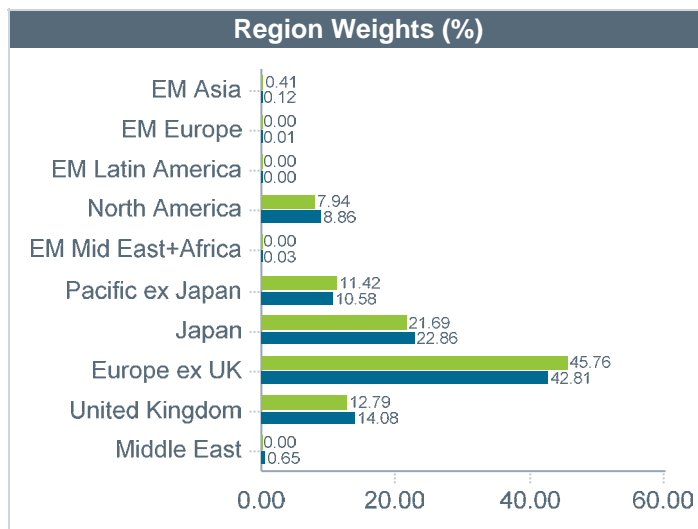
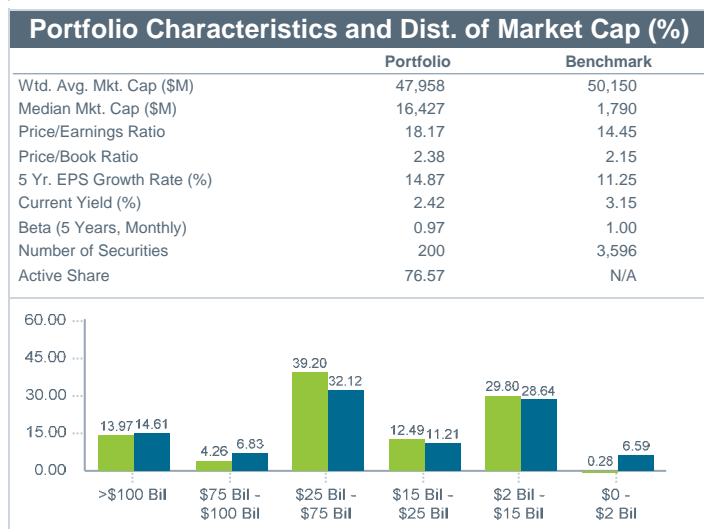
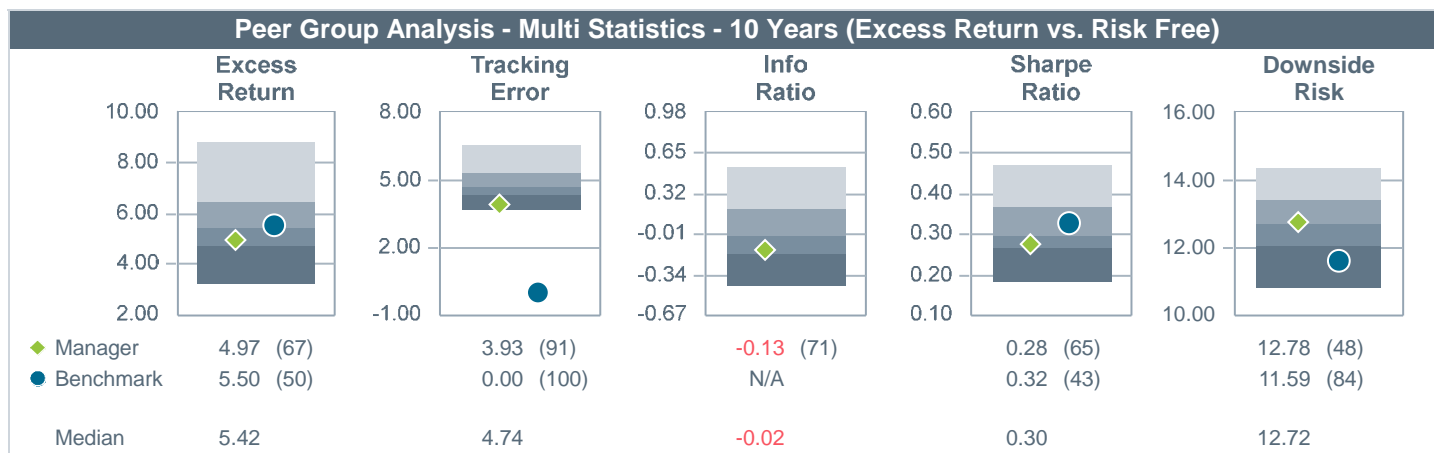
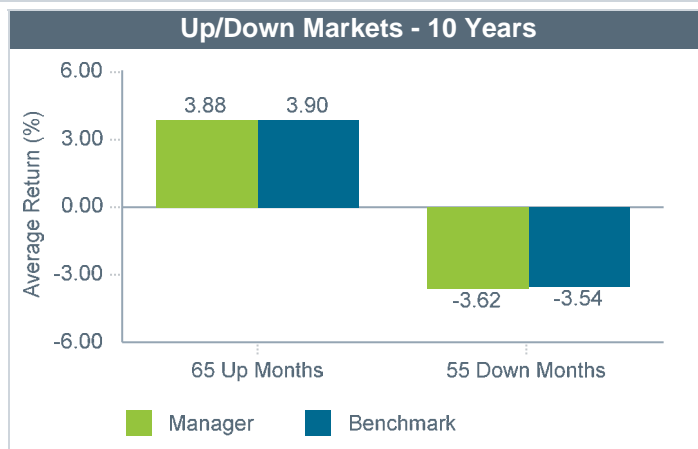
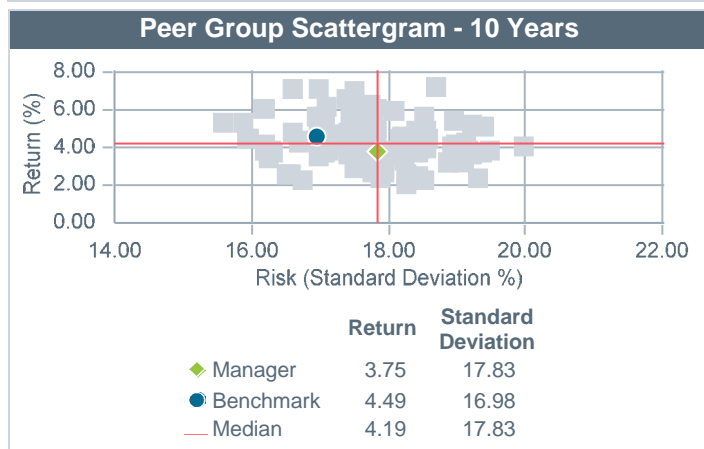
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.61	9.42	8.68	9.69	N/A	N/A	27.13	-0.22	7.17	1.31	31.52
Benchmark	-0.77	7.74	5.49	6.77	4.84	3.06	25.17	2.95	-1.95	-4.45	21.57
Difference	1.38	1.68	3.19	2.92	N/A	N/A	1.96	-3.17	9.12	5.76	9.95
Peer Group Median	-1.57	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	-4.26	24.32
Rank	12	24	8	8	N/A	N/A	42	69	6	6	7
Population	161	160	160	156	152	138	183	195	211	209	203



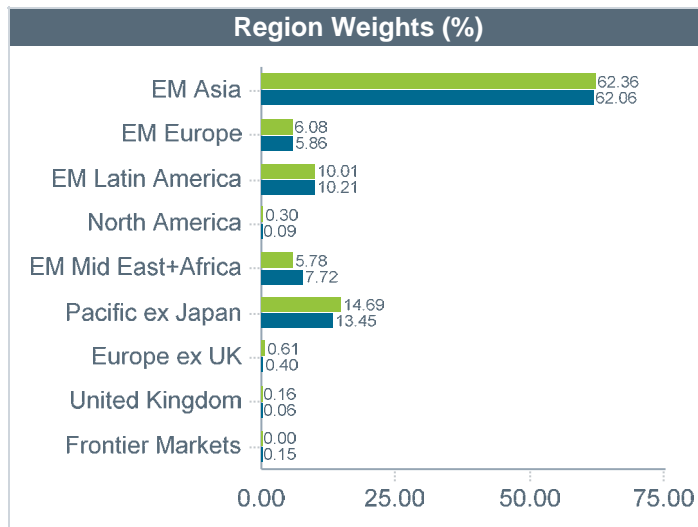
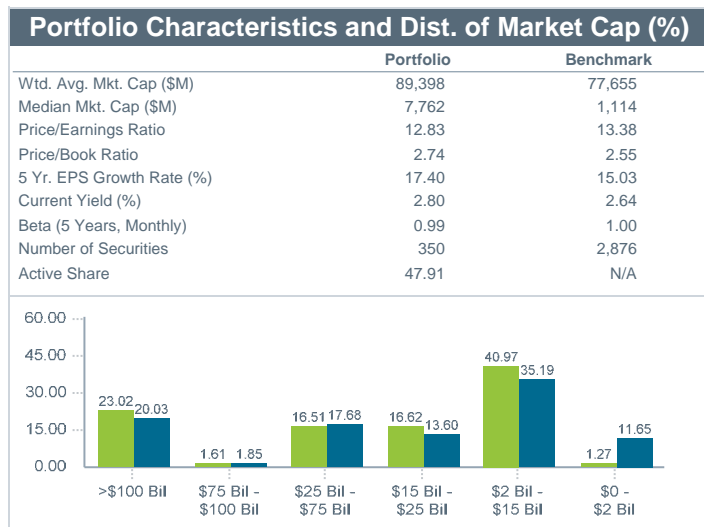
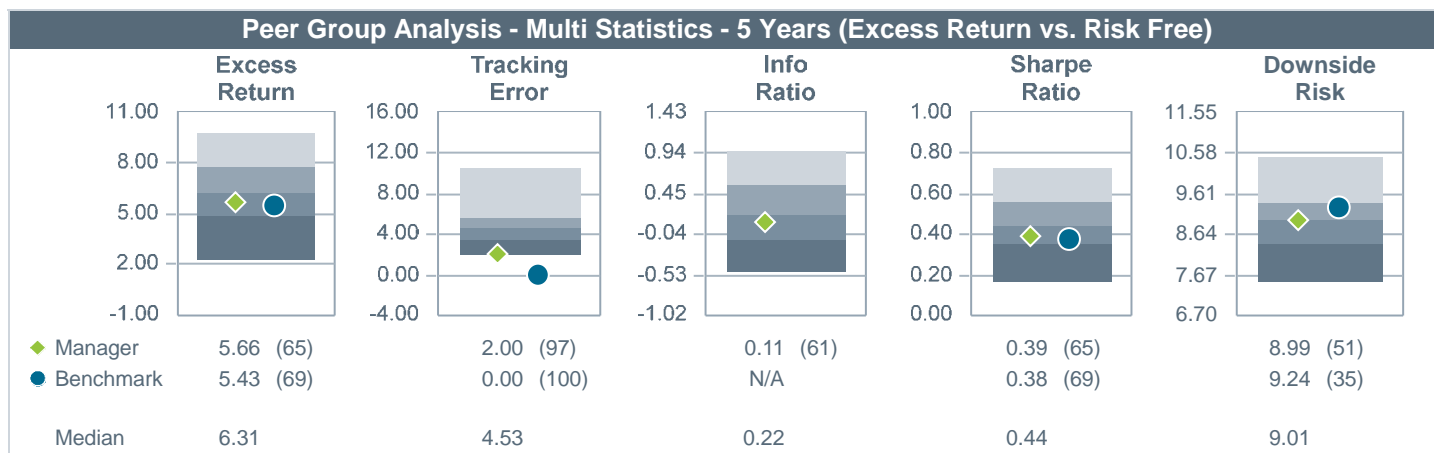
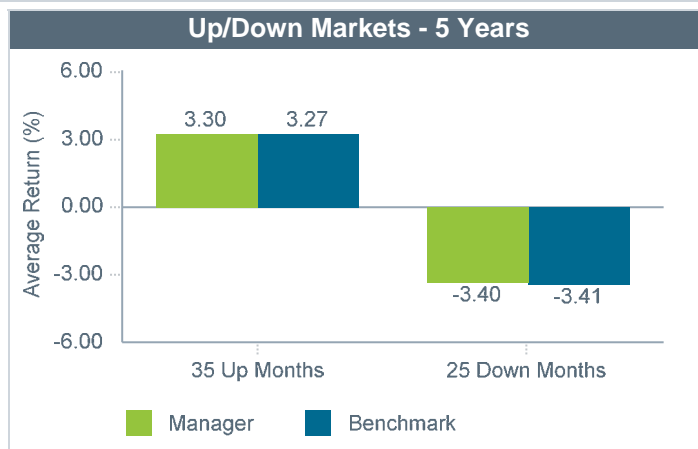
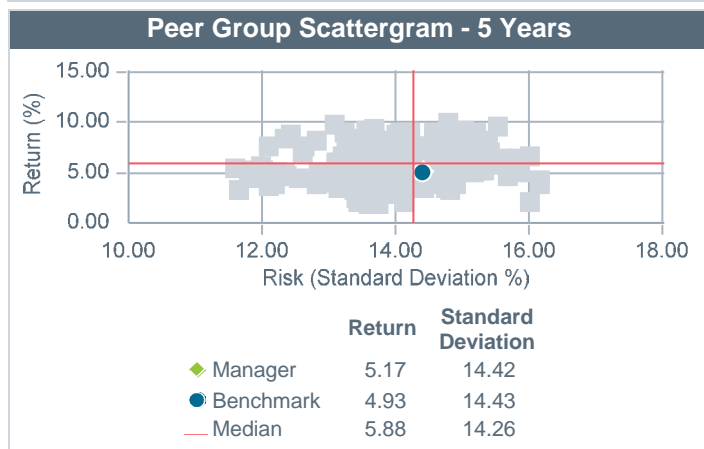
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.75	7.66	5.13	6.71	5.51	3.75	25.16	-0.70	0.99	-5.94	26.02
Benchmark	-0.77	7.74	5.49	6.77	4.84	4.49	25.17	2.95	-1.95	-4.45	21.57
Difference	0.02	-0.08	-0.36	-0.06	0.67	-0.74	-0.01	-3.65	2.94	-1.49	4.45
Peer Group Median	-1.57	7.07	5.47	7.34	6.09	4.19	26.37	1.06	1.22	-4.26	24.32
Rank	30	39	62	68	68	67	66	73	54	80	35
Population	161	160	160	156	152	138	183	195	211	209	203



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

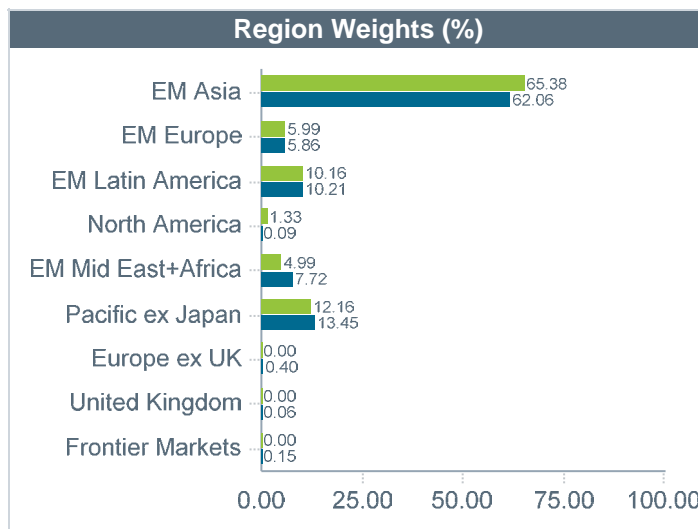
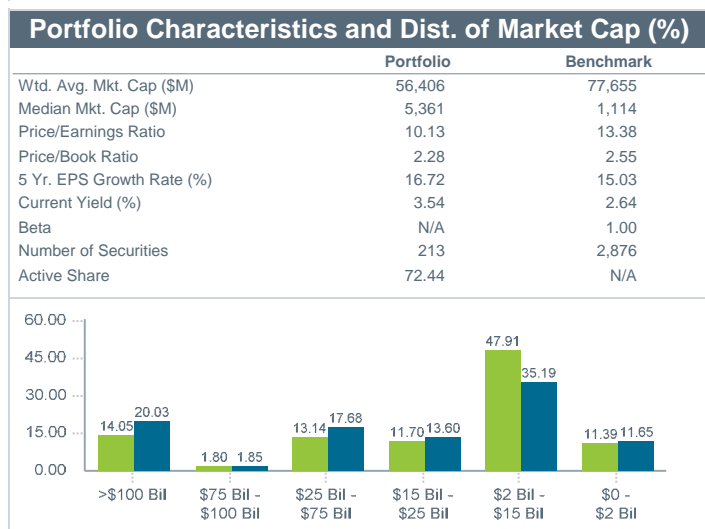
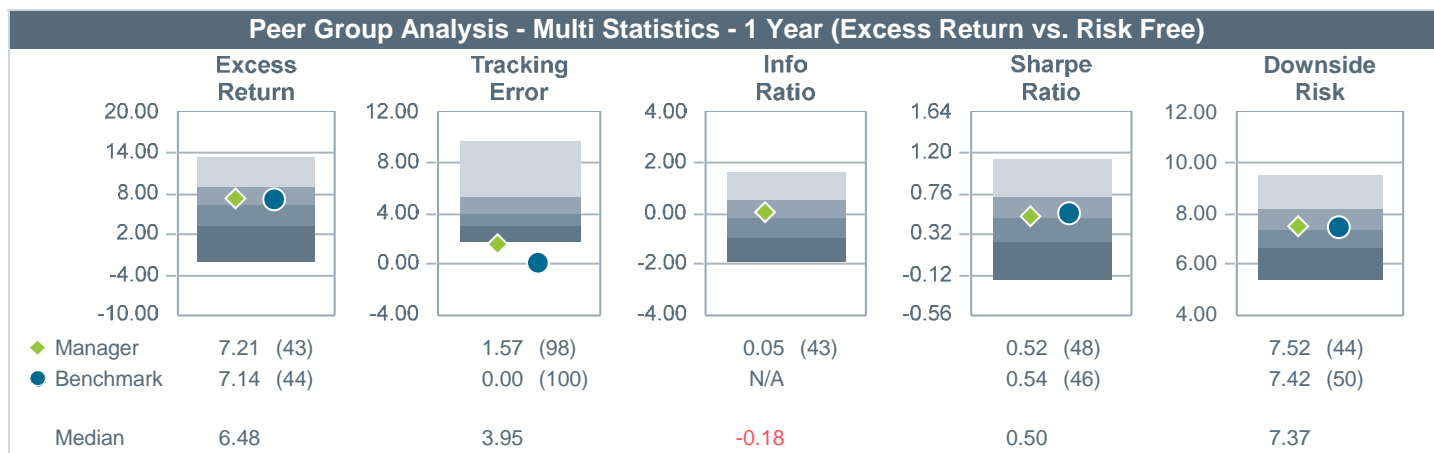
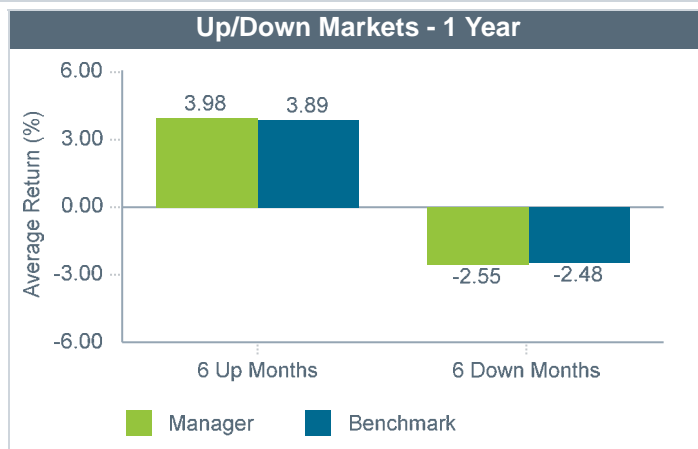
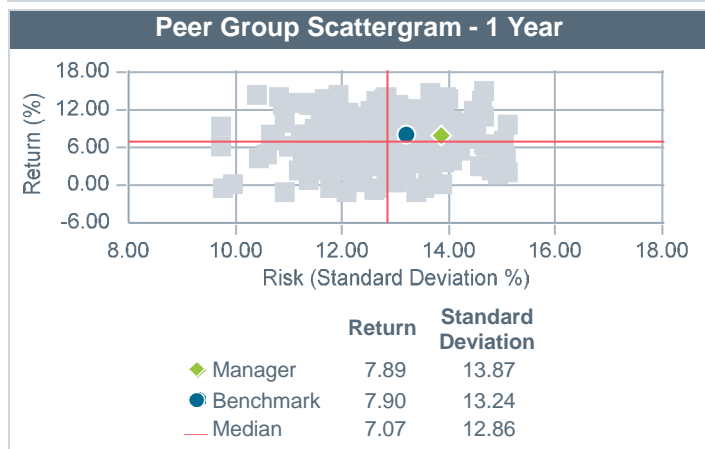
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-8.40	7.13	5.51	5.17	N/A	N/A	37.13	12.18	-15.10	0.24	-1.67
Benchmark	-8.02	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	-1.79	-2.20
Difference	-0.38	-0.77	0.32	0.24	N/A	N/A	0.30	2.28	-1.24	2.03	0.53
Peer Group Median	-8.40	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	-0.11	0.95
Rank	50	50	65	63	N/A	N/A	49	35	72	46	69
Population	268	267	255	221	174	126	296	310	327	324	308



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

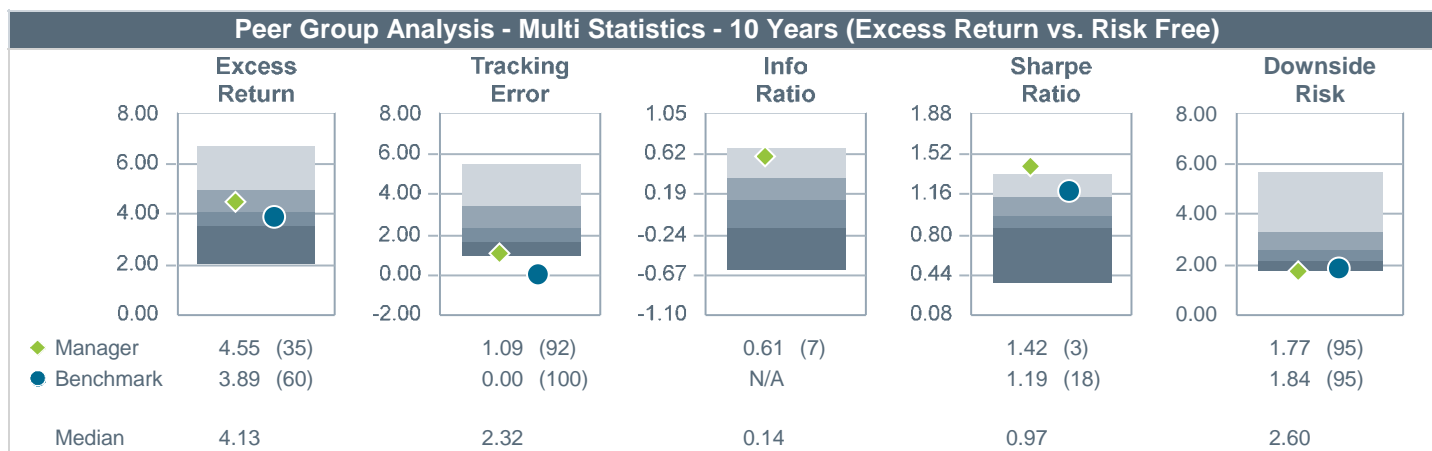
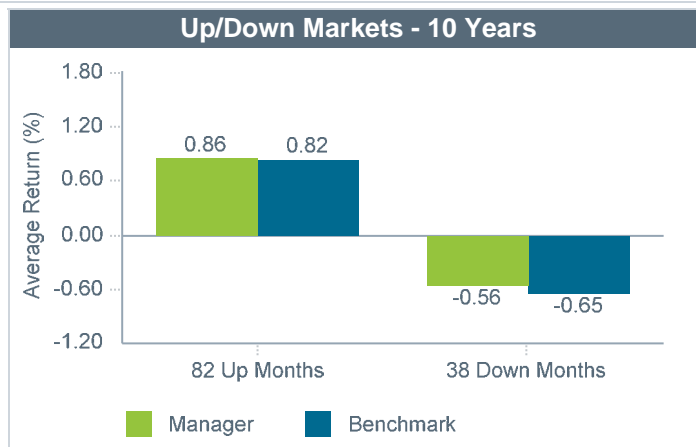
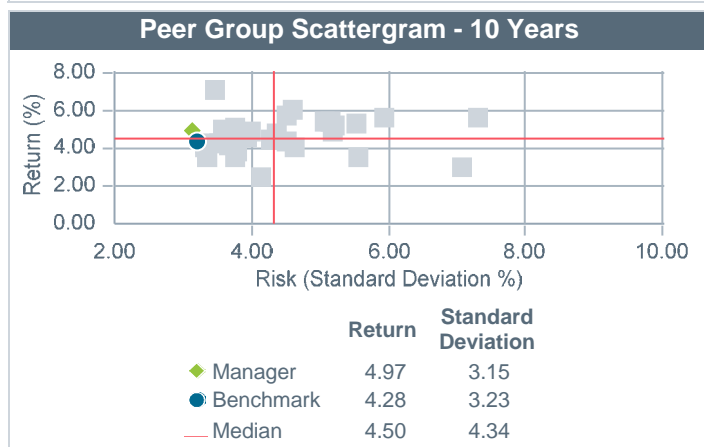


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-8.28	7.89	N/A	N/A	N/A	N/A	41.01	N/A	N/A	N/A	N/A
Benchmark	-8.02	7.90	5.19	4.93	1.42	2.52	36.83	9.90	-13.86	-1.79	-2.20
Difference	-0.26	-0.01	N/A	N/A	N/A	N/A	4.18	N/A	N/A	N/A	N/A
Peer Group Median	-8.40	7.07	6.18	5.88	3.16	3.56	36.88	10.08	-12.65	-0.11	0.95
Rank	49	44	N/A	N/A	N/A	N/A	28	N/A	N/A	N/A	N/A
Population	268	267	255	221	174	126	296	310	327	324	308

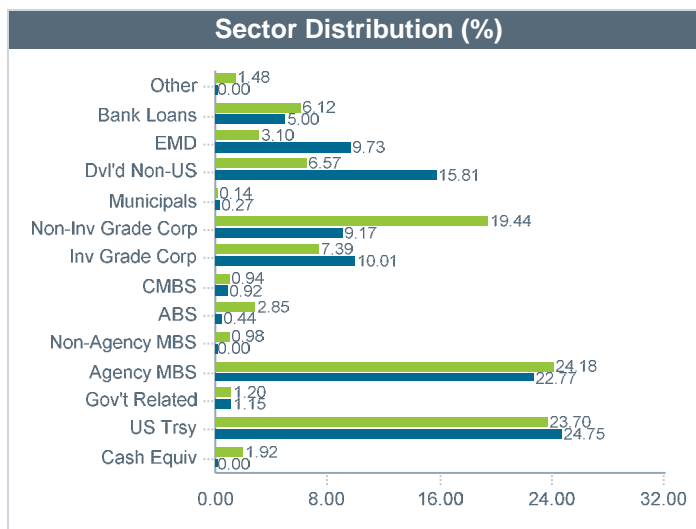


Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.05	0.89	2.90	3.38	3.78	4.97	4.88	5.00	0.78	6.05	-0.68
Benchmark	-0.19	0.50	2.81	3.04	3.24	4.28	4.12	5.65	0.11	5.56	-1.35
Difference	0.14	0.39	0.09	0.34	0.54	0.69	0.76	-0.65	0.67	0.49	0.67
Peer Group Median	-0.04	0.51	2.44	2.98	3.30	4.50	4.54	4.54	0.26	6.01	-1.39
Rank	53	27	37	38	35	34	43	41	30	49	37
Population	77	73	71	64	54	36	86	92	80	49	49

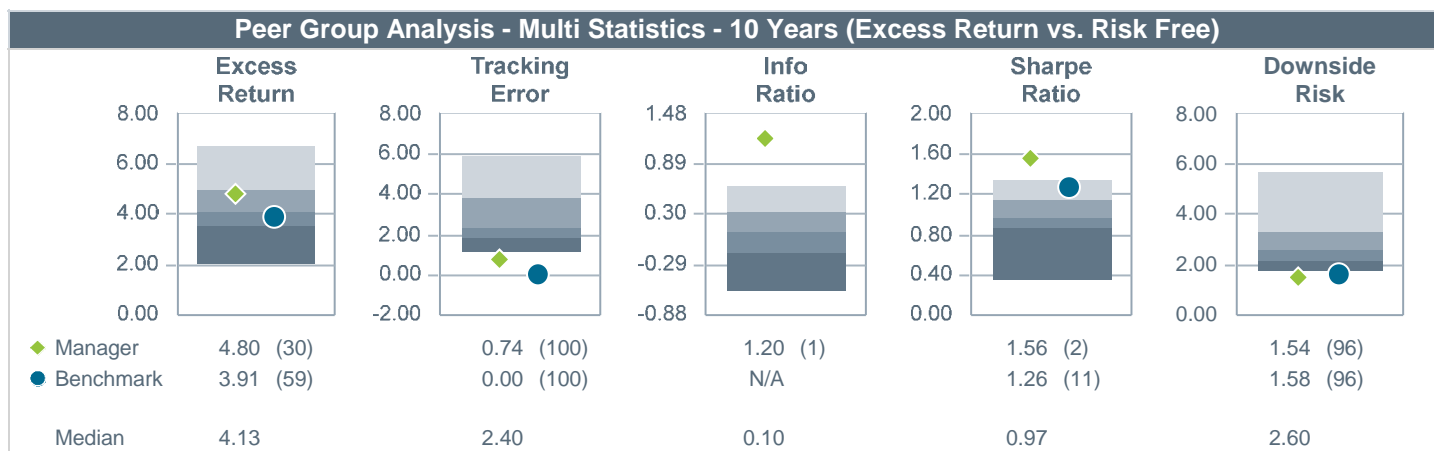
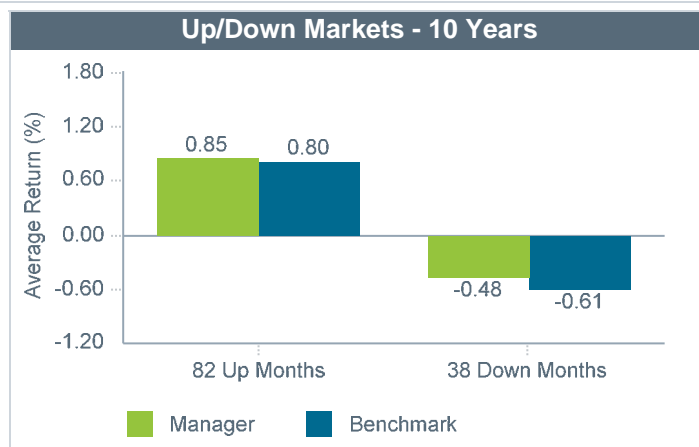
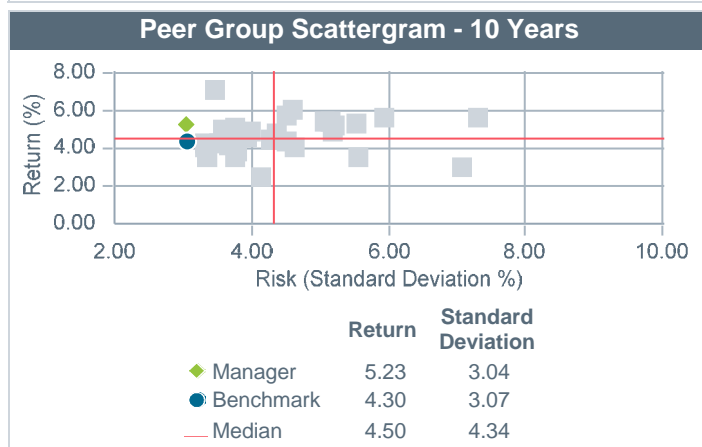


Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.33	N/A
Spread Duration	3.73	N/A
Avg. Maturity	6.32	6.32
Avg. Quality	A1	A2
Yield To Maturity (%)	4.23	4.19
Coupon Rate (%)	4.02	3.74
Current Yield (%)	4.06	3.76
Holdings Count	1,785	N/A

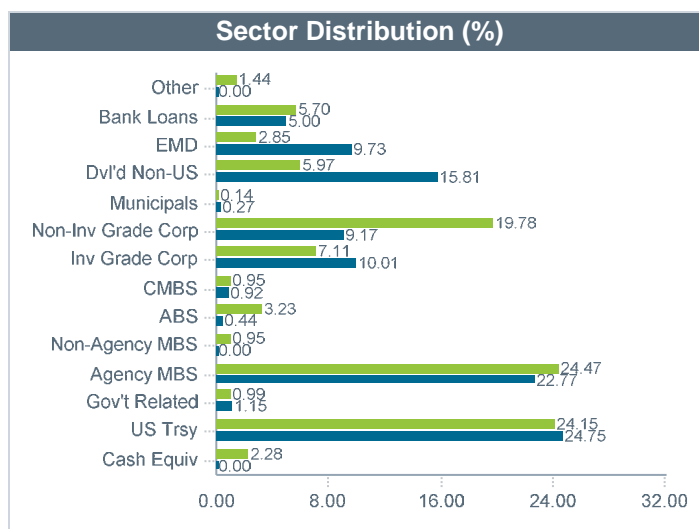


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock and Convertible Bonds.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.03	0.92	2.92	3.36	3.73	5.23	4.89	4.85	0.83	6.05	-0.82
Benchmark	-0.19	0.50	2.81	3.04	3.24	4.30	4.12	5.65	0.11	5.56	-1.35
Difference	0.16	0.42	0.11	0.32	0.49	0.93	0.77	-0.80	0.72	0.49	0.53
Peer Group Median	-0.04	0.51	2.44	2.98	3.30	4.50	4.54	4.54	0.26	6.01	-1.39
Rank	49	26	37	38	36	28	43	42	27	49	38
Population	77	73	71	64	54	36	86	92	80	49	49



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.34	N/A
Spread Duration	N/A	N/A
Avg. Maturity	6.32	6.32
Avg. Quality	A1	A2
Yield To Maturity (%)	4.13	4.19
Coupon Rate (%)	3.99	3.74
Current Yield (%)	3.90	3.76
Holdings Count	1,207	N/A



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock and Convertible Bonds.

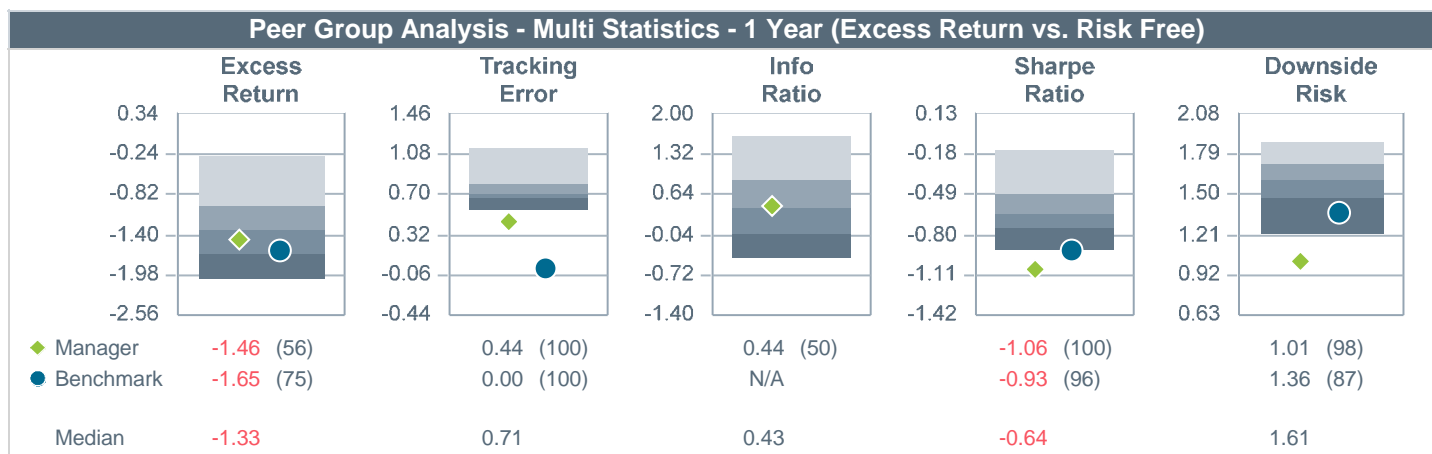
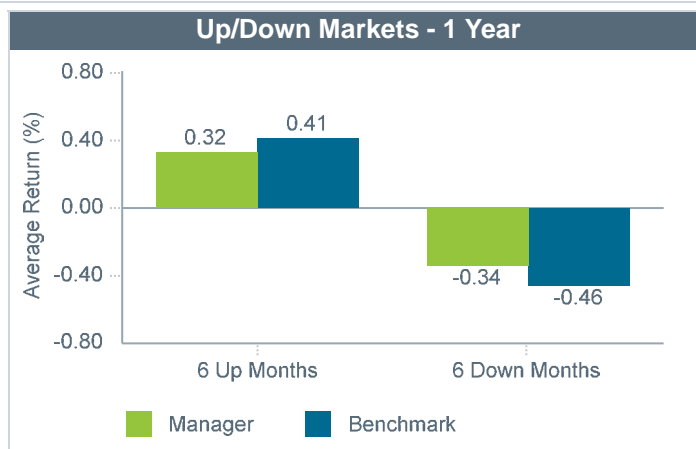
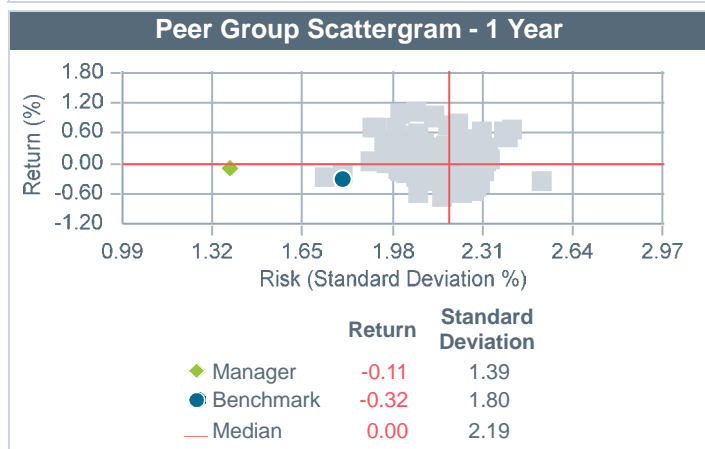
Manager: JP Morgan Principal Protection (SA)

As of June 30, 2018

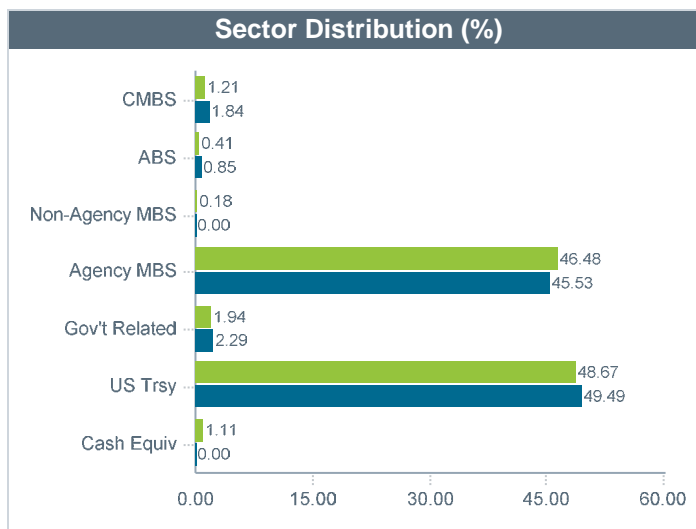
Benchmark: Bloomberg US Int Agg Ex Credit

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.13	-0.11	N/A	N/A	N/A	N/A	1.86	2.02	N/A	N/A	N/A
Benchmark	0.14	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	4.11	-1.27
Difference	-0.01	0.21	N/A	N/A	N/A	N/A	0.06	0.62	N/A	N/A	N/A
Peer Group Median	-0.09	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	6.17	-1.56
Rank	11	55	N/A	N/A	N/A	N/A	100	97	N/A	N/A	N/A
Population	133	133	128	125	123	119	146	159	162	176	188



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	3.51	4.34
Spread Duration	2.46	2.63
Avg. Maturity	4.27	5.28
Avg. Quality	Aaa	Aaa
Yield To Maturity (%)	3.05	3.04
Coupon Rate (%)	3.42	2.74
Current Yield (%)	3.67	2.76
Holdings Count	345	3,494



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of Covered Bonds.

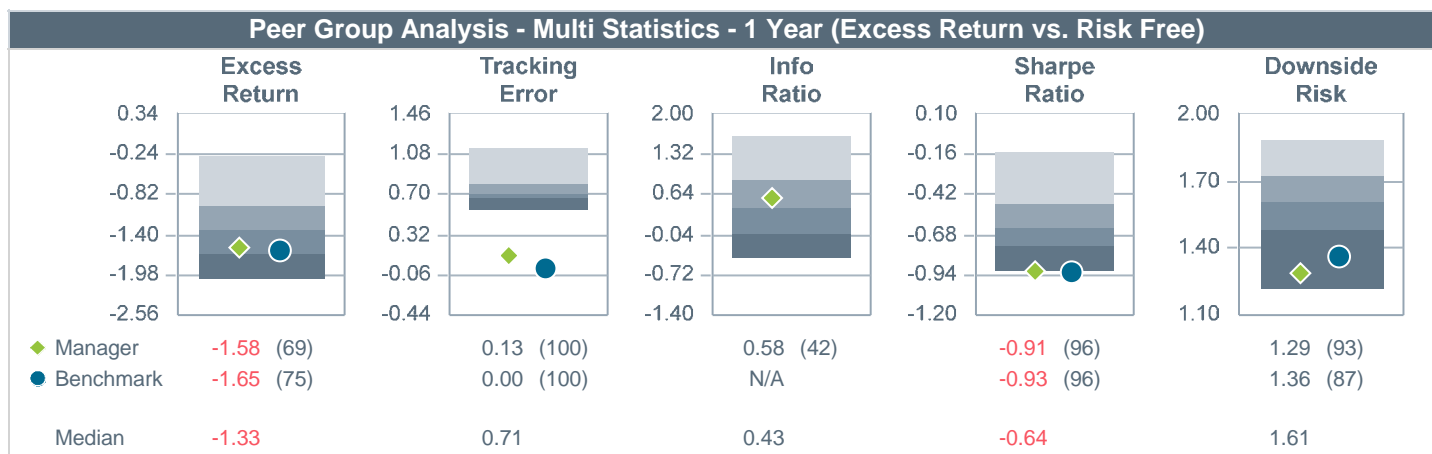
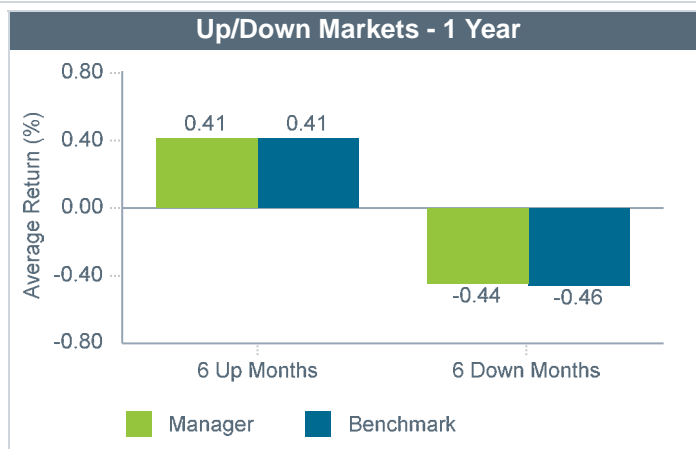
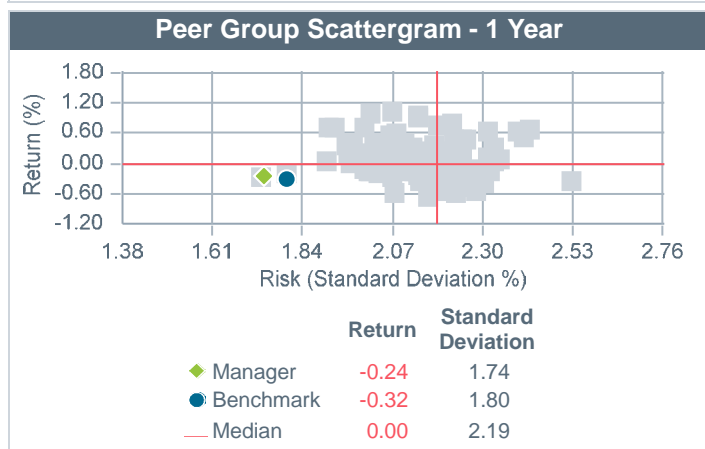
Manager: Wells Principal Protection (SA)

As of June 30, 2018

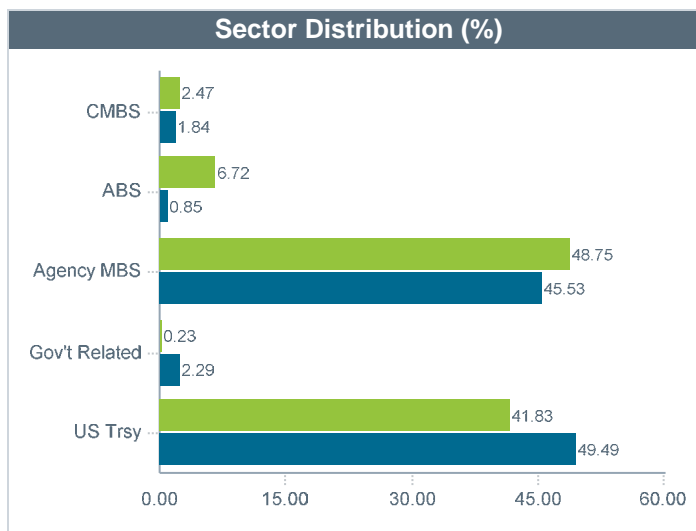
Benchmark: Bloomberg US Int Agg Ex Credit

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.16	-0.24	N/A	N/A	N/A	N/A	1.94	1.86	N/A	N/A	N/A
Benchmark	0.14	-0.32	1.03	1.61	1.76	2.99	1.80	1.40	1.32	4.11	-1.27
Difference	0.02	0.08	N/A	N/A	N/A	N/A	0.14	0.46	N/A	N/A	N/A
Peer Group Median	-0.09	0.00	2.09	2.67	3.07	4.39	4.05	3.10	0.82	6.17	-1.56
Rank	10	68	N/A	N/A	N/A	N/A	100	98	N/A	N/A	N/A
Population	133	133	128	125	123	119	146	159	162	176	188



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.37	4.34
Spread Duration	2.96	2.63
Avg. Maturity	5.80	5.28
Avg. Quality	Aaa	Aaa
Yield To Maturity (%)	3.30	3.04
Coupon Rate (%)	2.95	2.74
Current Yield (%)	2.97	2.76
Holdings Count	469	3,494



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of Covered Bonds.

Manager: Macquarie Unconstrained (SA)

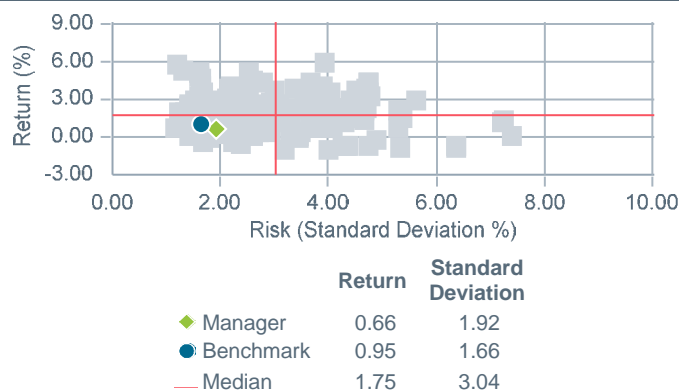
As of June 30, 2018

Benchmark: 67% B Global Credit/33% B Global High Yield

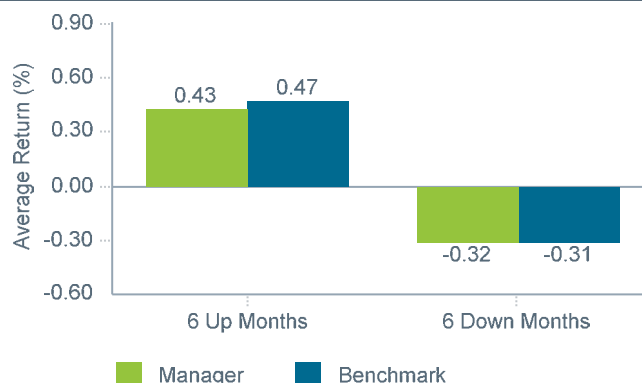
Peer Group: IM Global Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.37	0.66	N/A	N/A	N/A	N/A	7.86	8.37	N/A	N/A	N/A
Benchmark	-0.66	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	5.28	2.58
Difference	0.29	-0.29	N/A	N/A	N/A	N/A	1.13	-1.67	N/A	N/A	N/A
Peer Group Median	-1.05	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	2.46	-0.16
Rank	39	77	N/A	N/A	N/A	N/A	46	35	N/A	N/A	N/A
Population	213	211	207	189	154	110	232	251	262	264	257

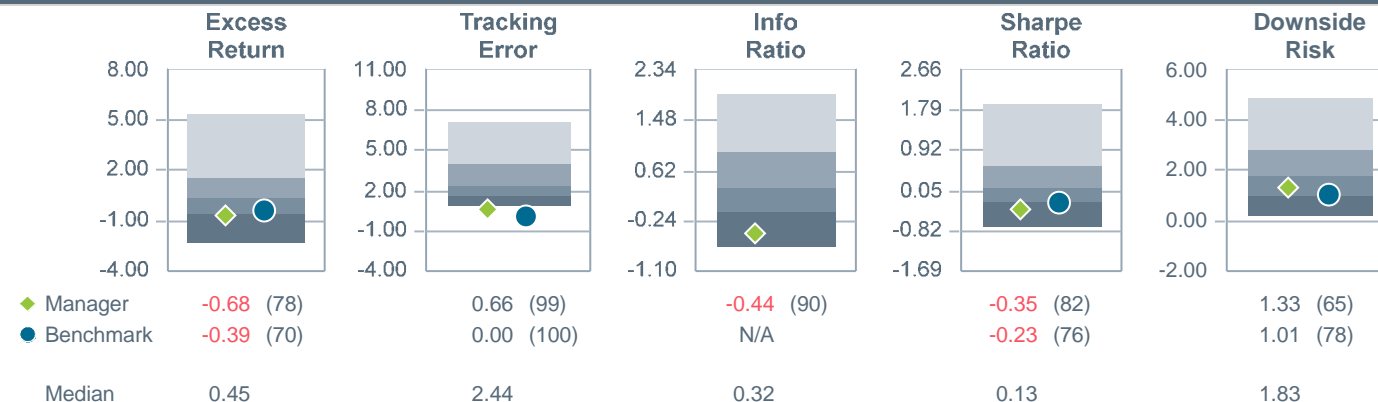
Peer Group Scattergram - 1 Year



Up/Down Markets - 1 Year



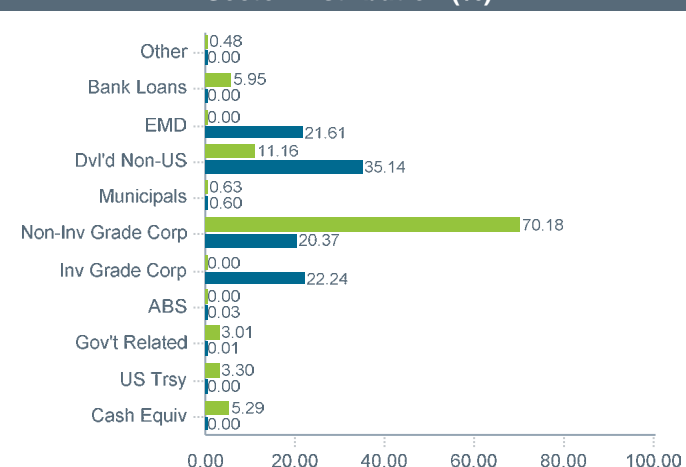
Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free)



Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	5.10	5.59
Spread Duration	N/A	5.56
Avg. Maturity	7.34	7.60
Avg. Quality	Baa2	Baa3
Yield To Maturity (%)	4.91	5.17
Coupon Rate (%)	4.77	4.62
Current Yield (%)	4.80	4.64
Holdings Count	N/A	17,175

Sector Distribution (%)



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Manager allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock, Sovereigns, and Convertible Bonds. On March 31, 2017, Delaware Investments adopted the name of its parent company, Macquarie Investment Management.

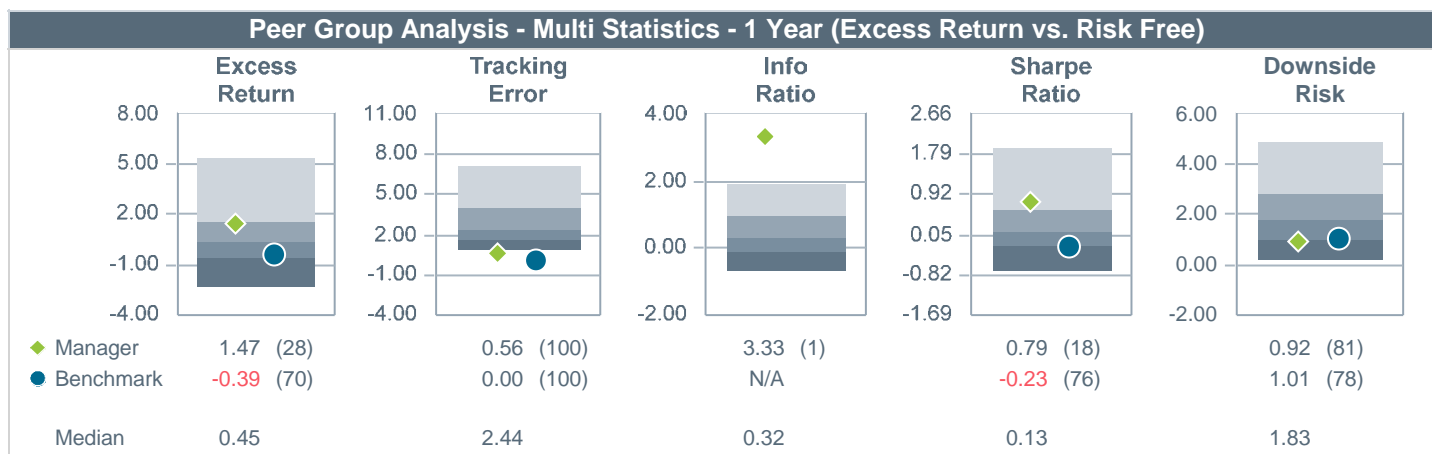
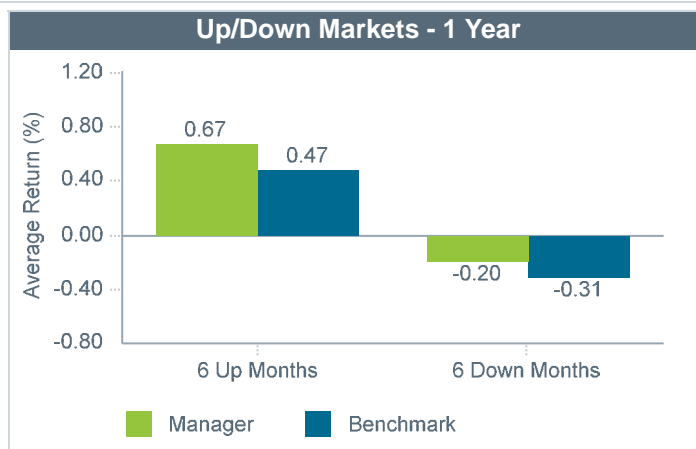
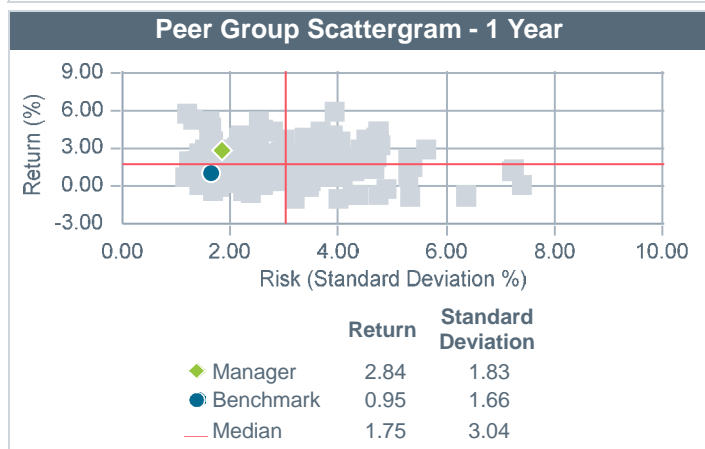
Manager: Neuberger Unconstrained (SA)

As of June 30, 2018

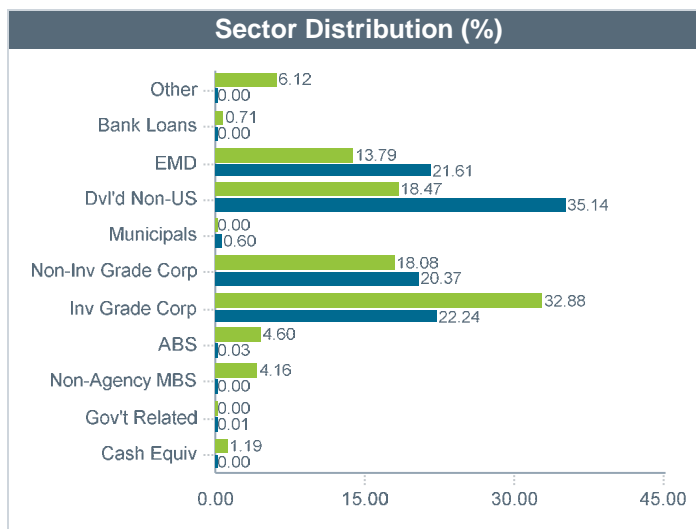
Benchmark: 67% B Global Credit/33% B Global High Yield

Peer Group: IM Global Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.27	2.84	N/A	N/A	N/A	N/A	9.26	9.65	N/A	N/A	N/A
Benchmark	-0.66	0.95	4.38	4.67	5.29	6.59	6.73	10.04	-0.34	5.28	2.58
Difference	0.39	1.89	N/A	N/A	N/A	N/A	2.53	-0.39	N/A	N/A	N/A
Peer Group Median	-1.05	1.75	3.25	3.05	3.30	4.42	7.63	5.77	-2.37	2.46	-0.16
Rank	37	26	N/A	N/A	N/A	N/A	27	31	N/A	N/A	N/A
Population	213	211	207	189	154	110	232	251	262	264	257



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.37	5.59
Spread Duration	5.86	5.56
Avg. Maturity	8.42	7.60
Avg. Quality	Baa3	Baa3
Yield To Maturity (%)	5.54	5.17
Coupon Rate (%)	4.94	4.62
Current Yield (%)	5.00	4.64
Holdings Count	844	17,175



Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of CRTs.



Manager: Pacific Asset Bank Loans (SA)

As of June 30, 2018

Benchmark: CS Lvg'd Loan Index

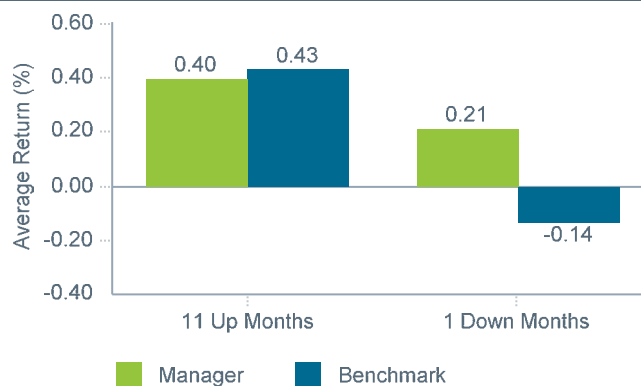
Peer Group: IM U.S. Bank Loans (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.40	4.65	N/A	N/A	N/A	N/A	5.48	9.18	N/A	N/A	N/A
Benchmark	0.78	4.67	4.33	4.24	4.59	5.00	4.25	9.88	-0.38	2.06	6.15
Difference	-0.38	-0.02	N/A	N/A	N/A	N/A	1.23	-0.70	N/A	N/A	N/A
Peer Group Median	0.75	4.64	4.38	4.43	4.85	5.51	4.46	9.51	0.68	2.01	6.28
Rank	99	50	N/A	N/A	N/A	N/A	8	59	N/A	N/A	N/A
Population	53	53	51	50	43	25	64	66	69	72	65

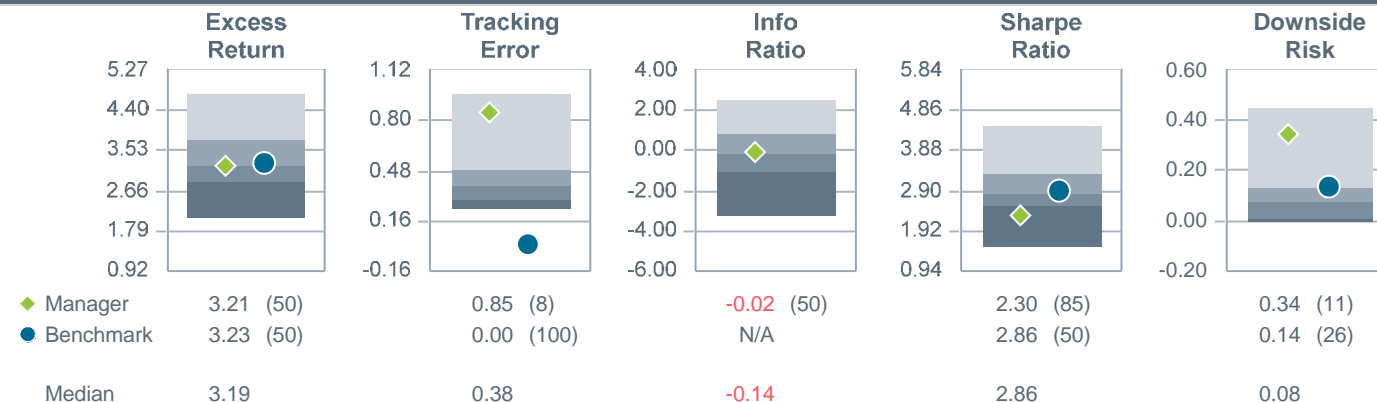
#### Peer Group Scattergram - 1 Year



#### Up/Down Markets - 1 Year



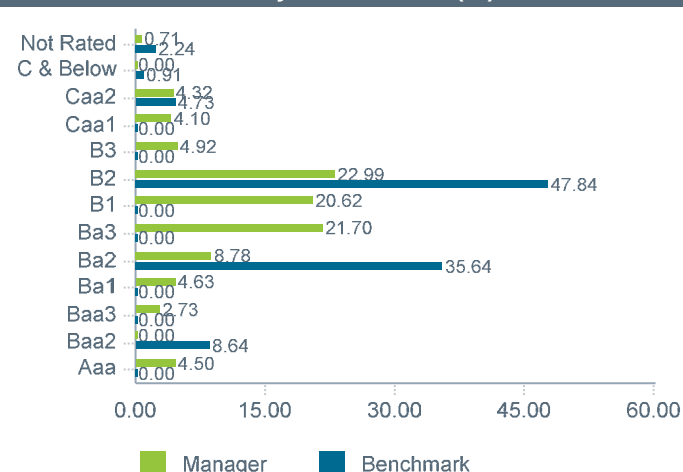
#### Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free)



#### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	0.28	N/A
Spread Duration	4.47	N/A
Avg. Maturity	5.56	5.21
Avg. Quality	B1	Ba2
Yield To Maturity (%)	6.07	6.84
Coupon Rate (%)	4.99	5.79
Current Yield (%)	N/A	5.90
Holdings Count	127	1,583

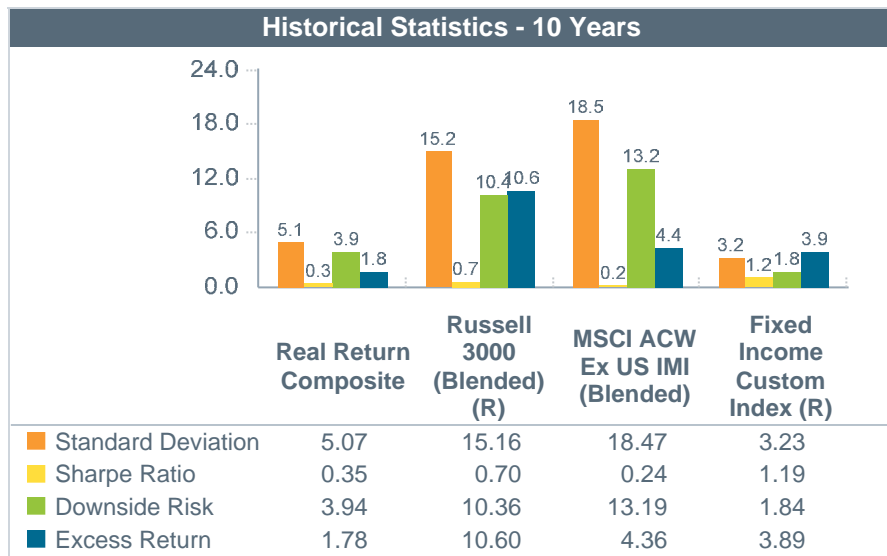
#### Quality Distribution (%)



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

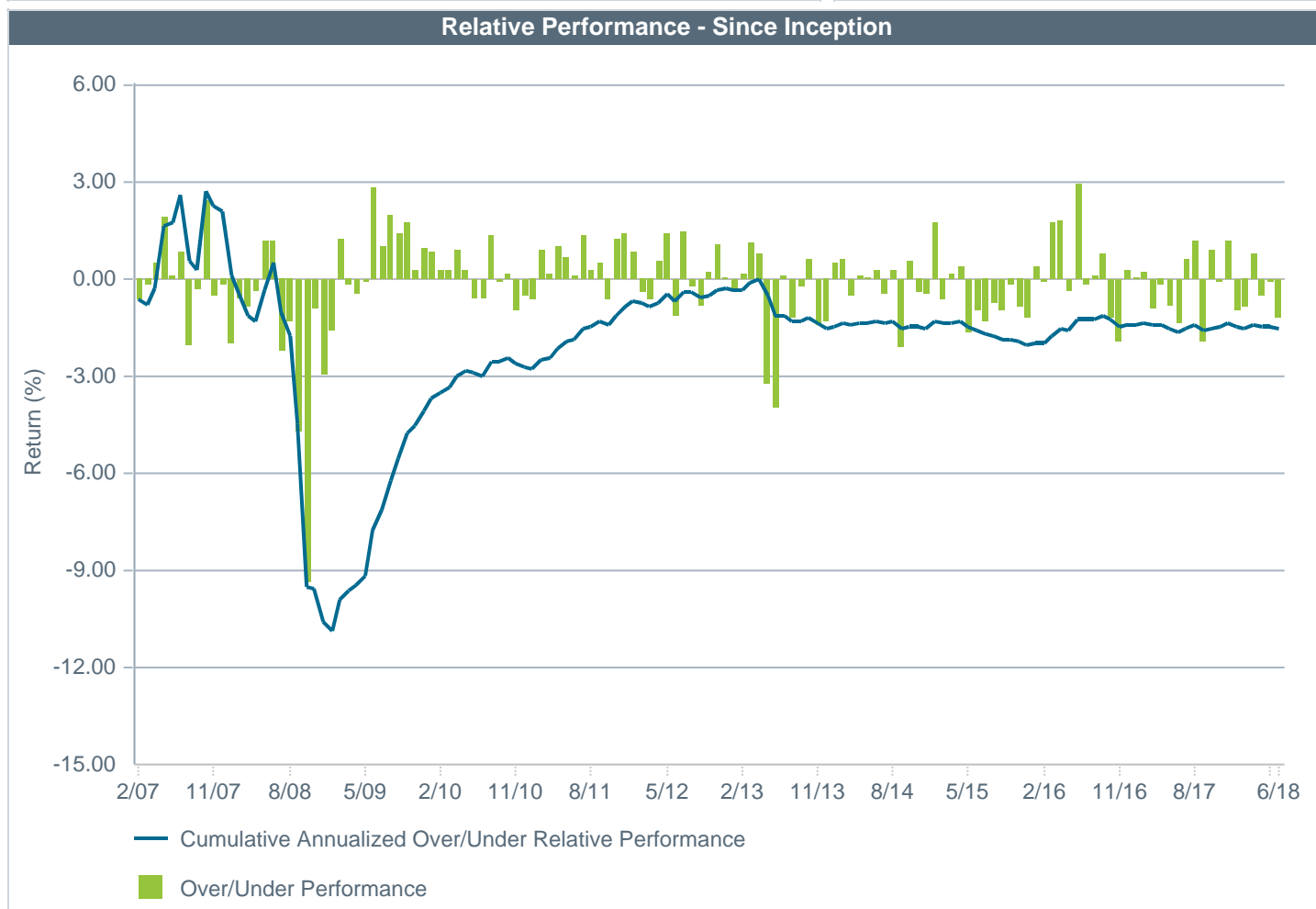


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.39	4.99	3.27	2.41	2.75	2.03	4.05	9.90	-2.56	2.21	-4.88
Benchmark	1.30	5.88	4.88	4.58	4.15	3.94	5.17	5.15	3.68	3.68	4.05
Difference	-1.69	-0.89	-1.61	-2.17	-1.40	-1.91	-1.12	4.75	-6.24	-1.47	-8.93

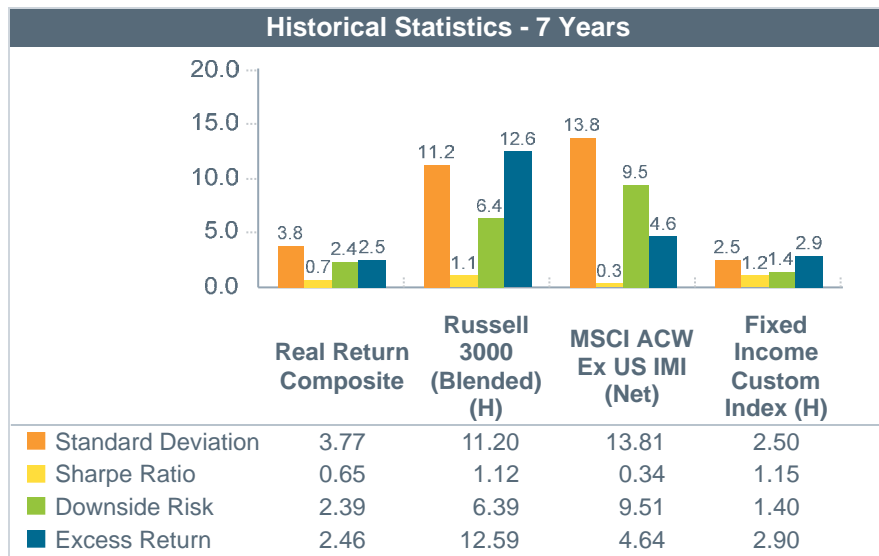


**Actual Correlation - 10 Years**

	Actual Correlation
Composite Benchmark	-0.03
S&P 500 Index (Cap Wtd)	0.28
Russell 2000 Index	0.20
MSCI EAFE Index (USD) (Net)	0.31
MSCI Emg Mkts Index (USD) (Net)	0.41
Bloomberg US Agg Bond Index	0.48
Bloomberg US Trsy US TIPS Index	0.63
Wilshire US REIT Index	0.32
HFRI FOF Comp Index	0.46
Bloomberg Cmtty Index (TR)	0.46
ICE BofAML 3 Mo US T-Bill Index	-0.28
Cons Price Index (Unadjusted)	0.30

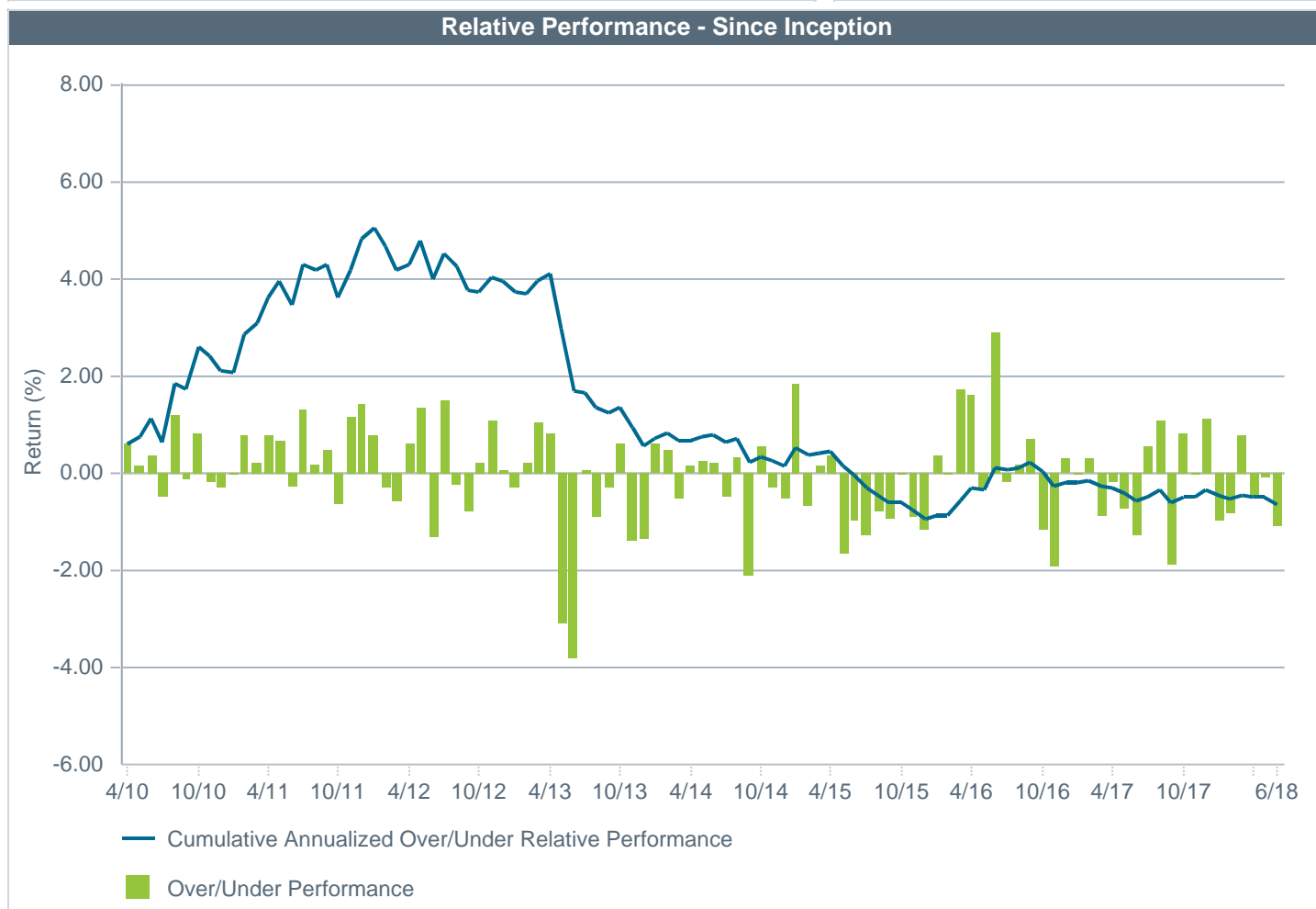


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.39	4.77	3.16	2.37	2.74	N/A	3.97	9.56	-2.58	2.26	-4.45
Benchmark	1.30	5.88	4.88	4.58	4.15	3.94	5.17	5.15	3.68	3.68	4.05
Difference	-1.69	-1.11	-1.72	-2.21	-1.41	N/A	-1.20	4.41	-6.26	-1.42	-8.50

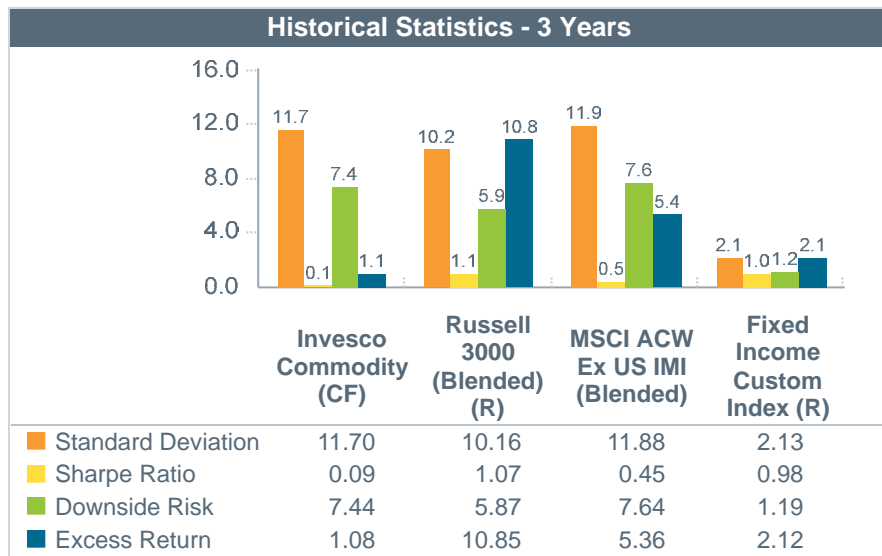


**Actual Correlation - 7 Years**

	Actual Correlation
Composite Benchmark	0.08
S&P 500 Index (Cap Wtd)	-0.03
Russell 2000 Index	-0.08
MSCI EAFE Index (USD) (Net)	0.05
MSCI Emg Mkts Index (USD) (Net)	0.24
Bloomberg US Agg Bond Index	0.69
Bloomberg US Trsy US TIPS Index	0.76
Wilshire US REIT Index	0.26
HFRI FOF Comp Index	0.07
Bloomberg Cmtty Index (TR)	0.28
ICE BofAML 3 Mo US T-Bill Index	0.06
Cons Price Index (Unadjusted)	0.02

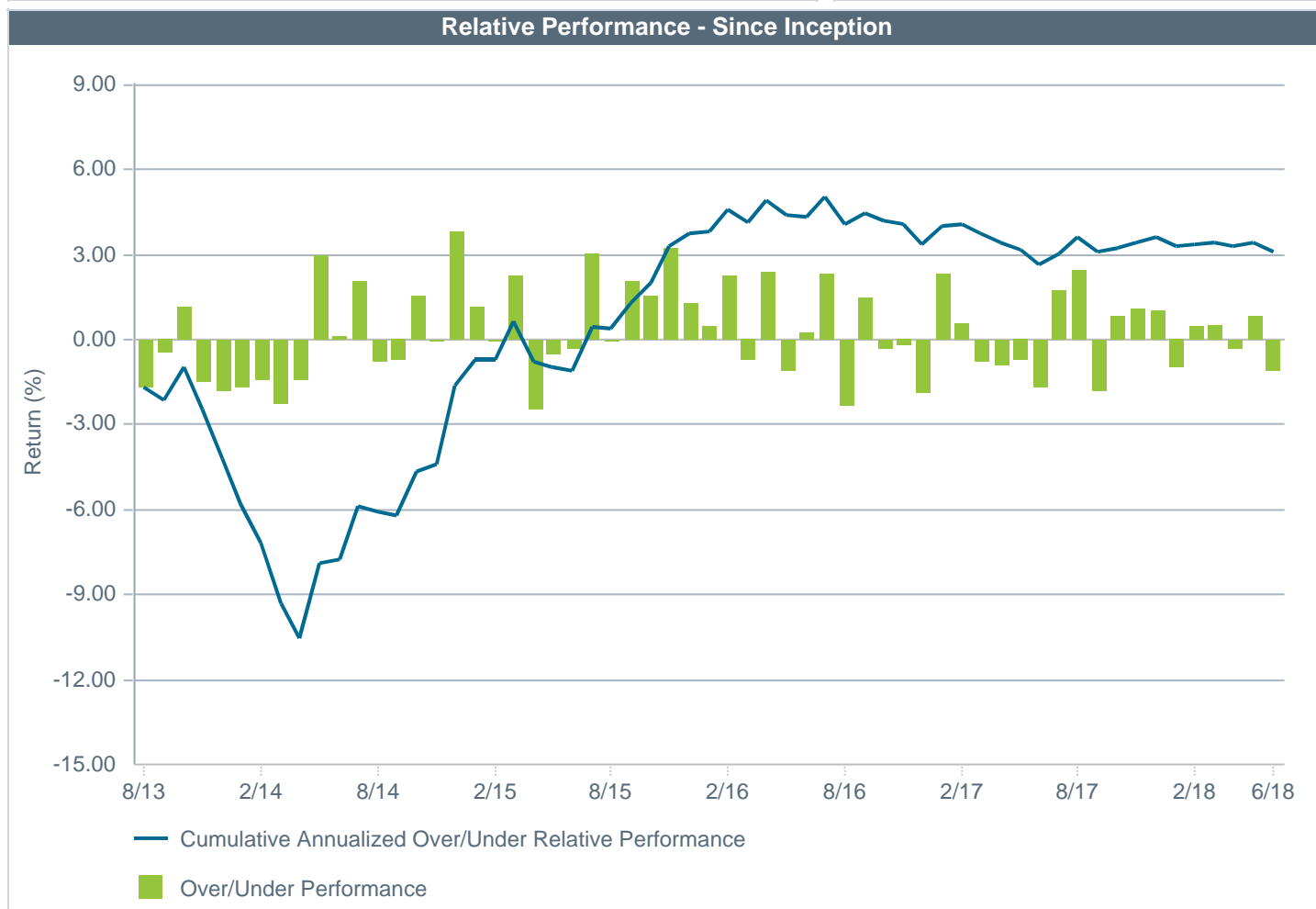


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.20	12.56	1.09	N/A	N/A	N/A	6.09	14.61	-15.75	-15.29	N/A
Benchmark	0.40	7.35	-4.54	-6.40	-7.81	-9.04	1.70	11.77	-24.66	-17.01	-9.52
Difference	-0.60	5.21	5.63	N/A	N/A	N/A	4.39	2.84	8.91	1.72	N/A



**Actual Correlation - 3 Years**

	Actual Correlation
Manager Benchmark	0.91
S&P 500 Index (Cap Wtd)	0.16
Russell 2000 Index	0.15
MSCI EAFE Index (USD) (Net)	0.17
MSCI Emg Mkts Index (USD) (Net)	0.40
Bloomberg US Agg Bond Index	0.11
Bloomberg US Trsy US TIPS Index	0.32
Wilshire US REIT Index	-0.03
HFRI FOF Comp Index	0.23
ICE BofAML 3 Mo US T-Bill Index	0.18
Cons Price Index (Unadjusted)	0.34

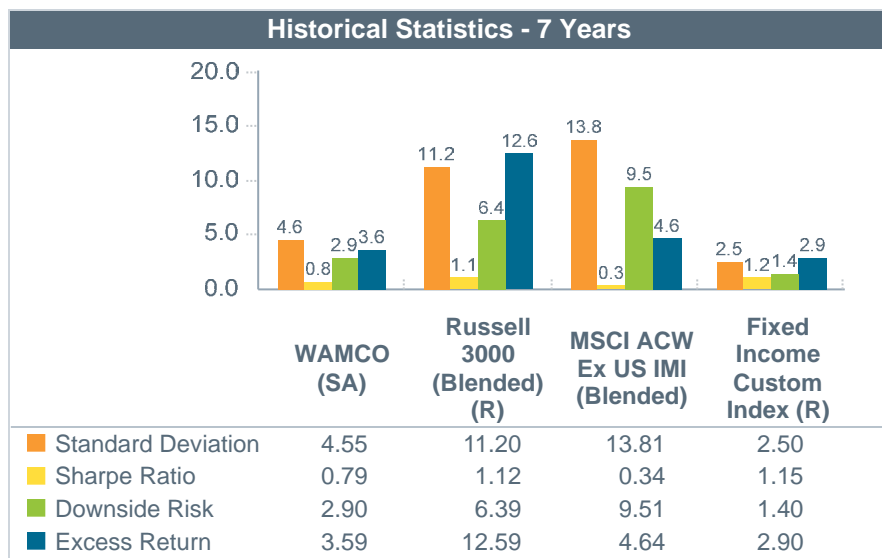


Manager: WAMCO (SA)

As of June 30, 2018

Benchmark: Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)

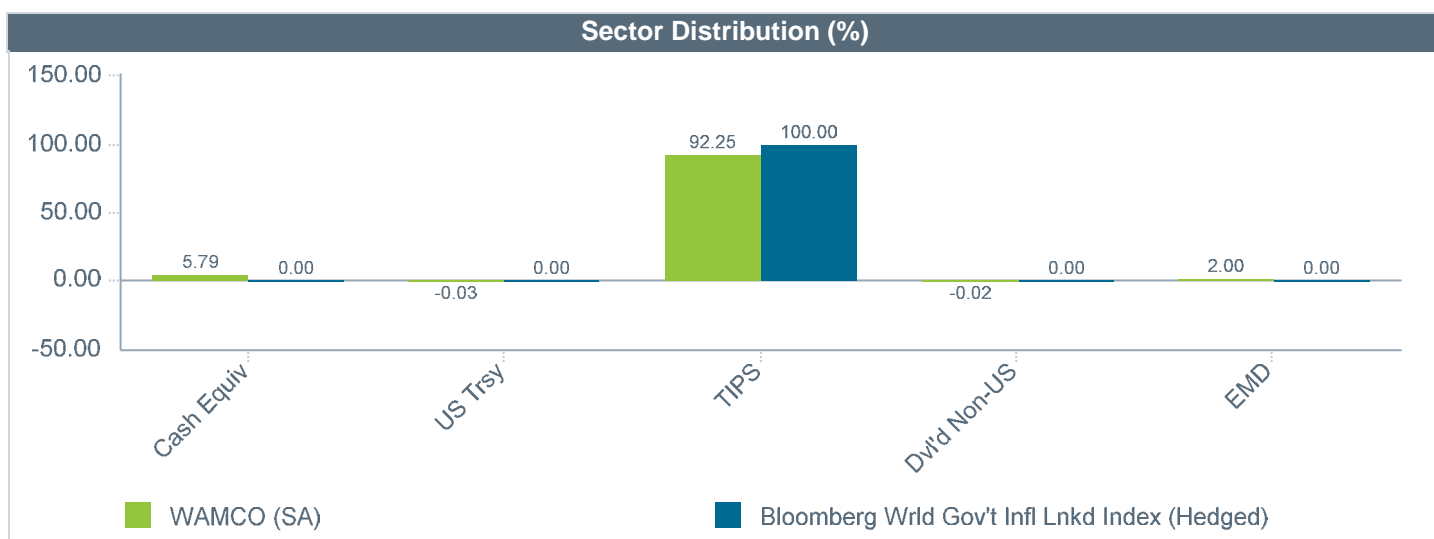
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.45	2.81	3.93	3.99	3.88	N/A	3.33	9.37	-0.22	8.75	-5.64
Benchmark	0.33	3.44	4.23	4.08	3.92	4.27	3.32	10.22	-1.12	9.04	-5.51
Difference	-0.78	-0.63	-0.30	-0.09	-0.04	N/A	0.01	-0.85	0.90	-0.29	-0.13



**Actual Correlation - 7 Years**

	Actual Correlation
Manager Benchmark	0.97
S&P 500 Index (Cap Wtd)	-0.05
Russell 2000 Index	-0.13
MSCI EAFE Index (USD) (Net)	0.01
MSCI Emg Mkts Index (USD) (Net)	0.15
Bloomberg US Agg Bond Index	0.81
Bloomberg US Trsy US TIPS Index	0.79
Wilshire US REIT Index	0.37
HFRI FOF Comp Index	0.03
Bloomberg Cmtty Index (TR)	-0.07
ICE BofAML 3 Mo US T-Bill Index	-0.04
Cons Price Index (Unadjusted)	-0.14

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	9.58	N/A
Spread Duration	N/A	N/A
Avg. Maturity	11.03	11.28
Avg. Quality	Aa3	Aaa
Yield To Maturity (%)	3.09	N/A
Coupon Rate (%)	1.09	N/A
Yield To Worst (%)	1.15	-0.65
Current Yield (%)	1.29	N/A
Holdings Count	52	141



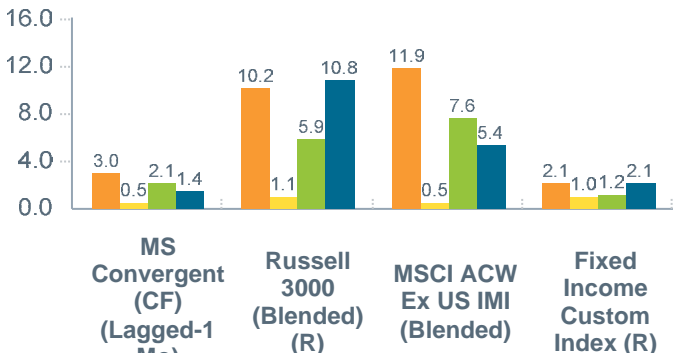
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Allocation to "Other" consists of Eurobonds.

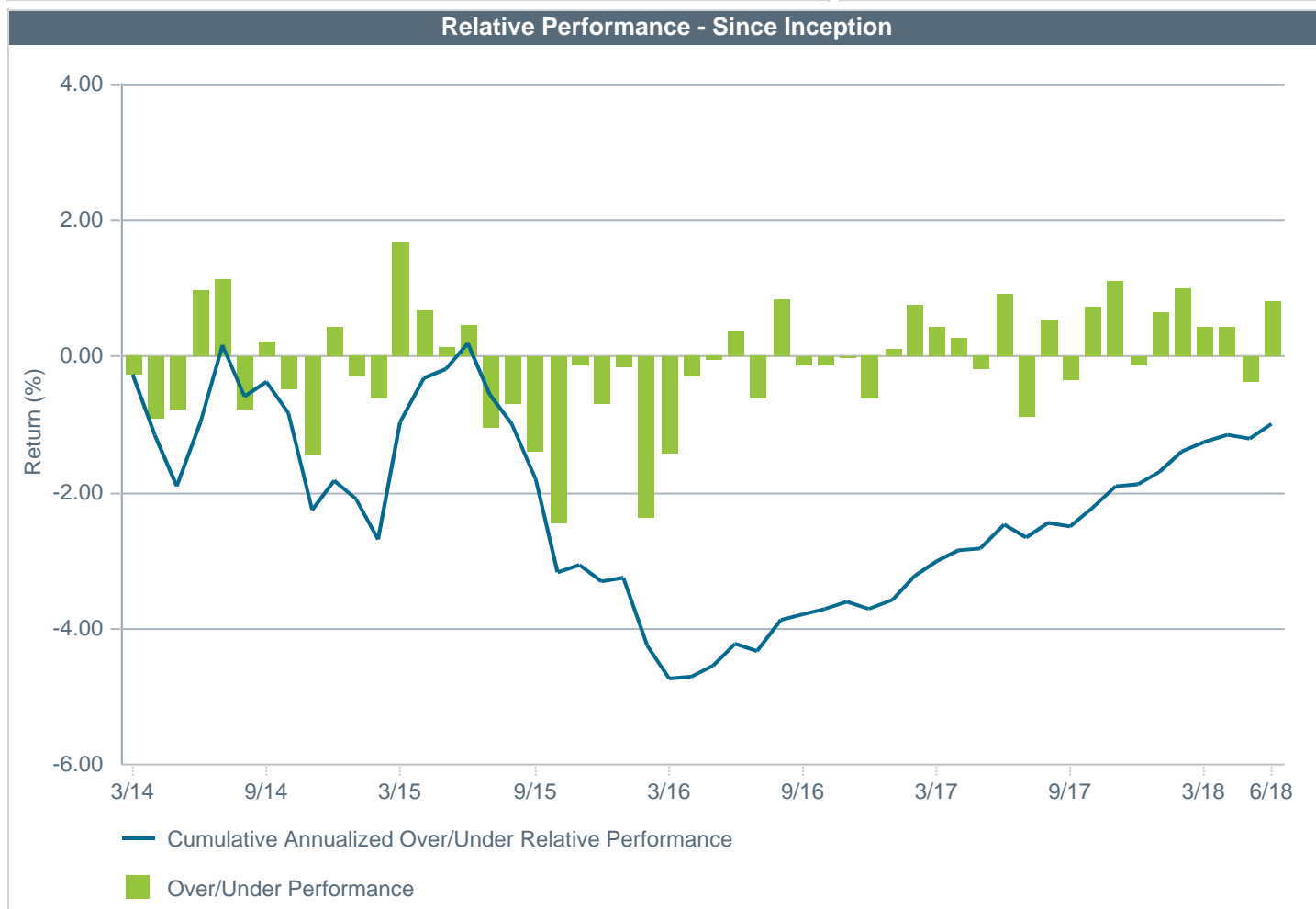
Manager: MS Convergent (CF) (Lagged-1 Mo)

As of June 30, 2018

Benchmark: ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	2.07	8.62	2.07	N/A	N/A	N/A	7.39	-1.27	-1.34	N/A	N/A
Benchmark	1.17	4.32	3.64	3.40	3.31	3.37	3.81	3.33	3.02	3.05	3.08
Difference	0.90	4.30	-1.57	N/A	N/A	N/A	3.58	-4.60	-4.36	N/A	N/A

Historical Statistics - 3 Years					Actual Correlation - 3 Years	
					Actual Correlation	
MS Convergent (CF) (Lagged-1 Mo)	Russell 3000 (Blended) (R)	MSCI ACW Ex US IMI (Blended)	Fixed Income Custom Index (R)		Manager Benchmark	0.55
Standard Deviation	10.16	11.88	2.13		S&P 500 Index (Cap Wtd)	-0.18
Sharpe Ratio	1.07	0.45	0.98		Russell 2000 Index	-0.03
Downside Risk	5.87	7.64	1.19		MSCI EAFE Index (USD) (Net)	-0.15
Excess Return	10.85	5.36	2.12		MSCI Emg Mkts Index (USD) (Net)	-0.08
					Bloomberg US Agg Bond Index	-0.23
					Bloomberg US Trsy US TIPS Index	-0.17
					Wilshire US REIT Index	-0.31
					HFRI FOF Comp Index	0.13
					Bloomberg Cmtty Index (TR)	0.12
					ICE BofAML 3 Mo US T-Bill Index	0.51
					Cons Price Index (Unadjusted)	0.31



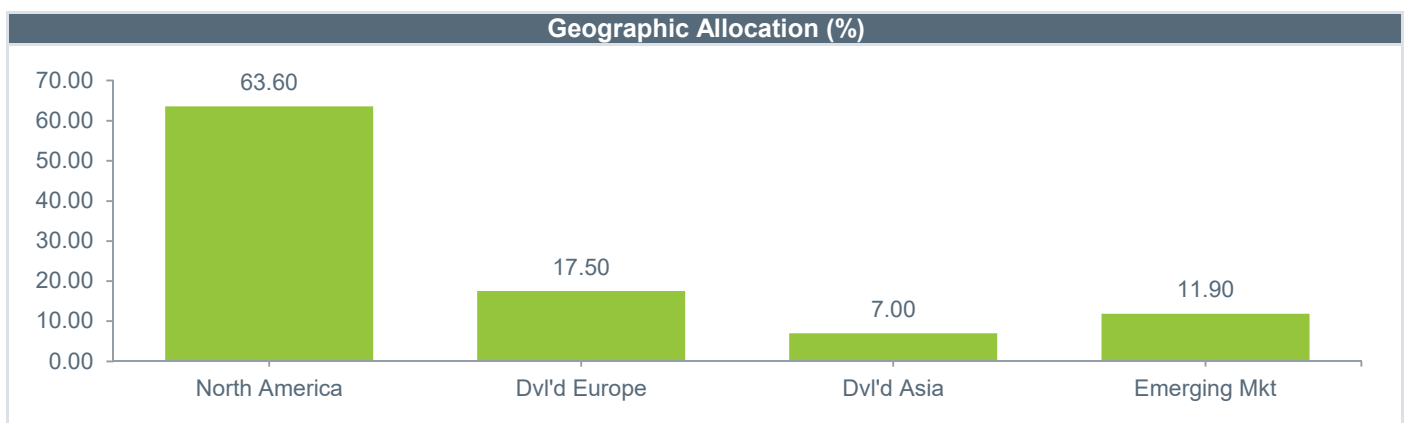
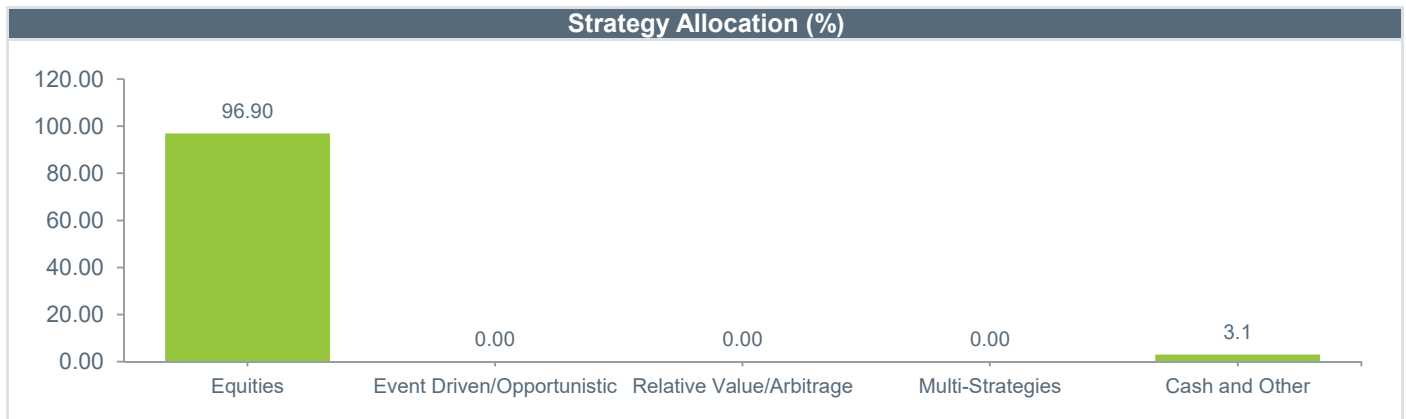
Performance shown is net of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity.



Investment Strategy
Morgan Stanley AIP seeks to provide superior performance with minimal principal loss over a complete investment cycle. The fund attempts to achieve its objective principally through investing in a diversified portfolio of investment funds managed by third party investment strategies who employ a variety of investment strategies.

Firm Statistics	
Year Firm Established	2000
Firm AUM (\$B)	\$23
Percentage Employee Owned	0.00%

Fund Statistics	
Fund Inception	2014
Fund Size (\$M)	\$5
Number of Underlying Managers	1
Maximum Weighting of an Underlying Manager	100%
Current Leverage (Assets/Equity)	None
Annual Manager Turnover	11.00%
Annual Management Fee	None
Performance Fee	No
Hurdle	No
Initial Lock-Up Period	No
Redemption Frequency	Monthly
Notification Period	N/A



Fund statistics shown are provided by the investment manager and are as of the most recently available quarter end. Actual management and performance fees and other terms may vary based on the invested assets or other manager concessions.

Allocation by Strategy	
Strategy	Allocation (%)
Equities L/S Opportunistic	0.0
Event Driven Equity	0.0
Equity L/S High Hedge	96.9
<i>Millennium International, Ltd.</i>	96.9
Statistical Arbitrage	0.0
Mortgage Arbitrage	0.0
Multi-Strategy	0.0
Cash and Other	3.1
<i>Cash and Other</i>	3.1

Turnover		
Strategy	New	Terms/Trans
Equities L/S Opportunistic	3	11
Event Driven Equity	0	2
Equity L/S High Hedge	0	4
Statistical Arbitrage	0	4
Mortgage Arbitrage	0	3
Multi-Strategy	0	3
Cash and Other	0	0
<b>Total Turnover</b>	<b>3</b>	<b>27</b>

### Investment Strategy

BAAM manages a custom discretionary Hope Street fund on the behalf of LADWP. Hope Street is a broadly diversified portfolio designed to provide downside capital protection and achieve the portfolio objective over a full market cycle. The portfolio is designed to maintain low volatility vs. the global equity markets.

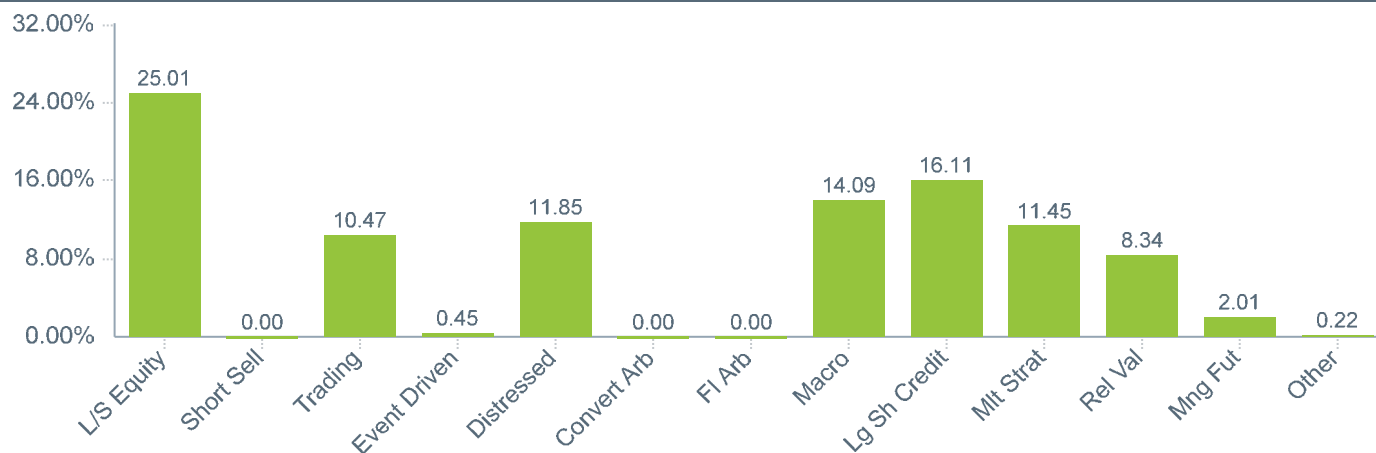
### Firm Statistics

Year Firm Established	1990
Firm AUM (\$M)	78,658
Percentage Employee Owned %	48.00

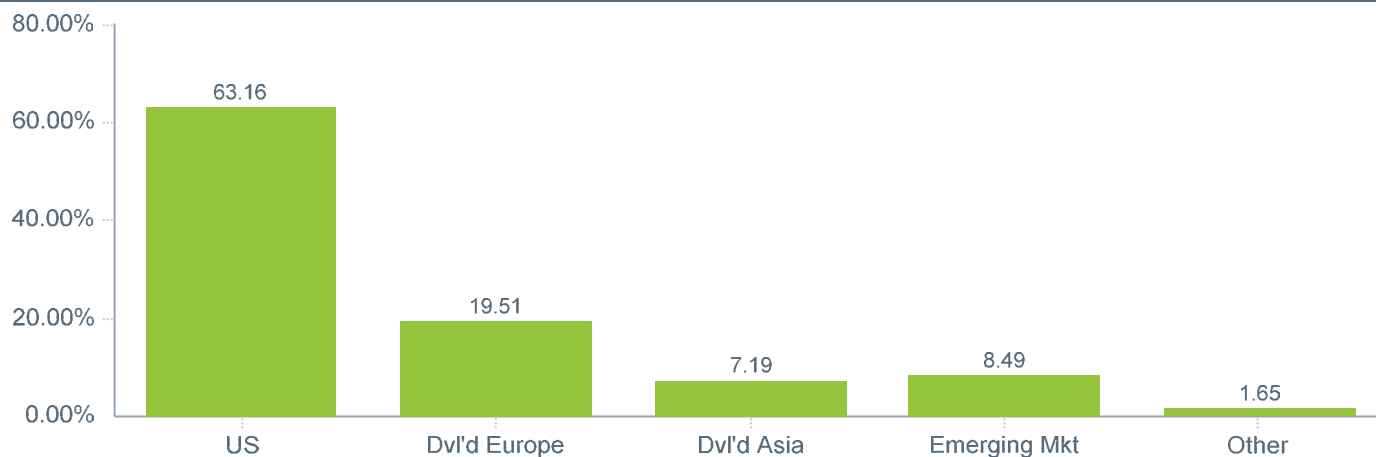
### Fund Statistics

Fund Inception	2017
Fund Size(\$M)	674
Number of Underlying Managers	47
Maximum Weighting of an Underlying Manager %	5.50
Current Leverage (Assets/Equity)	3.90
Annual Manager Turnover %	N/A
Annual Management Fee %	0.60
Performance Fee %	12.00
Hurdle %	4.40
Initial Lock-Up Periods	No
Redemption Frequency	Daily
Notification Period	60 Days

### Strategy Allocation (%)



### Geographic Allocation (%)



Strategy Allocation to "Other" consists of cash, hedging, and other expenses. Geographic Allocation to "Other" consists of Canada. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end.



Allocation by Strategy	
Strategy	Allocation (%)
<b>Equities</b>	<b>34.5</b>
<i>HealthCor, L.P.</i>	3.3
<i>Glenview Inst Ptr LP</i>	3.0
<i>BEMAP LP</i>	2.5
<i>PointState Fund LP</i>	2.1
<i>Alyeska 2 LP</i>	4.8
<i>Covalis Enhanced LP</i>	3.4
<i>Renaissance RIDA LLC</i>	4.8
<i>Trexquant LP</i>	3.3
<i>BlackRock GlobAlp LP</i>	2.5
<i>Squarepoint Focus LP</i>	2.2
<i>Two Sig RP En CSP LP</i>	1.2
<i>Squarepoint Core LP</i>	0.8
<i>GSA QMS LP</i>	0.6
<b>Credit</b>	<b>38.1</b>
<i>EJF Debt Opps II LP</i>	3.0
<i>Lion Point LP</i>	2.7
<i>SilverRock CSP LP</i>	2.7
<i>Varde Skyway L.P.</i>	5.4
<i>Solus Sola LLC(1)</i>	3.5
<i>Contrarian CSP LP</i>	3.0
<i>Bayview RMBS LP</i>	5.6
<i>Shelter Growth OppLP</i>	3.8
<i>Good Hill Ptnr LP</i>	3.8
<i>EMSO Rose Ltd.</i>	4.6
<b>Multi-Strategies</b>	<b>7.7</b>
<i>Magnetar Andrmlda LLC(1)</i>	5.4
<i>Elliott Assocs LP</i>	2.3
<b>Macro</b>	<b>16.1</b>
<i>FL Trading Pod LP</i>	14.3
<i>GSA Trend SMA CSP LP</i>	1.8
<b>Event Driven/Opportunistic</b>	<b>3.7</b>
<i>Parallel Investments</i>	2.8
<i>BSOF Feeder LP-Mgr &amp; Parallel Investment</i>	0.9
<b>Cash and Other</b>	<b>0.0</b>

Turnover		
Strategy	New	Terms/Trans
Equities	6	0
Credit	3	0
Multi-Strategies	0	0
Macro	0	0
Event Driven/Opportunistic	1	0
Cash and Other	0	0
<b>Total Turnover</b>	<b>10</b>	<b>0</b>

# Appendix



**As stated in Section IV of the Investment Policy:**

The purpose of a watch list is to focus attention and discussion on the managers that need it - due to difficulties or changes. However, being placed on the watch list does not suggest termination is imminent, as all managers, even top performers, experience some periods of underperformance. An investment manager/portfolio attains watch status if at least one of two events occurs:

- (i) the portfolio's rolling 60 month net return is less than the benchmark's return at two consecutive calendar quarter end dates, or
- (ii) after the Portfolio Review is conducted, Investment Staff and/or the investment consultant recommends to the Board that an investment manager is a candidate for watch status.

However, a manager with less than 60 months of performance with the Plan may be placed on watch for material underperformance relative to the benchmark. An investment manager/portfolio may also be placed on watch at any time as a result of qualitative factors, including but not limited to:

- Violation of investment guidelines
- Deviation from stated investment style and/ or shifts in the firm's philosophy or process
- Turnover of one or more key personnel
- Change in firm ownership or structure
- Significant loss of clients and/or assets under management
- Significant and persistent lack of responsiveness to client requests
- Litigation
- Failure to disclose significant information, including potential conflicts of interest
- Chronic violations of the Plan's Investment Policy
- Any other issue or situation of which the Investment Staff, the Advisory Consultant and/or Board become aware that is deemed material.

**Water and Power Employees' Retirement Plan**  
**Historical Policy Benchmark - Retirement**

**As of June 30, 2018**

Time Period	Asset Class	Target	Change	Policy Benchmarks
12/1/2017 - Present (Updated Interim Targets)	Domestic Equity	33%	-1.25%	Russell 3000
	International Equity	19%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	26%	-2.75%	Fixed Income Custom Index (R)
	Real Return	5%	-	CPI+3%
	Hedge Funds	5%	+3%	T-Bill + 3% Lag
	Real Estate	6%	+1%	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Cash	1%	-	T-Bill
2/1/2016 - Present (Interim Targets)	Domestic Equity	34.25%	+1.25%	Russell 3000
	International Equity	19%	-2%	MSCI ACWI ex U.S. IMI
	Fixed Income	28.75%	+4.75%	Fixed Income Custom Index (R)
	Real Return	5%	-1%	CPI+3%
	Hedge Funds	2%	+2%	T-Bill + 3% Lag
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Cash	1%	-	T-Bill
9/1/2015 - 1/31/2016	Domestic Equity	33%	-	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-	Fixed Income Custom Index (R)
	Real Return	6%	-	CPI+3%
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Covered Calls	5%	-	CBOE BXM
	Cash	1%	-	T-Bill
10/1/2014 - 8/31/2015	Domestic Equity	33%	-	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-	B Universal
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI+3%
	Cash	1%	-	T-Bill
7/1/2013 - 9/30/2014	Domestic Equity	33%	-1%	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-1%	B Universal
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	+1%	NCREIF + 0.5% Lag
	Private Equity	5%	+1%	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI+3% Lag
	Cash	1%	-	T-Bill

Please see the Addendum for custom index definitions.

**Water and Power Employees' Retirement Plan**  
**Historical Policy Benchmark - Retirement**

**As of June 30, 2018**

Time Period	Asset Class	Target	Change	Policy Benchmarks
4/1/2012-6/30/2013	Domestic Equity	34%	-1%	Russell 3000
	International Equity	21%	-1%	MSCI ACWI ex U.S. IMI
	Fixed Income	25%	-8%	B Universal
	Covered Calls	5%	+5%	CBOE BXM
	Real Estate	4%	+2%	NCREIF + 0.5% Lag
	Private Equity	4%	+2%	Russell 3000 + 3% Lag
	Real Return	6%	+1%	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
10/1/2011-3/31/2012	Domestic Equity	35%	+1%	Russell 3000
	International Equity	22%	+2%	MSCI ACWI ex U.S. IMI
	Fixed Income	33%	-	B Universal
	Real Estate	2%	-2%	NCREIF + 0.5% Lag
	Private Equity	2%	-1%	Russell 3000 + 3% Lag
	Real Return	5%	-	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
10/1/2010-9/30/2011	Domestic Equity	34%	+1%	Russell 3000
	International Equity	20%	+3%	MSCI ACWI ex U.S. IMI
	Fixed Income	33%	-7%	B Universal
	Real Estate	4%	+1%	NCREIF + 0.5% Lag
	Private Equity	3%	+1%	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	5%	+2%	T-Bill + 3% Lag
	Cash	1%	-1%	T-Bill
7/1/2009-9/30/2010	Domestic Equity	33%	-7%	Russell 3000
	International Equity	17%	-7%	MSCI ACWI ex U.S. IMI
	Fixed Income	40%	+10%	B Universal
	Real Estate	3%	+1%	NCREIF + 0.5% Lag
	Private Equity	2%	+1%	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	3%	+1%	T-Bill + 3% Lag
	Cash	2%	+1%	T-Bill
1/1/2009-6/30/2009	Domestic Equity	40%	-	Russell 3000
	International Equity	24%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	30%	-	B Universal
	Real Estate	2%	-	NCREIF + 0.5% Lag
	Private Equity	1%	-	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	2%	-	T-Bill + 3% Lag
	Cash	1%	-	T-Bill

**Water and Power Employees' Retirement Plan**  
**Historical Policy Benchmark - Retirement**

**As of June 30, 2018**

Time Period	Asset Class	Target	Change	Policy Benchmarks
7/1/2008-12/31/2008	Domestic Equity	40%	-	Russell 3000
	International Equity	24%	+9%	MSCI ACWI ex U.S.
	Fixed Income	30%	-5%	B Universal
	Real Estate	2%	-2%	NCREIF + 0.5% Lag
	Private Equity	1%	-3%	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	2%	+1%	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
3/1/2007-6/30/2008	Domestic Equity	40%	-	Russell 3000
	International Equity	15%	-	MSCI ACWI ex U.S.
	Fixed Income	35%	-	B Universal
	Real Estate	4%	-	NCREIF + 0.5% Lag
	Private Equity	4%	-1%	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	1%	+1%	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
1/1/2007-2/28/2007	Domestic Equity	40%	-	Russell 3000
	International Equity	15%	-	MSCI ACWI ex U.S.
	Fixed Income	35%	-	B Universal
	Real Estate	4%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Cash	1%	-	T-Bill
4/1/2003-12/31/2006	Domestic Equity	40%	-20%	Russell 3000
	International Equity	15%	+15%	MSCI ACWI ex U.S.
	Fixed Income	35%	+5%	B Universal
	Cash	1%	-9%	T-Bill
	Real Estate	4%	+4%	The Plan had allocated 5% to Alternatives and 4% to Real Estate asset classes.
	Alternatives	5%	+5%	
Thru 3/31/2003	Domestic Equity	60%	-	S&P 500
	Fixed Income	30%	-	Citigroup BIG
	Cash	10%	-	Citigroup T-Bill

**Water and Power Employees' Retirement Plan**  
**Historical Policy Benchmark - Health**

**As of June 30, 2018**

Time Period	Asset Class	Target	Change	Policy Benchmarks
12/1/2017 - Present (Updated Interim Targets)	Domestic Equity	33.00%	-1.25%	Russell 3000
	International Equity	19%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	26.00%	-2.75%	Fixed Income Custom Index (H)
	Real Return	5%	-	CPI+3%
	Hedge Funds	5%	+3%	T-Bill + 3% Lag
	Real Estate	6%	+1%	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Cash	1%	-	T-Bill
2/1/2016 - Present (Interim Targets)	Domestic Equity	34.25%	+1.25%	Russell 3000
	International Equity	19%	-2%	MSCI ACWI ex U.S. IMI
	Fixed Income	28.75%	+4.75%	Fixed Income Custom Index (H)
	Real Return	5%	-1%	CPI+3%
	Hedge Funds	2%	+2%	T-Bill + 3% Lag
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Cash	1%	-	T-Bill
9/1/2015 - 1/31/2016	Domestic Equity	33%	-	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-	Fixed Income Custom Index (H)
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI+3%
	Cash	1%	-	T-Bill
10/1/2014 - 8/31/2015	Domestic Equity	33%	-	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-	B Universal
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	-	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI+3%
	Cash	1%	-	T-Bill
7/1/2013 - 9/30/2014	Domestic Equity	33%	-2%	Russell 3000
	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-2%	B Universal
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	+2%	NCREIF + 0.5% Lag
	Private Equity	5%	+2%	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI + 3% Lag
	Cash	1%	-	T-Bill
4/1/2012-6/30/2013	Domestic Equity	35%	-1%	Russell 3000
	International Equity	21%	+1%	MSCI ACWI ex U.S. IMI
	Fixed Income	26%	-10%	B Universal
	Covered Calls	5%	+5%	CBOE BXM
	Real Estate	3%	+2%	NCREIF + 0.5% Lag
	Private Equity	3%	+2%	Russell 3000 + 3% Lag
	Real Return	6%	+1%	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
10/1/2011-3/31/2012	Domestic Equity	36%	+2%	Russell 3000
	International Equity	20%	+2%	MSCI ACWI ex U.S. IMI
	Fixed Income	36%	-6%	B Universal
	Real Estate	1%	+1%	NCREIF + 0.5% Lag
	Private Equity	1%	-	Russell 3000 + 3% Lag
	Real Return	5%	+2%	T-Bill + 3% Lag
	Cash	1%	-1%	T-Bill

Please see the Addendum for custom index definitions.

**Water and Power Employees' Retirement Plan**  
**Historical Policy Benchmark - Health**

**As of June 30, 2018**

Time Period	Asset Class	Target	Change	Policy Benchmarks
7/1/2010-9/30/2011	Domestic Equity	34%	-3%	Russell 3000
	International Equity	18%	+3%	MSCI ACWI ex U.S. IMI
	Fixed Income	42%	-3%	B Universal
	Private Equity	1%	-	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Real Return	3%	+3%	T-Bill + 3% Lag
	Cash	2%	-	T-Bill
10/1/09-6/30/10	Domestic Equity	37%	-23%	Russell 3000
	International Equity	15%	+15%	MSCI ACWI ex U.S. IMI
	Fixed Income	45%	+5%	B Universal
	Private Equity	1%	+1%	85% Cambridge U.S. Private Equity Lag / 15% Cambridge U.S. Venture Capital Lag
	Cash	2%	+2%	T-Bill
Thru 9/30/2009	Domestic Equity	60%	-	Russell 3000
	Fixed Income	40%	-	B Universal



**Water and Power Employees' Retirement Plan**  
**Summary of Retirement Plan Transitions**

**As of June 30, 2018**

Manager	Mandate	Funded	Terminated
<b>2018</b>			
Torchlight Debt Opp VI	Real Estate	1Q 2018	
<b>2017</b>			
LaSalle Asia V	Real Estate	4Q 2017	
Blackstone Hope St. LP	Hedge Fund	3Q 2017	
EnCap XI	Private Equity	3Q 2017	
Silver Lake V	Private Equity	1Q 2017	
CD&R X	Private Equity	1Q 2017	
<b>2016</b>			
FPA Core Plus III	Real Estate	4Q 2016	
Adams Street SMB I	Private Equity	4Q 2016	
Wellington Emerging	Emerging Markets	3Q 2016	
DRA G&I IX	Real Estate	3Q 2016	
Industry Ventures VIII	Private Equity	2Q 2016	
Industry Ven SP Opp III-A	Private Equity	2Q 2016	
Lone Star V	Real Estate	2Q 2016	
Mesa West IV	Real Estate	1Q 2016	
Westbrook X	Real Estate	1Q 2016	
Vista VI	Private Equity	1Q 2016	
<b>2015</b>			
Emerald Small Cap Growth (SA)	Small Cap Growth	4Q 2015	
Ares V	Private Equity	4Q 2015	
Harvest VII	Private Equity	4Q 2015	
JP Morgan Principal Protection (SA)	Principal Protection	3Q 2015	
Wells Principal Protection (SA)	Principal Protection	3Q 2015	
Macquarie Unconstrained (SA)	Extended Credit	3Q 2015	
Neuberger Unconstrained (SA)	Extended Credit	3Q 2015	
Pacific Asset Bank Loans (SA)	Bank Loans	3Q 2015	
Harrison Street Core	Real Estate	3Q 2015	
Jamestown Premier	Real Estate	2Q 2015	
Lone Star IV	Real Estate	2Q 2015	
Blackstone Tactical Opps	Private Equity	2Q 2015	
EnCap X	Private Equity	1Q 2015	
<b>2014</b>			
Torchlight Debt Opp V	Real Estate	4Q 2014	
Ares Special Situation IV	Private Equity	4Q 2014	
Almanac VII	Real Estate	4Q 2014	
Crestview Partners III	Private Equity	3Q 2014	
Prologis USLH	Real Estate	3Q 2014	
DRA G&I VIII	Real Estate	3Q 2014	
Molpus IV	Real Return	3Q 2014	
Hancock	Timber	2Q 2014	
Vista Equity V	Private Equity	2Q 2014	
CD&R IX	Private Equity	2Q 2014	
Landmark XV	Private Equity	1Q 2014	
Apollo VIII	Private Equity	1Q 2014	
Morgan Stanley	Hedge Fund	1Q 2014	
Brep Europe IV	Real Estate	1Q 2014	

**Water and Power Employees' Retirement Plan**  
**Summary of Retirement Plan Transitions**

**As of June 30, 2018**

Manager	Mandate	Funded	Terminated
<b>2013</b>			
GAM	Hedge Fund	4Q 2013	2Q 2018
Silver Lake IV	Private Equity	4Q 2013	
Heitman	Real Estate	4Q 2013	
Invesco Commodity	Commodities	3Q 2013	
Mesa West Fund III	Real Estate	3Q 2013	
Torchlight Debt Opp IV	Real Estate	3Q 2013	
DFA	Real Estate	1Q 2013	
EnergyCap IX	Private Equity	1Q 2013	
<b>2012</b>			
Vontobel	Emerging Markets	4Q 2012	3Q 2016
AresCorp. Opp. IV	Private Equity	4Q 2012	
Bristol Value II	Real Estate	4Q 2012	
ARS VI	Real Estate	3Q 2012	
Blackstone	Real Estate	3Q 2012	
PCCP	Real Estate	3Q 2012	
L.A. Capital	Emerging Markets	3Q 2012	
MFS	Developed International	3Q 2012	
BlackRock	Developed International	3Q 2012	
Gateway (non-replication)	Covered Calls	2Q 2012	1Q 2016
Gateway (replication)	Covered Calls	2Q 2012	1Q 2016
AG Core	Real Estate	1Q 2012	
<b>2011</b>			
DRA	Real Estate	4Q 2011	
Vista Equity Partners IV	Private Equity	4Q 2011	
Invesco	Real Estate	3Q 2011	
Lone Star VII	Real Estate	2Q 2011	
Lone Star II	Real Estate	2Q 2011	
Audax Mezz III	Private Equity	1Q 2011	
EnergyCap VIII	Private Equity	1Q 2011	
<b>2010</b>			
WAMCO	GILS	2Q 2010	
JP Morgan	Core Fixed Income	2Q 2010	3Q 2015
Frontier	Small Cap Growth	2Q 2010	4Q 2015
T. Rowe Price	Large Cap Growth	2Q 2010	
Lexington VIII	Private Equity	1Q 2010	
Mesa West	Real Estate	1Q 2010	
<b>2009</b>			
Oaktree V	Private Equity	1Q 2009	
<b>2008</b>			
Landmark XIV	Private Equity	3Q 2008	
CB Richard Ellis	Private Equity	2Q 2008	Q3 2016
Fisher Lynch	Real Estate	2Q 2008	
HRJ	Private Equity	1Q 2008	
<b>2007</b>			
JPM Strategic	Real Estate	3Q 2007	
Prisa II	Real Estate	2Q 2007	
PAAMCO	Hedge Fund	1Q 2007	4Q 2010
Aetos	Hedge Fund	1Q 2007	2Q 2013

**Water and Power Employees' Retirement Plan**  
**Summary of Retirement Plan Transitions**

**As of June 30, 2018**

Manager	Mandate	Funded	Terminated
<b>2006</b>			
Prisa	Real Estate	4Q 2006	
Landmark XIII	Private Equity	4Q 2006	
Paradigm	Small Cap Growth	3Q 2006	1Q 2010
Northpointe	Small Cap Growth	3Q 2006	2Q 2009
Lexington VI	Private Equity	3Q 2006	
<b>2005</b>			
Boston Company	Large Cap Active		1Q 2005
T. Rowe Price	Emerging Markets	1Q 2005	3Q 2011
Boston Company	Emerging Markets	1Q 2005	4Q 2011
Loomis Sayles	High Yield	1Q 2005	3Q 2015
Boston Company	International	1Q 2005	4Q 2011
<b>2004</b>			
Wells Capital	High Yield	4Q 2004	3Q 2015
Pyramis (formerly Fidelity)	International	4Q 2004	
Earnest Partners	Small Cap Value	4Q 2004	
Bank of New York	Small Cap Growth	4Q 2004	1Q 2006
Wells Capital	Core Fixed Income	3Q 2004	3Q 2015
ING/Aeltus	Core Fixed Income	3Q 2004	4Q 2009
T. Rowe Price	Large Cap Value	3Q 2004	
Invesco	International	2Q 2004	4Q 2011
MFS	Large Cap Value	1Q 2004	
Intech	Large Cap Growth	1Q 2004	3Q 2009
Fred Alger	Large Cap Growth	1Q 2004	
<b>2003</b>			
Northern Trust	Passive Core	3Q 2003	1Q 2005
BlackRock (formerly Merrill Lynch)	Passive Core	3Q 2003	

**Water and Power Employees' Retirement Plan**  
**Hedge Funds Characteristics and Terms**

Strategy	Definition
<b>Relative Value</b>	
Convertible Arbitrage	Seeks to profit from pricing anomalies between a company's convertible securities and its equity. A manager buys the convertible instrument (often a bond) and sells short the common stock.
Fixed Income/Credit Arbitrage	Exploits pricing inefficiencies between fixed income securities with similar characteristics, such as corporate vs. Treasury yield spreads. Offsetting long and short positions typically neutralize exposure to interest rate risk, isolating the pricing discrepancy.
Equity Market Neutral	Exploits relative pricing inefficiencies between equity securities while neutralizing market exposure. Typically the net (total long and short) portfolio exposure is balanced so that there is no directional bias to equity sectors or styles.
<b>Event Driven</b>	
Risk/Merger Arbitrage	Invests in the shares of companies involved in mergers, acquisitions, and LBOs. A common merger arbitrage strategy is to buy the equity of the "target" and sell short the equity of the "acquirer," making a profit if the deal outcome (and timing) is in line with the manager's positioning.
Distressed Securities	Managers pursuing this strategy invest in bank debt, corporate debt, trade claims, common stock, and warrants of companies either in bankruptcy or having financial or operational issues. The goal is to anticipate how corporate events (such as bankruptcies, reorganizations, distressed sales, and restructurings to reverse negative trends) will impact the underlying securities.
<b>Opportunistic</b>	
Global Macro	Employs a "top down" approach to invest across a wide range of global asset classes based on forecasted changes in global economies, political fortunes, or global supply and demand for resources.
Short Selling	Taking short positions in stocks in anticipation of a price decline, based on a view that the stock is overvalued, company earnings will disappoint, or there is a market selloff approaching.
Emerging Markets	Generally long-biased equity or debt positions that seek to capitalize on the undervaluation of companies in developing countries, which tend to have higher inflation and volatile growth.
Long/Short Equity	Core holding of long equities hedged to varying degrees with short positions in stocks or derivatives.

**Performance Related Comments**

- Performance shown is gross of fees, except where noted.
- Performance and data are provided by Northern Trust.
- RVK began monitoring the assets of Water and Power Employees' Retirement Plan as of 12/31/2014.

**Custom Index Comments**

- The Retirement Policy Benchmark returns shown prior to 12/31/2014 were provided by Northern Trust. The passive index is calculated monthly and currently consists of 33% Russell 3000 (Blended) (R), 19% MSCI ACWI Ex US IM Index (Blended), 26% Fixed Income Custom Index (R), 5% CPI+3% (Blended), 5% ICE BofAML 3 Mo US T-Bill Index+3%, 6% NCREIF Property Index+0.5% (Lagged-1 Qtr), 5% Russell 3000+3% (Blended), and 1% ICE BofAML 3 Mo US T-Bill Index.
- The Russell 3000 (Blended) (R) consists of the S&P 500 Index (Cap Wtd) through 03/31/2013 and the Russell 3000 Index thereafter.
- The MSCI ACWI Ex US IM Index (Blended) consists of the MSCI ACW Ex US Index (USD) (Net) through 12/31/2008 and the MSCI ACW Ex US IM Index (Net) thereafter.
- The Fixed Income Custom Index (R) is calculated monthly and consists of the Bloomberg US Universal Bond Index through 08/31/2015 and 50% Bloomberg US Intermediate Aggregate Bond Ex Credit Index, 45% 67% Bloomberg Global Credit/33% Bloomberg Global High Yield, and 5% Credit Suisse Leveraged Loan Index thereafter.
- The International Developed Blend consists of the MSCI EAFE Index (Hedged) through 12/31/2008 and the MSCI World Ex US IM Index (Net) thereafter.
- The CPI+3% (Blended) consists of the ICE BofAML 3 Mo US T-Bill Index+3% through 06/30/2013 and the CPI (Seasonally Adjusted) +3% thereafter.
- The Russell 3000+3% (Blended) consists of 50% Cambridge US Private Equity Index (Lagged-1 Qtr) (Monthly) and 50% Cambridge US Venture Capital Index (Lagged-1Qtr) (Monthly) through 09/30/2011 and the Russell 3000+3% (Lagged-1 Qtr) thereafter.
- The Health Policy Benchmark returns shown prior to 12/31/2014 were provided by Northern Trust. The passive index is calculated monthly and currently consists of 33% Russell 3000 (Blended) (H), 19% MSCI ACWI Ex US IM Index, 26% Fixed Income Custom Index (H), 5% CPI+3% (Blended), 5% ICE BofAML 3 Mo US T-Bill Index+3%, 6% NCREIF Property Index+0.5% (Lagged-1 Qtr), 5% Russell 3000+3% (Blended), and 1% ICE BofAML 3 Mo US Treasury Bill Index.
- The Russell 3000 (Blended) (H) consists of the Russell 1000 Index through 09/30/2009, and the Russell 3000 Index thereafter.
- The Fixed Income Custom Index (H) is calculated monthly and consists of the Bloomberg US Aggregate Bond Index through 10/31/2009, the Bloomberg US Universal Bond Index through 08/31/2015, and 50% Bloomberg US Intermediate Aggregate Bond Ex Credit Index, 45% 67% Bloomberg Global Credit/33% Bloomberg Global High Yield, and 5% Credit Suisse Leveraged Loan Index thereafter.
- The Death Policy Benchmark is a passive index calculated monthly and currently consists of 96% Bloomberg US Aggregate Bond Index and 4% FTSE 3 Mo Treasury Bill Index.
- The Disability Policy Benchmark is a passive index calculated monthly and currently consists of 95% Bloomberg US Aggregate Bond Index and 5% FTSE 3 Mo Treasury Bill Index.

**Miscellaneous Comments**

- In 09/2015, the Board approved a change in the Plan's target allocation that will begin implementation in early 2016. The new targets are as follows:
  - 29% Domestic Equity
  - 19% International Equity
  - 25% Fixed Income
  - 8% Real Estate
  - 8% Private Equity
  - 5% Real Return
  - 5% Hedge Funds
  - 1% Cash Equivalents
- Interim targets were approved as the plan moves towards the long-term strategic targets.

## Glossary

**Active Return** - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

**Active Share** - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

**Alpha Ratio** - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

**Average Quality** - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

**Benchmark Effect** - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

**Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

**Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

**Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.

**Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

**Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.





## Glossary

- Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.
- Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.
- US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.
- Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.
- VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."
- Cash Flow Effect** - The composite's active return minus the sum of each managers' active return minus the benchmark effect.
- Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.
- Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.
- Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.
- Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.
- Current Yield** - The annual income of a security divided by the security's current price.
- Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.
- Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.
- Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.
- Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.
- Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.
- Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.
- Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk free return.
- Expense Ratios** - Morningstar is the source for mutual fund expense ratios.
- Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.
- Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.
- Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.
- Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.
- Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.
- Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.
- Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.
- Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.
- Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.
- Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

## Glossary

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

### Peer Groups -

**Plan Sponsor Peer Groups** - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

**Investment Manager Peer Groups** - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees. For more information on Peer Groups, visit <https://www.invmetrics.com/style-peer-groups>.

**Percentile Rankings** - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value

100 - Lowest Statistical Value

*Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.*

**Performance Methodology** - RVK calculates performance for investment managers and composites using different methodologies.

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

**Portfolio Characteristics** - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

**Price to Earnings Ratio** - The ratio of a company's share price to its per-share earnings

**Private Equity Quartile Ranks** - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**Risk Free Benchmark** - ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.



## Glossary

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Bank Loans	50
TIPS	95	Stable Value (Plan Sponsor Directed)	50
US Large Cap Equity	95	Absolute Return Strategies	35
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	<u>Not Liquid Investments</u>	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITS	85	Non-Core Real Estate	5
Non-US Small Cap Equity	85	Private Equity Funds of Funds	5
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

**Sector Allocation** - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Simple Alpha** - The difference between the manager's return and the benchmark's return.

**Spread Duration** - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

**Time Period Abbreviations** - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

**Thematic Classification** - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITS
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Total Fund Attribution** - The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

**Strategic Asset Allocation (SAA)** - The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

**Tactical Asset Allocation (TAA)** - The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

**Style Selection (SS)** - The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

**Manager's Skill (MS)** - The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

**Tracking Error** - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

## Glossary

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

**Unit Value** - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

**Yield to Maturity** - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

**Yield to Worst** - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.

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