# **Quarterly Investment Performance** Analysis Water and Power Employees' Retirement Plan

Period Ended: March 31, 2017



# Table of Contents

Executive Summary	Tab 1
Watch List	Tab 2
Capital Markets Review	Tab 3
Total Fund – Retirement	Tab 4
Total Fund – Health	Tab 5
Total Fund – Death and Disability	Tab 6
Composite and Manager Reviews	Tab 7
Appendix	Tab 8



# **Executive Summary**



## **Executive Summary**



### **Capital Markets Review**

Global risk assets rallied during the first quarter of 2017, driven largely by continued positive expectations for US fiscal policy, as well as continued improvements in global economic growth and inflation, more broadly. Duration sensitive assets, however, traded with less conviction and direction, as sovereign debt yields of developed economies ended the quarter relatively unchanged. Globally, commodities were mixed, but traded down as a broad category, and the dollar weakened against a trade weighted basket of currencies. Precious metals were supported by the weaker dollar and continuation of low interest rates, and posted positive returns around 11.5%. Oil prices declined during the quarter, as increased US shale production offset production cuts announced by OPEC in November of last year.

In the US, the new administration provided few details regarding proposed pro-growth policies, which may include infrastructure spending, tax reform, and easing of regulations. Nevertheless, elevated valuations in domestic equity markets suggested that investors anticipate positive changes and are comfortable with near-term equity risk. US economic fundamentals likely supported this positive sentiment, with indicators such as retail sales, ISM PMI, Personal Consumption Expenditures, and Non-Farm Payroll growth posting performance consistent with gradual improvement. This environment also prompted the FOMC to raise policy rates at its March meeting. The Committee cited strengthened labor market conditions and progress toward its inflation objectives as key decision drivers while guiding markets toward two additional rate hikes this year. Even though US rates over the quarter were largely unchanged, the potential for a more hawkish Federal Reserve drove interest rate volatility higher over the period. Specifically, the 2-year Treasury yield reached a multi-year high of 1.37% before trading back to 1.27% at the close of the quarter. The 2Y / 10Y yield spread tightened throughout the period, retracing much of the widening experienced post-election, suggesting a modest decline in longer-run growth expectations. Market implied inflation expectations remained unchanged to marginally higher.

International markets outperformed US domestic markets, largely as a result of the aforementioned improvements in global growth and inflation. That said, emerging markets generally outperformed developed, with market participants reacting to improvements in earnings expectations amidst the backdrop of a marginally weaker US dollar. In Europe, the European Central Bank ("ECB") noted improvements in euro-zone economic fundamentals, highlighting strong business surveys, unemployment rates at a 7-year low of 9.49%, and inflation measures consistent with the ECB's 2.0% target. Though policy rates remained unchanged, ECB President Draghi stated that new supplements to the QE program are increasingly unlikely, which resulted in some relative price action. The Bank of Japan similarly held policy rates steady, but did not suggest that tightening is on the horizon, as the country's core CPI is barely positive at 0.1%.

### **Total Fund**

During the first quarter, the Retirement Plan outperformed its policy benchmark by 44 basis points and ranked in the 36<sup>th</sup> percentile among peers. The Health Plan outperformed its policy benchmark by 49 basis points and ranked in the 33<sup>rd</sup> percentile among peers.

Performance shown is gross of fees, except for the hedge fund composite/managers which are net of fees.



Over the one-year trailing period, the Retirement Plan underperformed its policy benchmark by 25 basis points, and ranked in the 44<sup>th</sup> percentile among peers. The Health Plan underperformed the policy benchmark by 12 basis points, and ranked in the 40<sup>th</sup> percentile among peers.

The Plan rebalanced to the approved interim targets during the first quarter of 2016, but has continued to maintain an overweight allocation to Public Equity (relative to the stated target allocation). This overweight allocation was beneficial even though there was some underperformance from individual managers, since domestic and international equity posted the highest absolute returns for the quarter. Negative relative performance from the real return composite detracted from total fund performance for the quarter.

#### **Domestic Equity**

The Domestic Equity Composite outperformed the Russell 3000 Index for the quarter, returning 6.55% versus 5.74% for the index. This performance ranked the composite in the 8<sup>th</sup> percentile among peers. Growth-oriented stocks substantially outperformed their value-oriented counterparts for the quarter. Fred Alger Large Cap Growth had the highest absolute performance for the quarter, returning 10.47% and outperforming the Russell 1000 Grth Index by 156 basis points. Earnest Partners Small Cap Value had the highest relative performance, outperforming the Russell 2000 Val Index by 563 basis points over the quarter. T. Rowe Price Large Cap Value had the lowest absolute performance returning 3.93% for the quarter, while Emerald Small Cap Growth had the lowest relative performance, underperforming the Russell 2000 Grth Index by 3 basis points.

#### **International Equity**

The International Equity Composite outperformed the MSCI ACW Ex US IM Index for the quarter, returning 8.30% versus 7.99% for the index. This performance ranked the composite in the 52<sup>nd</sup> percentile among peers. Emerging market indices significantly outperformed developed market counterparts for the quarter. MFS Developed Int'l had the lowest absolute and relative performance for the quarter, returning 6.49% and underperforming the MSCI World Ex US IMI Index by 43 basis points. Wellington Emerging had the highest absolute and relative performance over the quarter, returning 14.12% versus 11.65% for the MSCI Emg Mkts IM Index.

#### **Fixed Income**

The Fixed Income Composite outperformed the Fixed Income Custom Index for the quarter, returning 1.38% versus 1.22% for the index. This performance ranked the composite in the 45<sup>th</sup> percentile among peers. Neuberger Unconstrained has the highest absolute and relative performance over the quarter, returning 5.62% versus 2.01% for the 67% B Global Credit/33% B Global High Yield benchmark. Pacific Asset Bank Loans also contributed to Fixed Income



Composite outperformance posting a strong return of 1.71% and outperforming the CS Lvg'd Loan Index by 51 basis points.

### Alternative Asset Classes

#### **REAL RETURN**

The Real Return Composite underperformed the Consumer Price Index+3% by 67 basis points during the first quarter. Global Inflation-Linked Securities, which account for 54% of the total Real Return Composite, had positive absolute performance returning 0.58% during the quarter, but underperformed its benchmark by 12 basis points.

#### **HEDGE FUNDS**

The Hedge Funds Composite posted positive absolute and relative returns, returning 1.69% versus 0.87% for the benchmark. Both strategies have posted strong performance over short-time periods, but longer trailing periods have struggled primarily due to MS Convergent, which has underperformed its benchmark by 309 basis points since inception. GAM Divergent has also detracted from the composite's since inception underperformance, returning 1.90% versus 3.16% for the benchmark.

# Watch List



	Date Qualified		Rece	nt Perform	nance			
Watch List Managers	for Watch	2016 Q4	2017 Q1	1 Year	3 Year	5 Year	Reasons on Watch	Recommendation
New on Watch								
WAMCO (SA) Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	3/31/2017	-1.95 -2.06	0.58 0.70	5.94 6.60	5.16 5.32	3.44 3.36	Failure to meet performance criteria.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 01/11/2017.
Continue On Watch								
Fred Alger Large Cap Growth (SA) Russell 1000 Growth Index	12/31/2015	<b>-2.09</b> 1.01	10.47 8.91	14.80 15.76	7.51 11.27	11.42 13.32	Failure to meet performance criteria.	Staff and RVK are conducting an equity structure study to evaluate the structure of this composite going forward and expect to deliver results to the Board in Q3 2017. The manager last provided an update to the Board on 04/12/2017.
T. Rowe Price Large Cap Growth (SA) Russell 1000 Grth Index	12/31/2016	2.35 1.01	10.14 8.91	23.04 15.76	12.59 11.27	15.70 13.32	Portfolio Manager turnover.	Staff and RVK are conducting an equity structure study to evaluate the structure of this composite going forward and expect to deliver results to the Board in Q3 2017. The manager last provided an update to the Board on 04/12/2017.
Fidelity Developed Int'I (SA) International Developed Blend	9/30/2016	-1.85 -0.70	6.59 6.92	8.60 11.87	0.30 0.67	6.32 5.69	Portfolio Manager turnover.	Staff and RVK are conducting an equity structure study to evaluate the structure of this composite going forward and expect to deliver results to the Board in Q3 2017. The manager last provided an update to the Board on 10/12/2016.



# Water and Power Employees' Retirement Plan Watch List Summary

Watch List Managers	Date Qualified		Rece	nt Perform	nance		Reasons on Watch	Recommendation
	for Watch	2016 Q4	2017 Q1	1 Year	3 Year	5 Year		
Continue On Watch								
JP Morgan Principal Protection (SA) Bloomberg US Int Agg Ex Credit	3/31/2016	-1.69 -2.10	0.61 0.52			Performance and management are continuously being monitored. The manager last provided an update to the Board on 09/14/2016.		
Macquarie Unconstrained (SA) 67% B Global Credit/33% B Global High Yield	9/30/2016	-0.66 -0.82	2.03 2.01	7.58 8.58	N/A 4.68	N/A 5.68	Organization concerns.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 06/08/2016.
MS Convergent (CF) (Lagged-1 Mo) - Net BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	3/31/2016	0.10 0.83	2.19 0.87	4.16 <i>3.40</i>	0.07 3.17	N/A 3.14	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.
Removed From Watch								
Pacific Asset Bank Loans (SA) CS Lvg'd Loan Index	3/31/2016	2.54 2.25	1.71 1.20	8.99 9.74	N/A 3.72	N/A 4.88		After thoroughly reviewing performance, investment characteristics, fees relative to peers, stability of the firm, investment process and portfolio management team, RVK recommended that the Plan release Pacific Asset from watch status at the 4/12/2017 Board meeting.

Performance shown is gross of fees.

Please see the Appendix for manager watch list criteria.

On March 31, 2017, Delaware Investments adopted the name of its parent company, Macquarie Investment Management.



# **Capital Markets Review**



#### **Capital Markets Review**

#### As of March 31, 2017

#### First Quarter Economic Environment

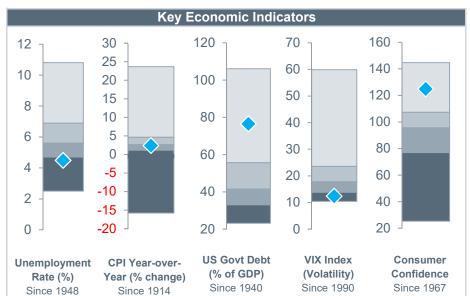
#### **Key Economic Indicators**

Global risk assets rallied during the first quarter of 2017, driven largely by continued positive expectations for US fiscal policy, as well as continued improvements in global economic growth and inflation, more broadly. Duration sensitive assets, however, traded with less conviction and direction, as sovereign debt yields of developed economies ended the quarter relatively unchanged.

Globally, commodities were mixed, but traded down as a broad category, and the dollar weakened against a trade weighted basket of currencies. Oil prices declined during the quarter, as increased US shale production offset production cuts announced by OPEC in November of last year. In the US, the new administration provided few details regarding proposed pro-growth policies, which may include infrastructure spending, tax reform, and easing of regulations. Nevertheless, elevated valuations in domestic equity markets suggested that investors anticipate positive changes and are comfortable with near-term equity risk.

Economic Indicators	Mar-17	Dec-16	Mar-16	Mar-14	20 Yr
Federal Funds Rate (%)	0.82	0.55	0.25	0.06	2.29
Breakeven Infl 1 Yr (%)	2.06	1.27	2.10	1.79	N/A
Breakeven Infl 10 Yr (%)	1.98	1.97	1.63	2.14	N/A
CPI YoY (Headline) (%)	2.4	2.1	0.9	1.5	2.2
Unemployment Rate (%)	4.5	4.7	5.0	6.7	6.0
Real GDP YoY (%)	1.9	2.0	1.6	1.6	2.3
PMI - Manufacturing	57.20	54.50	51.70	55.00	52.24
USD Total Wtd Idx	94.01	95.76	89.73	76.63	86.89
WTI Crude Oil per Barrel (\$)	50.6	53.7	38.3	101.6	56.4
Gold Spot per Oz (\$)	1,249.4	1,152.3	1,232.7	1,284.0	795.0

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	6.07	6.07	17.17	13.30	7.51
Russell 2000	2.47	2.47	26.22	12.35	7.12
MSCI EAFE (Net)	7.25	7.25	11.67	5.83	1.05
MSCI EAFE SC (Net)	7.97	7.97	10.99	9.20	3.03
MSCI Emg Mkts (Net)	11.44	11.44	17.21	0.81	2.72
Bloomberg US Agg Bond	0.82	0.82	0.44	2.34	4.27
BofA ML 3 Mo US T-Bill	0.10	0.10	0.36	0.14	0.68
NCREIF ODCE (Gross)	1.77	1.77	8.34	11.98	5.59
Wilshire US REIT	0.03	0.03	1.98	9.76	4.42
HFRI FOF Comp	2.39	2.39	6.23	3.22	1.24
Bloomberg Cmdty (TR)	-2.33	-2.33	8.69	-9.54	-6.22





Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.

Page 11

Treasury Yield Curve (%)



#### **US Equity Review**

#### As of March 31, 2017

First Quarter Review

#### **Broad Market**

The first quarter was marked by strong S&P earnings growth and continued muted volatility. Specifically, the year-over-year earnings growth rate for the S&P 500 was estimated at 9.2% by FactSet, which would mark the highest growth rate since 2011. Combining this with lower levels of stock correlation and investor comfort with market risks led to an environment where active manager performance generally improved over the quarter.

#### Market Cap

30

25

20

15

10

5

0

Large cap stocks outpaced small cap stocks this guarter, with the Russell 1000 Index returning 6.0% while the Russell 2000 Index returned 2.5%.

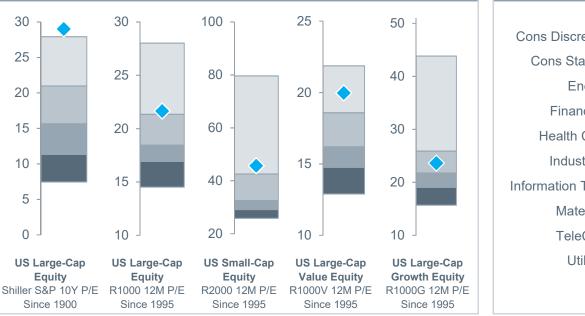
#### **Style and Sector**

In the first quarter of 2017, growth significantly outperformed value while the technology and consumer discretionary were the top performing sectors.

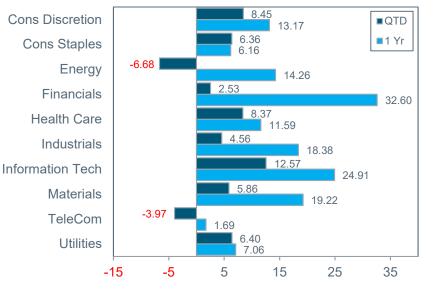
Valuations

Style and Capitalization Market Performance (%)





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



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



#### **Non-US Equity Review**

#### As of March 31, 2017

First Quarter Review

#### **Broad Market**

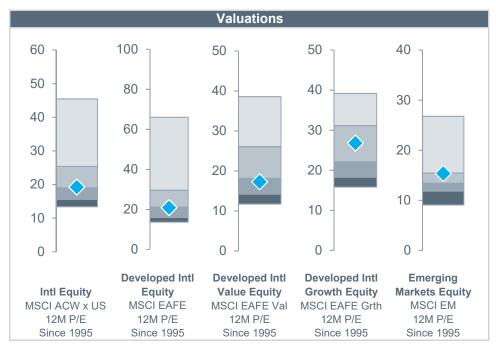
Underpinning the positive international equity performance was the expectation, supported by improving economic fundamentals, that the global economy is on more stable footing than previously believed. This was especially true in the UK, where recent economic data showed a steady expansion in the face of potentially leaving the EU Common Market.

#### Region

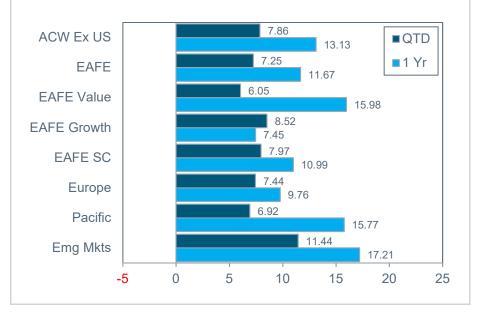
From a regional standpoint, emerging markets outperformed developed markets with India, Korea, and Mexico all posting mid-teen returns for the quarter. Conversely, commodity sensitive economies such as Canada and Norway lagged notably, posting slightly positive returns for the quarter.

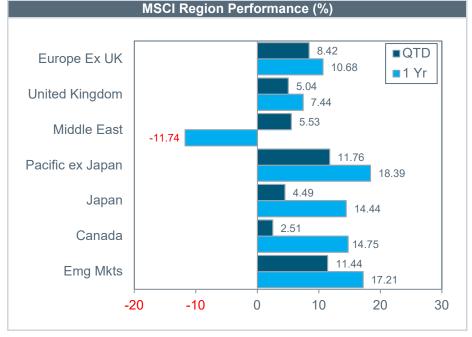
#### Market Cap & Style

In developed markets, small cap modestly outperformed large cap (8.0% vs. 7.3%) while growth outpaced value, with the EAFE Growth Index returning 8.5% vs. 6.1% for the EAFE Value Index.



MSCI Style and Capitalization Market Performance (%)





🙏 RVK

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.

#### **Fixed Income Review**

#### First Quarter Review

#### **Broad Market**

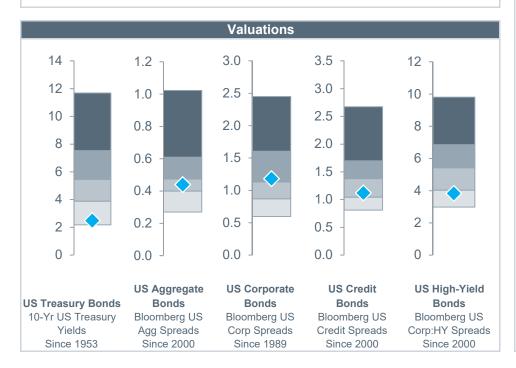
Short-dated global rates continued to be impacted by global central bank policy actions, while longer-dated rates reacted to broader economic developments and expectations for continued, albeit modest, improvements in global growth.

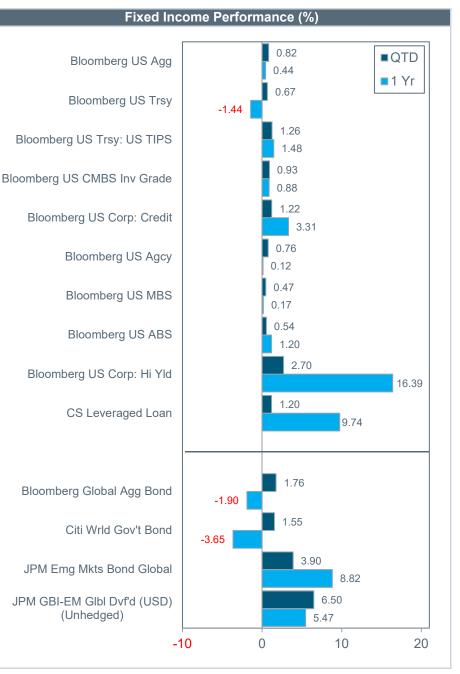
#### **Credit Market**

US credit markets outpaced US treasuries, returning 1.2% vs. 0.7% during the first quarter.

#### International

Upcoming elections in several European countries drove an uptick in volatility for rates markets, despite the steady improvement in economic data. The Citigroup World Government Bond Index (Unhedged) returned 1.6% for the quarter, while the hedged version of the index finished the quarter flat. The JPMorgan EMBI Global Diversified Index, which measures hard currency emerging markets debt, returned 3.9%.





KVK

Valuation data courtesy of Bloomberg Professional Service.

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

#### First Quarter Review - Absolute Return

#### **General Market - Hedge Funds**

Hedge fund strategies provided solid returns during the quarter, as most managers benefitted from lower correlations, less direct monetary policy involvement amidst no measureable changes in fiscal policy, and continued strong equity and credit performance as a result of positive investor sentiment. Generally, risk appetite appears to be improving across the broader hedge fund industry, as evidenced by rising levels of gross exposure across long/short equity, multi-strategy, and macro hedge fund strategies.

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

Most GTAA managers outperformed an undiversified and static 60/40 portfolio of US large cap equity and US fixed income. Managers that held to disciplined value-oriented processes, especially those with fewer constraints on emerging market allocations, outperformed peers. US-oriented strategies, especially those with biases toward income-oriented exposures, moderately underperformed both traditional long-oriented GTAA managers and a static 60/40 allocation.

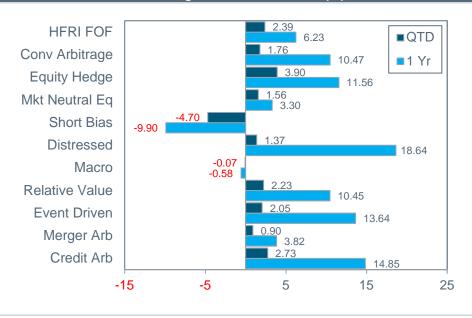
### First Quarter Review - Real Assets

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

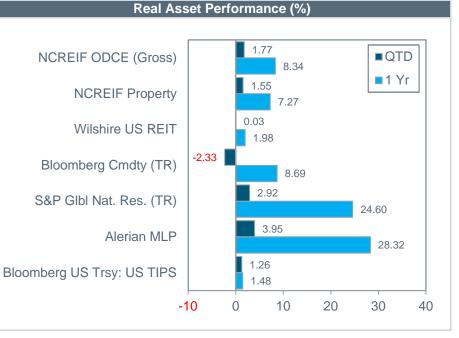
Inflation sensitive markets provided divergent performance in a quarter characterized by little change to long-term inflation expectations. This was evidenced by the breakeven inflation markets, as measured by the difference between nominal Treasuries and TIPS, ending the quarter largely unchanged.

#### **General Market - Real Estate**

Despite a few modest signs of softening in the market, such as more favorable lease terms and concessions, the residential and commercial real estate markets continued to be supported by a generally positive outlook for US economic growth. Core real estate investors entered 2017 with continued expectations that income returns would represent the majority of the total return, as opposed to prior years where capital appreciation returns were the primary driver. As evidence, the Core index, NCREIF-ODCE, returned 1.8% during the quarter with income returns accounting for 1.1%.



#### HFRI Hedge Fund Performance (%)





	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	8 2014	2015	2016	YTD
Best	61.34	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	2 31.78	15.02	21.31	11.44
Î	55.81	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	9 19.31	9.59	17.13	7.97
	47.25	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	7.25
	38.59	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	3 12.50	1.38	11.74	6.07
	36.18	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.35	13.94	4 5.97	0.55	11.19	2.70
	28.96	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	2.47
	28.68	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	2.39
	23.93	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	1.77
	11.61	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	1.58
	9.28	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	1.26
	8.39	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	0.82
	5.88	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	0.10
	4.11	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	0.03
Worst	1.15	1.33	2.43	0.49	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	2 -17.01	-24.66	0.33	-2.33
S&P 50 US Larg Cap		mall (Net)	- Int'l S	SCI EAFE SC (Net) - Int'I SC	MSCI EM (Net) - Int'I Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp: Hi Yield - Fl	Bloombrg US Trsy: US TIPS - FI	US Gov/Cre	OD	CE ss) -	Wilshire JS REIT - REITs		Cmdty (TR)	BofA ML 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**



### Asset Allocation by Manager and Schedule of Investable Assets - Retirement

March 31, 2017 : \$10,897,228,527		Market Value (\$)	Allocation (%)
	BlackRock Russell 1000 Index (CF)	1,738,962,080	15.96
	Wells Principal Protection (SA)	765,693,162	7.03
	JP Morgan Principal Protection (SA)	762,276,777	7.00
	Real Estate Composite	646,210,807	5.93
	Neuberger Unconstrained (SA)	617,516,090	5.67
	Macquarie Unconstrained (SA)	607,831,000	5.58
	T. Rowe Price Large Cap Value (SA)	537,538,956	4.93
	MFS Large Cap Value (SA)	537,262,067	4.93
	T. Rowe Price Large Cap Growth (SA)	520,034,203	4.77
	MFS Developed Int'l (SA)	512,993,748	4.71
	Fidelity Developed Int'l (SA)	511,085,391	4.69
	BlackRock Developed Int'l - Passive (CF)	509,132,674	4.67
	Fred Alger Large Cap Growth (SA)	494,913,952	4.54
	WAMCO (SA)	377,231,687	3.46
	Private Equity Composite	353,537,737	3.24
	Wellington Emerging (SA)	285,012,413	2.62
	LA Capital Emerging (CF)	270,013,255	2.48
	Earnest Partners Small Cap Value (SA)	149,836,949	1.38
	Pacific Asset Bank Loans (SA)	137,438,033	1.26
	Emerald Small Cap Growth (SA)	133,993,412	1.23
	Invesco Commodity (CF)	131,559,312	1.21
	Cash Equivalents	104,785,486	0.96
	GAM Divergent (CF) (Lagged-1 Mo)	85,560,000	0.79
	MS Convergent (CF) (Lagged-1 Mo)	80,165,089	0.74
	Molpus IV (CF) (Lagged-1 Mo)	16,881,732	0.15
	Hancock Timberland (CF) (Lagged-1 Mo)	9,748,922	0.09
	Vontobel Emerging (SA)	14,083	0.00
	Transition Account	-488	0.00

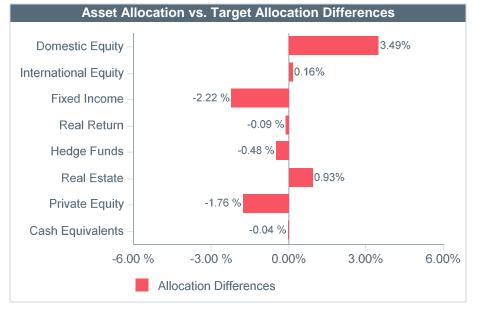
		Schedule of Investable	Assets - FYTD		
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
FYTD	10,049,793,526	847,435,002	10,897,228,527	9.09	109.09

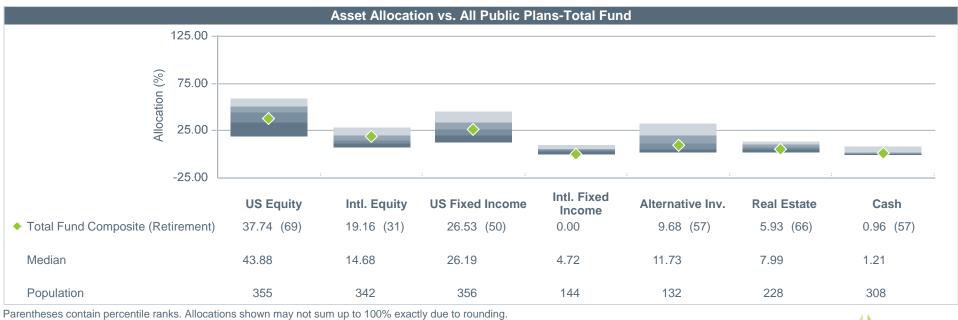
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends June 30th. Market value shown for Vontobel Emerging (SA) represents residual assets.



#### 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

	Market Value (\$)	Allocation (%)	Target (%)
Domestic Equity	4,112,541,618	37.74	34.25
International Equity	2,088,251,075	19.16	19.00
Fixed Income	2,890,755,062	26.53	28.75
Real Return	535,421,653	4.91	5.00
Hedge Funds	165,725,089	1.52	2.00
Real Estate	646,210,807	5.93	5.00
Private Equity	353,537,737	3.24	5.00
Cash Equivalents	104,785,486	0.96	1.00
Total Fund	10,897,228,527	100.00	100.00





🙏 RV

**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Total Fund Composite (Retirement)	4.69	9.09	11.16	6.18	8.37	8.23	5.71	6.94	1.68	6.86	6.41	01/01/2005
Retirement Policy Benchmark	4.25	9.43	11.41	5.92	7.97	8.30	5.53	8.40	0.71	6.75	6.26	
Difference	0.44	-0.34	-0.25	0.26	0.40	-0.07	0.18	-1.46	0.97	0.11	0.15	
All Public Plans-Total Fund Median	4.47	8.87	10.93	5.62	7.83	8.11	5.65	7.32	0.17	6.81	6.33	
Rank	36	44	44	25	28	45	45	60	13	49	47	
Domestic Equity Composite	6.55	16.10	18.63	10.07	13.82	13.12	7.91	11.68	1.96	11.82	7.46	04/01/2001
Russell 3000 (Blended) (R)	5.74	15.04	18.07	9.76	13.18	12.89	7.54	12.74	0.48	12.56	6.96	
Difference	0.81	1.06	0.56	0.31	0.64	0.23	0.37	-1.06	1.48	-0.74	0.50	
All Public Plans-US Equity Segment Median	5.44	14.91	18.03	9.11	12.73	12.71	7.51	12.85	0.14	11.42	7.26	
Rank	8	22	32	19	7	22	19	74	8	34	30	
MFS Large Cap Value (SA)	4.79	12.40	17.91	10.11	13.96	12.89	8.06	15.80	-0.06	11.86	9.46	03/01/2004
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	7.71	
Difference	1.52	-1.60	-1.31	1.44	0.83	0.71	2.13	-1.54	3.77	-1.59	1.75	
IM U.S. Large Cap Value Equity (SA+CF) Median	3.97	15.46	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	8.51	
Rank	32	77	53	19	25	35	23	39	27	56	17	
MFS Large Cap Value (SA) - Net	4.71	12.14	17.55	9.78	13.62	12.54	7.70	15.45	-0.38	11.55	9.09	03/01/2004
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	7.71	
Difference	1.44	-1.86	-1.67	1.11	0.49	0.36	1.77	-1.89	3.45	-1.90	1.38	
T. Rowe Price Large Cap Value (SA)	3.93	15.01	19.37	9.70	14.45	13.05	7.79	17.14	-1.90	13.43	9.21	10/01/2004
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	7.95	
Difference	0.66	1.01	0.15	1.03	1.32	0.87	1.86	-0.20	1.93	-0.02	1.26	
IM U.S. Large Cap Value Equity (SA+CF) Median	3.97	15.46	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	8.84	
Rank	52	55	39	27	15	30	30	26	45	35	35	
T. Rowe Price Large Cap Value (SA) - Net	3.86	14.76	19.02	9.38	14.11	12.71	7.44	16.80	-2.19	13.10	8.85	10/01/2004
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	7.95	
Difference	0.59	0.76	-0.20	0.71	0.98	0.53	1.51	-0.54	1.64	-0.35	0.90	

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 June 30th. Please see the Addendum for custom index descriptions.



As of March 31, 2017

**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
BlackRock Russell 1000 Index (CF)	6.01	14.54	17.45	10.01	13.29	12.96	7.60	12.09	0.94	13.27	8.98	09/01/2003
Russell 1000 Index	6.03	14.52	17.43	9.99	13.26	12.95	7.58	12.05	0.92	13.24	8.92	
Difference	-0.02	0.02	0.02	0.02	0.03	0.01	0.02	0.04	0.02	0.03	0.06	
IM U.S. Large Cap Core Equity (SA+CF) Median	5.97	14.32	16.32	9.80	13.22	12.92	7.74	10.52	1.28	13.41	9.21	
Rank	50	47	40	46	45	48	58	31	55	52	63	
BlackRock Russell 1000 Index (CF) - Net	6.01	14.54	17.45	10.01	13.28	12.95	7.56	12.09	0.93	13.26	8.91	09/01/2003
Russell 1000 Index	6.03	14.52	17.43	9.99	13.26	12.95	7.58	12.05	0.92	13.24	8.92	
Difference	-0.02	0.02	0.02	0.02	0.02	0.00	-0.02	0.04	0.01	0.02	-0.01	
Fred Alger Large Cap Growth (SA)	10.47	17.85	14.80	7.51	11.42	11.73	8.48	0.38	1.73	11.75	8.55	03/01/2004
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	8.43	
Difference	1.56	2.80	-0.96	-3.76	-1.90	-1.95	-0.65	-6.70	-3.94	-1.30	0.12	
IM U.S. Large Cap Growth Equity (SA+CF) Median	8.79	14.75	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	8.68	
Rank	19	19	59	87	80	81	65	85	78	54	55	
Fred Alger Large Cap Growth (SA) - Net	10.40	17.60	14.47	7.21	11.11	11.37	8.12	0.09	1.44	11.46	8.19	03/01/2004
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	8.43	
Difference	1.49	2.55	-1.29	-4.06	-2.21	-2.31	-1.01	-6.99	-4.23	-1.59	-0.24	
T. Rowe Price Large Cap Growth (SA)	10.14	22.07	23.04	12.59	15.70	14.36	N/A	5.78	12.48	9.31	14.36	04/01/2010
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	13.68	
Difference	1.23	7.02	7.28	1.32	2.38	0.68	N/A	-1.30	6.81	-3.74	0.68	
IM U.S. Large Cap Growth Equity (SA+CF) Median	8.79	14.75	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	13.05	
Rank	23	2	2	9	5	18	N/A	40	7	80	18	
T. Rowe Price Large Cap Growth (SA) - Net	10.06	21.77	22.63	12.23	15.33	13.98	N/A	5.42	12.11	8.99	13.98	04/01/2010
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	13.68	
Difference	1.15	6.72	6.87	0.96	2.01	0.30	N/A	-1.66	6.44	-4.06	0.30	
Earnest Partners Small Cap Value (SA)	5.50	24.05	27.84	11.99	15.58	14.42	9.11	24.79	-2.28	11.11	9.32	12/01/2004
Russell 2000 Val Index	-0.13	24.03	29.37	7.62	12.54	11.59	6.09	31.74	-7.47	4.22	7.45	
Difference	5.63	0.02	-1.53	4.37	3.04	2.83	3.02	-6.95	5.19	6.89	1.87	
IM U.S. Small Cap Value Equity (SA+CF) Median	0.77	21.75	24.57	8.67	13.70	13.40	8.43	26.14	-4.30	5.71	9.56	
Rank	5	25	25	4	14	25	32	59	30	6	56	
Earnest Partners Small Cap Value (SA) - Net	5.36	23.52	27.11	11.38	14.93	13.76	8.43	24.08	-2.83	10.53	8.62	12/01/2004
Russell 2000 Val Index	-0.13	24.03	29.37	7.62	12.54	11.59	6.09	31.74	-7.47	4.22	7.45	
Difference	5.49	-0.51	-2.26	3.76	2.39	2.17	2.34	-7.66	4.64	6.31	1.17	

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 June 30th. Please see the Addendum for custom index descriptions.



**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Emerald Small Cap Growth (SA)	5.32	20.80	23.48	N/A	N/A	N/A	N/A	10.02	N/A	N/A	7.21	12/01/2015
Russell 2000 Grth Index	5.35	19.17	23.03	6.72	12.10	12.88	8.06	11.32	-1.38	5.60	8.64	
Difference	-0.03	1.63	0.45	N/A	N/A	N/A	N/A	-1.30	N/A	N/A	-1.43	
IM U.S. Small Cap Growth Equity (SA+CF) Median	5.85	18.51	23.27	6.57	12.42	13.85	8.72	11.38	-0.74	4.01	9.67	
Rank	57	32	47	N/A	N/A	N/A	N/A	58	N/A	N/A	72	
Emerald Small Cap Growth (SA) - Net	5.17	20.26	22.75	N/A	N/A	N/A	N/A	9.37	N/A	N/A	6.57	12/01/2015
Russell 2000 Grth Index	5.35	19.17	23.03	6.72	12.10	12.88	8.06	11.32	-1.38	5.60	8.64	
Difference	-0.18	1.09	-0.28	N/A	N/A	N/A	N/A	-1.95	N/A	N/A	-2.07	
International Equity Composite	8.30	10.58	11.21	2.63	6.14	4.55	2.16	3.09	-1.39	-1.15	5.79	07/01/2004
MSCI ACW Ex US IM Index (Blended)	7.99	13.78	13.01	0.82	4.66	4.13	1.76	4.41	-4.60	-3.89	6.09	
Difference	0.31	-3.20	-1.80	1.81	1.48	0.42	0.40	-1.32	3.21	2.74	-0.30	
All Public Plans-Intl. Equity Segment Median	8.32	13.55	13.16	1.95	6.03	5.45	2.41	3.94	-2.51	-3.00	6.79	
Rank	52	93	85	23	45	85	73	66	31	20	87	
BlackRock Developed Int'l - Passive (CF)	7.06	13.42	12.43	1.07	N/A	N/A	N/A	3.45	-1.62	-4.13	6.85	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	6.48	
Difference	0.14	0.31	0.56	0.40	N/A	N/A	N/A	0.50	0.33	0.32	0.37	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	7.85	
Rank	75	53	50	70	N/A	N/A	N/A	37	71	58	69	
BlackRock Developed Int'l - Passive (CF) - Net	7.06	13.42	12.43	1.06	N/A	N/A	N/A	3.45	-1.64	-4.15	6.83	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	6.48	
Difference	0.14	0.31	0.56	0.39	N/A	N/A	N/A	0.50	0.31	0.30	0.35	
MFS Developed Int'I (SA)	6.49	3.18	4.49	4.45	N/A	N/A	N/A	-0.22	7.17	1.31	11.14	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	7.61	
Difference	-0.43	-9.93	-7.38	3.78	N/A	N/A	N/A	-3.17	9.12	5.76	3.53	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	8.92	
Rank	85	100	96	24	N/A	N/A	N/A	71	21	15	25	
MFS Developed Int'I (SA) - Net	6.40	2.91	4.13	4.11	N/A	N/A	N/A	-0.56	6.83	0.99	10.77	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	7.61	
Difference	-0.52	-10.20	-7.74	3.44	N/A	N/A	N/A	-3.51	8.78	5.44	3.16	

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 June 30th. Please see the Addendum for custom index descriptions.



**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Fidelity Developed Int'I (SA)	6.59	10.20	8.60	0.30	6.32	5.62	2.35	-0.70	0.99	-5.94	5.59	12/01/2004
International Developed Blend	6.92	13.11	11.87	0.67	5.69	4.79	1.05	2.95	-1.95	-4.45	4.62	
Difference	-0.33	-2.91	-3.27	-0.37	0.63	0.83	1.30	-3.65	2.94	-1.49	0.97	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	6.33	
Rank	84	76	79	83	67	69	64	74	54	78	72	
Fidelity Developed Int'I (SA) - Net	6.51	9.97	8.29	0.03	6.02	5.31	2.02	-0.98	0.73	-6.19	5.23	12/01/2004
International Developed Blend	6.92	13.11	11.87	0.67	5.69	4.79	1.05	2.95	-1.95	-4.45	4.62	
Difference	-0.41	-3.14	-3.58	-0.64	0.33	0.52	0.97	-3.93	2.68	-1.74	0.61	
LA Capital Emerging (CF)	11.73	16.53	16.92	2.54	N/A	N/A	N/A	12.18	-15.10	0.24	2.49	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	1.54	
Difference	0.08	0.43	0.09	1.31	N/A	N/A	N/A	2.28	-1.24	2.03	0.95	
IM Emerging Markets Equity (SA+CF) Median	12.22	15.72	18.42	2.55	2.86	3.43	3.85	10.02	-12.71	-0.18	3.34	
Rank	60	45	63	51	N/A	N/A	N/A	35	71	46	65	
LA Capital Emerging (CF) - Net	11.55	15.96	16.17	1.89	N/A	N/A	N/A	11.46	-15.65	-0.36	1.84	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	1.54	
Difference	-0.10	-0.14	-0.66	0.66	N/A	N/A	N/A	1.56	-1.79	1.43	0.30	
Wellington Emerging (SA)	14.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.31	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	6.69	
Difference	2.47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.62	
IM Emerging Markets Equity (SA+CF) Median	12.22	15.72	18.42	2.55	2.86	3.43	3.85	10.02	-12.71	-0.18	6.75	
Rank	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	
Wellington Emerging (SA) - Net	13.96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.00	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	6.69	
Difference	2.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.31	

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 June 30th. Please see the Addendum for custom index descriptions.



As of March 31, 2017

**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Fixed Income Composite	1.38	1.87	4.08	3.70	3.66	4.80	5.23	5.00	0.78	6.05	5.46	04/01/2001
Fixed Income Custom Index (R)	1.22	1.61	4.15	3.49	3.13	4.13	4.67	5.65	0.11	5.56	5.08	
Difference	0.16	0.26	-0.07	0.21	0.53	0.67	0.56	-0.65	0.67	0.49	0.38	
All Public Plans-US Fixed Income Segment Median	1.26	0.55	3.09	3.20	3.09	4.46	4.75	4.54	0.30	6.01	5.04	
Rank	45	26	37	33	34	39	25	42	30	49	21	
JP Morgan Principal Protection (SA)	0.61	-0.96	0.31	N/A	N/A	N/A	N/A	2.02	N/A	N/A	1.75	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.09	0.48	0.56	N/A	N/A	N/A	N/A	0.62	N/A	N/A	0.44	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	2.65	
Rank	99	36	84	N/A	N/A	N/A	N/A	98	N/A	N/A	98	
JP Morgan Principal Protection (SA) - Net	0.59	-1.03	0.20	N/A	N/A	N/A	N/A	1.92	N/A	N/A	1.65	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.07	0.41	0.45	N/A	N/A	N/A	N/A	0.52	N/A	N/A	0.34	
Wells Principal Protection (SA)	0.60	-0.96	0.34	N/A	N/A	N/A	N/A	1.86	N/A	N/A	1.64	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.08	0.48	0.59	N/A	N/A	N/A	N/A	0.46	N/A	N/A	0.33	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	2.65	
Rank	99	36	83	N/A	N/A	N/A	N/A	98	N/A	N/A	99	
Wells Principal Protection (SA) - Net	0.58	-1.05	0.22	N/A	N/A	N/A	N/A	1.73	N/A	N/A	1.51	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.06	0.39	0.47	N/A	N/A	N/A	N/A	0.33	N/A	N/A	0.20	
Macquarie Unconstrained (SA)	2.03	4.34	7.58	N/A	N/A	N/A	N/A	8.37	N/A	N/A	5.40	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.02	-0.17	-1.00	N/A	N/A	N/A	N/A	-1.67	N/A	N/A	-1.52	
IM Global Fixed Income (SA+CF) Median	2.17	2.63	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	4.42	
Rank	54	40	36	N/A	N/A	N/A	N/A	33	N/A	N/A	38	
Macquarie Unconstrained (SA) - Net	1.99	4.20	7.39	N/A	N/A	N/A	N/A	8.19	N/A	N/A	5.22	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	-0.02	-0.31	-1.19	N/A	N/A	N/A	N/A	-1.85	N/A	N/A	-1.70	

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 June 30th. Please see the Addendum for custom index descriptions.



**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Neuberger Unconstrained (SA)	2.62	5.83	9.88	N/A	N/A	N/A	N/A	9.65	N/A	N/A	7.49	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.61	1.32	1.30	N/A	N/A	N/A	N/A	-0.39	N/A	N/A	0.57	
IM Global Fixed Income (SA+CF) Median	2.17	2.63	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	4.42	
Rank	37	34	27	N/A	N/A	N/A	N/A	30	N/A	N/A	21	
Neuberger Unconstrained (SA) - Net	2.56	5.65	9.63	N/A	N/A	N/A	N/A	9.40	N/A	N/A	7.24	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.55	1.14	1.05	N/A	N/A	N/A	N/A	-0.64	N/A	N/A	0.32	
Pacific Asset Bank Loans (SA)	1.71	7.28	8.99	N/A	N/A	N/A	N/A	9.18	N/A	N/A	6.39	09/01/2015
CS Lvg'd Loan Index	1.20	6.69	9.74	3.72	4.88	5.02	4.24	9.88	-0.38	2.06	5.16	
Difference	0.51	0.59	-0.75	N/A	N/A	N/A	N/A	-0.70	N/A	N/A	1.23	
IM U.S. Bank Loans (SA+CF) Median	1.06	6.21	8.81	3.96	5.06	5.49	4.86	9.51	0.68	2.06	5.27	
Rank	6	18	47	N/A	N/A	N/A	N/A	58	N/A	N/A	9	
Pacific Asset Bank Loans (SA) - Net	1.63	7.03	8.64	N/A	N/A	N/A	N/A	8.83	N/A	N/A	6.05	09/01/2015
CS Lvg'd Loan Index	1.20	6.69	9.74	3.72	4.88	5.02	4.24	9.88	-0.38	2.06	5.16	
Difference	0.43	0.34	-1.10	N/A	N/A	N/A	N/A	-1.05	N/A	N/A	0.89	
Real Return Composite	0.46	0.95	7.18	2.58	1.89	3.17	2.70	9.90	-2.56	2.21		02/01/2007
CPI+3% (Blended)	1.13	3.91	5.45	4.12	4.02	3.76	4.14	5.15	3.68	3.69	4.21	
Difference	-0.67	-2.96	1.73	-1.54	-2.13	-0.59	-1.44	4.75	-6.24	-1.48	-1.50	
Invesco Commodity (CF)	-0.21	-2.52	11.66	-6.96	N/A	N/A	N/A	14.61	-15.75	-15.29	-6.57	08/01/2013
Bloomberg Cmdty Index (TR)	-2.33	-3.61	8.69	-13.92	-9.54	-5.94	-6.22	11.74	-24.66	-17.01	-9.97	
Difference	2.12	1.09	2.97	6.96	N/A	N/A	N/A	2.87	8.91	1.72	3.40	
Invesco Commodity (CF) - Net	-0.37	-2.99	10.94	-7.56	N/A	N/A	N/A	13.87	-16.32	-15.82	-7.14	08/01/2013
Bloomberg Cmdty Index (TR)	-2.33	-3.61	8.69	-13.92	-9.54	-5.94	-6.22	11.74	-24.66	-17.01	-9.97	
Difference	1.96	0.62	2.25	6.36	N/A	N/A	N/A	2.13	8.34	1.19	2.83	
Hancock Timberland (CF) (Lagged-1 Mo) - Net	0.00	-1.12	-2.08	0.82	N/A	N/A	N/A	4.81	-0.34	N/A		04/01/2014
NCREIF Timberland Index (Lagged-1 Mo)	1.18	2.86	2.59	5.96	7.06	5.20	5.83	3.28	9.26	10.38	5.96	
Difference	-1.18	-3.98	-4.67	-5.14	N/A	N/A	N/A	1.53	-9.60	N/A	-5.14	
Molpus IV (CF) (Lagged-1 Mo) - Net	3.38	3.23	2.66	N/A	N/A	N/A	N/A	-1.91	N/A	N/A		09/01/2015
NCREIF Timberland Index (Lagged-1 Mo)	1.18	2.86	2.59	5.96	7.06	5.20	5.83	3.28	9.26	10.38	3.32	
Difference	2.20	0.37	0.07	N/A	N/A	N/A	N/A	-5.19	N/A	N/A	-12.60	

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 June 30th. Please see the Addendum for custom index descriptions.



**Comparative Performance - Retirement** 

MS Convergent (CF) (Lagged-1 Mo) - Net

BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)

Difference

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
WAMCO (SA)	0.58	2.16	5.94	5.16	3.44	4.38	N/A	9.37	-0.22	8.75	4.38	04/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.70	2.36	6.60	5.32	3.36	4.71	5.05	10.22	-1.12	9.04	4.71	
Difference	-0.12	-0.20	-0.66	-0.16	0.08	-0.33	N/A	-0.85	0.90	-0.29	-0.33	
WAMCO (SA) - Net	0.54	2.02	5.75	4.99	3.26	4.19	N/A	9.18	-0.39	8.60	4.19	04/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.70	2.36	6.60	5.32	3.36	4.71	5.05	10.22	-1.12	9.04	4.71	
Difference	-0.16	-0.34	-0.85	-0.33	-0.10	-0.52	N/A	-1.04	0.73	-0.44	-0.52	
Hedge Funds Composite - Net	1.69	1.53	1.26	1.13	3.23	3.20	2.73	-2.30	1.24	3.03	2.76	03/01/2007
BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	0.87	2.55	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.78	
Difference	0.82	-1.02	-2.14	-2.04	0.09	0.07	-1.02	-5.63	-1.78	-0.02	-1.02	
GAM Divergent (CF) (Lagged-1 Mo) - Net	1.23	-0.03	-1.30	2.07	N/A	N/A	N/A	-3.23	3.70	4.82	1.90	12/01/2013
BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	0.87	2.55	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.16	
Difference	0.36	-2.58	-4.70	-1.10	N/A	N/A	N/A	-6.56	0.68	1.77	-1.26	

0.07

3.17

-3.10

N/A

3.14

N/A

N/A

3.13

N/A

N/A

3.75

N/A

-1.27

3.33

-4.60

-1.34

3.02

-4.36

N/A

3.05

N/A

4.16

3.40

0.76

3.25

2.55

0.70

2.19

0.87

1.32



0.07 03/01/2014

3.16

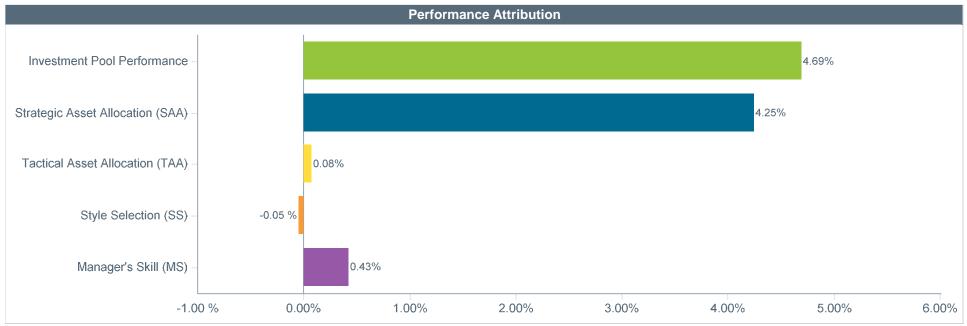
-3.09

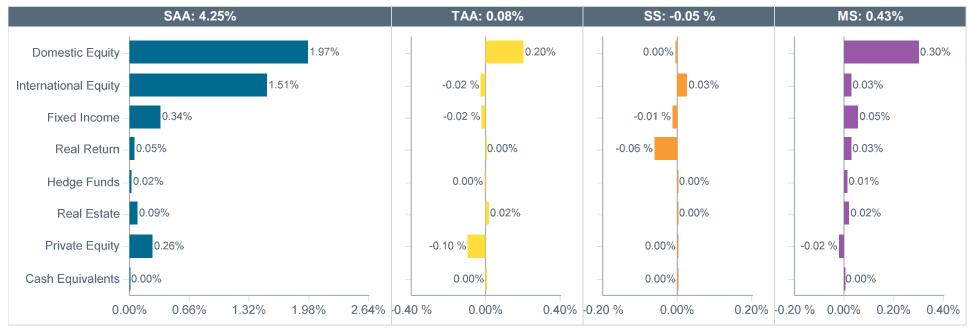
#### Water and Power Employees' Retirement Plan Alternative Investment Fund Performance Listing - Retirement

	Λ	larket Value	% of	% of	Inception	Inception
			Alt. Inv. Group	Total Fund	IRR	Date
Private Equity	\$	333,632,369	36.31%	3.20%	11.71%	May-06
Apollo VIII	\$	20,568,735	2.24%	0.20%	17.07%	Jan-14
Ares IV	\$	21,125,491	2.30%	0.20%	17.50%	Nov-12
ARES Special Situation IV	\$	8,658,933	0.94%	0.08%	-19.37%	Jan-15
Audax III V	\$	8,822,236	0.96%	0.08%	12.88%	Jan-11
Blackstone Tactical Opps II	\$	20,796,712	2.26%	0.20%	21.73%	Apr-15
Clayton, Dubilier & Rice IX	\$	15,911,534	1.73%	0.15%	25.03%	Apr-14
Crestview Partners III	\$	13,756,582	1.50%	0.13%	15.55%	Feb-15
EnCap IX	\$	11,874,507	1.29%	0.11%	25.66%	Jan-11
EnCap VIII	\$	4,984,890	0.54%	0.05%	-0.23%	Jan-13
EnCap X	\$	10,568,717	1.15%	0.10%	55.40%	Feb-15
Fisher Lynch II	\$	19,143,759	2.08%	0.18%	12.23%	Mar-08
Harvest VII	\$	137,655	0.01%	0.00%	-97.03%	Nov-15
HRJ Special Opp II	\$	9,337,906	1.02%	0.09%	8.52%	Feb-08
Landmark XIII	\$	9,061,328	0.99%	0.09%	6.99%	Oct-06
Landmark XIV	\$	11,888,567	1.29%	0.11%	13.87%	Aug-08
Landmark XV	\$	11,722,106	1.28%	0.11%	14.99%	Feb-14
Lexington VI	\$	7,206,884	0.78%	0.07%	7.98%	May-06
Lexington VII	\$	13,012,555	1.42%	0.12%	17.60%	Aug-09
Oaktree PF V	\$	8,265,378	0.90%	0.08%	6.78%	Jan-09
Silver Lake IV	\$	11,387,974	1.24%	0.11%	37.03%	Sep-13
Vista IV	\$	29,531,848	3.21%	0.28%	22.16%	Sep-11
Vista V	\$	44,825,730	4.88%	0.43%	14.99%	Apr-14
Vista VI	\$	21,042,342	2.29%	0.20%	3.70%	Jun-16
Real Estate	\$	585,093,583	63.69%	5.62%	9.17%	Nov-06
AG Core Plus III	\$	7,478,868	0.81%	0.07%	26.57%	Jan-12
Almanac VI	\$	7,009,150	0.76%	0.07%	20.82%	Jun-12
Almanac VII	\$	8,143,096	0.89%	0.08%	14.52%	Mar-15
BREP Europe IV	\$	17,133,353	1.86%	0.16%	8.18%	Dec-13
BREP VII	\$	18,755,239	2.04%	0.18%	20.93%	Jun-12
Bristol Value II	\$	9,800,714	1.07%	0.09%	14.62%	Nov-12
Dimensional Global REIT	\$	22,786,878	2.48%	0.22%	7.09%	Mar-13
DRA G&I VIII	\$	16,823,995	1.83%	0.16%	13.79%	Jun-14
DRA VII	\$	12,774,161	1.39%	0.12%	20.71%	Oct-11
Harrison Street Core	\$	52,275,333	5.69%	0.50%	7.89%	Aug-15
Heitman REIT	\$	21,597,528	2.35%	0.21%	9.26%	Sep-13
Invesco Core Realty	\$	50,864,959	5.54%	0.49%	11.63%	Jun-11
Jamestown Premier	\$	48,808,886	5.31%	0.47%	5.55%	Mar-15
JPM Strategic	\$	75,965,751	8.27%	0.73%	6.33%	Sep-07
Lone Star RE II	\$	1,504,620	0.16%	0.01%	29.53%	May-11
Lone Star RE IV	\$	25,511,753	2.78%	0.24%	10.82%	Jun-15
Lone Star VII	\$	838,093	0.09%	0.01%	50.45%	May-11
Mesa West II	\$	1	0.00%	0.00%	15.11%	Dec-09
Mesa West III	\$	11,907,062	1.30%	0.11%	9.92%	Aug-13
PCCP First Mtg II	\$	2,535,973	0.28%	0.02%	7.07%	Jun-12
PRISA I	\$	80,059,985	8.71%	0.77%	5.97%	Nov-06
PRISA II	\$	36,248,748	3.95%	0.35%	7.66%	May-07
Prologis USLH	\$	24,260,014	2.64%	0.23%	15.30%	Mar-15
Torchlight IV	\$	20,186,963	2.20%	0.19%	12.44%	Aug-13
Torchlight V	\$	6,352,786	0.69%	0.06%	10.63%	Mar-15
0	э \$					
Westbrook X	\$	5,469,675	0.60%	0.05%	20.35%	Feb-16



#### Water and Power Employees' Retirement Plan Total Fund Attribution - IDP





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



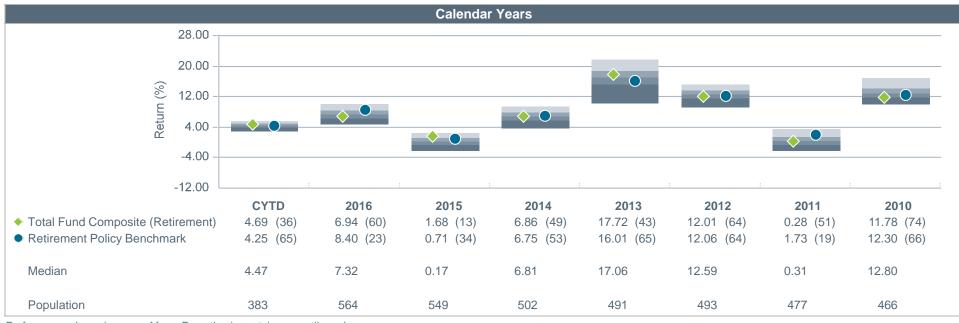
#### Water and Power Employees' Retirement Plan Growth of \$100 - Retirement



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







KVK

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

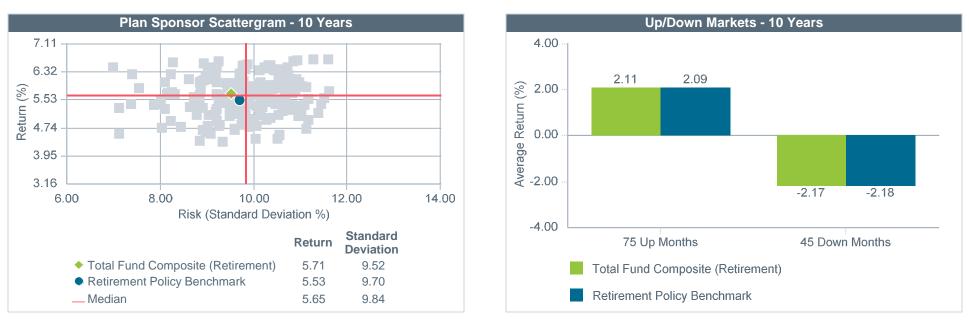
Total Fund Composite (Retirement) vs. Retirement Policy Benchmark

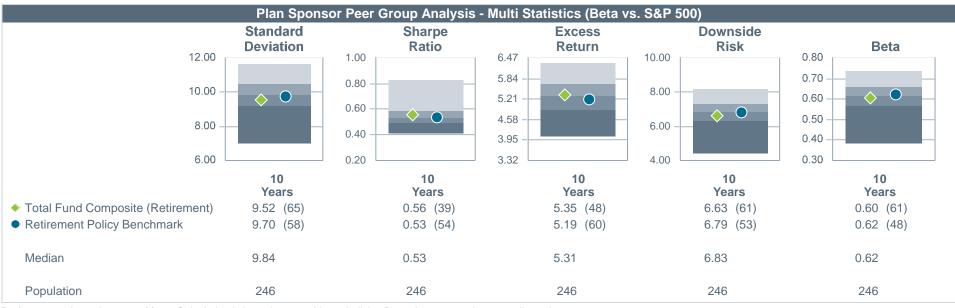
Comparative Performance & Rolling Return - Retirement



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







KVK

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

#### Water and Power Employees' Retirement Plan Equity Beta Analysis - Retirement



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**



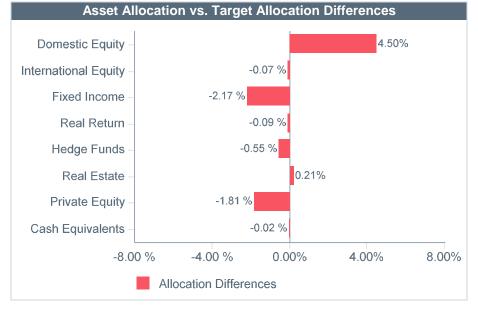
	t Allocation by Manager		
March 31, 2017 : \$1,851,234,029		Market Value (\$)	Allocatio (%)
	BlackRock Russell 1000 Index (CF)	319,552,701	17.26
	Wells Principal Protection (SA)	132,368,235	7.15
	JP Morgan Principal Protection (SA)	131,673,342	7.11
	Neuberger Unconstrained (SA)	103,431,256	5.59
	Macquarie Unconstrained (SA)	101,985,317	5.51
	Real Estate Composite	96,489,536	5.21
	MFS Large Cap Value (SA)	90,329,822	4.88
	T. Rowe Price Large Cap Value (SA)	90,081,548	4.87
	T. Rowe Price Large Cap Growth (SA)	87,545,161	4.73
	MFS Developed Int'l (SA)	86,302,994	4.66
	Fidelity Developed Int'l (SA)	86,067,810	4.65
	BlackRock Developed Int'l - Passive (CF)	85,693,300	4.63
	Fred Alger Large Cap Growth (SA)	83,136,079	4.49
	WAMCO (SA)	63,233,005	3.42
	Private Equity Composite	59,029,213	3.19
	Wellington Emerging (SA)	47,495,109	2.57
	LA Capital Emerging (CF)	44,851,928	2.42
	Earnest Partners Small Cap Value (SA)	24,873,150	1.34
	Pacific Asset Bank Loans (SA)	22,538,143	1.22
	Emerald Small Cap Growth (SA)	21,772,629	1.18
	Invesco Commodity (CF)	20,964,998	1.13
	Cash Equivalents	18,228,376	0.98
	GAM Divergent (CF) (Lagged-1 Mo)	13,903,500	0.75
	MS Convergent (CF) (Lagged-1 Mo)	13,026,827	0.70
	Molpus IV (CF) (Lagged-1 Mo)	4,220,435	0.23
	Hancock Timberland (CF) (Lagged-1 Mo)	2,437,229	0.13
	Vontobel Emerging (SA)	2,382	0.00
	Transition Account	2	0.00

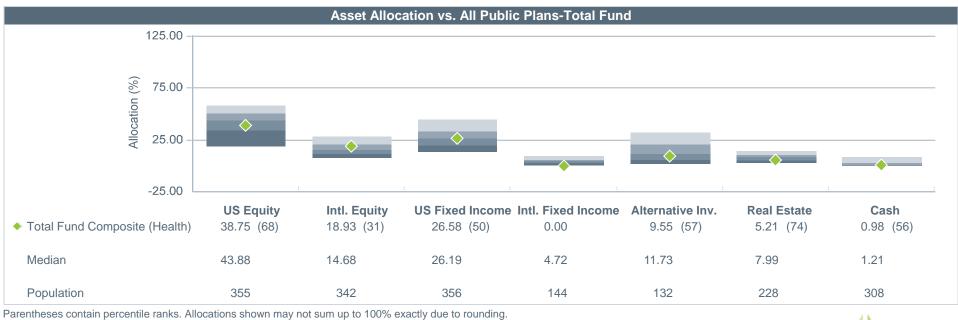
Schedule of Investable Assets - FYTD								
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value			
FYTD	1,695,441,418	155,792,611	1,851,234,029	9.18	109.18			

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends June 30th. Market value shown for Vontobel Emerging (SA) represents residual assets.



717,291,090		(%)
111,291,090	38.75	34.25
350,413,526	18.93	19.00
491,996,294	26.58	28.75
90,855,667	4.91	5.00
26,930,327	1.45	2.00
96,489,536	5.21	5.00
59,029,213	3.19	5.00
18,228,376	0.98	1.00
1,851,234,029	100.00	100.00
, , ,		
	491,996,294 90,855,667 26,930,327 96,489,536 59,029,213 18,228,376	491,996,29426.5890,855,6674.9126,930,3271.4596,489,5365.2159,029,2133.1918,228,3760.98





KVK

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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Total Fund Composite (Health)	4.74	9.18	11.29	6.08	8.28	8.11	6.09	6.93	1.46	6.74	6.06	01/01/2007
Health Policy Benchmark	4.25	9.43	11.41	5.92	7.95	8.17	5.59	8.40	0.71	6.75	5.60	
Difference	0.49	-0.25	-0.12	0.16	0.33	-0.06	0.50	-1.47	0.75	-0.01	0.46	
All Public Plans-Total Fund Median	4.47	8.87	10.93	5.62	7.83	8.11	5.65	7.32	0.17	6.81	5.72	
Rank	33	43	40	30	31	50	24	60	16	53	28	
Domestic Equity Composite	6.54	16.04	18.59	10.07	13.82	13.26	7.79	11.67	1.99	11.88	7.73	01/01/2007
Russell 3000 (Blended) (H)	5.74	15.04	18.07	9.76	13.18	12.89	7.55	12.74	0.48	12.56	7.49	
Difference	0.80	1.00	0.52	0.31	0.64	0.37	0.24	-1.07	1.51	-0.68	0.24	
All Public Plans-US Equity Segment Median	5.44	14.91	18.03	9.11	12.73	12.71	7.51	12.85	0.14	11.42	7.49	
Rank	8	22	33	19	7	10	23	74	8	33	24	
MFS Large Cap Value (SA)	4.79	12.40	17.91	10.10	13.96	12.86	N/A	15.76	-0.06	11.87	13.36	10/01/2009
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	12.92	
Difference	1.52	-1.60	-1.31	1.43	0.83	0.68	N/A	-1.58	3.77	-1.58	0.44	
IM U.S. Large Cap Value Equity (SA+CF) Median	3.97	15.46	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	13.18	
Rank	32	77	53	20	25	36	N/A	39	27	56	46	
MFS Large Cap Value (SA) - Net	4.71	12.15	17.55	9.77	13.61	12.51	N/A	15.41	-0.38	11.56	13.00	10/01/2009
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	12.92	
Difference	1.44	-1.85	-1.67	1.10	0.48	0.33	N/A	-1.93	3.45	-1.89	0.08	
T. Rowe Price Large Cap Value (SA)	3.93	15.01	19.37	9.77	14.51	13.06	N/A	17.11	-1.77	13.51	13.82	10/01/2009
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	12.92	
Difference	0.66	1.01	0.15	1.10	1.38	0.88	N/A	-0.23	2.06	0.06	0.90	
IM U.S. Large Cap Value Equity (SA+CF) Median	3.97	15.46	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	13.18	
Rank	52	55	39	26	14	30	N/A	26	45	34	31	
T. Rowe Price Large Cap Value (SA) - Net	3.85	14.76	19.02	9.45	14.17	12.71	N/A	16.77	-2.06	13.19	13.47	10/01/2009
Russell 1000 Val Index	3.27	14.00	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	12.92	
Difference	0.58	0.76	-0.20	0.78	1.04	0.53	N/A	-0.57	1.77	-0.26	0.55	



	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
BlackRock Russell 1000 Index (CF)	6.02	14.54	17.45	10.01	13.29	13.01	7.68	12.12	0.91	13.27	7.63	01/01/2007
Russell 1000 Index	6.03	14.52	17.43	9.99	13.26	12.95	7.58	12.05	0.92	13.24	7.52	
Difference	-0.01	0.02	0.02	0.02	0.03	0.06	0.10	0.07	-0.01	0.03	0.11	
IM U.S. Large Cap Core Equity (SA+CF) Median	5.97	14.32	16.32	9.80	13.22	12.92	7.74	10.52	1.28	13.41	7.68	
Rank	49	47	40	46	45	44	54	31	55	52	54	
BlackRock Russell 1000 Index (CF) - Net	6.02	14.54	17.45	10.01	13.28	12.99	7.64	12.12	0.90	13.26	7.58	01/01/2007
Russell 1000 Index	6.03	14.52	17.43	9.99	13.26	12.95	7.58	12.05	0.92	13.24	7.52	
Difference	-0.01	0.02	0.02	0.02	0.02	0.04	0.06	0.07	-0.02	0.02	0.06	
Fred Alger Large Cap Growth (SA)	10.48	17.84	14.78	7.53	11.45	11.76	N/A	0.37	1.77	11.78	12.76	10/01/2009
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	14.56	
Difference	1.57	2.79	-0.98	-3.74	-1.87	-1.92	N/A	-6.71	-3.90	-1.27	-1.80	
IM U.S. Large Cap Growth Equity (SA+CF) Median	8.79	14.75	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	13.92	
Rank	19	19	59	87	80	80	N/A	85	78	54	77	
Fred Alger Large Cap Growth (SA) - Net	10.40	17.59	14.45	7.23	11.14	11.40	N/A	0.08	1.48	11.49	12.39	10/01/2009
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	14.56	
Difference	1.49	2.54	-1.31	-4.04	-2.18	-2.28	N/A	-7.00	-4.19	-1.56	-2.17	
T. Rowe Price Large Cap Growth (SA)	10.15	22.03	23.02	12.59	15.71	N/A	N/A	5.70	12.53	9.40	14.84	05/01/2010
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	13.67	
Difference	1.24	6.98	7.26	1.32	2.39	N/A	N/A	-1.38	6.86	-3.65	1.17	
IM U.S. Large Cap Growth Equity (SA+CF) Median	8.79	14.75	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	13.00	
Rank	23	2	2	9	5	N/A	N/A	41	7	79	11	
T. Rowe Price Large Cap Growth (SA) - Net	10.06	21.73	22.61	12.23	15.34	N/A	N/A	5.35	12.16	9.08	14.46	05/01/2010
Russell 1000 Grth Index	8.91	15.05	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	13.67	
Difference	1.15	6.68	6.85	0.96	2.02	N/A	N/A	-1.73	6.49	-3.97	0.79	
Earnest Partners Small Cap Value (SA)	5.50	24.06	27.86	12.00	15.69	14.38	N/A	24.78	-2.27	11.12	15.55	10/01/2009
Russell 2000 Val Index	-0.13	24.03	29.37	7.62	12.54	11.59	6.09	31.74	-7.47	4.22	12.73	
Difference	5.63	0.03	-1.51	4.38	3.15	2.79	N/A	-6.96	5.20	6.90	2.82	
IM U.S. Small Cap Value Equity (SA+CF) Median	0.77	21.75	24.57	8.67	13.70	13.40	8.43	26.14	-4.30	5.71	14.61	
Rank	5	25	25	4	11	26	N/A	59	30	6	25	
Earnest Partners Small Cap Value (SA) - Net	5.35	23.53	27.13	11.38	15.04	13.73	N/A	24.07	-2.82	10.54	14.88	10/01/2009
Russell 2000 Val Index	-0.13	24.03	29.37	7.62	12.54	11.59	6.09	31.74	-7.47	4.22	12.73	
Difference	5.48	-0.50	-2.24	3.76	2.50	2.14	N/A	-7.67	4.65	6.32	2.15	



**Comparative Performance - Health** 

MSCI Wrld Ex US IM Index (USD) (Net)

Difference

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Emerald Small Cap Growth (SA)	5.35	20.87	23.69	N/A	N/A	N/A	N/A	10.14	N/A	N/A	7.31	12/01/2015
Russell 2000 Grth Index	5.35	19.17	23.03	6.72	12.10	12.88	8.06	11.32	-1.38	5.60	8.64	
Difference	0.00	1.70	0.66	N/A	N/A	N/A	N/A	-1.18	N/A	N/A	-1.33	
IM U.S. Small Cap Growth Equity (SA+CF) Median	5.85	18.51	23.27	6.57	12.42	13.85	8.72	11.38	-0.74	4.01	9.67	
Rank	56	32	45	N/A	N/A	N/A	N/A	55	N/A	N/A	71	
Emerald Small Cap Growth (SA) - Net	5.19	20.33	22.96	N/A	N/A	N/A	N/A	9.49	N/A	N/A	6.67	12/01/2015
Russell 2000 Grth Index	5.35	19.17	23.03	6.72	12.10	12.88	8.06	11.32	-1.38	5.60	8.64	
Difference	-0.16	1.16	-0.07	N/A	N/A	N/A	N/A	-1.83	N/A	N/A	-1.97	
International Equity Composite	8.30	10.55	11.18	2.62	6.09	4.40	N/A	3.06	-1.40	-1.14	5.03	09/01/2009
MSCI ACW Ex US IM Index (Net)	7.99	13.78	13.01	0.82	4.66	4.13	1.59	4.41	-4.60	-3.89	5.28	
Difference	0.31	-3.23	-1.83	1.80	1.43	0.27	N/A	-1.35	3.20	2.75	-0.25	
All Public Plans-Intl. Equity Segment Median	8.32	13.55	13.16	1.95	6.03	5.45	2.41	3.94	-2.51	-3.00	6.59	
Rank	52	93	85	24	48	90	N/A	67	31	20	97	
BlackRock Developed Int'l - Passive (CF)	7.06	13.42	12.43	1.07	N/A	N/A	N/A	3.45	-1.62	-4.13	6.90	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	6.48	
Difference	0.14	0.31	0.56	0.40	N/A	N/A	N/A	0.50	0.33	0.32	0.42	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	7.85	
Rank	75	53	50	70	N/A	N/A	N/A	37	71	58	68	
BlackRock Developed Int'l - Passive (CF) - Net	7.06	13.42	12.43	1.06	N/A	N/A	N/A	3.45	-1.65	-4.15	6.88	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	6.48	
Difference	0.14	0.31	0.56	0.39	N/A	N/A	N/A	0.50	0.30	0.30	0.40	
MFS Developed Int'I (SA)	6.50	3.14	4.45	4.42	N/A	N/A	N/A	-0.29	7.13	1.32	11.13	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	6.92	13.11	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	7.61	
Difference	-0.42	-9.97	-7.42	3.75	N/A	N/A	N/A	-3.24	9.08	5.77	3.52	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	8.92	
Rank	85	100	96	24	N/A	N/A	N/A	72	21	15	25	
MFS Developed Int'I (SA) - Net	6.41	2.88	4.09	4.08	N/A	N/A	N/A	-0.64	6.79	1.01	10.76	08/01/2012
	0.00	10.11	44.07	0.07	= 00	4 70	4.07	0.05	4.05		7.04	

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 June 30th. Please see the Addendum for custom index descriptions.

6.92

-0.51



7.61

3.15

11.87

13.11

-10.23 -7.78

0.67

3.41

5.69

N/A

4.79

N/A

1.37

N/A

2.95

-3.59

-1.95

8.74

-4.45

5.46

**Comparative Performance - Health** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Fidelity Developed Int'I (SA)	6.59	10.18	8.59	0.30	6.23	5.58	N/A	-0.67	0.98	-5.98	5.86	10/01/2009
International Developed Blend	6.92	13.11	11.87	0.67	5.69	4.79	1.05	2.95	-1.95	-4.45	5.02	
Difference	-0.33	-2.93	-3.28	-0.37	0.54	0.79	N/A	-3.62	2.93	-1.53	0.84	
IM International Equity Developed Markets (SA+CF) Median	8.04	13.61	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	6.90	
Rank	84	76	79	83	69	70	N/A	74	54	78	72	
Fidelity Developed Int'l (SA) - Net	6.52	9.94	8.29	0.03	5.93	5.28	N/A	-0.94	0.71	-6.23	5.54	10/01/2009
International Developed Blend	6.92	13.11	11.87	0.67	5.69	4.79	1.05	2.95	-1.95	-4.45	5.02	
Difference	-0.40	-3.17	-3.58	-0.64	0.24	0.49	N/A	-3.89	2.66	-1.78	0.52	
LA Capital Emerging (CF)	11.73	16.53	16.92	2.51	N/A	N/A	N/A	12.11	-15.10	0.24	2.48	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	1.54	
Difference	0.08	0.43	0.09	1.28	N/A	N/A	N/A	2.21	-1.24	2.03	0.94	
IM Emerging Markets Equity (SA+CF) Median	12.22	15.72	18.42	2.55	2.86	3.43	3.85	10.02	-12.71	-0.18	3.34	
Rank	60	45	63	51	N/A	N/A	N/A	35	71	46	66	
LA Capital Emerging (CF) - Net	11.55	15.96	16.17	1.87	N/A	N/A	N/A	11.39	-15.65	-0.36	1.83	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	1.54	
Difference	-0.10	-0.14	-0.66	0.64	N/A	N/A	N/A	1.49	-1.79	1.43	0.29	
Wellington Emerging (SA)	14.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.40	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	6.69	
Difference	2.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.71	
IM Emerging Markets Equity (SA+CF) Median	12.22	15.72	18.42	2.55	2.86	3.43	3.85	10.02	-12.71	-0.18	6.75	
Rank	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	
Wellington Emerging (SA) - Net	14.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.09	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	11.65	16.10	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	6.69	
Difference	2.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.40	



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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Fixed Income Composite	1.36	1.76	4.00	3.68	3.54	4.63	5.70	4.85	0.83	6.05	5.73	01/01/2007
Fixed Income Custom Index (H)	1.22	1.61	4.15	3.49	3.13	4.13	4.78	5.65	0.11	5.56	4.82	
Difference	0.14	0.15	-0.15	0.19	0.41	0.50	0.92	-0.80	0.72	0.49	0.91	
All Public Plans-US Fixed Income Segment Median	1.26	0.55	3.09	3.20	3.09	4.46	4.75	4.54	0.30	6.01	4.80	
Rank	46	28	37	33	37	44	19	44	27	49	20	
JP Morgan Principal Protection (SA)	0.62	-0.93	0.29	N/A	N/A	N/A	N/A	1.92	N/A	N/A	1.71	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.10	0.51	0.54	N/A	N/A	N/A	N/A	0.52	N/A	N/A	0.40	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	2.65	
Rank	99	34	85	N/A	N/A	N/A	N/A	98	N/A	N/A	99	
JP Morgan Principal Protection (SA) - Net	0.60	-1.00	0.19	N/A	N/A	N/A	N/A	1.81	N/A	N/A	1.61	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.08	0.44	0.44	N/A	N/A	N/A	N/A	0.41	N/A	N/A	0.30	
Wells Principal Protection (SA)	0.61	-0.97	0.33	N/A	N/A	N/A	N/A	1.85	N/A	N/A	1.64	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.09	0.47	0.58	N/A	N/A	N/A	N/A	0.45	N/A	N/A	0.33	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	2.65	
Rank	99	36	83	N/A	N/A	N/A	N/A	98	N/A	N/A	99	
Wells Principal Protection (SA) - Net	0.58	-1.06	0.21	N/A	N/A	N/A	N/A	1.72	N/A	N/A	1.51	09/01/2015
Bloomberg US Int Agg Ex Credit	0.52	-1.44	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	1.31	
Difference	0.06	0.38	0.46	N/A	N/A	N/A	N/A	0.32	N/A	N/A	0.20	
Macquarie Unconstrained (SA)	2.09	4.51	7.74	N/A	N/A	N/A	N/A	8.35	N/A	N/A	5.46	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.08	0.00	-0.84	N/A	N/A	N/A	N/A	-1.69	N/A	N/A	-1.46	
IM Global Fixed Income (SA+CF) Median	2.17	2.63	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	4.42	
Rank	53	40	35	N/A	N/A	N/A	N/A	33	N/A	N/A	38	
Macquarie Unconstrained (SA) - Net	2.04	4.38	7.55	N/A	N/A	N/A	N/A	8.17	N/A	N/A	5.28	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.03	-0.13	-1.03	N/A	N/A	N/A	N/A	-1.87	N/A	N/A	-1.64	



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

ch 31, 2017	s of Marc	As								
Inception Date	Since Incep.	2014	2015	2016	10 Years	7 Years	5 Years	3 Years	1 Year	FYTD
09/01/2015	7.46	N/A	N/A	9.48	N/A	N/A	N/A	N/A	9.76	5.40
	6.92	5.28	-0.34	10.04	6.26	6.29	5.68	4.68	8.58	4.51
	0.54	N/A	N/A	-0.56	N/A	N/A	N/A	N/A	1.18	0.89
	4.42	2.47	-2.40	5.71	4.83	4.00	3.21	2.38	5.38	2.63
	04	NI/A	NI/A	00	NI/A	N 1 / A	NI/A	NI/A	00	00

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
Neuberger Unconstrained (SA)	2.58	5.40	9.76	N/A	N/A	N/A	N/A	9.48	N/A	N/A	7.46	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.57	0.89	1.18	N/A	N/A	N/A	N/A	-0.56	N/A	N/A	0.54	
IM Global Fixed Income (SA+CF) Median	2.17	2.63	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	4.42	
Rank	38	36	28	N/A	N/A	N/A	N/A	30	N/A	N/A	21	
Neuberger Unconstrained (SA) - Net	2.52	5.22	9.51	N/A	N/A	N/A	N/A	9.23	N/A	N/A	7.22	09/01/2015
67% B Global Credit/33% B Global High Yield	2.01	4.51	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	6.92	
Difference	0.51	0.71	0.93	N/A	N/A	N/A	N/A	-0.81	N/A	N/A	0.30	
Pacific Asset Bank Loans (SA)	1.52	7.26	8.97	N/A	N/A	N/A	N/A	9.37	N/A	N/A		09/01/2015
CS Lvg'd Loan Index	1.20	6.69	9.74	3.72	4.88	5.02	4.24	9.88	-0.38	2.06	5.16	
Difference	0.32	0.57	-0.77	N/A	N/A	N/A	N/A	-0.51	N/A	N/A	1.22	
IM U.S. Bank Loans (SA+CF) Median	1.06	6.21	8.81	3.96	5.06	5.49	4.86	9.51	0.68	2.06	5.27	
Rank	11	19	47	N/A	N/A	N/A	N/A	53	N/A	N/A	10	
Pacific Asset Bank Loans (SA) - Net	1.44	7.00	8.63	N/A	N/A	N/A	N/A	9.02	N/A	N/A	6.04	09/01/2015
CS Lvg'd Loan Index	1.20	6.69	9.74	3.72	4.88	5.02	4.24	9.88	-0.38	2.06	5.16	
Difference	0.24	0.31	-1.11	N/A	N/A	N/A	N/A	-0.86	N/A	N/A	0.88	
Real Return Composite	0.53	1.01	7.01	2.52	1.91	3.46	N/A	9.56	-2.58	2.26		04/01/2010
CPI+3% (Blended)	1.13	3.91	5.45	4.12	4.02	3.76	4.14	5.15	3.68	3.69	3.76	
Difference	-0.60	-2.90	1.56	-1.60	-2.11	-0.30	N/A	4.41	-6.26	-1.43	-0.30	
Invesco Commodity (CF)	-0.11	-2.56	11.50	-7.19	N/A	N/A	N/A	14.05	-15.83	-15.59		08/01/2013
Bloomberg Cmdty Index (TR)	-2.33	-3.61	8.69	-13.92	-9.54	-5.94	-6.22	11.74	-24.66	-17.01	-9.97	
Difference	2.22	1.05	2.81	6.73	N/A	N/A	N/A	2.31	8.83	1.42	3.22	
Invesco Commodity (CF) - Net	-0.27	-3.03	10.78	-7.80	N/A	N/A	N/A	13.30	-16.41	-16.12		08/01/2013
Bloomberg Cmdty Index (TR)	-2.33	-3.61	8.69	-13.92	-9.54	-5.94	-6.22	11.74	-24.66	-17.01	-9.97	
Difference	2.06	0.58	2.09	6.12	N/A	N/A	N/A	1.56	8.25	0.89	2.65	
Hancock Timberland (CF) (Lagged-1 Mo) - Net	0.00	-1.12	-2.08	0.82	N/A	N/A	N/A	4.81	-0.34	N/A		04/01/2014
NCREIF Timberland Index (Lagged-1 Mo)	1.18	2.86	2.59	5.96	7.06	5.20	5.83	3.28	9.26	10.38	5.96	
Difference	-1.18	-3.98	-4.67	-5.14	N/A	N/A	N/A	1.53	-9.60	N/A	-5.14	
Molpus IV (CF) (Lagged-1 Mo) - Net	3.38	3.23	2.66	N/A	N/A	N/A	N/A	-1.91	N/A	N/A		09/01/2015
NCREIF Timberland Index (Lagged-1 Mo)	1.18	2.86	2.59	5.96	7.06	5.20	5.83	3.28	9.26	10.38	3.32	
Difference	2.20	0.37	0.07	N/A	N/A	N/A	N/A	-5.19	N/A	N/A	-12.60	



**Comparative Performance - Health** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date
WAMCO (SA)	0.58	2.17	5.95	5.29	3.48	4.40	N/A	9.36	-0.18	9.13	4.40	04/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.70	2.36	6.60	5.32	3.36	4.71	5.05	10.22	-1.12	9.04	4.71	
Difference	-0.12	-0.19	-0.65	-0.03	0.12	-0.31	N/A	-0.86	0.94	0.09	-0.31	
WAMCO (SA) - Net	0.54	2.04	5.76	5.11	3.30	4.21	N/A	9.17	-0.35	8.97	4.21	04/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.70	2.36	6.60	5.32	3.36	4.71	5.05	10.22	-1.12	9.04	4.71	
Difference	-0.16	-0.32	-0.84	-0.21	-0.06	-0.50	N/A	-1.05	0.77	-0.07	-0.50	
Hedge Funds Composite - Net	1.69	1.53	1.26	1.13	3.28	N/A	N/A	-2.30	1.24	3.57	3.34	09/01/2010
BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	0.87	2.55	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.13	
Difference	0.82	-1.02	-2.14	-2.04	0.14	N/A	N/A	-5.63	-1.78	0.52	0.21	
GAM Divergent (CF) (Lagged-1 Mo) - Net	1.23	-0.03	-1.30	2.07	N/A	N/A	N/A	-3.23	3.70	4.83	1.91	12/01/2013
BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	0.87	2.55	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.16	
Difference	0.36	-2.58	-4.70	-1.10	N/A	N/A	N/A	-6.56	0.68	1.78	-1.25	
MS Convergent (CF) (Lagged-1 Mo) - Net	2.19	3.25	4.16	0.07	N/A	N/A	N/A	-1.27	-1.34	N/A	0.07	03/01/2014
BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)	0.87	2.55	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.16	
Difference	1.32	0.70	0.76	-3.10	N/A	N/A	N/A	-4.60	-4.36	N/A	-3.09	

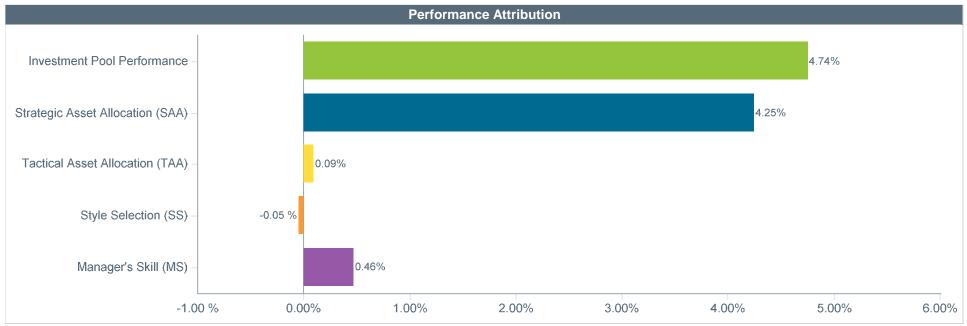


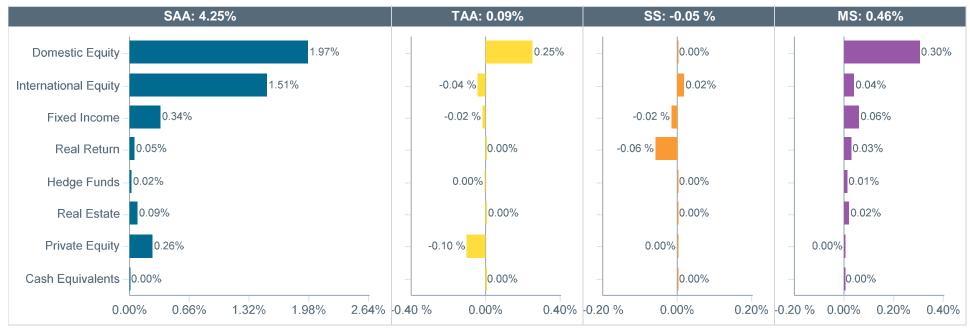
## Water and Power Employees' Retirement Plan Alternative Investment Fund Performance Listing - Health

			% of	% of	Inception	Inception
	IV	larket Value	Alt. Inv. Group	Total Fund	IRR	Date
Private Equity	\$	54,827,039	39.25%	3.10%	15.30%	Aug-09
Apollo VIII	\$	3,629,777	2.60%	0.21%	17.07%	Jan-14
ARES IV	\$	4,225,101	3.02%	0.24%	17.50%	Nov-12
ARES Special Situation IV	\$	1,731,786	1.24%	0.10%	-19.37%	Jan-15
Audax Mezz III	\$	1,556,863	1.11%	0.09%	12.73%	Jan-11
Blackstone Tactical Opps	\$	4,159,342	2.98%	0.24%	21.73%	Apr-15
CDR IX	\$	3,182,307	2.28%	0.18%	25.03%	Apr-14
Crestview Partners III	\$	2,751,310	1.97%	0.16%	15.55%	Feb-15
EnCap VIII	\$	996,978	0.71%	0.06%	-0.24%	Jan-11
EnCAP IX	\$	2,095,502	1.50%	0.12%	25.66%	Jan-13
EnCAP X	\$	1,999,486	1.43%	0.11%	55.40%	Feb-15
Harvest VII	\$	27,528	0.02%	0.00%	-97.04%	Nov-15
Landmark XIV	\$	1,981,431	1.42%	0.11%	13.88%	Aug-08
Landmark XV	\$	2,051,372	1.47%	0.12%	14.99%	Feb-14
Lexington VII	\$	2,168,789	1.55%	0.12%	17.60%	Aug-09
Oaktree V	\$	1,291,471	0.92%	0.07%	6.89%	Jan-09
Silver Lake IV	\$	1,898,004	1.36%	0.11%	36.27%	Sep-13
Vista IV	\$	5,906,375	4.23%	0.33%	22.17%	Sep-11
Vista V	\$	8,965,148	6.42%	0.51%	14.99%	Apr-14
Vista VI	\$	4,208,469	3.01%	0.24%	3.70%	Jun-16
Real Estate	\$	84,869,096	60.75%	4.80%	13.19%	Jan-10
AG Core Plus III	\$	830,984	0.59%	0.05%	26.57%	Jan-12
Almanac VI	\$	778,806	0.56%	0.04%	20.82%	Jun-12
Almanac VII	\$	2,035,773	1.46%	0.12%	14.52%	Mar-15
BREP Europe IV	\$	4,283,342	3.07%	0.24%	8.18%	Dec-13
BREP VII	\$	4,688,806	3.36%	0.27%	20.93%	Jun-12
Bristol Value II	\$	2,450,193	1.75%	0.14%	14.62%	Nov-12
Dimensional Global REIT	\$	5,706,031	4.08%	0.32%	7.09%	Mar-13
DRA G&I VIII	\$	4,205,999	3.01%	0.24%	14.39%	Jun-14
DRA VII	\$	3,046,145	2.18%	0.17%	20.71%	Oct-11
Harrison Street Core	\$	10,455,066	7.48%	0.59%	7.89%	Aug-15
Heitman REIT	\$	5,382,501	3.85%	0.30%	9.09%	Sep-13
Invesco Core Realty	\$	8,476,380	6.07%	0.48%	11.52%	Jun-11
Jamestown Premier	\$	9,761,777	6.99%	0.55%	5.55%	Mar-15
Lone Star RE II	\$	167,180	0.12%	0.01%	29.53%	May-11
Lone Star RE IV	\$	5,102,350	3.65%	0.29%	10.82%	Jun-15
Lone Star VII	\$	93,123	0.07%	0.01%	50.38%	May-11
Mesa West II	\$	1	0.00%	0.00%	14.63%	Jan-10
Mesa West III	\$	2,976,766	2.13%	0.17%	9.92%	Aug-13
PCCP First Mtg II	\$	633,992	0.45%	0.04%	7.07%	Jun-12
Prologis USLH	\$	6,065,004	4.34%	0.34%	15.30%	Mar-15
Torchlight IV	\$	5,046,745	3.61%	0.29%	12.44%	Aug-13
Torchlight V	\$	1,588,196	1.14%	0.09%	10.63%	Mar-15
Westbrook X	\$	1,093,936	0.78%	0.06%	20.35%	Feb-16



#### Water and Power Employees' Retirement Plan Total Fund Attribution - IDP

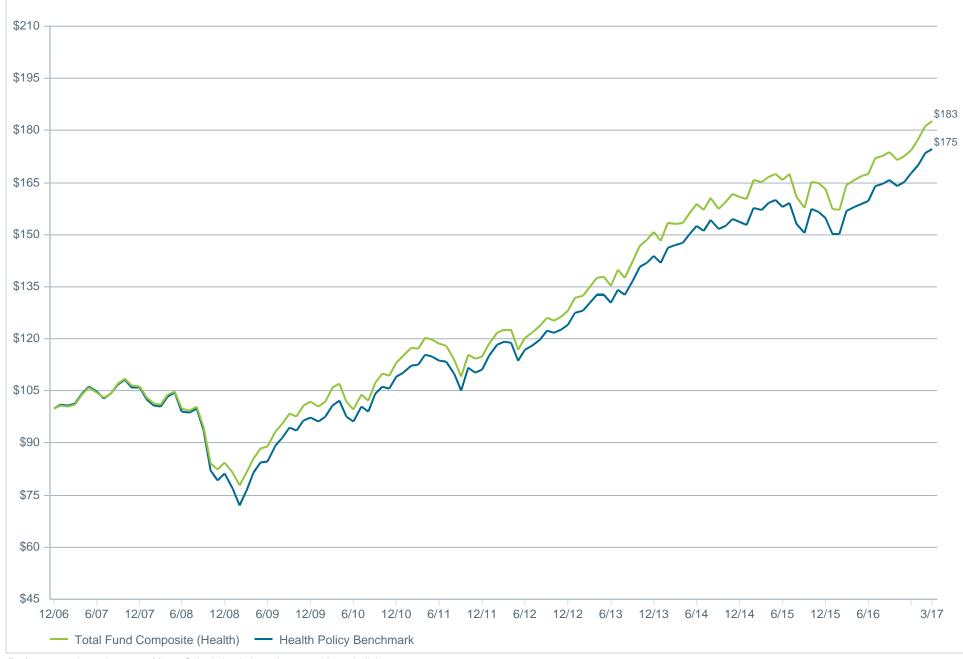




Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



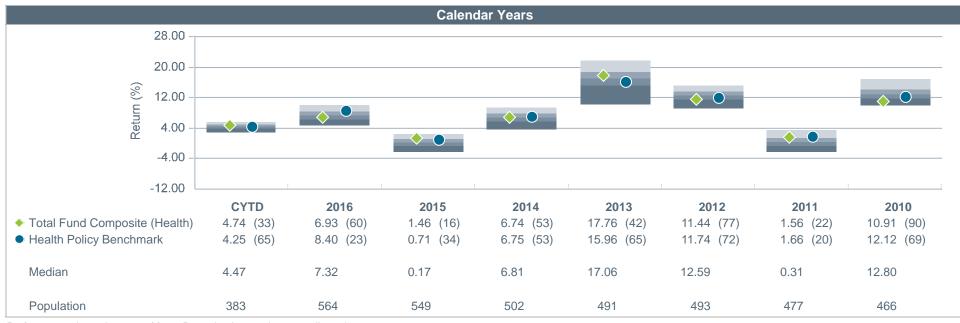
#### Water and Power Employees' Retirement Plan Growth of \$100 - Health



KVK

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







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

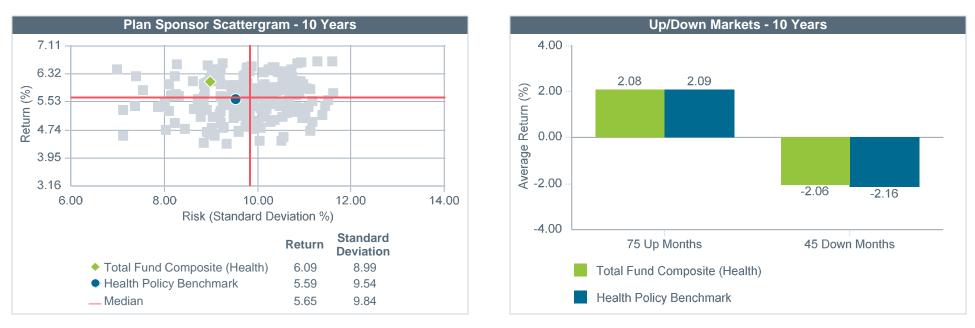
## Water and Power Employees' Retirement Plan Total Fund Composite (Health) vs. Health Policy Benchmark Comparative Performance & Rolling Return - Health

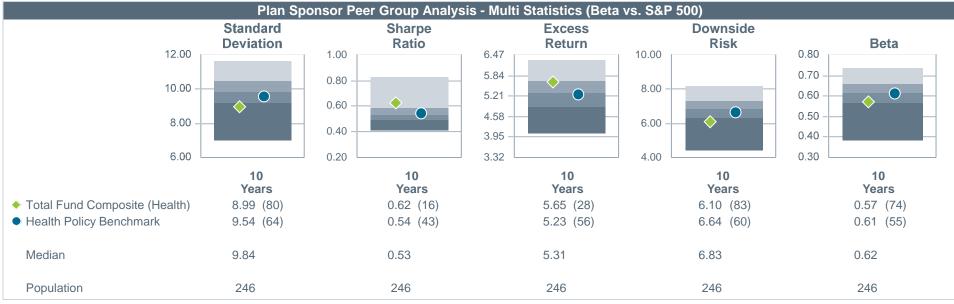
	-											
	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Total Fund Composite (Health)	4.74	9.18	11.29	6.08	8.28	8.11	6.09	6.93	1.46	6.74	17.76	11.44
Health Policy Benchmark	4.25	9.43	11.41	5.92	7.95	8.17	5.59	8.40	0.71	6.75	15.96	11.74
Difference	0.49	-0.25	-0.12	0.16	0.33	-0.06	0.50	-1.47	0.75	-0.01	1.80	-0.30



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







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



#### Water and Power Employees' Retirement Plan Equity Beta Analysis - Health



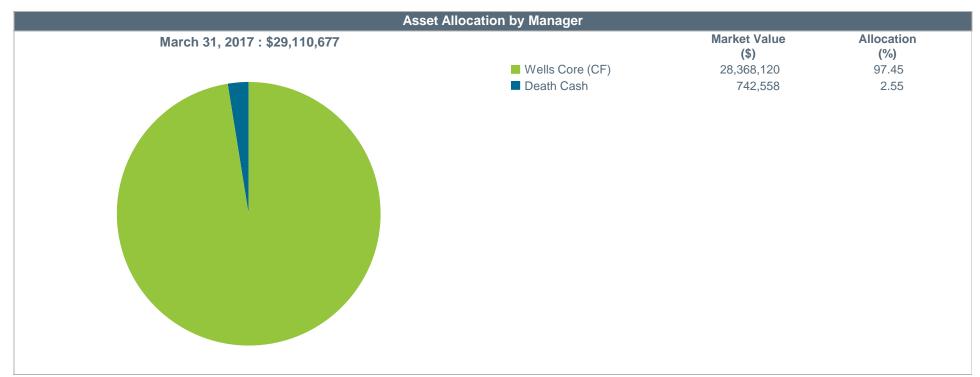
Performance shown is gross of fees. The objective of the Total Fund Beta is to measure the aggregate level of non-diversifiable or systematic equity risk exposure of the Water and Power Employees' Retirement Plan - Health. The Total Fund Beta is calculated using the S&P 500 Index (Cap Wtd) as the benchmark 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



# Asset Allocation by Manager and Comparative Performance - Death

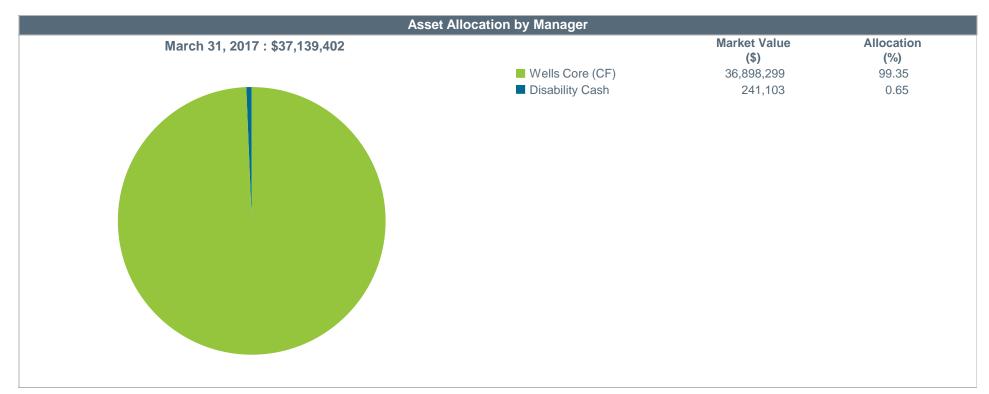


Comparative Performance													
	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date	
Total Fund Composite (Death)	0.65	-1.51	0.77	2.89	2.89	4.03	4.92	2.92	1.08	6.06	5.47	12/01/1995	
Death Policy Benchmark	0.79	-1.65	0.44	2.58	2.25	3.35	4.13	2.55	0.53	5.72	5.12		
Difference	-0.14	0.14	0.33	0.31	0.64	0.68	0.79	0.37	0.55	0.34	0.35		
Wells Core (CF)	0.66	-1.56	0.77	2.94	2.95	4.33	5.37	2.98	1.06	6.18	5.23	07/01/2004	
Bloomberg US Agg Bond Index	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	4.33		
Difference	-0.16	0.17	0.33	0.26	0.61	0.85	1.10	0.33	0.51	0.21	0.90		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	4.76		
Rank	97	64	61	53	38	24	11	59	27	47	15		
Wells Core (CF) - Net	0.66	-1.56	0.77	2.95	2.95	4.34	5.37	2.98	1.06	6.19	4.96	07/01/2004	
Bloomberg US Agg Bond Index	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	4.33		
Difference	-0.16	0.17	0.33	0.27	0.61	0.86	1.10	0.33	0.51	0.22	0.63		

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 June 30th. Please see the Addendum for custom index descriptions.



# Asset Allocation by Manager and Comparative Performance - Disability



Comparative Performance														
	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	Since Incep.	Inception Date		
Total Fund Composite (Disability)	0.66	-1.55	0.77	2.94	2.94	4.22	5.10	2.97	1.10	6.14	5.82	12/01/1995		
Disability Policy Benchmark	0.78	-1.63	0.44	2.56	2.23	3.31	4.09	2.53	0.53	5.66	5.09			
Difference	-0.12	0.08	0.33	0.38	0.71	0.91	1.01	0.44	0.57	0.48	0.73			
Wells Core (CF)	0.66	-1.56	0.77	2.94	2.95	4.34	5.37	2.98	1.06	6.19	4.90	07/01/2004		
Bloomberg US Agg Bond Index	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	4.33			
Difference	-0.16	0.17	0.33	0.26	0.61	0.86	1.10	0.33	0.51	0.22	0.57			
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	-1.30	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	4.76			
Rank	97	64	61	53	38	24	11	59	27	47	37			
Wells Core (CF) - Net	0.66	-1.56	0.77	2.94	2.95	4.34	5.37	2.98	1.06	6.18	5.22	07/01/2004		
Bloomberg US Agg Bond Index	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	4.33			
Difference	-0.16	0.17	0.33	0.26	0.61	0.86	1.10	0.33	0.51	0.21	0.89			

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 June 30th. Please see the Addendum for custom index descriptions.



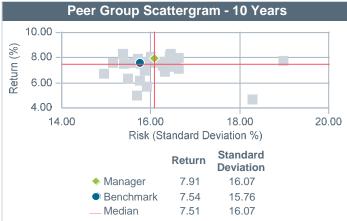
# **Composite and Manager Reviews**

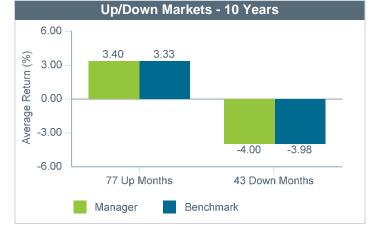


# Manager: Domestic Equity Composite - Retirement

**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	2016	2015	2014	2013	2012		
Manager	6.55	18.63	10.07	13.82	13.12	7.91	11.68	1.96	11.82	36.97	17.00		
Benchmark	5.74	18.07	9.76	13.18	12.89	7.54	12.74	0.48	12.56	33.55	16.42		
Difference	0.81	0.56	0.31	0.64	0.23	0.37	-1.06	1.48	-0.74	3.42	0.58		
Peer Group Median	5.44	18.03	9.11	12.73	12.71	7.51	12.85	0.14	11.42	33.76	16.57		
Rank	8	32	19	7	22	19	74	8	34	5	28		
Population	92	87	82	70	59	34	101	91	50	48	44		



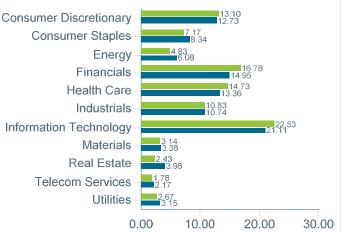




#### Portfolio Characteristics and Dist. of Market Cap (%)



#### Sector Weights (%)



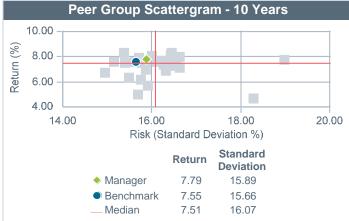
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

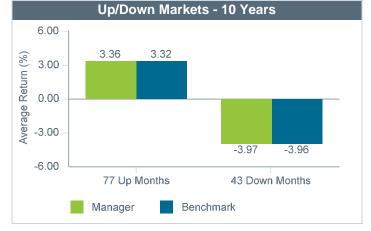


# Manager: Domestic Equity Composite - Health

**Benchmark:** Russell 3000 (Blended) (H) **Peer Group:** All Public Plans-US Equity Segment

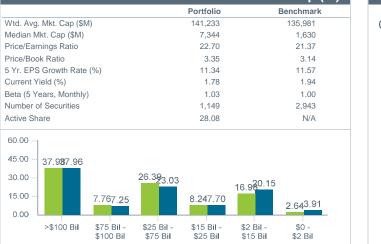
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	6.54	18.59	10.07	13.82	13.26	7.79	11.67	1.99	11.88	36.87	16.98		
Benchmark	5.74	18.07	9.76	13.18	12.89	7.55	12.74	0.48	12.56	33.55	16.42		
Difference	0.80	0.52	0.31	0.64	0.37	0.24	-1.07	1.51	-0.68	3.32	0.56		
Peer Group Median	5.44	18.03	9.11	12.73	12.71	7.51	12.85	0.14	11.42	33.76	16.57		
Rank	8	33	19	7	10	23	74	8	33	6	28		
Population	92	87	82	70	59	34	101	91	50	48	44		







#### Portfolio Characteristics and Dist. of Market Cap (%)



#### Sector Weights (%)



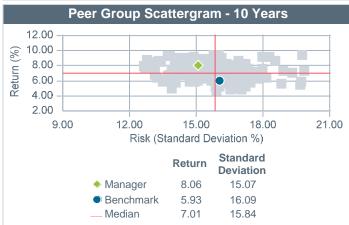
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

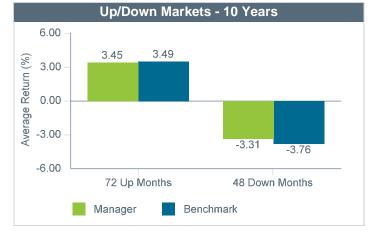


# Manager: MFS Large Cap Value (SA)

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	2016	2015	2014	2013	2012		
Manager	4.79	17.91	10.11	13.96	12.89	8.06	15.80	-0.06	11.86	36.41	16.69		
Benchmark	3.27	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	32.53	17.51		
Difference	1.52	-1.31	1.44	0.83	0.71	2.13	-1.54	3.77	-1.59	3.88	-0.82		
Peer Group Median	3.97	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	34.29	15.68		
Rank	32	53	19	25	35	23	39	27	56	34	38		
Population	328	327	322	309	293	257	345	371	397	401	422		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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

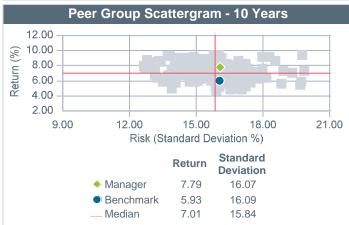


45.00

# Manager: T. Rowe Price Large Cap Value (SA)

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

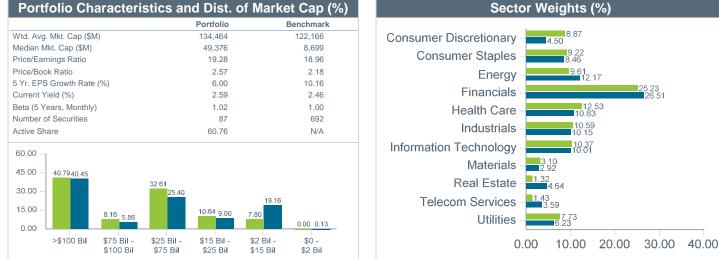
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	3.93	19.37	9.70	14.45	13.05	7.79	17.14	-1.90	13.43	35.32	18.13		
Benchmark	3.27	19.22	8.67	13.13	12.18	5.93	17.34	-3.83	13.45	32.53	17.51		
Difference	0.66	0.15	1.03	1.32	0.87	1.86	-0.20	1.93	-0.02	2.79	0.62		
Peer Group Median	3.97	18.26	8.52	12.98	12.46	7.01	14.58	-2.30	12.23	34.29	15.68		
Rank	52	39	27	15	30	30	26	45	35	42	25		
Population	328	327	322	309	293	257	345	371	397	401	422		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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

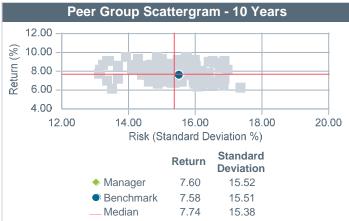


# Manager: BlackRock Russell 1000 Index (CF)

Benchmark: Russell 1000 Index

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

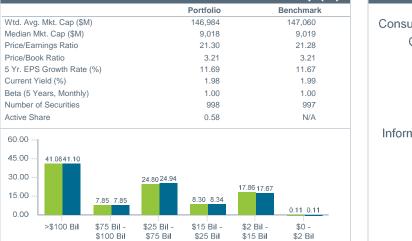
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	6.01	17.45	10.01	13.29	12.96	7.60	12.09	0.94	13.27	33.16	16.51		
Benchmark	6.03	17.43	9.99	13.26	12.95	7.58	12.05	0.92	13.24	33.11	16.42		
Difference	-0.02	0.02	0.02	0.03	0.01	0.02	0.04	0.02	0.03	0.05	0.09		
Peer Group Median	5.97	16.32	9.80	13.22	12.92	7.74	10.52	1.28	13.41	32.96	15.70		
Rank	50	40	46	45	48	58	31	55	52	49	40		
Population	273	271	263	246	229	201	288	310	333	352	359		







#### Portfolio Characteristics and Dist. of Market Cap (%)



#### Sector Weights (%)



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

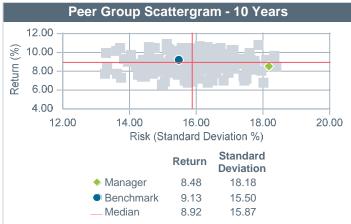


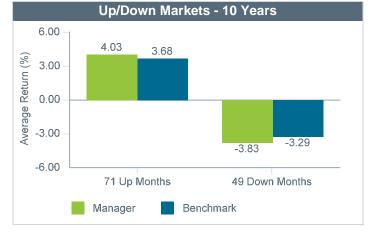
# Manager: Fred Alger Large Cap Growth (SA)

## Benchmark: Russell 1000 Grth Index

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

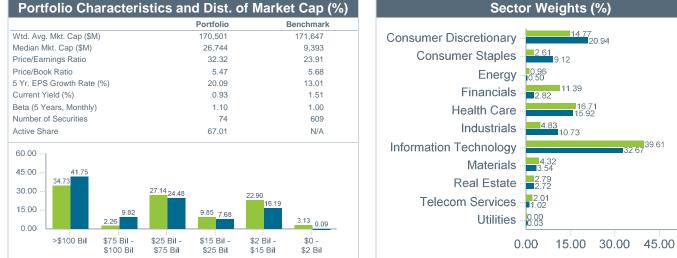
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	10.47	14.80	7.51	11.42	11.73	8.48	0.38	1.73	11.75	37.29	15.31		
Benchmark	8.91	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	33.48	15.26		
Difference	1.56	-0.96	-3.76	-1.90	-1.95	-0.65	-6.70	-3.94	-1.30	3.81	0.05		
Peer Group Median	8.79	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	34.52	15.19		
Rank	19	59	87	80	81	65	85	78	54	27	49		
Population	283	281	273	261	253	231	301	330	342	350	364		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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



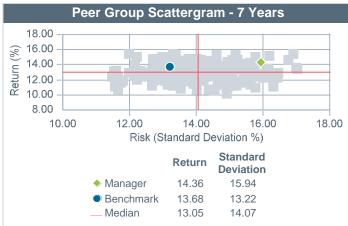
60.00

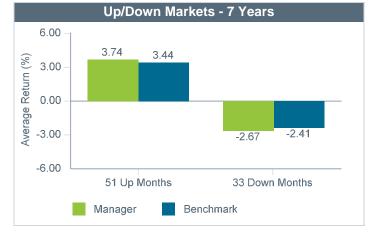
# Manager: T. Rowe Price Large Cap Growth (SA)

#### Benchmark: Russell 1000 Grth Index

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

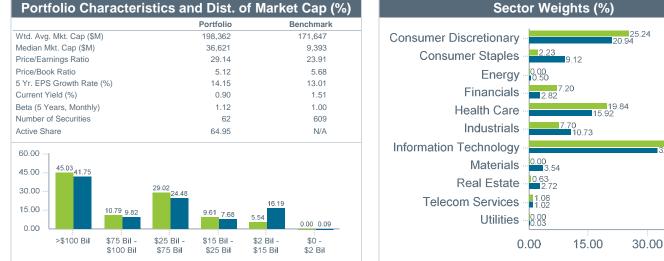
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	10.14	23.04	12.59	15.70	14.36	N/A	5.78	12.48	9.31	44.58	19.84		
Benchmark	8.91	15.76	11.27	13.32	13.68	9.13	7.08	5.67	13.05	33.48	15.26		
Difference	1.23	7.28	1.32	2.38	0.68	N/A	-1.30	6.81	-3.74	11.10	4.58		
Peer Group Median	8.79	15.61	10.28	12.73	13.05	8.91	4.64	4.93	11.95	34.52	15.19		
Rank	23	2	9	5	18	N/A	40	7	80	5	13		
Population	283	281	273	261	253	231	301	330	342	350	364		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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



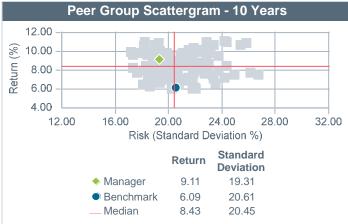
36.08

45.00

#### Manager: Earnest Partners Small Cap Value (SA) Benchmark: Russell 2000 Val Index

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

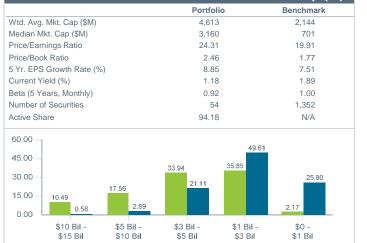
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	5.50	27.84	11.99	15.58	14.42	9.11	24.79	-2.28	11.11	35.47	15.46		
Benchmark	-0.13	29.37	7.62	12.54	11.59	6.09	31.74	-7.47	4.22	34.52	18.05		
Difference	5.63	-1.53	4.37	3.04	2.83	3.02	-6.95	5.19	6.89	0.95	-2.59		
Peer Group Median	0.77	24.57	8.67	13.70	13.40	8.43	26.14	-4.30	5.71	38.09	17.48		
Rank	5	25	4	14	25	32	59	30	6	73	67		
Population	217	214	210	201	190	168	228	239	250	252	261		



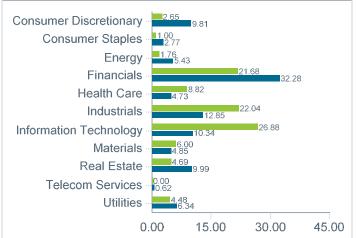




#### Portfolio Characteristics and Dist. of Market Cap (%)



## Sector Weights (%)



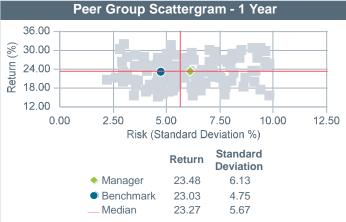
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



# Manager: Emerald Small Cap Growth (SA)

Benchmark: Russell 2000 Grth Index Peer Group: IM U.S. Small Cap Growth Equity (SA+CF)

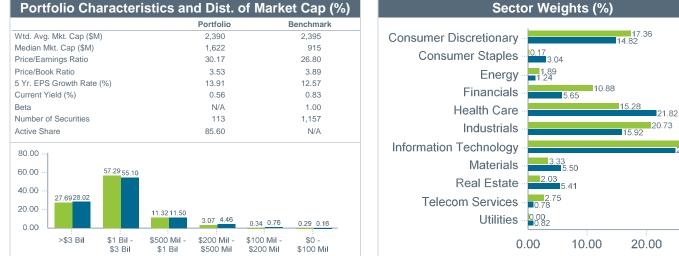
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	5.32	23.48	N/A	N/A	N/A	N/A	10.02	N/A	N/A	N/A	N/A		
Benchmark	5.35	23.03	6.72	12.10	12.88	8.06	11.32	-1.38	5.60	43.30	14.59		
Difference	-0.03	0.45	N/A	N/A	N/A	N/A	-1.30	N/A	N/A	N/A	N/A		
Peer Group Median	5.85	23.27	6.57	12.42	13.85	8.72	11.38	-0.74	4.01	45.45	14.75		
Rank	57	47	N/A	N/A	N/A	N/A	58	N/A	N/A	N/A	N/A		
Population	163	163	159	153	147	125	178	198	208	214	222		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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



25,59

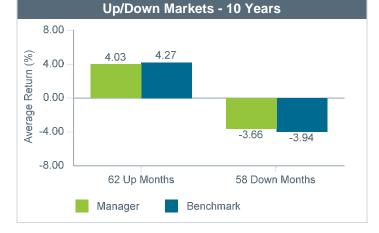
30.00

# Manager: International Equity Composite - Retirement

Benchmark: MSCI ACW Ex US IM Index (Blended) Peer Group: All Public Plans-Intl. Equity Segment

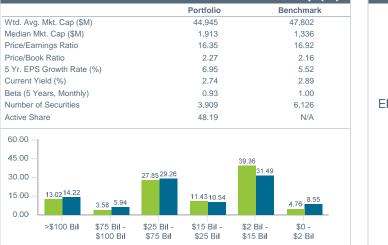
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	8.30	11.21	2.63	6.14	4.55	2.16	3.09	-1.39	-1.15	19.16	13.94		
Benchmark	7.99	13.01	0.82	4.66	4.13	1.76	4.41	-4.60	-3.89	15.82	17.04		
Difference	0.31	-1.80	1.81	1.48	0.42	0.40	-1.32	3.21	2.74	3.34	-3.10		
Peer Group Median	8.32	13.16	1.95	6.03	5.45	2.41	3.94	-2.51	-3.00	18.68	18.94		
Rank	52	85	23	45	85	73	66	31	20	44	100		
Population	90	84	78	66	55	33	96	84	47	44	39		



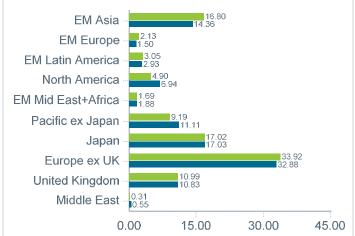




#### Portfolio Characteristics and Dist. of Market Cap (%)



#### Region Weights (%)



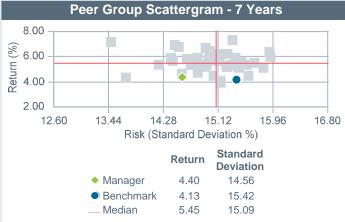
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



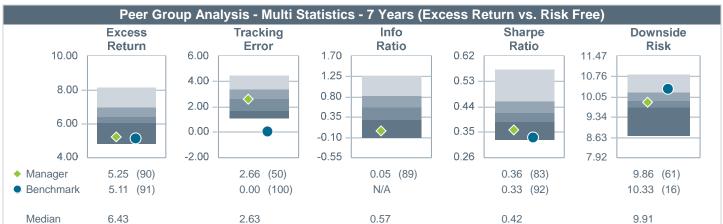
# Manager: International Equity Composite - Health

Benchmark: MSCI ACW Ex US IM Index (Net) Peer Group: All Public Plans-Intl. Equity Segment

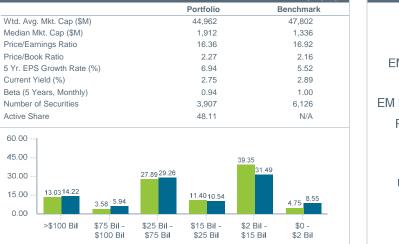
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	8.30	11.18	2.62	6.09	4.40	N/A	3.06	-1.40	-1.14	18.81	12.69		
Benchmark	7.99	13.01	0.82	4.66	4.13	1.59	4.41	-4.60	-3.89	15.82	17.04		
Difference	0.31	-1.83	1.80	1.43	0.27	N/A	-1.35	3.20	2.75	2.99	-4.35		
Peer Group Median	8.32	13.16	1.95	6.03	5.45	2.41	3.94	-2.51	-3.00	18.68	18.94		
Rank	52	85	24	48	90	N/A	67	31	20	49	100		
Population	90	84	78	66	55	33	96	84	47	44	39		



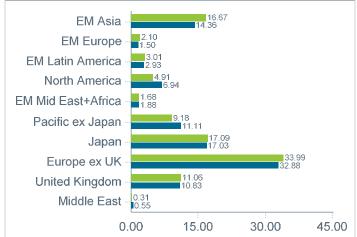




#### Portfolio Characteristics and Dist. of Market Cap (%)



## Region Weights (%)



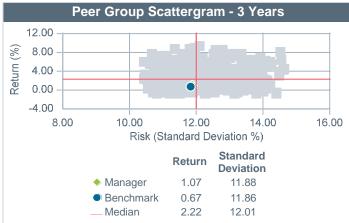
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

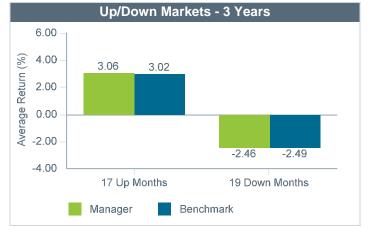


# Manager: BlackRock Developed Int'l - Passive (CF)

Peer Group: IM International Equity Developed Markets (SA+CF)

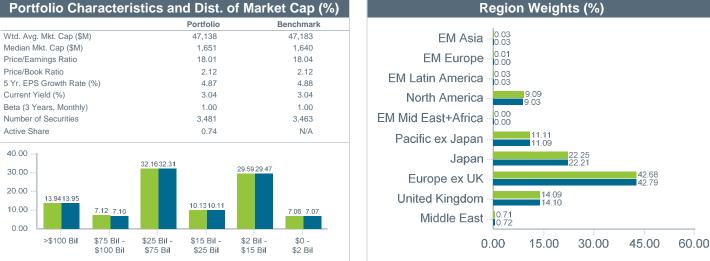
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012		
Manager	7.06	12.43	1.07	N/A	N/A	N/A	3.45	-1.62	-4.13	21.90	N/A		
Benchmark	6.92	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	21.57	16.55		
Difference	0.14	0.56	0.40	N/A	N/A	N/A	0.50	0.33	0.32	0.33	N/A		
Peer Group Median	8.04	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	23.87	19.67		
Rank	75	50	70	N/A	N/A	N/A	37	71	58	62	N/A		
Population	636	633	602	565	521	435	678	734	749	763	782		







#### Portfolio Characteristics and Dist. of Market Cap (%)



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



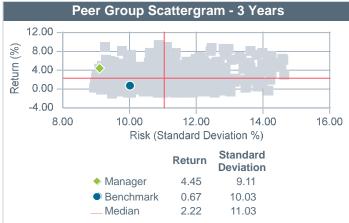
# As of March 31, 2017



## Manager: MFS Developed Int'l (SA)

# Benchmark: MSCI Wrld Ex US IM Index (USD) (Net)

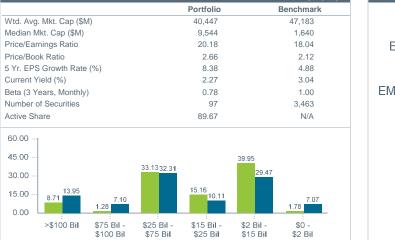
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	6.49	4.49	4.45	N/A	N/A	N/A	-0.22	7.17	1.31	31.52	N/A
Benchmark	6.92	11.87	0.67	5.69	4.79	1.37	2.95	-1.95	-4.45	21.57	16.55
Difference	-0.43	-7.38	3.78	N/A	N/A	N/A	-3.17	9.12	5.76	9.95	N/A
Peer Group Median	8.04	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	23.87	19.67
Rank	85	96	24	N/A	N/A	N/A	71	21	15	16	N/A
Population	636	633	602	565	521	435	678	734	749	763	782



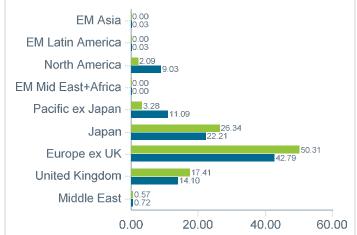




#### Portfolio Characteristics and Dist. of Market Cap (%)



## Region Weights (%)



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

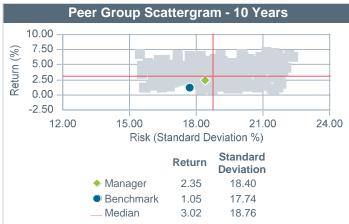


## Manager: Fidelity Developed Int'l (SA)

Benchmark: International Developed Blend

Peer Group: IM International Equity Developed Markets (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	6.59	8.60	0.30	6.32	5.62	2.35	-0.70	0.99	-5.94	26.02	18.35
Benchmark	6.92	11.87	0.67	5.69	4.79	1.05	2.95	-1.95	-4.45	21.57	16.55
Difference	-0.33	-3.27	-0.37	0.63	0.83	1.30	-3.65	2.94	-1.49	4.45	1.80
Peer Group Median	8.04	12.25	2.22	7.10	6.62	3.02	1.83	1.33	-3.59	23.87	19.67
Rank	84	79	83	67	69	64	74	54	78	38	62
Population	636	633	602	565	521	435	678	734	749	763	782







#### Portfolio Characteristics and Dist. of Market Cap (%)



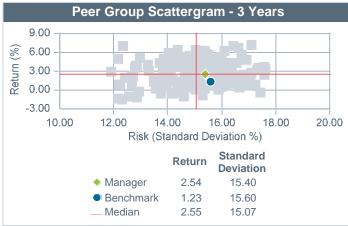
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

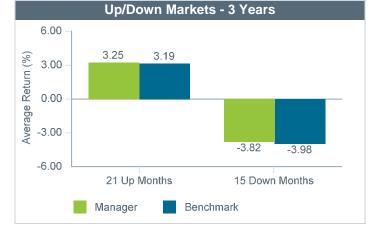


# Manager: LA Capital Emerging (CF)

#### Benchmark: MSCI Emg Mkts IM Index (USD) (Net) Peer Group: IM Emerging Markets Equity (SA+CF)

Performance												
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012	
Manager	11.73	16.92	2.54	N/A	N/A	N/A	12.18	-15.10	0.24	-1.67	N/A	
Benchmark	11.65	16.83	1.23	1.05	1.79	2.93	9.90	-13.86	-1.79	-2.20	18.69	
Difference	0.08	0.09	1.31	N/A	N/A	N/A	2.28	-1.24	2.03	0.53	N/A	
Peer Group Median	12.22	18.42	2.55	2.86	3.43	3.85	10.02	-12.71	-0.18	0.95	20.55	
Rank	60	63	51	N/A	N/A	N/A	35	71	46	69	N/A	
Population	269	269	251	193	146	100	286	310	312	299	273	







#### Portfolio Characteristics and Dist. of Market Cap (%)

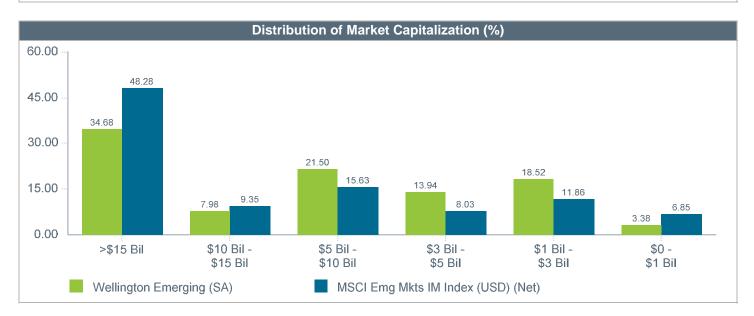


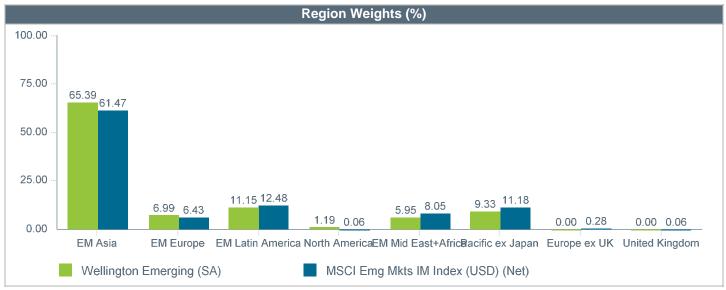
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



#### Wellington Emerging (SA) vs. MSCI Emg Mkts IM Index (USD) (Net) Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	38,010	49,838
Median Mkt. Cap (\$M)	4,414	988
Price/Earnings Ratio	11.18	14.03
Price/Book Ratio	1.99	2.33
5 Yr. EPS Growth Rate (%)	10.73	7.72
Current Yield (%)	2.81	2.43
Beta	N/A	1.00
Number of Securities	181	2,661





Returns-based exhibits will be included after the fund has one year of performance history. Beta Calculation requires three years of performance history.



# Manager: Fixed Income Composite - Retirement

Peer Group: All Public Plans-US Fixed Income Segment

				0								
Performance												
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012	
Manager	1.38	4.08	3.70	3.66	4.80	5.23	5.00	0.78	6.05	-0.68	7.52	
Benchmark	1.22	4.15	3.49	3.13	4.13	4.67	5.65	0.11	5.56	-1.35	5.53	
Difference	0.16	-0.07	0.21	0.53	0.67	0.56	-0.65	0.67	0.49	0.67	1.99	
Peer Group Median	1.26	3.09	3.20	3.09	4.46	4.75	4.54	0.30	6.01	-1.39	7.57	
Rank	45	37	33	34	39	25	42	30	49	37	53	
Population	86	84	81	71	60	37	96	80	49	49	48	





Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free) Tracking Info Sharpe Downside **Excess** Return Error Ratio Ratio Risk 8.00 8.00 8.00 1.08 1.70 6.00 0.70 1.40 6.00 6.00 â 4.00 0.32 1.10 4.00 4.00  $\square$ 2.00 -0.06 0.80 2.00 2.00  $\land \cap$ 0.00 -0.44 0.50 0.00 -2.00 -0.82 0.20 0.00 Manager 4.47 (28) 1.13 (94) 0.47 (14) 1.37 (4) 1.79 (93) Benchmark 3.94 (62) 0.00 (100) N/A 1.20 (12) 1.84 (93) 4.02 2.40 0.04 1.00 Median 2.58

**Portfolio Characteristics** Portfolio **Benchmark** Effective Duration 4.45 N/A Spread Duration N/A N/A Avg. Maturity 5.99 6.29 Avg. Quality A2 A2 Yield To Maturity (%) 3.40 3.46 Coupon Rate (%) 3.70 3.72 Current Yield (%) 3.69 3.64 Holdings Count 1,521 N/A





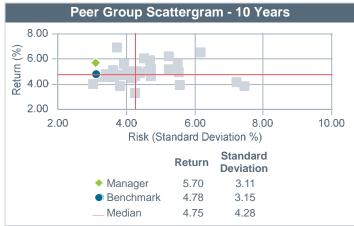
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock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



## Manager: Fixed Income Composite - Health

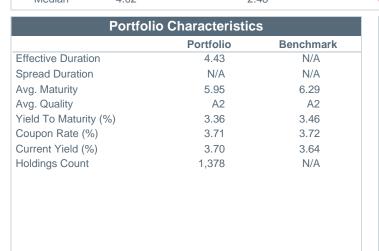
Peer Group: All Public Plans-US Fixed Income Segment

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.36	4.00	3.68	3.54	4.63	5.70	4.85	0.83	6.05	-0.82	6.84
Benchmark	1.22	4.15	3.49	3.13	4.13	4.78	5.65	0.11	5.56	-1.35	5.53
Difference	0.14	-0.15	0.19	0.41	0.50	0.92	-0.80	0.72	0.49	0.53	1.31
Peer Group Median	1.26	3.09	3.20	3.09	4.46	4.75	4.54	0.30	6.01	-1.39	7.57
Rank	46	37	33	37	44	19	44	27	49	38	63
Population	86	84	81	71	60	37	96	80	49	49	48













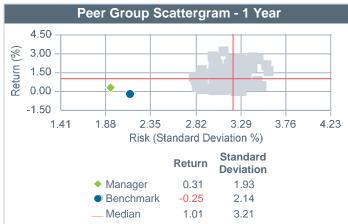
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock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



## Manager: JP Morgan Principal Protection (SA)

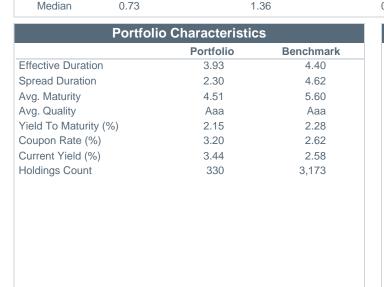
Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

				Pe	erforman	ce					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.61	0.31	N/A	N/A	N/A	N/A	2.02	N/A	N/A	N/A	N/A
Benchmark	0.52	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	-1.27	2.35
Difference	0.09	0.56	N/A	N/A	N/A	N/A	0.62	N/A	N/A	N/A	N/A
Peer Group Median	0.92	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	-1.56	5.88
Rank	99	84	N/A	N/A	N/A	N/A	98	N/A	N/A	N/A	N/A
Population	140	139	138	136	133	128	151	157	171	183	192

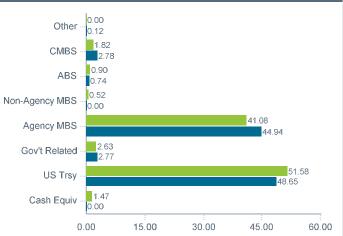












Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of Covered Bonds.

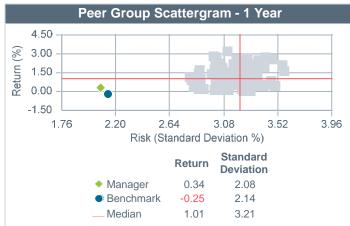


## Manager: Wells Principal Protection (SA)

Benchmark: Bloomberg US Int Agg Ex Credit

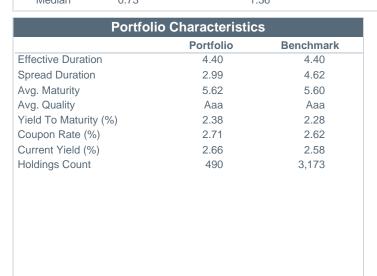
Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

				Pe	erforman	се					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.60	0.34	N/A	N/A	N/A	N/A	1.86	N/A	N/A	N/A	N/A
Benchmark	0.52	-0.25	2.08	1.64	2.63	3.69	1.40	1.32	4.11	-1.27	2.35
Difference	0.08	0.59	N/A	N/A	N/A	N/A	0.46	N/A	N/A	N/A	N/A
Peer Group Median	0.92	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	-1.56	5.88
Rank	99	83	N/A	N/A	N/A	N/A	98	N/A	N/A	N/A	N/A
Population	140	139	138	136	133	128	151	157	171	183	192

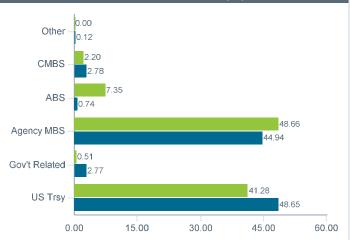








Sector Distribution (%)



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



## Manager: Macquarie Unconstrained (SA)

# **Benchmark:** 67% B Global Credit/33% B Global High Yield **Peer Group:** IM Global Fixed Income (SA+CF)

				Pe	rforman	се					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	2.03	7.58	N/A	N/A	N/A	N/A	8.37	N/A	N/A	N/A	N/A
Benchmark	2.01	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	2.58	14.14
Difference	0.02	-1.00	N/A	N/A	N/A	N/A	-1.67	N/A	N/A	N/A	N/A
Peer Group Median	2.17	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	-0.06	9.53
Rank	54	36	N/A	N/A	N/A	N/A	33	N/A	N/A	N/A	N/A
Population	207	206	191	165	128	98	227	250	253	246	237

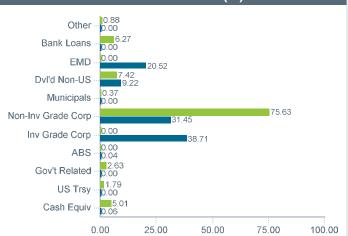


#### Up/Down Markets - 1 Year 1.98 Average Return (%) 1.32 1.15 1.03 0.66 0.00 -0.66 -0.63 -0.68 -1.32 9 Up Months 3 Down Months Benchmark Manager



**Portfolio Characteristics** Portfolio **Benchmark** Effective Duration 5.16 5.49 Spread Duration 5.39 N/A Avg. Maturity 7.52 7.24 Avg. Quality Ba1 Ba1 Yield To Maturity (%) 4.47 4.41 Coupon Rate (%) 4.98 4.81 Current Yield (%) 4.80 4.66 Holdings Count N/A 16,074

## Sector Distribution (%)



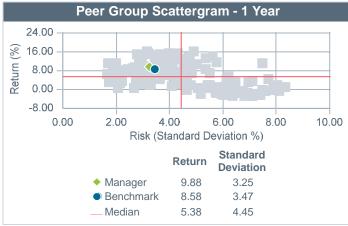
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Manager allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation 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)

# **Benchmark:** 67% B Global Credit/33% B Global High Yield **Peer Group:** IM Global Fixed Income (SA+CF)

-				De							
				Pe	erforman	ce					
	QTD	1	3	5	7	10	2016	2015	2014	2013	2012
		Year	Years	Years	Years	Years					
Manager	2.62	9.88	N/A	N/A	N/A	N/A	9.65	N/A	N/A	N/A	N/A
Benchmark	2.01	8.58	4.68	5.68	6.29	6.26	10.04	-0.34	5.28	2.58	14.14
Difference	0.61	1.30	N/A	N/A	N/A	N/A	-0.39	N/A	N/A	N/A	N/A
Peer Group Median	2.17	5.38	2.38	3.21	4.00	4.83	5.71	-2.40	2.47	-0.06	9.53
Rank	37	27	N/A	N/A	N/A	N/A	30	N/A	N/A	N/A	N/A
Population	207	206	191	165	128	98	227	250	253	246	237

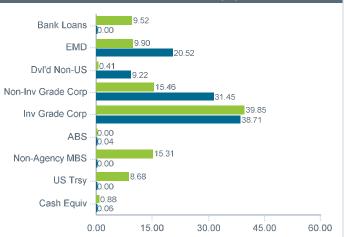






Spread Duration 5.62 5.39   Avg. Maturity 6.96 7.24   Avg. Quality Ba1 Ba1   Yield To Maturity (%) 4.47 4.41   Coupon Rate (%) 3.95 4.81   Current Yield (%) 3.84 4.66		Portfolio	Benchmark
Avg. Maturity6.967.24Avg. QualityBa1Ba1Yield To Maturity (%)4.474.41Coupon Rate (%)3.954.81Current Yield (%)3.844.66	Effective Duration	5.37	5.49
Avg. Quality Ba1 Ba1   Yield To Maturity (%) 4.47 4.41   Coupon Rate (%) 3.95 4.81   Current Yield (%) 3.84 4.66	Spread Duration	5.62	5.39
Yield To Maturity (%) 4.47 4.41   Coupon Rate (%) 3.95 4.81   Current Yield (%) 3.84 4.66	Avg. Maturity	6.96	7.24
Coupon Rate (%) 3.95 4.81   Current Yield (%) 3.84 4.66	Avg. Quality	Ba1	Ba1
Current Yield (%) 3.84 4.66	Yield To Maturity (%)	4.47	4.41
	Coupon Rate (%)	3.95	4.81
	Current Yield (%)	3.84	4.66
Holdings Count 575 16,074	Holdings Count	575	16,074

### **Sector Distribution (%)**



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



## Manager: Pacific Asset Bank Loans (SA) Benchmark: CS Lvg'd Loan Index Peer Group: IM U.S. Bank Loans (SA+CF)

Performance 5 7 1 3 10 QTD 2016 2015 2014 2013 2012 Years Year Years Years Years 1.71 8.99 N/A Manager N/A N/A N/A N/A 9.18 N/A N/A N/A Benchmark 1.20 9.74 3.72 4.88 5.02 4.24 9.88 -0.38 2.06 6.15 9.43 0.51 Difference -0.75 N/A N/A N/A N/A -0.70 N/A N/A N/A N/A Peer Group Median 1.06 8.81 3.96 5.06 5.49 4.86 9.51 0.68 2.06 6.29 10.01 47 N/A 58 N/A N/A Rank 6 N/A N/A N/A N/A N/A Population 57 56 56 52 43 22 60 65 68 62 64

Peer Group Scattergram - 1 Year 15.00 12.00 % Return 9.00 6.00 3.00 1.04 1.30 1.56 1.82 2.08 2.34 2.60 Risk (Standard Deviation %) Standard

Return

8.99

9.74

8.81

Manager

Benchmark

Median

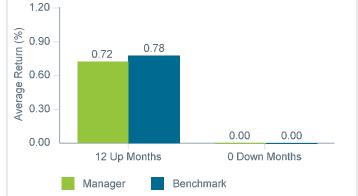
Deviation

1.68

1.78

1.66

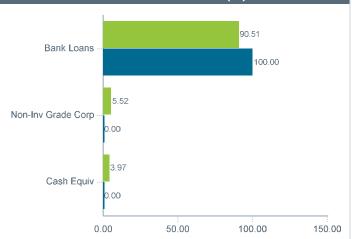
Up/Down Markets - 1 Year



Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free) **Excess** Tracking Info Sharpe Downside Return Error Ratio Ratio **Risk** 5.00 8.00 14.00 1.70 10.00 12.00 1.25 2.00 8.00 4.00 10.00 0.80 -1.00 6.00 0.00  $\bigcirc$ Ĉ 0.35 8.00 -4.00 4.00 -4.00 6.00 -0.10 4.00 -0.55 -7.00 2.00 -8.00 8.35 (47) 1.38 (5) -0.51 (37) 7.77 (11) 0.00 (1) Manager Benchmark 9.06 (31) 0.00 (100) N/A 6.13 (36) 0.00 (1) Median 8.19 0.48 -1.80 5.73 0.00

**Portfolio Characteristics** Portfolio **Benchmark** Effective Duration 0.39 N/A Spread Duration 4.22 N/A Avg. Maturity 5.09 4.73 Avg. Quality B1 Ba2 Yield To Maturity (%) 6.49 6.65 Coupon Rate (%) 5.16 4.86 Current Yield (%) 5.13 5.00 Holdings Count 126 1,497

### Sector Distribution (%)

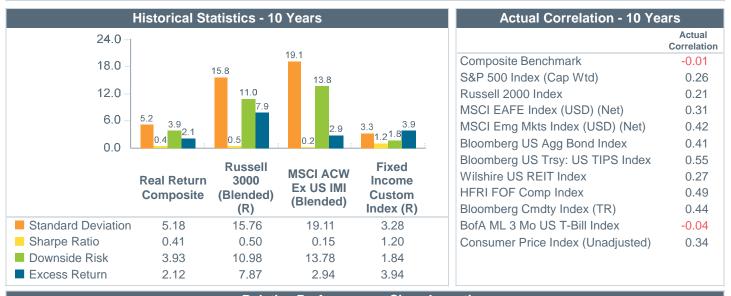


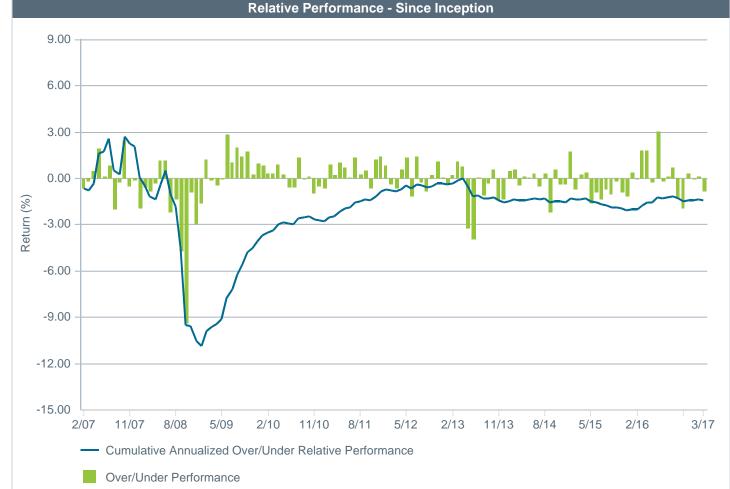
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



#### Manager: Real Return Composite - Retirement Benchmark: CPI+3% (Blended)

Dencimark.	0111070	Dicinaca	)								
	Performance										
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.46	7.18	2.58	1.89	3.17	2.70	9.90	-2.56	2.21	-4.88	5.62
Benchmark	1.13	5.45	4.12	4.02	3.76	4.14	5.15	3.68	3.69	4.08	3.11
Difference	-0.67	1.73	-1.54	-2.13	-0.59	-1.44	4.75	-6.24	-1.48	-8.96	2.51





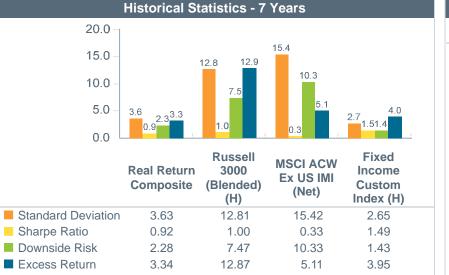


Performance shown is gross of fees. Calculation is based on monthly periodicity.

#### Manager: Real Return Composite - Health Benchmark: CPI+3% (Blended)

8.00

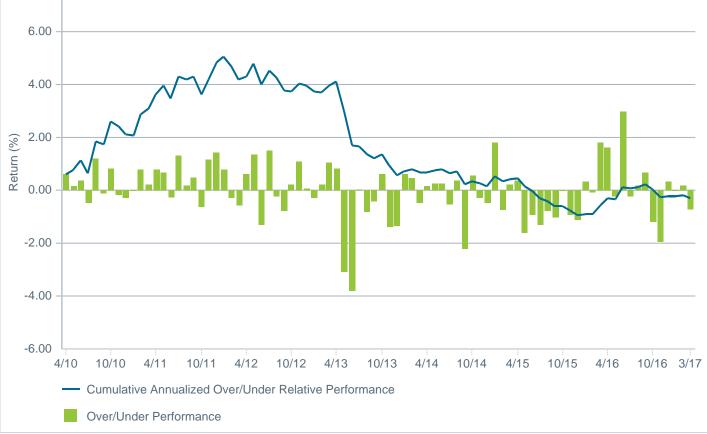
Deficilitatik.	0111070		)								
					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.53	7.01	2.52	1.91	3.46	N/A	9.56	-2.58	2.26	-4.45	5.58
Benchmark	1.13	5.45	4.12	4.02	3.76	4.14	5.15	3.68	3.69	4.08	3.11
Difference	-0.60	1.56	-1.60	-2.11	-0.30	N/A	4.41	-6.26	-1.43	-8.53	2.47



# **Actual Correlation - 7 Years**

	Actual Correlation
Composite Benchmark	0.05
S&P 500 Index (Cap Wtd)	-0.06
Russell 2000 Index	-0.08
MSCI EAFE Index (USD) (Net)	0.03
MSCI Emg Mkts Index (USD) (Net)	0.20
Bloomberg US Agg Bond Index	0.69
Bloomberg US Trsy: US TIPS Index	0.75
Wilshire US REIT Index	0.26
HFRI FOF Comp Index	0.04
Bloomberg Cmdty Index (TR)	0.22
BofA ML 3 Mo US T-Bill Index	0.22
Consumer Price Index (Unadjusted)	0.11

**Relative Performance - Since Inception** 

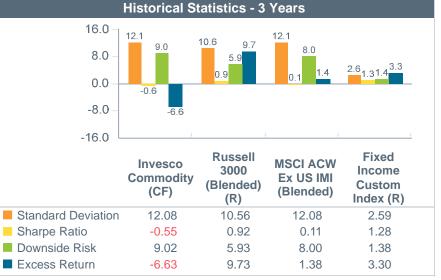




## Manager: Invesco Commodity (CF)

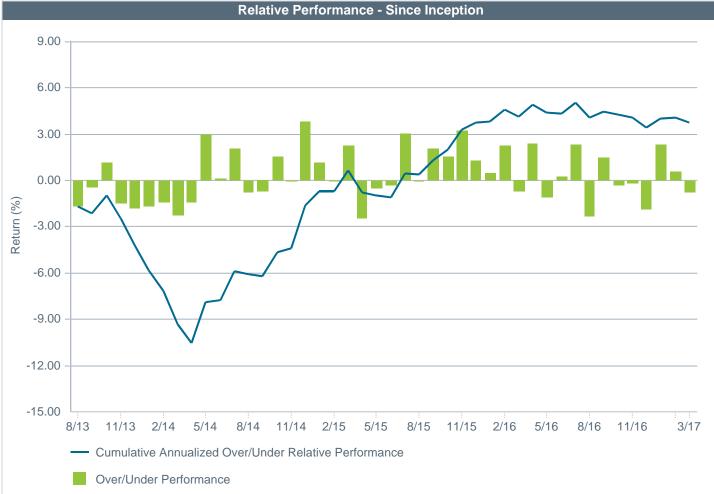
Benchmark: Bloomberg Cmdty Index (TR)

					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	-0.21	11.66	-6.96	N/A	N/A	N/A	14.61	-15.75	-15.29	N/A	N/A
Benchmark	-2.33	8.69	-13.92	-9.54	-5.94	-6.22	11.74	-24.66	-17.01	-9.52	-1.06
Difference	2.12	2.97	6.96	N/A	N/A	N/A	2.87	8.91	1.72	N/A	N/A



	Actual Correlation
Manager Benchmark	0.91
S&P 500 Index (Cap Wtd)	0.20
Russell 2000 Index	0.24
MSCI EAFE Index (USD) (Net)	0.29
MSCI Emg Mkts Index (USD) (Net)	0.47
Bloomberg US Agg Bond Index	0.02
Bloomberg US Trsy: US TIPS Index	0.30
Wilshire US REIT Index	-0.02
HFRI FOF Comp Index	0.03
BofA ML 3 Mo US T-Bill Index	0.45
Consumer Price Index (Unadjusted)	0.46

**Actual Correlation - 3 Years** 



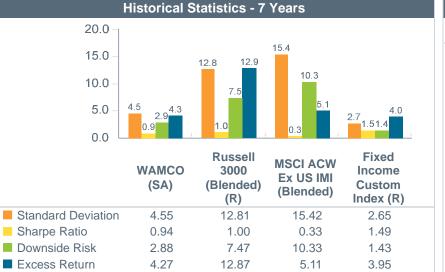
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity.



#### Manager: WAMCO (SA)

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

		3			( 3 7						
					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.58	5.94	5.16	3.44	4.38	N/A	9.37	-0.22	8.75	-5.64	5.48
Benchmark	0.70	6.60	5.32	3.36	4.71	5.05	10.22	-1.12	9.04	-5.51	5.60
Difference	-0.12	-0.66	-0.16	0.08	-0.33	N/A	-0.85	0.90	-0.29	-0.13	-0.12

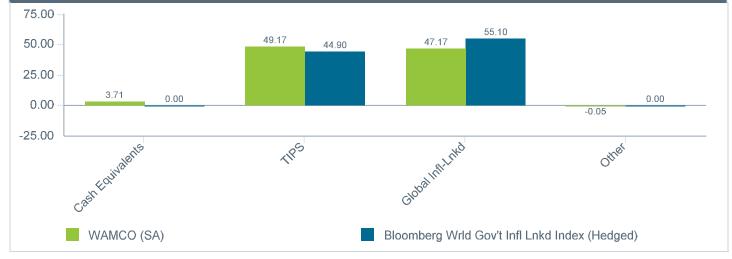


	Actual Correlation
Manager Benchmark	0.97
S&P 500 Index (Cap Wtd)	-0.08
Russell 2000 Index	-0.14
MSCI EAFE Index (USD) (Net)	0.01
MSCI Emg Mkts Index (USD) (Net)	0.13
Bloomberg US Agg Bond Index	0.80
Bloomberg US Trsy: US TIPS Index	0.76
Wilshire US REIT Index	0.33
HFRI FOF Comp Index	0.02
Bloomberg Cmdty Index (TR)	-0.09
BofA ML 3 Mo US T-Bill Index	0.01
Consumer Price Index (Unadjusted)	-0.07

**Actual Correlation - 7 Years** 

Portfolio 9.74	Benchmark 12.96
9.74	12.96
	.2.00
1.47	N/A
10.29	11.44
Aaa	Aaa
1.92	-0.94
1.02	1.00
-0.07	N/A
0.44	N/A
52	134
	10.29 Aaa 1.92 1.02 -0.07 0.44

Sector Distribution (%)



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: GAM Divergent (CF) (Lagged-1 Mo)

Benchmark: BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)

Actual

Correlation

-0.26

-0.25

0.04

-0.31

-0.10

-0.25

-0.27

-0.24

-0.15

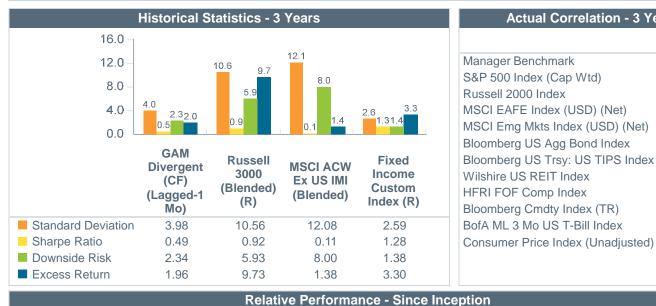
-0.02

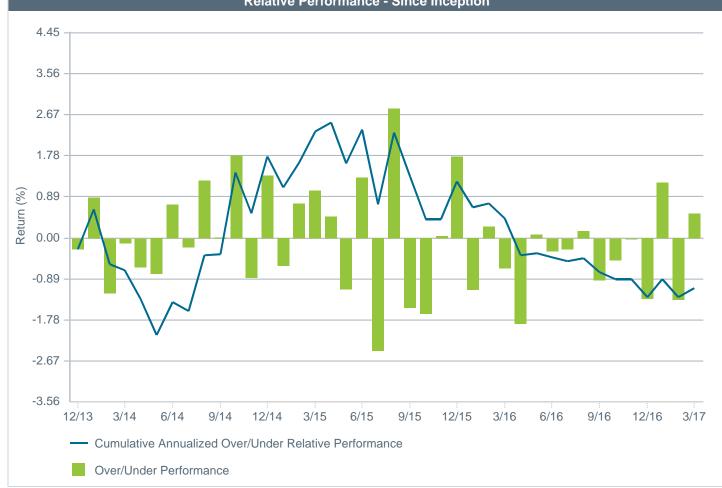
-0.04

-0.15

**Actual Correlation - 3 Years** 

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.23	-1.30	2.07	N/A	N/A	N/A	-3.23	3.70	4.82	N/A	N/A
Benchmark	0.87	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.08	3.10
Difference	0.36	-4.70	-1.10	N/A	N/A	N/A	-6.56	0.68	1.77	N/A	N/A





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



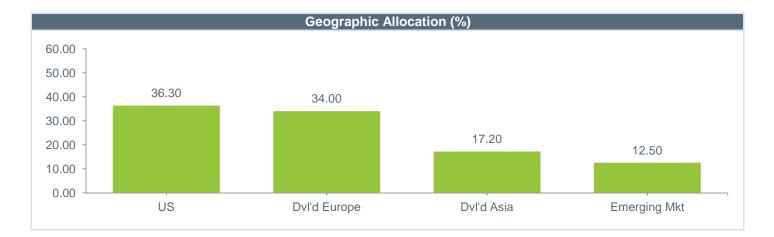
## GAM Divergent (CF) Hedge Funds Statistics

Investment Strategy The strategy seeks to achieve long term capital appreciation with a diversification of risk. This is sought by allocating the Company's assets to one or more Trading Funds managed by Trading Advisers who employ a variety of investment techniques and strategies in financial markets worldwide.

Firm Statistics	
Year Firm Established	1983
Firm AUM (\$B)	\$127
Percentage Employee Owned	15.00%

Fund Statistics	
Fund Inception	2013
Fund Size (\$M)	\$99
Number of Underlying Managers	19
Maximum Weighting of an Underlying Manager	14.00%
Current Leverage (Assets/Equity)	None
Annual Manager Turnover	17.00%
Annual Management Fee	0.65%
Performance Fee	No
Hurdle	No
Initial Lock-Up Period	No
Redemption Frequency	Monthly
Notification Period	48 Days





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.



## **GAM Underlying Manager Allocations**

Macro - Discretionary	Allocation (%)
Alphadyne Global Rates II	10.6
LindenGrove	9.4
Autonomy Global	8.3
Karya	6.9
Field Street	5.6
MaxQ Enhanced	5.4
Pharo Trading	4.7
Guard Macro	4.0
Gemsstock	2.0
Subtotal	56.8

Macro - Systematic	Allocation (%)
QMS Diversified Global Macro	3.9
Two Sigma AR Macro Enhanced	3.6
Two Sigma Compass Enhanced	0.9
Subtotal	8.4

Managed Futures - Trend	Allocation (%)
Winton Futures	6.1
GSA Trend	1.6
Subtotal	7.6
Managed Futures - Short-Term/Active	Allocation (%)
Jefferies Systematic	6.8
Crabel Multi-Product	6.2
Edgestream Nias	5.9
GTS Master Fund	4.2
Subtotal	23.1
Relative Value	Allocation (%)
Laurion Capital	4.1
Subtotal	4.1
Cash and Other	0.0

## <u>Turnover</u>

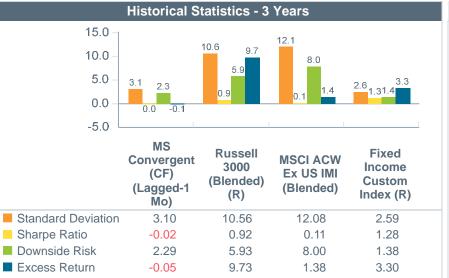
Strategy Allocation	New	Terms/Trans
Macro-Discretionary	1	0
Macro-Systematic	0	0
Managed Futures-Trend	0	0
Managed Futures-Short Term/Active	0	1
Relative Value	0	0
YTD Turnover	1	1



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

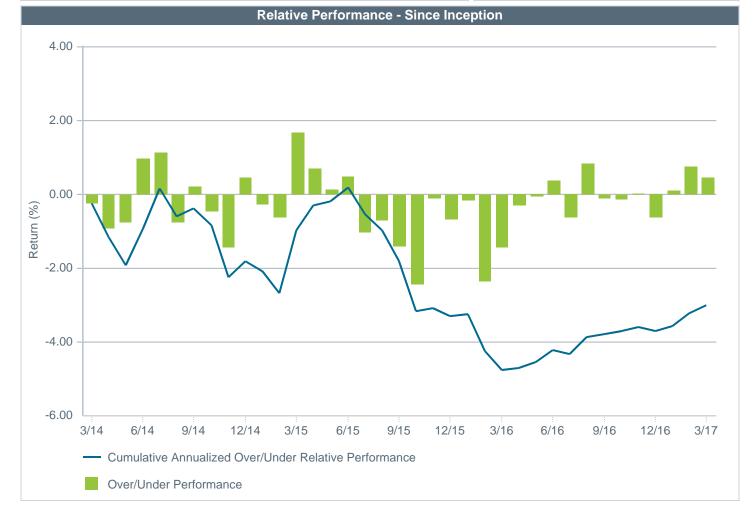
Benchmark: BofA ML 3 Mo US T-Bill Index+3% (1 Mo Lag)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	2.19	4.16	0.07	N/A	N/A	N/A	-1.27	-1.34	N/A	N/A	N/A
Benchmark	0.87	3.40	3.17	3.14	3.13	3.75	3.33	3.02	3.05	3.08	3.10
Difference	1.32	0.76	-3.10	N/A	N/A	N/A	-4.60	-4.36	N/A	N/A	N/A



Actual Correlation Manager Benchmark 0.15 S&P 500 Index (Cap Wtd) -0.32 Russell 2000 Index -0.08 MSCI EAFE Index (USD) (Net) -0.25 MSCI Emg Mkts Index (USD) (Net) -0.08 Bloomberg US Agg Bond Index -0.23 Bloomberg US Trsy: US TIPS Index -0.22 Wilshire US REIT Index -0.34 HFRI FOF Comp Index 0.10 Bloomberg Cmdty Index (TR) 0.00 BofA ML 3 Mo US T-Bill Index 0.02 Consumer Price Index (Unadjusted) 0.27

**Actual Correlation - 3 Years** 



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



## MS Convergent (CF) Hedge Funds Statistics

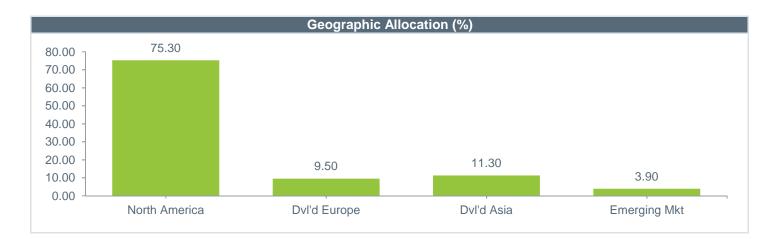
### Investment Strategy

Morgan Stanley AIP seeks to provide superior performance with minimal prinicipal 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)	\$94				
Number of Underlying Managers	25				
Maximum Weighting of an Underlying Manager	6.00%				
Current Leverage (Assets/Equity)	None				
Annual Manager Turnover	39.00%				
Annual Management Fee	0.77%				
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.



## Morgan Stanley Underlying Manager Allocations

Equity L/S Opportunistic	Allocation (%)
Anchor Bolt Offshore Fund, Ltd.	5.9
Atlas Enhanced Fund, Ltd.	5.1
Shellback Offshore Fund, Ltd.	4.1
Pleiad Asia Offshore Feeder Fund	4.0
Tide Point Offshore Fund, Ltd.	3.3
Quentec Fund, Ltd.	3.0
Ailanthus Capital Partners, Ltd.	3.0
Spitfire Qualified Fund Ltd. (The)	3.0
Doonbeg Fund, Ltd.	1.6
Subtotal	33.0

Event Driven Equity	Allocation (%)
Third Point Offshore Fund, Ltd.	7.2
Sachem Head Offshore Ltd.	4.3
Subtotal	11.5

Equity L/S High Hedge	Allocation (%)
Millennium International, Ltd.	6.1
Horizon Portfolio I Limited	5.1
Atlas Fundamental Trading Fund, Ltd.	4.9
Citadel Global Equities Fund Ltd.	3.7
Waterfront CP Offshore Fund Ltd.	1.5
Subtotal	21.3

Statistical Arbitrage	Allocation (%)
Renaissance Institutional Equities Fund Int'l L.P.	5.4
HBK Quantitative Strategies Offshore Fund L.P.	3.3
GSA QMS Fund Limited	3.2
Teza Offshore Fund IV, Ltd.	1.3
Subtotal	13.2

Mortgage Arbitrage	Allocation (%)
Shelter Growth Opportunities Fund Ltd.	5.1
SPM Core Offshore Fund, Ltd.	3.1
Rimrock Structured Product (Cayman) Fund,	2.0
Subtotal	10.2
Multi Strategy	Allocation (%)
Citadel Kensington Global Strategies Fund Ltd.	5.0
HBK Multi-Strategy Offshore Fund Ltd.	4.1
Output	
Subtotal	9.1
Subtotal	9.1

Strategy Allocation	New	Terms/Trans
Distressed	0	0
Equity L/S High Hedge	0	0
Equity L/S Opportunistic	2	1
Event Driven Credit	0	0
Event Driven Equity	0	0
Merger/Risk Arbitrage	0	0
Mortgage Arbitrage	0	0
Multi Strategy	0	1
Relative Value Credit	0	0
Statistical Arbitrage	0	0
YTD Turnover	2	2

Underlying manager allocations may not sum to 100% because funds that make up less than 1% of NAV are excluded.



# Appendix



# Water and Power Employees' Retirement Plan Manager Watch Criteria

## 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

Time Period	Asset Class	Target	Change	Policy Benchmarks
2/1/2016 - Present	Domestic Equity	34.25%		Russell 3000
(Interim Targets)	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
0, 1, 2010 1, 01, 2010	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
	Covered Calls		-	T-Bill
10/1/2014 0/21/2015		1%	-	
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
4/1/2012-6/30/2013	Domestic Equity	34%	-1%	Russell 3000
1, 1,2012 0,00,2010	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%	+3%	
				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



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

Time Period	Asset Class	Target	Change	
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
1/1/2009-0/30/2009	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
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%
	T invate Equity	170	070	Cambridge U.S. Venture Capital Lag
	Real Return	20/	. 40/	
		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
	T iXed income	0070		D Oniversal
	Real Estate	4%	_	NCREIF + 0.5% Lag
	Private Equity	4%	-1%	85% Cambridge U.S. Private Equity Lag / 15%
	T invate Equity	- 70	170	Cambridge U.S. Venture Capital Lag
	Real Return	1%	. 40/	T-Bill + 3% Lag
			+1%	0
4/4/0007 0/00/0007	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
	Iteal LState	4 /0	-	NOREIT + 0.3 % 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		-9%	T-Bill
		1%		
	Real Estate	4%	+4%	The Plan had allocated 5% to Alternatives and 4
	Alternatives	5%	+5%	to Real Estate asset classes. Since both of these
Thru 3/31/2003	Domestic Equity	60%	-	S&P 500
	Fixed Income	30%	-	Citigroup BIG
			1	Citigroup T-Bill



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

Time Period	Asset Class	Target	Change	Policy Benchmarks
2/1/2016 - Present	Domestic Equity	34.25%	+1.25%	Russell 3000
(Interim Targets)	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
10/1/2014 - 8/31/2013	International Equity	21%	_	MSCI ACWI ex U.S. IMI
	Fixed Income		-	B Universal
		24%	-	
	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 2/21/2012				
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
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



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

Time Period	Asset Class	Target	Change	Policy Benchmarks
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



Manager	Mandate	Funded	Terminated
	2017	10.0047	
Silver Lake V	Private Equity	1Q 2017	
CD&R X	Private Equity	1Q 2017	
FPA Core Plus III	2016	40.2016	
Adams Street SMB I	Real Estate Private Equity	4Q 2016 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	
	2015		
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 Lone Star IV	Real Estate Real Estate	2Q 2015	
Blackstone Tactical Opps	Private Equity	2Q 2015 2Q 2015	
EnCap X	Private Equity	1Q 2015	
	2014	10,2010	
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 Morgon Stanlov	Private Equity Hedge Fund	1Q 2014 1Q 2014	
Morgan Stanley Brep Europe IV	Real Estate	1Q 2014	
	2013	10 2014	
GAM	Hedge Fund	4Q 2013	
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	
	2012	10.0010	00.0010
Vontobel	Emerging Markets	4Q 2012	3Q 2016
AresCorp. Opp. IV	Private Equity	4Q 2012	
Bristol Value II ARS VI	Real Estate Real Estate	4Q 2012 3Q 2012	
Blackstone	Real Estate	3Q 2012 3Q 2012	
PCCP	Real Estate	3Q 2012 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	



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

Manager	Mandate	Funded	Terminated
	2011		
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	
WANCO	2010 GILS	20,2010	
WAMCO	GILS Core Fixed Income	2Q 2010	20 2045
JP Morgan		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	
	2009 Driveto Fauity	10 2000	
Oaktree V	Private Equity 2008	1Q 2009	
Landmark XIV	Private Equity	3Q 2008	
CB Richard Ellis	Private Equity	2Q 2008	
Fisher Lynch	Real Estate	2Q 2008	
HRJ			
пкј	Private Equity 2007	1Q 2008	
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
Aetos	2006	10 2007	202013
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	- 4 - 000
	1		
, , , , , , , , , , , , , , , , , , ,	2005		
Boston Company	Large Cap Active		1Q 2005
	Large Cap Active	1Q 2005	1Q 2005 3Q 2011
Boston Company	Large Cap Active Emerging Markets	1Q 2005 1Q 2005	
Boston Company T. Rowe Price	Large Cap Active Emerging Markets Emerging Markets		3Q 2011
Boston Company T. Rowe Price Boston Company	Large Cap Active Emerging Markets	1Q 2005	3Q 2011 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004	1Q 2005 1Q 2005	3Q 2011 4Q 2011 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital	Large Cap Active Emerging Markets Emerging Markets High Yield International	1Q 2005 1Q 2005	3Q 2011 4Q 2011 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004	1Q 2005 1Q 2005 1Q 2005	3Q 2011 4Q 2011 3Q 2015 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield	1Q 2005 1Q 2005 1Q 2005 4Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity)	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus T. Rowe Price	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income Large Cap Value International	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 2Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015 4Q 2009
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus T. Rowe Price Invesco MFS	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income Large Cap Value International Large Cap Value	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 2Q 2004 1Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015 4Q 2009 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus T. Rowe Price Invesco MFS Intech	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income Large Cap Value International Large Cap Value Large Cap Growth	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 2Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015 4Q 2009
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus T. Rowe Price Invesco MFS	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income Large Cap Value International Large Cap Value	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 2Q 2004 1Q 2004 1Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015 4Q 2009 4Q 2011
Boston Company T. Rowe Price Boston Company Loomis Sayles Boston Company Wells Capital Pyramis (formerly Fidelity) Earnest Partners Bank of New York Wells Capital ING/Aeltus T. Rowe Price Invesco MFS Intech	Large Cap Active Emerging Markets Emerging Markets High Yield International 2004 High Yield International Small Cap Value Small Cap Growth Core Fixed Income Core Fixed Income Large Cap Value International Large Cap Value Large Cap Growth Large Cap Growth	1Q 2005 1Q 2005 1Q 2005 4Q 2004 4Q 2004 4Q 2004 4Q 2004 3Q 2004 3Q 2004 3Q 2004 3Q 2004 2Q 2004 1Q 2004 1Q 2004	3Q 2011 4Q 2011 3Q 2015 4Q 2011 3Q 2015 1Q 2006 3Q 2015 4Q 2009 4Q 2011



Strategy	Definition
Relative Value	
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.
Opportunistic	
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 December 31, 2014.

#### Custom Index Comments

- The Retirement Policy Benchmark returns shown prior to December 31, 2014 were provided by Northern Trust. The passive index is calculated monthly and currently consists of 34.25% Russell 3000 (Blended) (R), 19% MSCI ACWI Ex US IM Index (Blended), 28.75% Fixed Income Custom Index (R), 5% CPI+3% (Blended), 2% BofA ML 3 Mo US T-Bill Index+3%, 5% NCREIF Property Index+0.5% (Lagged-1 Qtr), 5% Russell 3000+3% (Blended), and 1% BofA ML 3 Mo US T-Bill Index.
- The Russell 3000 (Blended) (R) consists of the S&P 500 Index (Cap Wtd) through March 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 December 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 August 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 December 31, 2008 and the MSCI World Ex US IM Index Index (Net) thereafter.
- The CPI+3% (Blended) consists of the BofA ML 3 Mo US T-Bill Index+3% through June 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 September 30, 2011 and the Russell 3000+3% (Lagged-1Qtr) thereafter.
- The Health Policy Benchmark returns shown prior to December 31, 2014 were provided by Northern Trust. The passive index is calculated monthly and currently consists of 34.25% Russell 3000 (Blended) (H), 19% MSCI ACWI Ex US IM Index, 28.75% Fixed Income Custom Index (H), 5% CPI+3% (Blended), 2% BofA ML 3 Mo US T-Bill Index+3%, 5% NCREIF Property Index+0.5% (Lagged-1 Qtr), 5% Russell 3000+3% (Blended), and 1% BofA Merrill Lynch 3 Mo US Treasury Bill Index.
- The Russell 3000 (Blended) (H) consists of the Russell 1000 Index through September 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 October 31, 2009, the Bloomberg US Universal Bond Index through August 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% Citigroup 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% Citigroup 3 Mo Treasury Bill Index.

#### **Miscellaneous Comments**

- In September 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.
- In September 2015, the Board approved the termination of Vontobel Emerging (SA). An emerging markets RFP was completed, but the funds will remain with Vontobel Emerging (SA) until they are moved to the newly selected manager.
- On March 31, 2017, Delaware Investments adopted the name of its parent company, Macquarie Investment Management.



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>	Moody's	<b>Explanation</b>	<u>S&amp;P</u>	Moody's	<b>Explanation</b>
Higher Credit Quality – Investment Grade			Lower Credit Quality – Below Investment Grade		
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	В	B2	0 7 1
А	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

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 inflationlinked 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.

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."

**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., BofA ML 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.

**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 returns compiled from consultant and custodial 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.

Institutional Peer Groups (Separate Account and Commingled Fund) - RVK utilizes the Investment Metrics Separate Account and Commingled Fund Manager Peer Groups for peer comparison and rankings. The Separate Account and Commingled Fund Peer Group database includes performance and other quantitative data for over 1,000 investment management firms, 6,400 investment products, across 100 standard peer groups. Separate Account and Commingled Fund Peer Groups are groups are gross of fees.

Mutual Fund (MF) Peer Groups - RVK utilizes the Lipper Mutual Fund Manager Peer Groups for peer comparison and rankings. The Lipper Manager Peer Group database includes performance and other quantitative data for over 700 investment management firms and 24,500 investment products, across more than 140 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 ≥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 - BofA ML 3 Mo US T-Bill Index unless specified otherwise.



**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.

Asset Class	<b>RVK Liquidity Rating</b>	Asset Class	<b>RVK Liquidity Rating</b>
Liquid Investments		Less Liquid Investments	
T-Bills and Treasurys	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	0	
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	Not Liquid Investments	
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., BofA ML 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> Absolute Return Strategies Currency Overlay

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

**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.



**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., BofA ML 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.



# PORTLAND

## CHICAGO

NEW YORK

**Disclaimer of Warranties and Limitation of Liability -** This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.

