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

Period Ended: March 31, 2018



## **RVK Honored to Receive Greenwich Quality Leader Award**

- Greenwich Associates\* conducted interviews with over 1,000 senior professionals of large plan sponsors and ranked opinions of their investment consulting relationships on a series of key metrics, including, but not limited to:
  - Understanding Clients' Goals and Objectives
  - Advice on Long-term Asset Allocation
  - Proactive Advice and Innovative Ideas
  - Credibility with the Board and/or Investment Committee
  - Knowledge of Investment Managers
  - Advice on DC Plan Structure and Design
  - Satisfaction with Manager Recommendations
  - Responsiveness to Client Requests and Needs
  - Competitive Fees
- RVK is grateful to be 1 of 3 firms (among large US consultants) to receive this award for 2017



\*Greenwich Associates is the leading provider of global market intelligence and advisory services to the financial services industry that conducts an annual survey to institutional investors whereby approx. 1,200 respondents rank their respective investment consulting relationships on key metrics on a scale from 1 (poor) to 5 (excellent). The award is based upon Greenwich Associates' 2017 US Institutional Investors study.





## 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

Following a period of unprecedented market calm in 2017, the first quarter of 2018 was characterized by higher levels of volatility as investors reacted to the prospect of higher future inflation, rising interest rates and a potential trade war between the United States and China.

The quarter began with a substantial global equity market rally in January. Drivers of the rally included improving global economic fundamentals, continuation of generally accommodative monetary policies among global central banks, and continued corporate earnings growth. At their peak, US and developed international equity markets traded up 7% with emerging market equity indices up nearly 10%. However, the market rally reversed sharply in February in response to an uptick in inflation expectations, a repricing of the yield curve, and a dramatic spike in equity market volatility. The correction resulted in a drawdown in broad US equity indices of just over 10%. The quarter ended with developed equity markets in negative territory, US duration sensitive assets down moderately, and global bond markets maintaining slight gains in part due to a weakening US Dollar.

In its first meeting since Jay Powell assumed the role of Chairman, the Federal Open Market Committee set the federal funds target range at 1.50% to 1.75%, an increase of 0.25%, and maintained guidance for two additional rate increases in 2018. Treasury issuance rose during the quarter with deficits set to surge as a result of the recently passed tax reform, and interest rates increased across maturities compared to the start of 2018. Though various headlines grabbed investor attention throughout the quarter, US economic data continued to generally indicate a robust economic expansion. Non-farm payroll growth averaged in excess of 200,000 job gains per month while Purchasing Manager's data for both the US manufacturing and non-manufacturing sectors indicated continued expansion. The University of Michigan Consumer Sentiment survey maintained its highest six month average reading since 2001, and the NFIB small business optimism index reached its highest level since the 1980s. Amidst continued improvement in economic fundamentals, short-term borrowing costs increased as the spread between the USD LIBOR rate and overnight indexed swaps (FRA/OIS) materially widened, a potential leading indicator of tightening credit conditions.

In Europe, the EU increased its GDP growth estimate for 2017 from 2.2% to 2.4%, while also raising its forecasts for 2018 and 2019. The European Central Bank maintained guidance that it would continue to reduce the pace of asset purchases and likely end its quantitative easing program by 2019. Collectively, global central banks continued to pivot away from the use of extraordinary measures to stimulate economic activity.

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



#### **Total Fund**

During the first quarter, the Retirement Plan outperformed its policy benchmark by 6 basis points and ranked in the 24<sup>th</sup> percentile among peers. The Health Plan outperformed its policy benchmark by 6 basis points and ranked in the 24<sup>th</sup> percentile among peers.

Over the one-year trailing period, the Retirement Plan outperformed its policy benchmark by 86 basis points, and ranked in the 22<sup>nd</sup> percentile among peers. The Health Plan outperformed the policy benchmark by 101 basis points, and ranked in the 20<sup>th</sup> percentile among peers.

#### **Domestic Equity**

The Domestic Equity Composite outperformed the Russell 3000 Index for the quarter, returning 0.22% versus -0.64% for the index. This performance ranked the composite in the 23<sup>rd</sup> percentile among peers. T. Rowe Price Large Cap Growth had the highest absolute and relative performance for the quarter, returning 4.85% and outperforming the Russell 1000 Growth Index by 343 basis points. MFS Large Cap Value had the lowest absolute performance, returning -3.02% for the quarter. Emerald Small Cap Growth had the lowest relative performance returning -1.64% and underperforming the Russell 2000 Growth Index by 394 basis points.

#### International Equity

The International Equity Composite outperformed the MSCI ACW Ex US IM Index for the quarter, returning -0.50% versus -1.06% for the index. This performance ranked the composite in the 58<sup>th</sup> percentile among peers. Wellington Emerging had the highest absolute performance for the quarter, returning 1.58%. BlackRock Developed International had the lowest absolute performance, returning -1.86% for the quarter. MFS Developed Int'l had the highest relative performance, returning -0.64% and outperforming the MSCI World Ex US IM Index by 117 basis points. LA Capital Emerging had the lowest relative performance, returning 0.90% and underperforming the MSCI Emerging Markets IM Index by 35 basis points.

#### **Fixed Income**

The Fixed Income Composite tracked the Fixed Income Custom Index for the quarter, returning - 0.84% versus -0.85% for the index. This performance ranked the composite in the 37<sup>th</sup> percentile among peers. Pacific Asset Bank Loans had the highest absolute performance for the quarter, returning 1.61%. Neuberger Unconstrained had the highest relative performance for the quarter, returning -0.64% and outperforming the 67% B Global Credit/33% B Global High Yield Index by 36 basis points. Macquarie Unconstrained had the lowest absolute and relative performance for

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



the quarter, returning -1.72% and underperforming the 67% B Global Credit/33% B Global High Yield Index by 72 basis points.

#### Alternative Asset Classes

#### **REAL RETURN**

The Real Return Composite underperformed the Consumer Price Index+3% by 109 basis points during the first quarter. Hancock Timberland was the largest driver of positive performance returning 2.02% during the quarter, and outperforming its benchmark by 50 basis points. WAMCO and Molpus IV also posted positive performance of 0.40% and 1.72%, respectively and both outperformed their respective benchmarks for the quarter. Invesco Commodity detracted from composite performance, returning -0.39%.

#### HEDGE FUNDS

The Hedge Funds Composite posted positive absolute returns but underperformed the ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag) by 28 basis points during the first quarter. MS Convergent had the highest absolute and relative performance for the quarter, returning 3.22% and outperforming the ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag) by 215 basis points. Blackstone Hope St. LP had the lowest absolute and relative performance for the quarter, returning 0.65% and underperforming the ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag) by 42 basis points.

## Watch List



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

		Date Board		Rece	nt Perform	nance			
Watch List Managers	Date Qualified for Watch	Approved Manager for Watch	2018Q1	FYTD	1 Year	3 Year	5 Year	Reasons on Watch	Recommendation
Continue On Watch									
Fred Alger Large Cap Growth (SA) Russell 1000 Growth Index	12/31/2015	4/13/2016	4.70 1.42	16.44 <i>15.84</i>	22.55 21.25	9.38 12.90	14.30 15.53	Failure to meet performance criteria.	The Board approved the recommendation to terminate Fred Alger Large Cap Growth (SA) on 11/08/2017. A RFP is in process.
Fidelity Developed Int'I (SA) International Developed Blend	9/30/2016	11/9/2016	-0.99 -1.81	8.47 8.58	16.26 14.95	5.98 6.10	7.06 6.54	Portfolio Manager turnover.	The manager last provided an update to the Board on 11/08/2017.
Macquarie Unconstrained (SA) 67% B Global Credit/33% B Global High Yield	9/30/2016	11/9/2016	-1.72 -1.00	1.03 1.62	3.90 3.58	N/A N/A	N/A N/A	Organization concerns.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 06/28/2017.
WAMCO (SA) Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	3/31/2017	4/12/2017	0.40 0.07	3.28 3.10	3.14 2.67	3.07 3.24	2.72 2.66	Failure to meet performance criteria.	Performance and management are continuously being monitored. The manager last provided an update to the Board on 01/24/2018.
MS Convergent (CF) (Lagged-1 Mo) - Net ICE BolAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	3/31/2016	6/8/2016	3.22 1.07	6.41 3.11	8.47 4.01	2.07 3.49	N/A N/A	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.





# **Capital Markets Review**



#### As of March 31, 2018

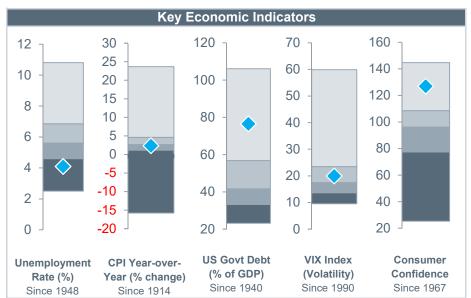
#### First Quarter Economic Environment

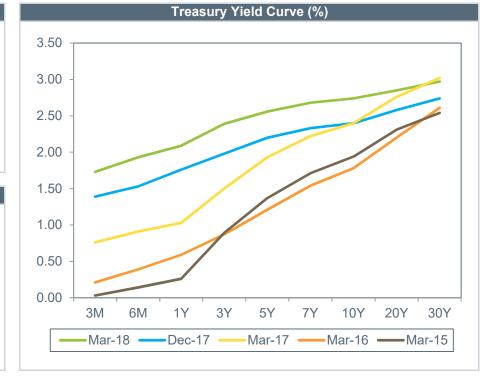
#### **Key Economic Indicators**

The quarter began with a substantial global equity market rally in January. Drivers of the rally included improving global economic fundamentals, continuation of generally accommodative monetary policies among global central banks, and continued corporate earnings growth. The market rally reversed sharply in February in response to an uptick in inflation expectations, a repricing of the yield curve, and a dramatic spike in equity market volatility. The quarter ended with developed equity markets in negative territory, US duration sensitive assets down moderately, and global bond markets maintaining slight gains in part due to a weakening US Dollar. The Federal Open Market Committee set the federal funds target range at 1.50% to 1.75%, an increase of 0.25%, and maintained guidance for two additional rate increases in 2018. US economic data continued to generally indicate a robust economic expansion. Non-farm payroll growth averaged in excess of 200,000 job gains per month while Purchasing Manager's data for both the US manufacturing and nonmanufacturing sectors indicated continued expansion.

Economic Indicators	Mar-18		Dec-17	Mar-17	Mar-15	20 Yr
Federal Funds Rate (%)	1.68		1.33	0.82	0.06	2.07
Breakeven Infl 1 Yr (%)	2.23		0.85	2.06	1.46	N/A
Breakeven Infl 10 Yr (%)	2.06		1.98	1.98	1.78	N/A
CPI YoY (Headline) (%)	2.4		2.1	2.4	-0.1	2.2
Unemployment Rate (%)	4.1	_	4.1	4.5	5.5	5.9
Real GDP YoY (%)	2.9		2.6	2.0	3.8	2.2
PMI - Manufacturing	59.3	_	59.3	56.6	51.8	52.5
USD Total Wtd Idx	86.37		87.47	93.96	92.06	86.59
WTI Crude Oil per Barrel (\$)	64.9		60.4	50.6	47.6	58.1
Gold Spot per Oz (\$)	1,326		1,303	1,249	1,184	843

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	-0.76	-0.76	13.99	13.31	9.49
Russell 2000	-0.08	-0.08	11.79	11.47	9.84
MSCI EAFE (Net)	-1.53	-1.53	14.80	6.50	2.74
MSCI EAFE SC (Net)	0.24	0.24	23.49	11.10	6.48
MSCI Emg Mkts (Net)	1.42	1.42	24.93	4.99	3.02
Bloomberg US Agg Bond	-1.46	-1.46	1.20	1.82	3.63
ICE BofAML 3 Mo US T-Bill	0.35	0.35	1.11	0.34	0.34
NCREIF ODCE (Gross)	2.20	2.20	8.07	11.43	5.11
Wilshire US REIT	-7.48	-7.48	-3.64	6.13	6.22
HFRI FOF Comp	0.29	0.29	5.57	3.38	1.55
Bloomberg Cmdty (TR)	-0.40	-0.40	3.71	-8.32	-7.71





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.

#### **US Equity Review**

#### As of March 31, 2018

#### First Quarter Review

#### **Broad Market**

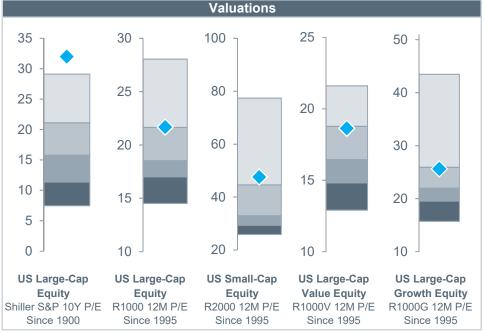
Despite strong returns in January, US equity markets faltered during the final two months of the quarter, delivering mixed results across market cap and style. The S&P 500 Index's return of -0.76% marks the first negative quarter for the index since Q3 2015. Declines were relatively widespread, with nine of eleven sectors producing negative returns.

#### Market Cap

Increased global macroeconomic uncertainty indirectly favored small cap stocks, which tend to be more domestically-focused, providing greater insulation from global headwinds.

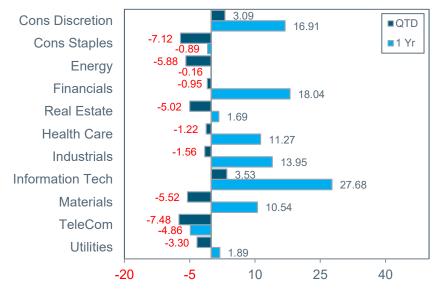
#### **Style and Sector**

Growth stocks led value stocks for the guarter as the Russell 1000 Growth Index outperformed its value counterpart by 4.25% for the guarter. Technology stocks led all other sectors posting 3.53% with consumer discretionary following close behind with 3.09% for the guarter.



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, 2018

#### **First Quarter Review**

#### **Developed Markets**

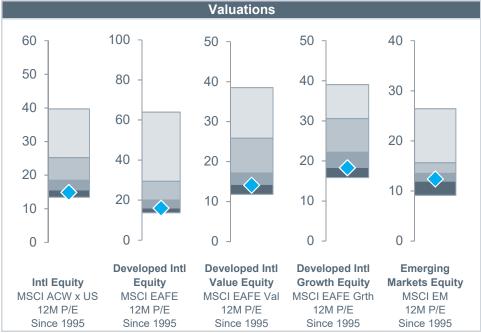
Developed international markets lagged during the quarter, ending with negative returns and underperforming their domestic counterparts. Market movements were affected by headlines related to global trade negotiations, however there were also significant political events within developed international markets.

#### **Emerging Markets**

Emerging markets outperformed domestic and developed international for both the quarter and the trailing one year period. MSCI Emerging Markets Index outpaced the MSCI EAFE Index by 295 basis points during the quarter.

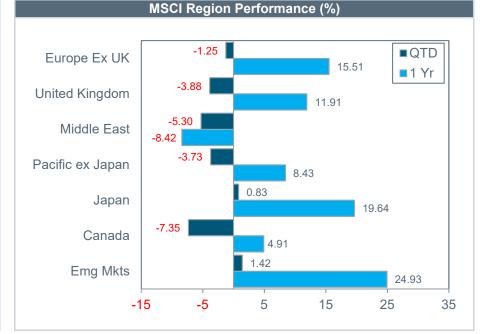
#### Market Cap & Style

Developed international growth stocks continued to outperform value stocks, while small cap stocks outperformed large cap stocks, ending the quarter in slightly positive territory. Contrary to the rest of the world, emerging market value outperformed growth.





MSCI Style and Capitalization Market Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers. All returns are shown net of foreign taxes on dividends. KVK

#### **Fixed Income Review**

#### First Quarter Review

#### **Broad Market**

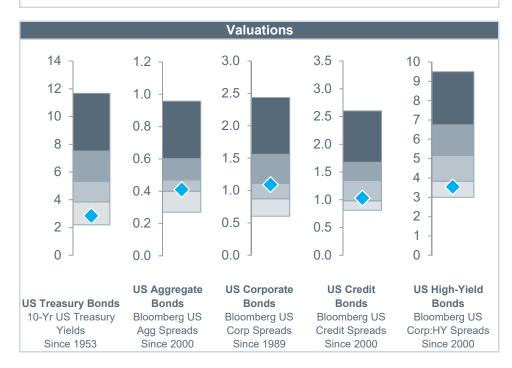
Treasury yields increased across all maturities leading to negative returns across rate-sensitive fixed income indices. The Bloomberg Barclays US Aggregate Bond Index posted a return of -1.46% during the quarter. Longer duration bonds were hit the hardest with the Bloomberg Barclays US Long Government/Credit Index returning -3.58%.

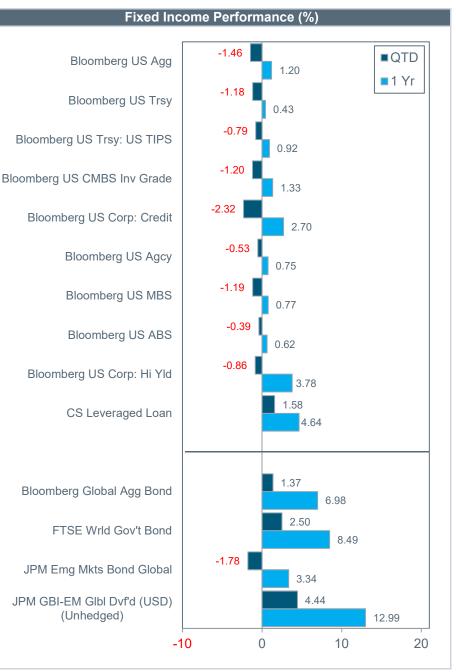
#### **Credit Market**

Investment grade and high yield credit spreads widened modestly, ending a nine-quarter streak of spread tightening.

#### **Emerging Market Debt**

Non-US dollar denominated emerging market debt was the best performing sub-asset class within fixed income over the quarter, returning 4.44%. In contrast, hard currency and corporate emerging market debt ended the quarter with negative returns after four consecutive quarters of posting positive returns.





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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 funds produced modestly positive returns during the first quarter of 2018, though heightened levels of market volatility created significant dispersion across strategies. FoHFs that outperformed benefitted from manager selection within the discretionary macro space, where several managers correctly bet on rising interest rates and produced near double digit returns or higher during the quarter. Managers within the multi-strategy space produced negative returns on average according to HFR, but the firms RVK tracks closely were modestly positive during the quarter, producing average returns near 1%.

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

GTAA managers provided modestly positive performance and for the most part, tended to outperform traditional asset classes. Globally-oriented managers that rely on fundamental, value-based investment processes have continued to allocate to various exposures in emerging markets, which they believe to be undervalued.

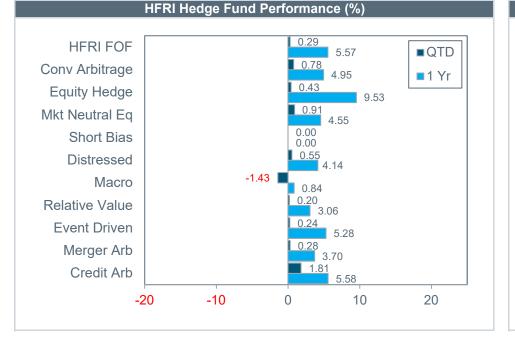
### First Quarter Review - Real Assets

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

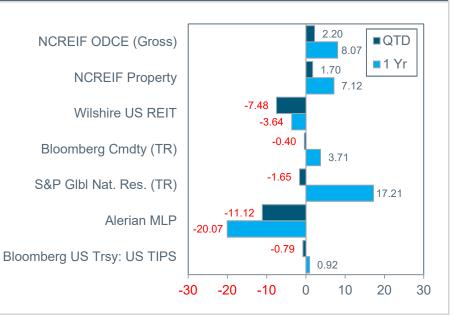
DIS managers posted weak returns despite increases in market-based measures of future inflation and heightened press attention about the potential for further acceleration of inflationary pressure. Market expectations of future inflation also increased modestly from 1.98% to 2.06% based on 10 Year Treasury breakevens. Managers with greater exposure to floating rate credit-sensitive fixed income and foreign currency performed toward the top of the peer group. Managers with significant MLP exposure within global listed infrastructure allocations lagged by the widest margins.

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

The Core private real estate index, NCREIF-ODCE, returned 2.2% during Q1, comprised of 1.0% income and 1.2% appreciation. Investors in publicly traded real estate significantly underperformed their private market counterparts during the quarter as measured by Wilshire US REIT Index return of -7.48%.



### Real Asset Performance (%)





	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
Best	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	15.02	21.31	37.28	2.20
	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.42
	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	4.23	11.96	25.03	0.35
	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	1.38	11.77	21.83	0.29
	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	0.24
	13.06	13.54	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-0.08
	11.14	7.49	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	7.24	7.77	-0.40
	10.88	5.34	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.37	-0.81	6.67	7.62	-0.76
	9.15	4.91	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-0.79
	8.56	4.55	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	4.18	-0.86
	8.46	3.07	4.34	1.87	-39.20	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-1.46
	6.86	2.84	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-1.53
	4.34	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-3.58
Worst	1.33	2.43	0.49	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-7.48
								Disamburg	Disamb						
S&P 500 US Larg Cap		mall (Net)		(Net) - (1	MSCI EM Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp: Hi Yield - Fl	Bloombrg US Trsy: US TIPS - FI	Bloomb US Gov/Crec Lng - F	OD dit: (Gros	CE US ss) - US		IFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv



NCREIF ODCE (Gross) performance is reported quarterly.

## **Total Fund - Retirement**



Asset Allocation by Manager and Schedule of Investable Assets - Retirement

March 31, 2018 : \$12,069,637,081		Market Value (\$)	Allocatio (%)
	BlackRock Russell 1000 Index (CF)	1,445,458,877	11.98
	Wells Principal Protection (SA)	740,623,476	6.14
	JP Morgan Principal Protection (SA)	739,311,459	6.13
	Real Estate Composite	693,960,054	5.75
	T. Rowe Price Large Cap Growth (SA)	676,276,888	5.60
	Neuberger Unconstrained (SA)	653,313,664	5.41
	Macquarie Unconstrained (SA)	631,525,125	5.23
	MFS Developed Int'l (SA)	608,471,495	5.04
	Fred Alger Large Cap Growth (SA)	606,535,196	5.03
	Fidelity Developed Int'l (SA)	594,199,608	4.92
	T. Rowe Price Large Cap Value (SA)	588,573,443	4.88
	BlackRock Developed Int'l - Passive (CF)	586,742,597	4.86
	Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	586,428,152	4.86
	MFS Large Cap Value (SA)	585,815,503	4.85
	Private Equity Composite	463,047,038	3.84
	WAMCO (SA)	389,077,059	3.22
	Wellington Emerging (SA)	357,720,767	2.96
	LA Capital Emerging (CF)	334,400,854	2.77
	Earnest Partners Small Cap Value (SA)	171,577,358	1.42
	Emerald Small Cap Growth (SA)	162,103,136	1.34
	Pacific Asset Bank Loans (SA)	145,705,425	1.21
	Invesco Commodity (CF)	139,314,101	1.15
	Cash Equivalents	130,568,348	1.08
	Molpus IV (CF) (Lagged-1 Qtr)	18,480,876	0.15
	Hancock Timberland (CF) (Lagged-1 Qtr)	13,651,747	0.11
	MS Convergent (CF) (Lagged-1 Mo)	6,360,071	0.05
	GAM Divergent (CF) (Lagged-1 Mo)	394,849	0.00
	Vontobel Emerging (SA)	-82	0.00

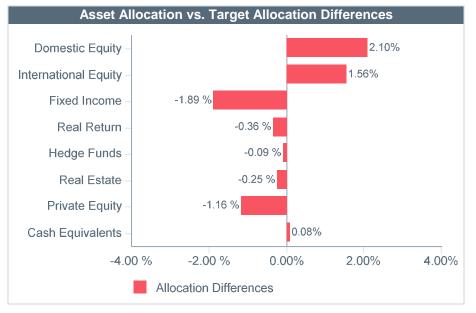
Schedule of Investable Assets - FYTD											
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value						
FYTD	11,250,100,561	819,536,520	12,069,637,081	7.63	107.63						

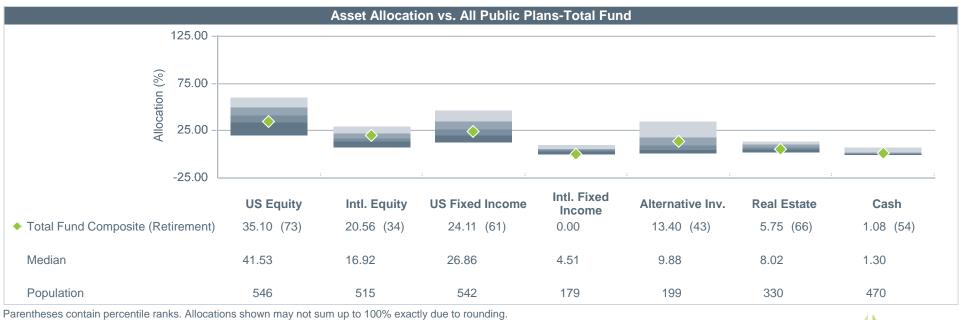
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends 06/30.



#### 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	4,236,340,400	35.10	33.00
International Equity	2,481,535,238	20.56	19.00
Fixed Income	2,910,479,149	24.11	26.00
Real Return	560,523,783	4.64	5.00
Hedge Funds	593,183,072	4.91	5.00
Real Estate	693,960,054	5.75	6.00
Private Equity	463,047,038	3.84	5.00
Cash Equivalents	130,568,348	1.08	1.00
Total Fund	12,069,637,081	100.00	100.00





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Comparative	Performance -	Retirement
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Difference

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Total Fund Composite (Retirement)	0.07	7.63	11.39	7.29	8.65	8.11	6.81	16.53	6.94	1.68	6.78	01/01/2005
Retirement Policy Benchmark	0.01	7.33	10.53	7.10	8.18	8.02	6.60	15.21	8.40	0.71	6.58	
Difference	0.06	0.30	0.86	0.19	0.47	0.09	0.21	1.32	-1.46	0.97	0.20	
All Public Plans-Total Fund Median	-0.31	7.02	10.27	6.46	7.91	7.55	6.63	15.51	7.36	0.17	6.62	
Rank	24	32	22	17	21	28	40	29	61	12	42	
Domestic Equity Composite	0.22	11.62	16.10	11.10	14.29	12.94	10.01	23.44	11.68	1.96	7.95	04/01/2001
Russell 3000 (Blended) (R)	-0.64	10.48	13.81	10.22	13.03	12.39	9.62	21.13	12.74	0.48	7.35	
Difference	0.86	1.14	2.29	0.88	1.26	0.55	0.39	2.31	-1.06	1.48	0.60	
All Public Plans-US Equity Segment Median	-0.47	10.53	13.80	9.95	12.75	11.95	9.61	20.32	12.90	0.21	7.91	
Rank	23	17	13	9	3	4	29	8	76	8	40	
MFS Large Cap Value (SA)	-3.02	4.92	9.04	9.44	12.40	12.16	9.21	17.82	15.80	-0.06	9.43	03/01/2004
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	7.66	
Difference	-0.19	-0.61	2.09	1.56	1.62	1.16	1.43	4.16	-1.54	3.77	1.77	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95	8.69	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	8.69	
Rank	81	88	69	37	39	38	45	44	39	29	26	
MFS Large Cap Value (SA) - Net	-3.09	4.69	8.71	9.10	12.07	11.82	8.86	17.46	15.45	-0.38	9.06	03/01/2004
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	7.66	
Difference	-0.26	-0.84	1.76	1.22	1.29	0.82	1.08	3.80	-1.89	3.45	1.40	
T. Rowe Price Large Cap Value (SA)	-2.52	6.83	9.49	9.51	12.42	12.11	9.45	16.74	17.14	-1.90	9.23	10/01/2004
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	7.88	
Difference	0.31	1.30	2.54	1.63	1.64	1.11	1.67	3.08	-0.20	1.93	1.35	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95	8.69	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	8.99	
Rank	66	72	64	36	39	38	36	58	26	46	43	
T. Rowe Price Large Cap Value (SA) - Net	-2.59	6.60	9.18	9.19	12.09	11.78	9.10	16.40	16.80	-2.19	8.87	10/01/2004
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	7.88	
5.00							1					

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

0.24

1.07

2.23

1.31

1.31

0.78



2.74

-0.54

1.32

1.64

0.99

**Comparative Performance - Retirement** 

Russell 1000 Index   0.66   10.59   13.88   10.39   13.71   12.57   9.61   21.69   12.05   0.92   9.26     Difference   0.00   0.00   0.00   0.02   10.33   10.317   12.57   9.61   21.69   12.05   0.92   0.92   0.92   0.93   0.96     BlackRock Russell 1000 Index (CF) - Net   0.69   10.59   14.00   10.24   13.19   12.57   9.61   21.69   12.02   0.93   9.26   0.90/1/2003     Russell 1000 Index (CF) - Net   0.69   10.59   14.00   10.39   13.17   12.57   9.61   21.69   12.02   0.92   9.26   9.26   0.90/1/2003     BlackRock Russell 1000 Index   CF) - Net   0.69   10.54   21.55   9.38   14.30   11.62   10.09   23.22   0.38   1.73   9.49   0.30/1/2004     Russell 1000 Grth Index   1.42   1.58   21.25   1.23   4.09   13.41   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   3.38   1.130		QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Difference     0.00     0.02     0.03     0.01     0.01     0.04     0.02     0.03       IM U.S. Large Cap Core Equity (SA+CF) Median     -0.44     10.79     14.02     10.23     13.32     12.73     9.75     21.82     10.50     1.39     9.66       BlackRock Russell 1000 Index (CF) - Net     -0.69     10.59     13.98     10.39     13.17     12.57     9.59     21.70     12.09     0.93     9.26     09/01/2003       Russell 1000 Index (CF) - Net     -0.69     10.59     13.98     10.39     13.17     12.57     9.59     21.70     12.09     0.93     9.26     09/01/2003       Difference     0.00     0.00     0.00     0.02     0.00     -0.02     0.01     0.04     0.01     0.00     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02	BlackRock Russell 1000 Index (CF)	-0.69	10.59	14.00	10.42	13.20	12.58	9.62	21.70	12.09	0.94	9.32	09/01/2003
IMU U.S. Large Cap Core Equity (SA+CF) Median   -0.44   10.79   14.02   10.23   13.32   12.73   9.75   21.82   10.50   1.39   9.66     BlackRock Russell 1000 Index (CF) - Net   -0.69   10.59   14.00   10.42   13.19   12.57   9.59   21.70   12.09   0.93   9.26     Difference   0.00   0.00   0.02   0.03   10.20   10.04   10.14   12.57   9.61   21.60   0.04   0.01   0.00     Prid Alger Large Cap Growth (SA)   4.70   16.44   22.55   9.38   11.30   11.62   10.09   29.32   0.38   1.73   9.49   0301/2004     Russell 1000 Orth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   2.92     Difference   3.28   0.60   1.30   -3.52   -1.23   -2.47   -1.25   -0.89   6.67   3.94   0.20     MU S. Large Cap Growth (SA) - Net   462   16.19   22.21   9.07   13.98   11.30   9.74   28.5   0.09	Russell 1000 Index	-0.69	10.59	13.98	10.39	13.17	12.57	9.61	21.69	12.05	0.92	9.26	
Rank     58     56     51     42     55     56     52     30     56     69       Blackhock Russell 1000 Index (CF) - Net     -0.69     10.59     13.09     13.17     12.57     9.59     21.70     12.09     0.33     9.26     0y01/2003       Russell 1000 Index     O.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00 <td>Difference</td> <td>0.00</td> <td>0.00</td> <td>0.02</td> <td>0.03</td> <td>0.03</td> <td>0.01</td> <td>0.01</td> <td>0.01</td> <td>0.04</td> <td>0.02</td> <td>0.06</td> <td></td>	Difference	0.00	0.00	0.02	0.03	0.03	0.01	0.01	0.01	0.04	0.02	0.06	
BlackRock Russell 1000 Index (CF) - Net     -0.69     10.59     14.00     10.42     13.19     12.57     9.59     21.70     12.09     0.93     9.26     0y0/1/2004       Russell 1000 Index     -0.69     10.59     13.98     10.39     13.17     12.57     9.61     21.69     12.05     0.92     9.26       Difference     0.00     0.00     0.02     0.00     0.00     -0.02     0.01     0.04     0.01     0.00     0.00       Fred Alger Large Cap Growth (SA)     4.70     16.44     22.55     9.38     14.30     11.62     10.09     29.32     0.38     1.73     9.49     03/01/2004       Russell 1000 Grth Index     1.42     15.84     21.25     12.09     15.53     14.09     11.34     30.21     7.08     5.67     9.29       Difference     3.20     50.66     16.53     13.38     10.99     28.25     0.09     1.44     9.3     03/01/2004       Russell 1000 Grth Index     1.42     15.84     21.25     12.09     15.53	IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	9.66	
Russell 1000 Index   -0.69   10.59   13.98   10.39   13.17   12.57   9.61   21.69   12.05   0.92   9.26     Difference   0.00   0.00   0.02   0.03   0.02   0.00   -0.02   0.01   0.04   0.01   0.00     Fred Alger Large Cap Growth (SA)   1.42   15.84   21.25   12.33   11.42   10.45   10.73   9.61   21.34   0.01   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00	Rank	58	56	51	42	55	56	55	52	30	56	69	
Difference     0.00     0.00     0.02     0.03     0.02     0.00     -0.02     0.01     0.04     0.01     0.00       Fred Alger Large Cap Growth (SA)     4.70     16.44     22.55     9.38     14.30     11.62     10.09     29.32     0.38     1.73     9.49     03/01/2004       Russell 1000 Grth Index     1.42     15.84     21.25     12.30     12.34     -0.24     -0.89     -6.77     3.94     0.20       IM U.S. Large Cap Growth (SA)-Net     4.62     16.19     22.21     9.07     13.38     10.99     28.21     4.65     4.93     9.53       Fred Alger Large Cap Growth (SA)-Net     4.62     16.19     22.21     9.07     13.98     11.30     9.74     28.95     0.09     1.44     9.13     0.321     7.08     5.67     9.29       Difference     3.20     0.35     0.96     -3.83     -1.55     -2.79     -1.60     -1.26     6.99     4.23     -0.16       Russell 1000 Grth Index     1.42     15.84     21.25	BlackRock Russell 1000 Index (CF) - Net	-0.69	10.59	14.00	10.42	13.19	12.57	9.59	21.70	12.09	0.93	9.26	09/01/2003
Fred Alger Large Cap Growth (SA)   4.70   16.44   22.55   9.38   14.30   11.62   10.09   29.32   0.38   1.73   9.49   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.28   0.60   1.30   -3.52   -1.23   2.47   -1.125   -0.08   -6.70   -3.94   0.20     IM U.S. Large Cap Growth (SA) + Net   1.89   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   9.53     Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.55   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.74   4.93   16.81   N/A   36.61   5.78   12.48   16.21   04/0	Russell 1000 Index	-0.69	10.59	13.98	10.39	13.17	12.57	9.61	21.69	12.05	0.92	9.26	
Russell 1000 Grith Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.28   0.60   1.30   -3.52   -1.23   -2.47   -1.25   -0.89   -6.70   -3.94   0.20     MU U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   1.99   28.21   4.65   4.63   9.53     Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.95   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.55   2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60	Difference	0.00	0.00	0.02	0.03	0.02	0.00	-0.02	0.01	0.04	0.01	0.00	
Russell 1000 Grith Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.28   0.60   1.30   -3.52   -1.23   -2.47   -1.25   -0.89   -6.70   -3.94   0.20     MU U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   1.99   28.21   4.65   4.63   9.53     Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.95   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.55   2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60	Fred Alger Large Cap Growth (SA)	4.70	16.44	22.55	9.38	14.30	11.62	10.09	29.32	0.38	1.73	9.49	03/01/2004
IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   9.53     Rank   18   38   37   84   63   86   70   42   85   77   52     Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.95   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Nussell 1000 Grth Index   1.42   15.84   21.25   12.80   15.53   14.09   11.34   30.21   7.08   5.67   14.00     IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96   16.01	Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	9.29	
Rank   18   38   37   84   63   86   70   42   85   77   52     Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.95   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.80   4.54   4.02   2.81   4.65   4.93   13.96     Rank   17   9   5   3   2	Difference	3.28	0.60	1.30	-3.52	-1.23	-2.47	-1.25	-0.89	-6.70	-3.94	0.20	
Fred Alger Large Cap Growth (SA) - Net   4.62   16.19   22.21   9.07   13.98   11.30   9.74   28.95   0.09   1.44   9.13   03/01/2004     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     T. Rowe Price Large Cap Growth (SA)   4.85   20.91   30.05   17.44   19.93   16.98   N/A   36.61   5.78   12.48   16.21   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.08   4.54   4.40   2.89   N/A   6.41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   1.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04	IM U.S. Large Cap Growth Equity (SA+CF) Median	1.99	15.28	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	9.53	
Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   -1.60   -1.26   -6.99   -4.23   -0.16     T. Rowe Price Large Cap Growth (SA)   4.85   20.91   30.05   17.44   19.93   16.98   N/A   36.61   5.78   12.48   16.21   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.80   4.54   4.40   2.89   N/A   6.40   -1.30   6.81   1.61     IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   N/A   6.61   11   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4	Rank	18	38	37	84	63	86	70	42	85	77	52	
Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   9.29     Difference   3.20   0.35   0.96   -3.83   -1.55   -2.79   1.60   -1.26   -6.99   -4.23   -0.16     T. Rowe Price Large Cap Growth (SA)   4.85   20.91   30.05   17.44   19.93   16.98   N/A   36.61   5.78   12.48   16.21   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.80   4.54   4.40   2.89   N/A   6.40   -1.30   6.81   1.61     MU LS. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   2   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russel	Fred Alger Large Cap Growth (SA) - Net	4.62	16.19	22.21	9.07	13.98	11.30	9.74	28.95	0.09	1.44	9.13	03/01/2004
T. Rowe Price Large Cap Growth (SA)   4.85   20.91   30.05   17.44   19.93   16.98   N/A   36.61   5.78   12.48   16.21   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.80   4.54   4.40   2.89   N/A   6.40   -1.30   6.81   1.61     IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   2   N/A   6   41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60 <t< td=""><td></td><td>1.42</td><td>15.84</td><td>21.25</td><td>12.90</td><td>15.53</td><td>14.09</td><td>11.34</td><td>30.21</td><td>7.08</td><td>5.67</td><td>9.29</td><td></td></t<>		1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	9.29	
Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.43   5.07   8.80   4.54   4.40   2.89   N/A   6.40   -1.30   6.81   1.61     IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   2   N/A   6   41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23    Earnest Partners Small Cap Value (SA)	Difference	3.20	0.35	0.96	-3.83	-1.55	-2.79	-1.60	-1.26	-6.99	-4.23	-0.16	
Difference   3.43   5.07   8.80   4.54   4.40   2.89   N/A   6.40   -1.30   6.81   1.61     IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   2   N/A   6   41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Rus	T. Rowe Price Large Cap Growth (SA)	4.85	20.91	30.05	17.44	19.93	16.98	N/A	36.61	5.78	12.48	16.21	04/01/2010
IM U.S. Large Cap Growth Equity (SA+CF) Median   1.99   15.28   20.83   11.66   15.03   13.38   10.99   28.21   4.65   4.93   13.96     Rank   17   9   5   3   2   2   N/A   6   41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   7.47   7.28	Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	14.60	
Rank   17   9   5   3   2   2   N/A   6   41   7   7     T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity	Difference	3.43	5.07	8.80	4.54	4.40	2.89	N/A	6.40	-1.30	6.81	1.61	
T. Rowe Price Large Cap Growth (SA) - Net   4.77   20.62   29.63   17.05   19.55   16.60   N/A   36.17   5.42   12.11   15.83   04/01/2010     Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   15.60   4.427   9.49	IM U.S. Large Cap Growth Equity (SA+CF) Median	1.99	15.28	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	13.96	
Russell 1000 Grth Index   1.42   15.84   21.25   12.90   15.53   14.09   11.34   30.21   7.08   5.67   14.60     Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net	Rank	17	9	5	3	2	2	N/A	6	41	7	7	
Difference   3.35   4.78   8.38   4.15   4.02   2.51   N/A   5.96   -1.66   6.44   1.23     Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     R	T. Rowe Price Large Cap Growth (SA) - Net	4.77	20.62	29.63	17.05	19.55	16.60	N/A	36.17	5.42	12.11	15.83	04/01/2010
Earnest Partners Small Cap Value (SA)   -1.84   12.47   14.51   12.01   14.62   13.16   11.43   23.07   24.79   -2.28   9.70   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28	Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	14.60	
Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28     Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28	Difference	3.35	4.78	8.38	4.15	4.02	2.51	N/A	5.96	-1.66	6.44	1.23	
Difference   0.80   8.04   9.38   4.14   4.66   3.74   2.82   15.23   -6.95   5.19   2.42     IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28	Earnest Partners Small Cap Value (SA)	-1.84	12.47	14.51	12.01	14.62	13.16	11.43	23.07	24.79	-2.28	9.70	12/01/2004
IM U.S. Small Cap Value Equity (SA+CF) Median   -1.78   7.45   8.37   8.71   11.68   11.11   10.74   11.60   26.10   -4.27   9.49     Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28	Russell 2000 Val Index	-2.64	4.43	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	7.28	
Rank   53   6   9   10   4   10   36   4   58   31   44     Earnest Partners Small Cap Value (SA) - Net   -1.97   12.01   13.87   11.38   13.99   12.53   10.75   22.39   24.08   -2.83   9.01   12/01/2004     Russell 2000 Val Index   -2.64   4.43   5.13   7.87   9.96   9.42   8.61   7.84   31.74   -7.47   7.28	Difference	0.80	8.04	9.38	4.14	4.66	3.74	2.82	15.23	-6.95	5.19	2.42	
Earnest Partners Small Cap Value (SA) - Net     -1.97     12.01     13.87     11.38     13.99     12.53     10.75     22.39     24.08     -2.83     9.01     12/01/2004       Russell 2000 Val Index     -2.64     4.43     5.13     7.87     9.96     9.42     8.61     7.84     31.74     -7.47     7.28	IM U.S. Small Cap Value Equity (SA+CF) Median	-1.78	7.45	8.37	8.71	11.68	11.11	10.74	11.60	26.10	-4.27	9.49	
Russell 2000 Val Index     -2.64     4.43     5.13     7.87     9.96     9.42     8.61     7.84     31.74     -7.47     7.28	Rank	53	6	9	10	4	10	36	4	58	31	44	
	Earnest Partners Small Cap Value (SA) - Net	-1.97	12.01	13.87	11.38	13.99	12.53	10.75	22.39	24.08	-2.83	9.01	12/01/2004
Difference 0.67 7.58 8.74 3.51 4.03 3.11 2.14 14.55 -7.66 4.64 1.73	• • • •	-2.64	4.43	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	7.28	
	Difference	0.67	7.58	8.74	3.51	4.03	3.11	2.14	14.55	-7.66	4.64	1.73	

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



**Comparative Performance - Retirement** 

Emerald Small Cap Growth (SA)     -1.64     13.39     20.97       Russell 2000 Grth Index     2.30     13.64     18.67       Difference     -3.94     -0.25     2.37       IM U.S. Small Cap Growth Equity (SA+CF) Median     2.90     14.22     20.97       Rank     93     57     44	63 8.77 85 N/A	Years N/A 12.90 N/A 13.59	Years N/A 11.29 N/A	Years N/A 10.95	<b>29.53</b> 22.17	10.02	N/A	Incep.	
Russell 2000 Grth Index     2.30     13.64     18.61       Difference     -3.94     -0.25     2.33       IM U.S. Small Cap Growth Equity (SA+CF) Median     2.90     14.22     20.24	85 N/A 28 10.06	N/A 13.59			22.17		,	12.90	12/01/201
IM U.S. Small Cap Growth Equity (SA+CF) Median 2.90 14.22 20.24	.8 10.06	13.59	N/A		22.17	11.32	-1.38	12.81	
			,	N/A	7.36	-1.30	N/A	0.09	
Popk 02 57 d	8 N/A		12.14	11.70	23.71	11.40	-0.74	14.32	
Nalik 93 57 4		N/A	N/A	N/A	20	59	N/A	64	
Emerald Small Cap Growth (SA) - Net -1.78 12.89 20.20	.6 N/A	N/A	N/A	N/A	28.77	9.37	N/A	12.24	12/01/2015
Russell 2000 Grth Index 2.30 13.64 18.65	63 8.77	12.90	11.29	10.95	22.17	11.32	-1.38	12.81	
Difference -4.08 -0.75 1.6	63 N/A	N/A	N/A	N/A	6.60	-1.95	N/A	-0.57	
International Equity Composite -0.50 10.91 18.8	3 8.03	7.97	5.56	4.12	29.34	3.09	-1.39	6.69	07/01/2004
MSCI ACW Ex US IM Index (Blended) -1.06 10.63 17.10	0 6.75	6.24	4.52	3.16	27.81	4.41	-4.60	6.85	
Difference 0.56 0.28 1.73	3 1.28	1.73	1.04	0.96	1.53	-1.32	3.21	-0.16	
All Public Plans-Intl. Equity Segment Median -0.32 11.05 18.53	53 7.61	7.19	6.04	4.04	28.59	3.95	-2.60	7.57	
Rank 58 54 4	4 36	29	71	49	37	68	28	87	
BlackRock Developed Int'l - Passive (CF) -1.86 8.65 15.24	.4 6.49	6.90	N/A	N/A	25.71	3.45	-1.62	8.33	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net) -1.81 8.58 14.99	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	7.97	
Difference -0.05 0.07 0.2	.39 0.39	0.36	N/A	N/A	0.54	0.50	0.33	0.36	
IM All EAFE (SA+CF) Median -1.28 8.98 16.60		7.70	6.64	4.19	26.38	1.05	1.22	9.17	
Rank 74 56 64	64 54	73	N/A	N/A	59	21	75	71	
BlackRock Developed Int'l - Passive (CF) - Net -1.86 8.65 15.24	.4 6.48	6.88	N/A	N/A	25.71	3.45	-1.64	8.32	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net) -1.81 8.58 14.99	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	7.97	
Difference -0.05 0.07 0.29	.9 0.38	0.34	N/A	N/A	0.54	0.50	0.31	0.35	
MFS Developed Int'I (SA) -0.64 8.76 18.6	61 8.38	10.51	N/A	N/A	27.13	-0.22	7.17	12.42	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net) -1.81 8.58 14.99	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	8.87	
Difference 1.17 0.18 3.60	6 2.28	3.97	N/A	N/A	1.96	-3.17	9.12	3.55	
IM All EAFE (SA+CF) Median -1.28 8.98 16.60		7.70	6.64	4.19	26.38	1.05	1.22	9.92	
Rank 30 54 24	25 18	5	N/A	N/A	42	69	6	7	
MFS Developed Int'I (SA) - Net -0.73 8.49 18.2	.1 8.01	10.15	N/A	N/A	26.70	-0.56	6.83	12.05	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net) -1.81 8.58 14.99	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	8.87	
Difference 1.08 -0.09 3.24	.6 1.91	3.61	N/A	N/A	1.53	-3.51	8.78	3.18	

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



**Comparative Performance - Retirement** 

MSCI Emg Mkts IM Index (USD) (Net)

Difference

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Fidelity Developed Int'l (SA)	-0.99	8.47	16.26	5.98	7.06	5.91	3.88	25.16	-0.70	0.99	6.35	12/01/2004
International Developed Blend	-1.81	8.58	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	5.36	
Difference	0.82	-0.11	1.31	-0.12	0.52	0.84	-0.41	-0.01	-3.65	2.94	0.99	
IM All EAFE (SA+CF) Median	-1.28	8.98	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	6.60	
Rank	40	59	53	69	69	73	61	65	73	54	60	
Fidelity Developed Int'I (SA) - Net	-1.05	8.24	15.94	5.68	6.76	5.61	3.56	24.81	-0.98	0.73	6.00	12/01/2004
International Developed Blend	-1.81	8.58	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	5.36	
Difference	0.76	-0.34	0.99	-0.42	0.22	0.54	-0.73	-0.36	-3.93	2.68	0.64	
LA Capital Emerging (CF)	0.90	16.95	23.85	8.93	5.41	N/A	N/A	37.13	12.18	-15.10	6.08	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	5.31	
Difference	-0.35	-0.35	-0.23	0.34	0.48	N/A	N/A	0.30	2.28	-1.24	0.77	
IM Emerging Markets Equity (SA+CF) Median	1.81	17.29	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	6.89	
Rank	70	56	55	64	63	N/A	N/A	50	35	72	67	
LA Capital Emerging (CF) - Net	0.74	16.38	23.05	8.23	4.75	N/A	N/A	36.24	11.46	-15.65	5.40	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	5.31	
Difference	-0.51	-0.92	-1.03	-0.36	-0.18	N/A	N/A	-0.59	1.56	-1.79	0.09	
Wellington Emerging (SA)	1.58	17.63	25.51	N/A	N/A	N/A	N/A	41.01	N/A	N/A	23.47	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	20.56	
Difference	0.33	0.33	1.43	N/A	N/A	N/A	N/A	4.18	N/A	N/A	2.91	
IM Emerging Markets Equity (SA+CF) Median	1.81	17.29	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	21.26	
Rank	55	46	42	N/A	N/A	N/A	N/A	29	N/A	N/A	33	
Wellington Emerging (SA) - Net	1.44	17.12	24.80	N/A	N/A	N/A	N/A	40.21	N/A	N/A	22.77	10/01/2016

1.25

0.19

17.30

-0.18

24.08

0.72

8.59

N/A

4.93

N/A

2.47

N/A

3.22

N/A

36.83

3.38

-13.86

N/A

9.90

N/A

20.56

2.21



<b>Comparative</b>	Performance -	Retirement
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IM Global Fixed Income (SA+CF) Median

Macquarie Unconstrained (SA) - Net

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

Rank

Difference

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Fixed Income Composite	-0.84	0.94	2.58	2.58	2.91	4.13	4.91	4.88	5.00	0.78	5.29	04/01/2001
Fixed Income Custom Index (R)	-0.85	0.69	1.99	2.39	2.59	3.59	4.21	4.12	5.65	0.11	4.90	
Difference	0.01	0.25	0.59	0.19	0.32	0.54	0.70	0.76	-0.65	0.67	0.39	
All Public Plans-US Fixed Income Segment Median	-1.01	0.58	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	4.82	
Rank	37	35	34	34	36	35	29	43	40	30	12	
JP Morgan Principal Protection (SA)	-0.66	-0.24	0.57	N/A	N/A	N/A	N/A	1.86	2.02	N/A	1.29	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.29	0.22	0.26	N/A	N/A	N/A	N/A	0.06	0.62	N/A	0.37	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	2.34	
Rank	6	79	100	N/A	N/A	N/A	N/A	100	97	N/A	100	
JP Morgan Principal Protection (SA) - Net	-0.68	-0.32	0.47	N/A	N/A	N/A	N/A	1.76	1.92	N/A	1.19	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.27	0.14	0.16	N/A	N/A	N/A	N/A	-0.04	0.52	N/A	0.27	
Wells Principal Protection (SA)	-0.93	-0.40	0.39	N/A	N/A	N/A	N/A	1.94	1.86	N/A	1.15	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.02	0.06	0.08	N/A	N/A	N/A	N/A	0.14	0.46	N/A	0.23	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	2.34	
Rank	10	93	100	N/A	N/A	N/A	N/A	100	98	N/A	100	
Wells Principal Protection (SA) - Net	-0.95	-0.48	0.27	N/A	N/A	N/A	N/A	1.83	1.73	N/A	1.03	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.00	-0.02	-0.04	N/A	N/A	N/A	N/A	0.03	0.33	N/A	0.11	
Macquarie Unconstrained (SA)	-1.72	1.03	3.90	N/A	N/A	N/A	N/A	7.86	8.37	N/A	4.81	09/01/2015
67% B Global Credit/33% B Global High Yield	-1.00	1.62	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.61	
Difference	-0.72	-0.59	0.32	N/A	N/A	N/A	N/A	1.13	-1.67	N/A	-0.80	

0.44

-1.76

-1.00

-0.76

97

3.38

0.91

1.62

-0.71

91

5.55

3.72

3.58

0.14

76

3.57

N/A

N/A

4.19

N/A

2.91

N/A

N/A

4.37

N/A

3.83

N/A

N/A

5.63

N/A

4.09

N/A

N/A

6.64

N/A

7.63

7.67

6.73

0.94

46



5.77

8.19

10.04

-1.85

35

-2.37

N/A

N/A

-0.34

N/A

4.78

50

4.64

5.61

-0.97

09/01/2015

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

Since

Incep.

5.61

1.22

4.78

22

6.59

5.61

0.98

6.00

4.96

1.04

4.91

10

2016

9.65

10.04

-0.39

5.77

9.40

10.04

-0.64

9.18

9.88

-0.70

9.51

58

31

26

8

2015

N/A

-0.34

N/A

-2.37

N/A

N/A

-0.34

N/A

N/A

-0.38

N/A

0.72

N/A

Inception

Date

09/01/2015

09/01/2015

6.83 09/01/2015

1 3 5 7 10 QTD **FYTD** 2017 Year Years Years Years Years -0.64 N/A N/A **Neuberger Unconstrained (SA)** 3.12 5.80 N/A N/A 9.26 67% B Global Credit/33% B Global High Yield -1.00 1.62 3.58 4.19 4.37 5.63 6.64 6.73 Difference 0.36 1.50 2.22 N/A N/A N/A N/A 2.53 IM Global Fixed Income (SA+CF) Median 0.44 3.38 5.55 3.57 2.91 3.83 4.09 7.63 Rank 80 55 46 N/A N/A N/A N/A Neuberger Unconstrained (SA) - Net -0.69 2.94 5.55 N/A N/A N/A N/A 9.01 67% B Global Credit/33% B Global High Yield -1.00 1.62 3.58 4.19 4.37 5.63 6.64 6.73 Difference 0.31 1.32 1.97 N/A N/A N/A N/A 2.28 Pacific Asset Bank Loans (SA) 4.23 N/A N/A N/A N/A 5.48 1.61 5.37 CS Lvg'd Loan Index 1.58 3.86 4.64 4.33 4.17 4.52 5.36 4.25 Difference 0.03 0.37 0.73 N/A N/A N/A N/A 1.23 IM U.S. Bank Loans (SA+CF) Median 1.39 3.88 4.80 4.45 4.31 4.88 5.85 4.46 Rank 14 29 N/A N/A N/A N/A 19 4 62 2 00 E 04 NI/A NI/A NI/A **NI/A** E 4 4 . . ..... ..... . .

Pacific Asset Bank Loans (SA) - Net	1.53	3.98	5.04	N/A	N/A	N/A	N/A	5.14	8.83	N/A	5.66	09/01/2015
CS Lvg'd Loan Index	1.58	3.86	4.64	4.33	4.17	4.52	5.36	4.25	9.88	-0.38	4.96	
Difference	-0.05	0.12	0.40	N/A	N/A	N/A	N/A	0.89	-1.05	N/A	0.70	
Real Return Composite	0.28	5.41	3.86	3.13	1.31	3.19	2.38	4.05	9.90	-2.56	2.81	02/01/2007
CPI+3% (Blended)	1.37	4.52	5.43	4.93	4.47	4.07	3.91	5.17	5.15	3.68	4.31	
Difference	-1.09	0.89	-1.57	-1.80	-3.16	-0.88	-1.53	-1.12	4.75	-6.24	-1.50	
Invesco Commodity (CF)	-0.39	12.78	5.89	1.60	N/A	N/A	N/A	6.09	14.61	-15.75	-4.45	09/01/2013
Bloomberg Cmdty Index (TR)	-0.40	6.92	3.71	-3.21	-8.32	-8.77	-7.71	1.70	11.77	-24.66	-7.99	
Difference	0.01	5.86	2.18	4.81	N/A	N/A	N/A	4.39	2.84	8.91	3.54	
Invesco Commodity (CF) - Net	-0.55	12.23	5.21	0.93	N/A	N/A	N/A	5.40	13.87	-16.32	-5.05	09/01/2013
Bloomberg Cmdty Index (TR)	-0.40	6.92	3.71	-3.21	-8.32	-8.77	-7.71	1.70	11.77	-24.66	-7.99	
Difference	-0.15	5.31	1.50	4.14	N/A	N/A	N/A	3.70	2.10	8.34	2.94	
Hancock Timberland (CF) (Lagged-1 Qtr) - Net	2.02	0.91	6.77	3.70	N/A	N/A	N/A	4.65	4.81	-0.34	2.28	04/01/2014
NCREIF Timberland Index (Lagged-1 Qtr)	1.52	2.84	3.63	3.73	6.22	5.76	4.43	3.28	3.28	9.26	5.38	
Difference	0.50	-1.93	3.14	-0.03	N/A	N/A	N/A	1.37	1.53	-9.60	-3.10	
Molpus IV (CF) (Lagged-1 Qtr) - Net	1.72	2.12	2.85	N/A	N/A	N/A	N/A	4.52	-1.91	N/A	-4.77	09/01/2015
NCREIF Timberland Index (Lagged-1 Qtr)	1.52	2.84	3.63	3.73	6.22	5.76	4.43	3.28	3.28	9.26	3.64	
Difference	0.20	-0.72	-0.78	N/A	N/A	N/A	N/A	1.24	-5.19	N/A	-8.41	

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



**Comparative Performance - Retirement** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
WAMCO (SA)	0.40	3.27	3.14	3.07	2.72	4.37	N/A	3.33	9.37	-0.22	4.16	05/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.07	3.10	2.67	3.24	2.66	4.33	4.24	3.32	10.22	-1.12	4.35	
Difference	0.33	0.17	0.47	-0.17	0.06	0.04	N/A	0.01	-0.85	0.90	-0.19	
WAMCO (SA) - Net	0.36	3.14	2.96	2.89	2.55	4.19	N/A	3.15	9.18	-0.39	3.97	05/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.07	3.10	2.67	3.24	2.66	4.33	4.24	3.32	10.22	-1.12	4.35	
Difference	0.29	0.04	0.29	-0.35	-0.11	-0.14	N/A	-0.17	-1.04	0.73	-0.38	
Hedge Funds Composite - Net	0.79	2.21	3.00	0.61	2.43	2.63	2.32	3.92	-2.30	1.24	2.78	03/01/2007
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.80	
Difference	-0.28	-0.90	-1.01	-2.89	-0.89	-0.63	-1.04	0.11	-5.63	-1.78	-1.02	
Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	0.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.64	09/01/2017
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	2.43	
Difference	-0.42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.79	
GAM Divergent (CF) (Lagged-1 Mo) - Net	1.26	1.55	1.24	0.31	N/A	N/A	N/A	1.21	-3.23	3.70	1.75	12/01/2013
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.36	
Difference	0.19	-1.56	-2.77	-3.19	N/A	N/A	N/A	-2.60	-6.56	0.68	-1.61	
MS Convergent (CF) (Lagged-1 Mo) - Net	3.22	6.41	8.47	2.07	N/A	N/A	N/A	7.39	-1.27	-1.34	2.06	03/01/2014
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.37	
Difference	2.15	3.30	4.46	-1.43	N/A	N/A	N/A	3.58	-4.60	-4.36	-1.31	

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 06/30. Please see the Addendum for custom index descriptions.



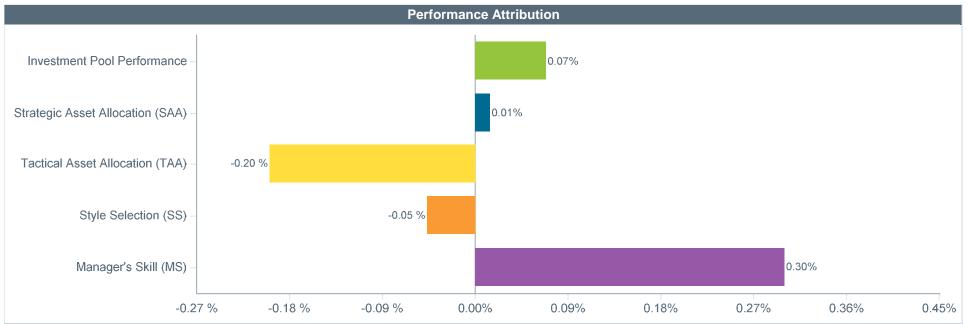
Alternative Investment Fund Performance Listing - Retirement

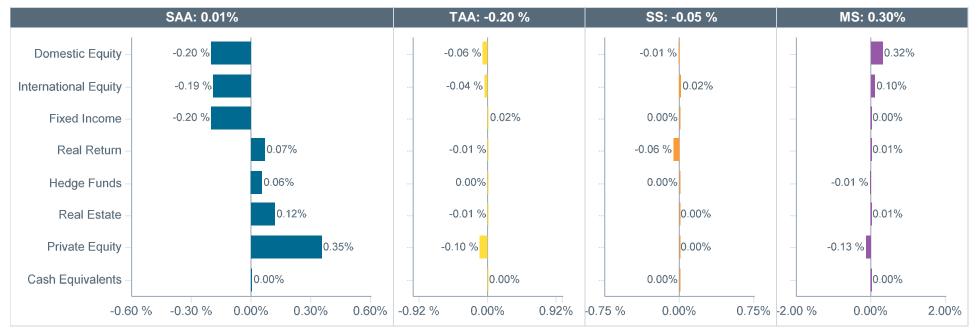
	Market Value (\$)	% of Alt. Inv. Group	% of Total Fund	Inception IRR	Inception Date
Private Equity	426,317,843	38.28%	3.54%	12.12%	May-06
Adams Street SMB I	9,837,854	0.88%	0.08%	-7.62%	Jan-17
Adams Offeet on D T	27,118,538	2.44%	0.22%	24.21%	Jan-14
Ares IV	20,835,491	1.87%	0.17%	18.69%	Nov-12
ARES Special Situation IV	18,099,329	1.63%	0.15%	-13.92%	Jan-15
Ares V	7,428,631	0.67%	0.06%	12.15%	Jan-15
Audax III V	5,900,592	0.53%	0.05%	13.01%	Jan-11
Blackstone Tactical Opps II	31,260,670	2.81%	0.26%	19.38%	Apr-15
Clayton, Dubilier & Rice IX	18,304,199	1.64%	0.15%	18.98%	Apr-14
Crestview Partners III	20,989,158	1.88%	0.17%	21.57%	Feb-15
EnCap IX	12,626,174	1.13%	0.10%	19.80%	Jan-11
EnCap VIII	5,435,926	0.49%	0.05%	-0.46%	Jan-13
EnCap X	22,960,890	2.06%	0.19%	24.38%	Feb-15
EnCap XI	1,032,626	0.09%	0.01%	29%	Jun-17
Fisher Lynch II	16,652,280	1.50%	0.14%	10.99%	Mar-08
Harvest VII	8,699,199	0.78%	0.07%	13.36%	Nov-15
HRJ Special Opp II	6,636,025	0.60%	0.06%	8.01%	Feb-08
Industry Ventures VIII	4,119,197	0.37%	0.03%	32.21%	May-16
Landmark XIII	7,550,015	0.68%	0.06%	6.83%	Oct-06
Landmark XIV	9.862.835	0.89%	0.08%	13.18%	Aug-08
Landmark XV	14,484,345	1.30%	0.12%	14.42%	Feb-14
Lexington VI	4,689,292	0.42%	0.04%	8.16%	May-06
Lexington VII	10,716,010	0.96%	0.09%	17.29%	Aug-09
Oaktree PF V	7.699.121	0.69%	0.06%	5.65%	Jan-09
Silver Lake IV	19,159,258	1.72%	0.16%	32.88%	Sep-13
Vista IV	19,487,283	1.75%	0.16%	20.98%	Sep-13 Sep-11
Vista V	51,299,235	4.61%	0.43%	18.97%	Apr-14
Vista VI	43,433,670	3.90%	0.36%	11.01%	Jun-16
eal Estate	687,226,409	61.72%	5.70%	9.04%	Nov-06
AG Core Plus III	5,966,020	0.54%	0.05%	24.72%	Jan-12
Almanac VI	6,712,923	0.60%	0.06%	17.59%	Jun-12
Almanac VII	13,498,472	1.21%	0.11%	17.97%	Mar-15
BREP Europe IV	12,779,359	1.15%	0.11%	18.21%	Dec-13
BREP VII	16,784,388	1.51%	0.14%	20.62%	Jun-12
Bristol Value II	11,607,229	1.04%	0.10%	14.92%	Nov-12
Dimensional Global REIT	24,884,108	2.23%	0.21%	7.58%	Mar-13
DRA G&I IX	16,782,391	1.51%	0.14%	16.55%	Sep-16
DRA G&I VIII	17,565,849	1.58%	0.15%	21.51%	Jun-14
DRA VII	8,026,643	0.72%	0.07%	13.25%	Oct-11
FPA Core Plus III	31,173,365	2.80%	0.26%	4.29%	Jan-17
Harrison Street Core	58,226,673	5.23%	0.48%	9.89%	Aug-15
Heitman REIT	23,962,419	2.15%	0.20%	9.67%	Sep-13
Invesco Core Realty	54,584,969	4.90%	0.45%	10.71%	Jun-11
Jamestown Premier	50,188,916	4.51%	0.42%	6.82%	Mar-15
JPM Strategic	80,641,856	7.24%	0.67%	5.67%	Sep-07
LaSalle Asia V	3,882,207	0.35%	0.03%	-22.36%	Nov-17
Lone Star RE II	863,627	0.08%	0.01%	28.75%	May-11
Lone Star RE IV	23,495,830	2.11%	0.19%	17.78%	Jun-15
Lone Star V	5,178,283	0.47%	0.04%	-2.14%	Aug-17
Lone Star VI	137,559	0.01%	0.00%	49.80%	May-11
Mesa West III	6,864,007	0.62%	0.06%	10.20%	Aug-13
Mesa West IV		1.39%	0.13%	5.94%	Feb-16
	15,464,029				
PCCP First Mtg II	1,588,011	0.14%	0.01%	7.18%	Jun-12
PRISA I	85,706,629	7.70%	0.71%	5.34%	Nov-06
PRISA II	38,800,453	3.48%	0.32%	6.86%	May-07
Prologis USLH	29,407,430	2.64%	0.24%	16.78%	Mar-15
Torchlight IV	14,923,533	1.34%	0.12%	12.37%	Aug-13
Torchlight IV Torchlight V Westbrook X	14,923,533 15,302,267 12,226,964	1.34% 1.37% 1.10%	0.12% 0.13% 0.10%	13.09% 23.28%	Mar-15 Feb-16



Market values and performance were provided by Northern Trust.

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

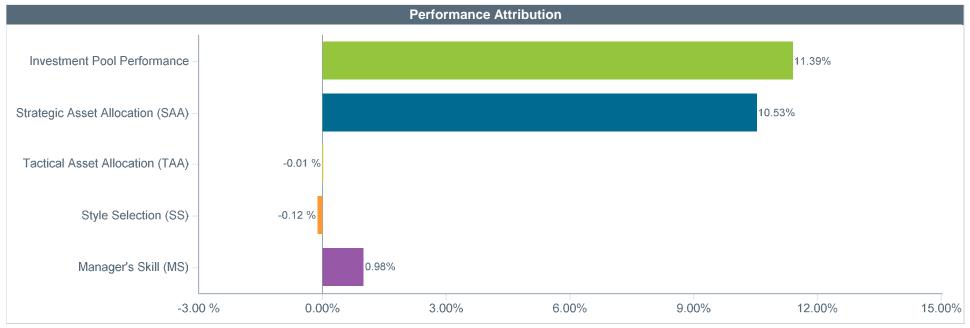


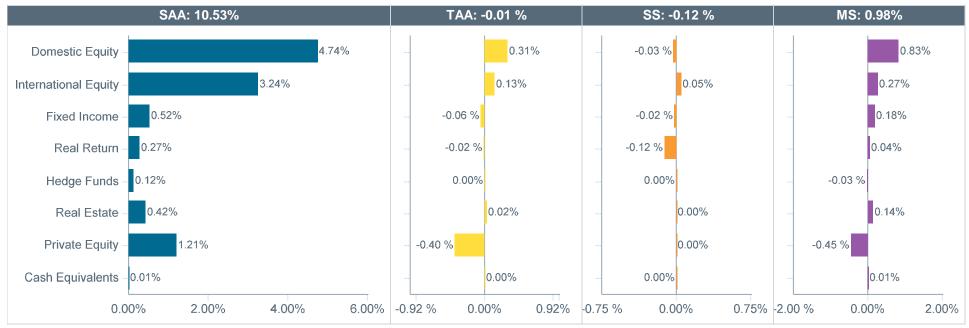


Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



#### Water and Power Employees' Retirement Plan 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

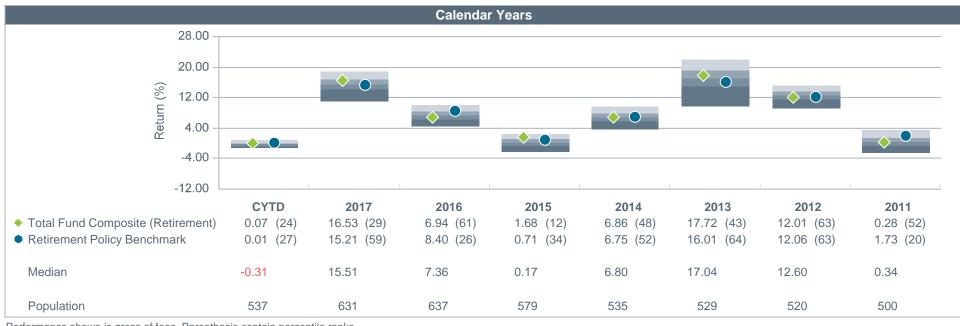


KVK

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

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





KVK

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

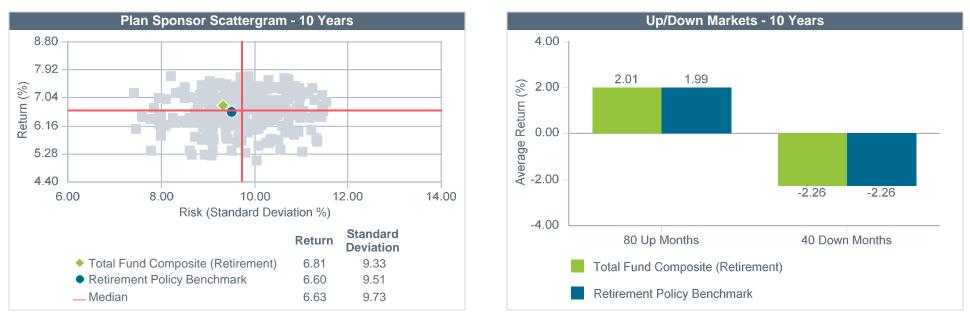
Total Fund Composite (Retirement) vs. Retirement Policy Benchmark

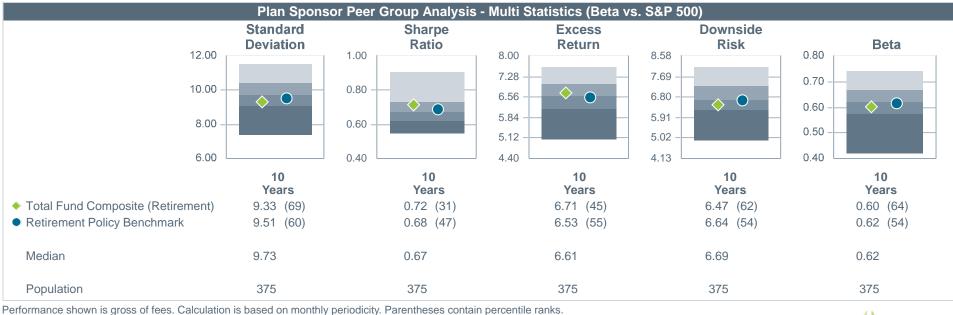
Comparative Performance & Rolling Return - Retirement



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







🙏 RVK

#### 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**



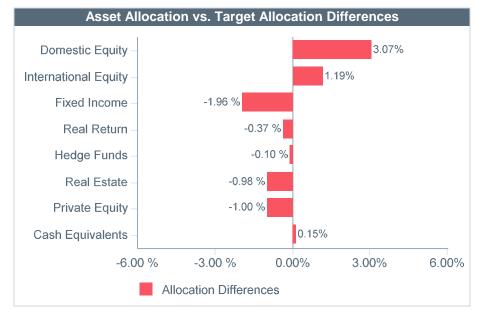
Asset	Allocation by Manager		
March 31, 2018 : \$2,061,963,477		Market Value (\$)	Allocation (%)
	BlackRock Russell 1000 Index (CF)	275,928,721	13.38
	Wells Principal Protection (SA)	128,242,478	6.22
	JP Morgan Principal Protection (SA)	127,939,047	6.20
	T. Rowe Price Large Cap Growth (SA)	113,854,747	5.52
	Neuberger Unconstrained (SA)	109,674,057	5.32
	Macquarie Unconstrained (SA)	106,036,293	5.14
	Real Estate Composite	103,556,325	5.02
	MFS Developed Int'I (SA)	102,381,733	4.97
	Fred Alger Large Cap Growth (SA)	101,894,730	4.94
	Fidelity Developed Int'I (SA)	100,048,441	4.85
	Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	99,940,246	4.85
	BlackRock Developed Int'l - Passive (CF)	98,755,984	4.79
	T. Rowe Price Large Cap Value (SA)	98,639,177	4.78
	MFS Large Cap Value (SA)	98,539,701	4.78
	Private Equity Composite	82,449,062	4.00
	WAMCO (SA)	65,200,930	3.16
	Wellington Emerging (SA)	59,590,825	2.89
	LA Capital Emerging (CF)	55,547,358	2.69
	Earnest Partners Small Cap Value (SA)	28,489,748	1.38
	Emerald Small Cap Growth (SA)	26,326,425	1.28
	Pacific Asset Bank Loans (SA)	23,890,900	1.16
	Cash Equivalents	23,765,902	1.15
	Invesco Commodity (CF)	22,139,788	1.07
	Molpus IV (CF) (Lagged-1 Qtr)	4,620,219	0.22
	Hancock Timberland (CF) (Lagged-1 Qtr)	3,412,934	0.17
	MS Convergent (CF) (Lagged-1 Mo)	1,033,512	0.05
	GAM Divergent (CF) (Lagged-1 Mo)	64,163	0.00
	Transition Account	31	0.00

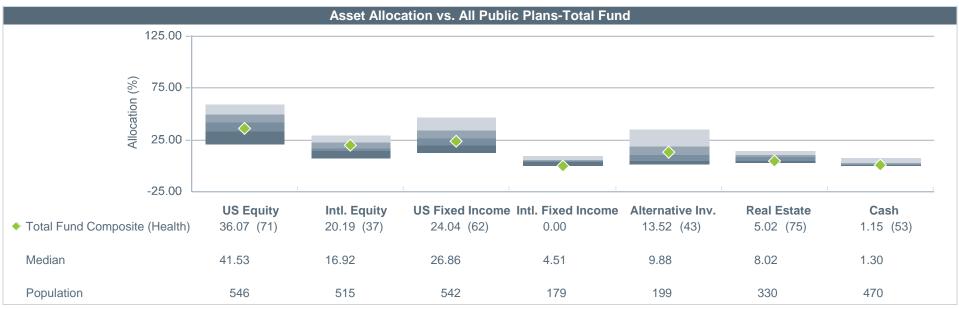
Schedule of Investable Assets - FYTD											
Periods Ending	Beginning Market Value (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value						
FYTD	1,916,571,489	145,391,987	2,061,963,477	7.74	107.74						

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Fiscal year ends 06/30.



Asse	t Allocation vs. Targe	et Allocation	
	Market Value (\$)	Allocation (%)	Target (%)
Domestic Equity	743,673,249	36.07	33.00
International Equity	416,324,372	20.19	19.00
Fixed Income	495,782,775	24.04	26.00
Real Return	95,373,871	4.63	5.00
Hedge Funds	101,037,921	4.90	5.00
Real Estate	103,556,325	5.02	6.00
Private Equity	82,449,062	4.00	5.00
Cash Equivalents	23,765,902	1.15	1.00
Total Fund	2,061,963,477	100.00	100.00





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



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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Total Fund Composite (Health)	0.07	7.74	11.54	7.27	8.61	8.22	7.27	16.75	6.93	1.46	6.53	01/01/2007
Health Policy Benchmark	0.01	7.33	10.53	7.10	8.16	8.01	6.76	15.21	8.40	0.71	6.03	
Difference	0.06	0.41	1.01	0.17	0.45	0.21	0.51	1.54	-1.47	0.75	0.50	
All Public Plans-Total Fund Median	-0.31	7.02	10.27	6.46	7.91	7.55	6.63	15.51	7.36	0.17	6.10	
Rank	24	28	20	17	22	25	19	23	61	15	26	
Domestic Equity Composite	0.19	11.59	16.03	11.07	14.27	13.00	9.99	23.37	11.67	1.99	8.45	01/01/2007
Russell 3000 (Blended) (H)	-0.64	10.48	13.81	10.22	13.03	12.39	9.56	21.13	12.74	0.48	8.03	
Difference	0.83	1.11	2.22	0.85	1.24	0.61	0.43	2.24	-1.07	1.51	0.42	
All Public Plans-US Equity Segment Median	-0.47	10.53	13.80	9.95	12.75	11.95	9.61	20.32	12.90	0.21	8.10	
Rank	24	17	13	9	3	4	30	8	76	8	26	
MFS Large Cap Value (SA)	-2.96	5.01	9.09	9.45	12.41	12.14	N/A	17.80	15.76	-0.06	12.85	10/01/2009
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	12.20	
Difference	-0.13	-0.52	2.14	1.57	1.63	1.14	N/A	4.14	-1.58	3.77	0.65	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95	8.69	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	12.94	
Rank	80	88	68	37	39	38	N/A	44	39	29	54	
MFS Large Cap Value (SA) - Net	-3.03	4.77	8.76	9.11	12.08	11.80	N/A	17.45	15.41	-0.38	12.50	10/01/2009
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	12.20	
Difference	-0.20	-0.76	1.81	1.23	1.30	0.80	N/A	3.79	-1.93	3.45	0.30	
T. Rowe Price Large Cap Value (SA)	-2.51	6.84	9.50	9.56	12.47	12.12	N/A	16.73	17.11	-1.77	13.30	10/01/2009
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	12.20	
Difference	0.32	1.31	2.55	1.68	1.69	1.12	N/A	3.07	-0.23	2.06	1.10	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95	8.69	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	12.94	
Rank	66	72	64	34	38	38	N/A	59	26	46	39	
T. Rowe Price Large Cap Value (SA) - Net	-2.58	6.61	9.18	9.24	12.14	11.79	N/A	16.38	16.77	-2.06	12.96	10/01/2009
Russell 1000 Val Index	-2.83	5.53	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	12.20	
Difference	0.25	1.08	2.23	1.36	1.36	0.79	N/A	2.72	-0.57	1.77	0.76	



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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
BlackRock Russell 1000 Index (CF)	-0.69	10.59	14.00	10.42	13.19	12.61	9.69	21.70	12.12	0.91	8.18	01/01/2007
Russell 1000 Index	-0.69	10.59	13.98	10.39	13.17	12.57	9.61	21.69	12.05	0.92	8.08	
Difference	0.00	0.00	0.02	0.03	0.02	0.04	0.08	0.01	0.07	-0.01	0.10	
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	8.41	
Rank	58	55	51	42	55	54	52	52	30	56	61	
BlackRock Russell 1000 Index (CF) - Net	-0.69	10.59	14.00	10.42	13.19	12.60	9.65	21.70	12.12	0.90	8.14	01/01/2007
Russell 1000 Index	-0.69	10.59	13.98	10.39	13.17	12.57	9.61	21.69	12.05	0.92	8.08	
Difference	0.00	0.00	0.02	0.03	0.02	0.03	0.04	0.01	0.07	-0.02	0.06	
Fred Alger Large Cap Growth (SA)	4.70	16.44	22.56	9.38	14.34	11.67	N/A	29.33	0.37	1.77	13.87	10/01/2009
Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	15.33	
Difference	3.28	0.60	1.31	-3.52	-1.19	-2.42	N/A	-0.88	-6.71	-3.90	-1.46	
IM U.S. Large Cap Growth Equity (SA+CF) Median	1.99	15.28	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	14.70	
Rank	18	37	37	84	63	86	N/A	42	85	77	73	
Fred Alger Large Cap Growth (SA) - Net	4.62	16.20	22.22	9.07	14.02	11.34	N/A	28.96	0.08	1.48	13.51	10/01/2009
Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	15.33	
Difference	3.20	0.36	0.97	-3.83	-1.51	-2.75	N/A	-1.25	-7.00	-4.19	-1.82	
T. Rowe Price Large Cap Growth (SA)	4.86	20.92	30.05	17.43	19.93	16.97	N/A	36.61	5.70	12.53	16.66	05/01/2010
Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	14.60	
Difference	3.44	5.08	8.80	4.53	4.40	2.88	N/A	6.40	-1.38	6.86	2.06	
IM U.S. Large Cap Growth Equity (SA+CF) Median	1.99	15.28	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	13.94	
Rank	17	9	5	3	2	2	N/A	6	41	7	5	
T. Rowe Price Large Cap Growth (SA) - Net	4.78	20.64	29.64	17.04	19.55	16.59	N/A	36.17	5.35	12.16	16.27	05/01/201
Russell 1000 Grth Index	1.42	15.84	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	14.60	
Difference	3.36	4.80	8.39	4.14	4.02	2.50	N/A	5.96	-1.73	6.49	1.67	
Earnest Partners Small Cap Value (SA)	-1.84	12.50	14.54	12.02	14.62	13.09	N/A	23.09	24.78	-2.27	15.43	10/01/2009
Russell 2000 Val Index	-2.64	4.43	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	11.81	
Difference	0.80	8.07	9.41	4.15	4.66	3.67	N/A	15.25	-6.96	5.20	3.62	
IM U.S. Small Cap Value Equity (SA+CF) Median	-1.78	7.45	8.37	8.71	11.68	11.11	10.74	11.60	26.10	-4.27	13.79	
Rank	53	6	9	10	4	11	N/A	4	58	31	14	
Earnest Partners Small Cap Value (SA) - Net	-1.97	12.03	13.90	11.39	13.99	12.46	N/A	22.41	24.07	-2.82	14.76	10/01/2009
Russell 2000 Val Index	-2.64	4.43	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	11.81	
Difference	0.67	7.60	8.77	3.52	4.03	3.04	N/A	14.57	-7.67	4.65	2.95	



# Water and Power Employees' Retirement Plan

**Comparative Performance - Health** 

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Emerald Small Cap Growth (SA)	-1.69	13.33	20.91	N/A	N/A	N/A	N/A	29.57	10.14	N/A	12.94	12/01/2015
Russell 2000 Grth Index	2.30	13.64	18.63	8.77	12.90	11.29	10.95	22.17	11.32	-1.38	12.81	
Difference	-3.99	-0.31	2.28	N/A	N/A	N/A	N/A	7.40	-1.18	N/A	0.13	
IM U.S. Small Cap Growth Equity (SA+CF) Median	2.90	14.22	20.28	10.06	13.59	12.14	11.70	23.71	11.40	-0.74	14.32	
Rank	94	58	48	N/A	N/A	N/A	N/A	20	56	N/A	64	
Emerald Small Cap Growth (SA) - Net	-1.84	12.83	20.20	N/A	N/A	N/A	N/A	28.81	9.49	N/A	12.27	12/01/201
Russell 2000 Grth Index	2.30	13.64	18.63	8.77	12.90	11.29	10.95	22.17	11.32	-1.38	12.81	
Difference	-4.14	-0.81	1.57	N/A	N/A	N/A	N/A	6.64	-1.83	N/A	-0.54	
International Equity Composite	-0.47	10.93	18.82	8.01	7.89	5.51	N/A	29.29	3.06	-1.40	6.55	09/01/2009
MSCI ACW Ex US IM Index (Net)	-1.06	10.63	17.10	6.75	6.24	4.52	3.06	27.81	4.41	-4.60	6.59	
Difference	0.59	0.30	1.72	1.26	1.65	0.99	N/A	1.48	-1.35	3.20	-0.04	
All Public Plans-Intl. Equity Segment Median	-0.32	11.05	18.53	7.61	7.19	6.04	4.04	28.59	3.95	-2.60	7.78	
Rank	57	54	44	38	32	72	N/A	39	69	28	93	
BlackRock Developed Int'l - Passive (CF)	-1.86	8.65	15.24	6.49	6.94	N/A	N/A	25.71	3.45	-1.62	8.37	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	-1.81	8.58	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	7.97	
Difference	-0.05	0.07	0.29	0.39	0.40	N/A	N/A	0.54	0.50	0.33	0.40	
IM All EAFE (SA+CF) Median	-1.28	8.98	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	9.17	
Rank	74	56	64	54	72	N/A	N/A	59	21	75	70	
BlackRock Developed Int'l - Passive (CF) - Net	-1.86	8.65	15.24	6.48	6.92	N/A	N/A	25.71	3.45	-1.65	8.35	10/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	-1.81	8.58	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	7.97	
Difference	-0.05	0.07	0.29	0.38	0.38	N/A	N/A	0.54	0.50	0.30	0.38	
MFS Developed Int'I (SA)	-0.61	8.78	18.64	8.35	10.51	N/A	N/A	27.12	-0.29	7.13	12.42	08/01/2012
MSCI Wrld Ex US IM Index (USD) (Net)	-1.81	8.58	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	8.87	
Difference	1.20	0.20	3.69	2.25	3.97	N/A	N/A	1.95	-3.24	9.08	3.55	
IM All EAFE (SA+CF) Median	-1.28	8.98	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	9.92	
Rank	29	54	24	18	5	N/A	N/A	42	70	7	7	
MFS Developed Int'I (SA) - Net	-0.69	8.51	18.24	7.99	10.14	N/A	N/A	26.69	-0.64	6.79	12.04	08/01/201
MSCI Wrld Ex US IM Index (USD) (Net)	-1.81	8.58	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	8.87	
Difference	1.12	-0.07	3.29	1.89	3.60	N/A	N/A	1.52	-3.59	8.74	3.17	



# Water and Power Employees' Retirement Plan

**Comparative Performance - Health** 

Fidelity Developed Int'l (SA)

FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
8.47	16.25	5.99	6.97	5.86	N/A	25.16	-0.67	0.98	7.03	10/01/2009
8.58	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	6.14	
-0.11	1.30	-0.11	0.43	0.79	N/A	-0.01	-3.62	2.93	0.89	
0.00	10.00	6 77	7 70	6.64	4 10	26.20	1 05	1 00	7.60	

International Developed Blend	-1.81	8.58	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	6.14	
Difference	0.82	-0.11	1.30	-0.11	0.43	0.79	N/A	-0.01	-3.62	2.93	0.89	
IM AII EAFE (SA+CF) Median	-1.28	8.98	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	7.63	
Rank	40	59	53	68	71	76	N/A	65	73	54	68	
Fidelity Developed Int'I (SA) - Net	-1.06	8.24	15.93	5.70	6.67	5.56	N/A	24.81	-0.94	0.71	6.71	10/01/2009
International Developed Blend	-1.81	8.58	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	6.14	
Difference	0.75	-0.34	0.98	-0.40	0.13	0.49	N/A	-0.36	-3.89	2.66	0.57	
LA Capital Emerging (CF)	0.90	16.95	23.85	8.91	5.40	N/A	N/A	37.13	12.11	-15.10	6.07	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	5.31	
Difference	-0.35	-0.35	-0.23	0.32	0.47	N/A	N/A	0.30	2.21	-1.24	0.76	
IM Emerging Markets Equity (SA+CF) Median	1.81	17.29	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	6.89	
Rank	70	56	55	64	64	N/A	N/A	50	35	72	68	
LA Capital Emerging (CF) - Net	0.74	16.38	23.05	8.20	4.73	N/A	N/A	36.24	11.39	-15.65	5.39	10/01/2012
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	5.31	
Difference	-0.51	-0.92	-1.03	-0.39	-0.20	N/A	N/A	-0.59	1.49	-1.79	0.08	
Wellington Emerging (SA)	1.75	17.84	25.50	N/A	N/A	N/A	N/A	40.87	N/A	N/A	23.53	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	20.56	
Difference	0.50	0.54	1.42	N/A	N/A	N/A	N/A	4.04	N/A	N/A	2.97	
IM Emerging Markets Equity (SA+CF) Median	1.81	17.29	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	21.26	
Rank	51	43	42	N/A	N/A	N/A	N/A	29	N/A	N/A	32	
Wellington Emerging (SA) - Net	1.61	17.34	24.79	N/A	N/A	N/A	N/A	40.07	N/A	N/A	22.83	10/01/2016
MSCI Emg Mkts IM Index (USD) (Net)	1.25	17.30	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	20.56	
Difference	0.36	0.04	0.71	N/A	N/A	N/A	N/A	3.24	N/A	N/A	2.27	

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

QTD

-0.99



As of March 31, 2018

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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Fixed Income Composite	-0.84	0.94	2.61	2.56	2.89	4.07	5.19	4.89	4.85	0.83	5.45	01/01/2007
Fixed Income Custom Index (H)	-0.85	0.69	1.99	2.39	2.59	3.59	4.22	4.12	5.65	0.11	4.56	
Difference	0.01	0.25	0.62	0.17	0.30	0.48	0.97	0.77	-0.80	0.72	0.89	
All Public Plans-US Fixed Income Segment Median	-1.01	0.58	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	4.47	
Rank	37	35	33	34	36	36	22	43	42	27	19	
JP Morgan Principal Protection (SA)	-0.67	-0.26	0.57	N/A	N/A	N/A	N/A	1.87	1.92	N/A	1.27	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.28	0.20	0.26	N/A	N/A	N/A	N/A	0.07	0.52	N/A	0.35	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	2.34	
Rank	6	84	100	N/A	N/A	N/A	N/A	100	97	N/A	100	
JP Morgan Principal Protection (SA) - Net	-0.69	-0.33	0.47	N/A	N/A	N/A	N/A	1.77	1.81	N/A	1.17	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.26	0.13	0.16	N/A	N/A	N/A	N/A	-0.03	0.41	N/A	0.25	
Wells Principal Protection (SA)	-0.93	-0.40	0.38	N/A	N/A	N/A	N/A	1.94	1.85	N/A	1.15	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.02	0.06	0.07	N/A	N/A	N/A	N/A	0.14	0.45	N/A	0.23	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	2.34	
Rank	10	93	100	N/A	N/A	N/A	N/A	100	98	N/A	100	
Wells Principal Protection (SA) - Net	-0.95	-0.48	0.27	N/A	N/A	N/A	N/A	1.83	1.72	N/A	1.03	09/01/2015
Bloomberg US Int Agg Ex Credit	-0.95	-0.46	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	0.92	
Difference	0.00	-0.02	-0.04	N/A	N/A	N/A	N/A	0.03	0.32	N/A	0.11	
Macquarie Unconstrained (SA)	-1.71	1.07	3.97	N/A	N/A	N/A	N/A	7.99	8.35	N/A	4.88	09/01/2015
67% B Global Credit/33% B Global High Yield	-1.00	1.62	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.61	
Difference	-0.71	-0.55	0.39	N/A	N/A	N/A	N/A	1.26	-1.69	N/A	-0.73	
IM Global Fixed Income (SA+CF) Median	0.44	3.38	5.55	3.57	2.91	3.83	4.09	7.63	5.77	-2.37	4.78	
Rank	97	91	76	N/A	N/A	N/A	N/A	44	35	N/A	48	
Macquarie Unconstrained (SA) - Net	-1.75	0.94	3.80	N/A	N/A	N/A	N/A	7.81	8.17	N/A	4.70	09/01/2015
67% B Global Credit/33% B Global High Yield	-1.00	1.62	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.61	
Difference	-0.75	-0.68	0.22	N/A	N/A	N/A	N/A	1.08	-1.87	N/A	-0.91	



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

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
Neuberger Unconstrained (SA)	-0.59	3.24	6.04	N/A	N/A	N/A	N/A	9.42	9.48	N/A	6.91	09/01/201
67% B Global Credit/33% B Global High Yield	-1.00	1.62	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.61	
Difference	0.41	1.62	2.46	N/A	N/A	N/A	N/A	2.69	-0.56	N/A	1.30	
IM Global Fixed Income (SA+CF) Median	0.44	3.38	5.55	3.57	2.91	3.83	4.09	7.63	5.77	-2.37	4.78	
Rank	78	53	43	N/A	N/A	N/A	N/A	25	32	N/A	19	
Neuberger Unconstrained (SA) - Net	-0.65	3.06	5.79	N/A	N/A	N/A	N/A	9.17	9.23	N/A	6.66	09/01/2015
67% B Global Credit/33% B Global High Yield	-1.00	1.62	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.61	
Difference	0.35	1.44	2.21	N/A	N/A	N/A	N/A	2.44	-0.81	N/A	1.05	
Pacific Asset Bank Loans (SA)	1.50	4.25	5.38	N/A	N/A	N/A	N/A	5.40	9.37	N/A	5.99	09/01/2015
CS Lvg'd Loan Index	1.58	3.86	4.64	4.33	4.17	4.52	5.36	4.25	9.88	-0.38	4.96	
Difference	-0.08	0.39	0.74	N/A	N/A	N/A	N/A	1.15	-0.51	N/A	1.03	
IM U.S. Bank Loans (SA+CF) Median	1.39	3.88	4.80	4.45	4.31	4.88	5.85	4.46	9.51	0.72	4.91	
Rank	22	29	18	N/A	N/A	N/A	N/A	9	53	N/A	10	
Pacific Asset Bank Loans (SA) - Net	1.42	4.00	5.05	N/A	N/A	N/A	N/A	5.06	9.02	N/A	5.65	09/01/201
CS Lvg'd Loan Index	1.58	3.86	4.64	4.33	4.17	4.52	5.36	4.25	9.88	-0.38	4.96	
Difference	-0.16	0.14	0.41	N/A	N/A	N/A	N/A	0.81	-0.86	N/A	0.69	
Real Return Composite	0.33	5.17	3.76	2.99	1.34	3.09	N/A	3.97	9.56	-2.58	3.50	04/01/2010
CPI+3% (Blended)	1.37	4.52	5.43	4.93	4.47	4.07	3.91	5.17	5.15	3.68	3.96	
Difference	-1.04	0.65	-1.67	-1.94	-3.13	-0.98	N/A	-1.20	4.41	-6.26	-0.46	
Invesco Commodity (CF)	-0.43	12.60	5.60	1.36	N/A	N/A	N/A	5.95	14.05	-15.83	-4.65	09/01/2013
Bloomberg Cmdty Index (TR)	-0.40	6.92	3.71	-3.21	-8.32	-8.77	-7.71	1.70	11.77	-24.66	-7.99	
Difference	-0.03	5.68	1.89	4.57	N/A	N/A	N/A	4.25	2.28	8.83	3.34	
Invesco Commodity (CF) - Net	-0.59	12.05	4.92	0.70	N/A	N/A	N/A	5.26	13.30	-16.41	-5.25	09/01/2013
Bloomberg Cmdty Index (TR)	-0.40	6.92	3.71	-3.21	-8.32	-8.77	-7.71	1.70	11.77	-24.66	-7.99	
Difference	-0.19	5.13	1.21	3.91	N/A	N/A	N/A	3.56	1.53	8.25	2.74	
Hancock Timberland (CF) (Lagged-1 Qtr) - Net	2.02	0.91	6.77	3.70	N/A	N/A	N/A	4.65	4.81	-0.34	2.28	04/01/2014
NCREIF Timberland Index (Lagged-1 Qtr)	1.52	2.84	3.63	3.73	6.22	5.76	4.43	3.28	3.28	9.26	5.38	
Difference	0.50	-1.93	3.14	-0.03	N/A	N/A	N/A	1.37	1.53	-9.60	-3.10	
Molpus IV (CF) (Lagged-1 Qtr) - Net	1.72	2.12	2.85	N/A	N/A	N/A	N/A	4.52	-1.91	N/A	-4.77	09/01/201
NCREIF Timberland Index (Lagged-1 Qtr)	1.52	2.84	3.63	3.73	6.22	5.76	4.43	3.28	3.28	9.26	3.64	
Difference	0.20	-0.72	-0.78	N/A	N/A	N/A	N/A	1.24	-5.19	N/A	-8.41	



# Water and Power Employees' Retirement Plan

Comparative	Performance -	Health
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ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)

	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date
WAMCO (SA)	0.41	3.26	3.11	3.05	2.78	4.32	N/A	3.29	9.36	-0.18	4.17	05/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.07	3.10	2.67	3.24	2.66	4.33	4.24	3.32	10.22	-1.12	4.35	
Difference	0.34	0.16	0.44	-0.19	0.12	-0.01	N/A	-0.03	-0.86	0.94	-0.18	
WAMCO (SA) - Net	0.37	3.13	2.93	2.87	2.60	4.13	N/A	3.11	9.17	-0.35	3.98	05/01/2010
Bloomberg Wrld Gov't Infl Lnkd Index (Hedged)	0.07	3.10	2.67	3.24	2.66	4.33	4.24	3.32	10.22	-1.12	4.35	
Difference	0.30	0.03	0.26	-0.37	-0.06	-0.20	N/A	-0.21	-1.05	0.77	-0.37	
Hedge Funds Composite - Net	0.79	2.20	2.99	0.61	2.48	2.67	N/A	3.91	-2.30	1.24	3.29	09/01/2010

3.26

3.36

3.81

3.33

3.02

3.32

3.50

Difference	-0.28	-0.91	-1.02	-2.89	-0.84	-0.59	N/A	0.10	-5.63	-1.78	0.04	
Disclottens liens O(   D (OE) (I sugged 4 Ms) Not	0.00	N1/A		<b>NI/A</b>	<b>NI/A</b>	<b>NI/A</b>	<b>N1/A</b>		N1/A		4.04	00/04/0047
Blackstone Hope St. LP (CF) (Lagged-1 Mo) - Net	0.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.64	09/01/2017
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	2.43	
Difference	-0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.79	
GAM Divergent (CF) (Lagged-1 Mo) - Net	1.26	1.55	1.24	0.31	N/A	N/A	N/A	1.21	-3.23	3.70	1.75	12/01/2013
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.36	
Difference	0.19	-1.56	-2.77	-3.19	N/A	N/A	N/A	-2.60	-6.56	0.68	-1.61	
MS Convergent (CF) (Lagged-1 Mo) - Net	3.22	6.41	8.47	2.07	N/A	N/A	N/A	7.39	-1.27	-1.34	2.06	03/01/2014
ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)	1.07	3.11	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.37	
Difference	2.15	3.30	4.46	-1.43	N/A	N/A	N/A	3.58	-4.60	-4.36	-1.31	

4.01

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

1.07

3.11



3.25

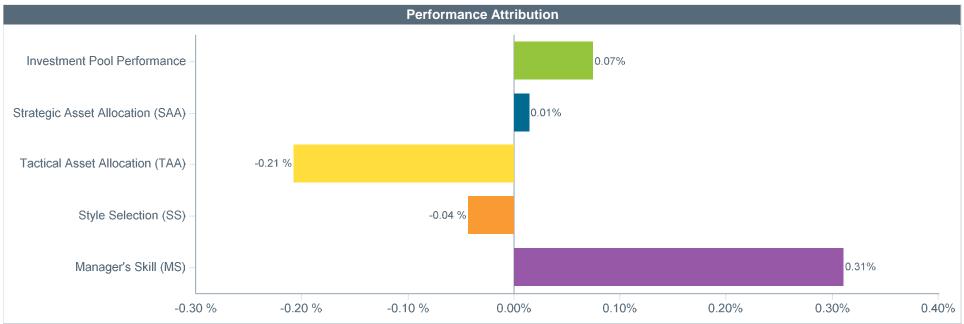
As of March 31, 2018

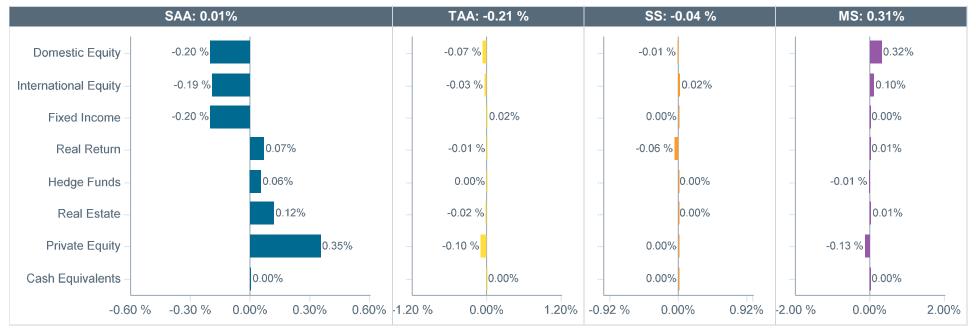
# Water and Power Employees' Retirement Plan Alternative Investment Fund Performance Listing - Health

	Market Value (\$)	% of Alt. Inv. Group	% of Total Fund	Inception IRR	Inception Date
Private Equity	74,812,321	42.07%	3.63%	15.50%	Aug-09
Adams Street SMB I	1,967,570	1.11%	0.10%	-7.62%	Jan-17
Apollo VIII	4,785,625	2.69%	0.23%	24.21%	Jan-14
Ares IV	4,167,103	2.34%	0.20%	18.69%	Nov-12
Ares Special Situation IV	3,619,866	2.04%	0.18%	-13.92%	Jan-15
Ares V	1,485,726	0.84%	0.07%	12.15%	Jan-15
Audax Mezz III	1,041,279	0.59%	0.05%	12.88%	Jan-11
Blackstone Tactical Opps	6,252,133	3.52%	0.30%	19.41%	Apr-15
CDR IX	3,660,836	2.06%	0.18%	18.98%	Apr-14
Crestview Partners III	4,197,828	2.36%	0.20%	21.57%	Feb-15
EnCap VIII	1,087,185	0.61%	0.05%	-0.47%	Jan-11
EnCap IX	2,228,149	1.25%	0.11%	19.80%	Jan-13
EnCap X	4,343,953	2.44%	0.21%	24.38%	Feb-15
EnCap XI	206,525	0.12%	0.01%	29.29%	Jun-17
Harvest VII	1,739,838	0.98%	0.08%	13.30%	Nov-15
Industry Ventures VIII	823,840	0.46%	0.04%	32.21%	Aug-16
Landmark XIV	1,643,804	0.92%	0.08%	13.19%	Aug-08
Landmark XV	2,534,770	1.43%	0.12%	14.41%	Feb-14
Lexington VII	1,786,041	1.00%	0.09%	17.29%	Aug-09
Oaktree V	1,202,994	0.68%	0.06%	5.74%	Jan-09
Silver Lake IV	3,193,218	1.80%	0.15%	32.39%	Sep-13
Vista IV	3,897,455	2.19%	0.19%	20.98%	Sep-13
Vista IV	10,259,851	5.77%	0.50%	18.97%	Apr-14
Vista VI	8,686,732	4.89%	0.42%	11.01%	Jun-16
al Estate	103,006,502	57.93%	5.00%	13.25%	Jan-10
AG Core Plus III	662,891	0.37%	0.03%	24.73%	Jan-12
Almanac VI		0.37%	0.03%	24.73%	Jun-12
	745,892			17.99%	•=
Almanac VII	3,374,614	1.90%	0.16%		Mar-15
BREP Europe IV	3,194,847	1.80%	0.16%	18.21%	Dec-13
BREP VII	4,196,119	2.36%	0.20%	20.62%	Jun-12
Bristol Value II	2,901,823	1.63%	0.14%	14.92%	Nov-12
Dimensional Global REIT	6,231,196	3.50%	0.30%	7.58%	Mar-13
DRA G&I IX	3,356,479	1.89%	0.16%	17.54%	Sep-16
DRA G&I VIII	1,914,045	1.08%	0.09%	13.60%	Jun-14
DRA VII	4,391,463	2.47%	0.21%	21.46%	Oct-11
FPA Core Plus III	6,234,673	3.51%	0.30%	4.29%	Jan-17
Harrison Street Core	11,645,336	6.55%	0.57%	9.89%	Aug-15
Heitman REIT	5,962,258	3.35%	0.29%	9.50%	Sep-13
Invesco Core Realty	9,096,908	5.12%	0.44%	10.71%	Jun-11
Jamestown Premier	10,037,783	5.64%	0.49%	6.82%	Mar-15
LaSalle Asia V	776,441	0.44%	0.04%	-22.36%	Nov-17
Lone Star RE II	95,964	0.05%	0.00%	28.75%	May-11
Lone Star RE IV	4,699,164	2.64%	0.23%	17.78%	Jun-15
Lone Star VII	15,282	0.01%	0.00%	49.73%	May-11
Lone Star RE V	913,815	0.51%	0.04%	-2.14%	Aug-17
Mesa West III	1,716,003	0.97%	0.08%	10.20%	Aug-13
Mesa West IV	3,092,806	1.74%	0.15%	5.94%	Feb-16
PCCP First Mtg II	397,002	0.22%	0.02%	7.18%	Jun-12
Prologis USLH	7,351,857	4.13%	0.36%	16.78%	Mar-15
Torchlight IV	3,730,889	2.10%	0.18%	12.37%	Aug-13
Torchlight V	3,825,557	2.15%	0.19%	13.09%	Mar-15
Westbrook X	2,445,395	1.38%	0.12%	23.28%	Feb-16



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

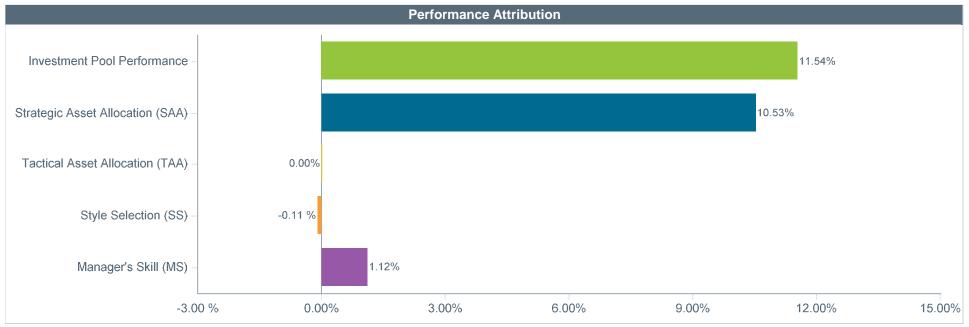


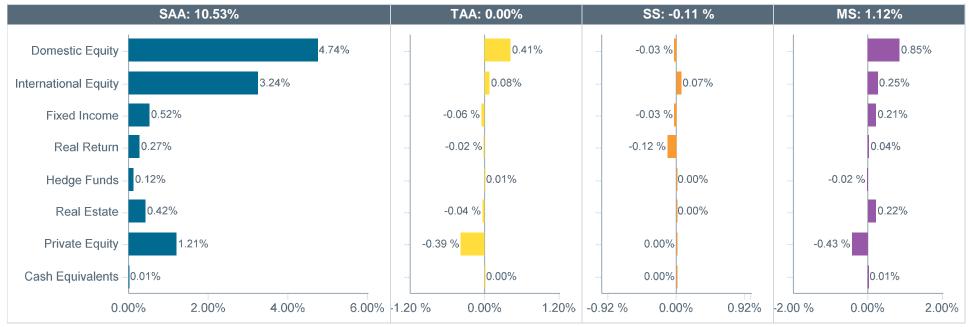


Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



#### Water and Power Employees' Retirement Plan 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

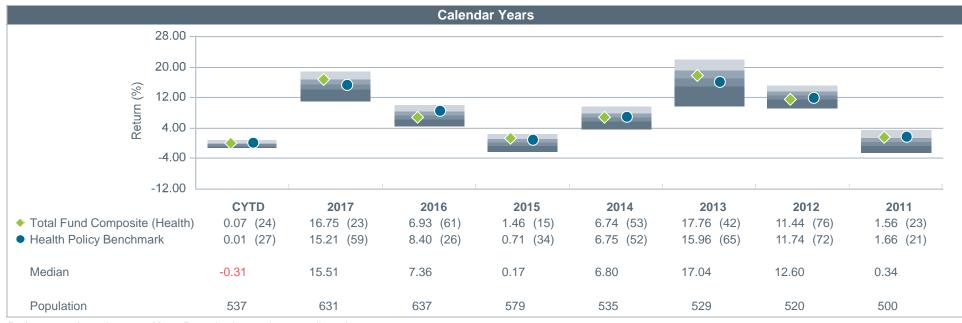


Performance shown is gross of fees. Calculation is based on monthly periodicity.



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



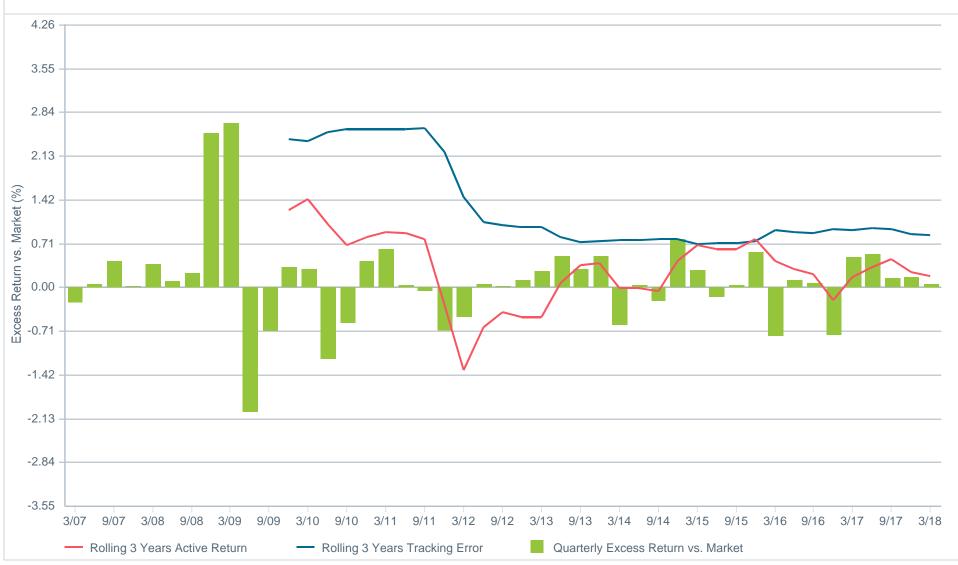


KVK

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

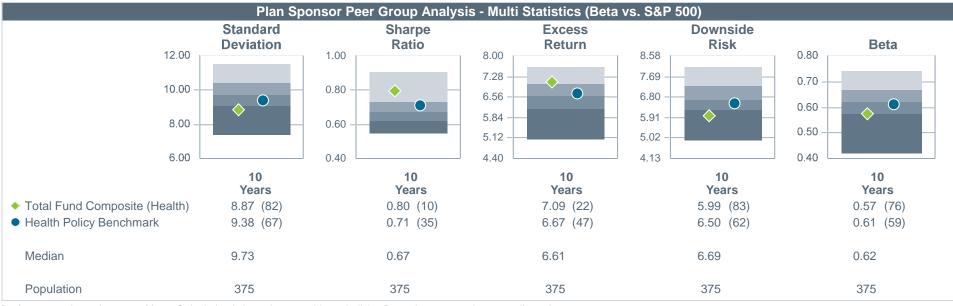
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Total Fund Composite (Health)	0.07	7.74	0.07	11.54	7.27	8.61	8.22	7.27	16.75	6.93	1.46	6.74	17.76
Health Policy Benchmark	0.01	7.33	0.01	10.53	7.10	8.16	8.01	6.76	15.21	8.40	0.71	6.75	15.96
Difference	0.06	0.41	0.06	1.01	0.17	0.45	0.21	0.51	1.54	-1.47	0.75	-0.01	1.80



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



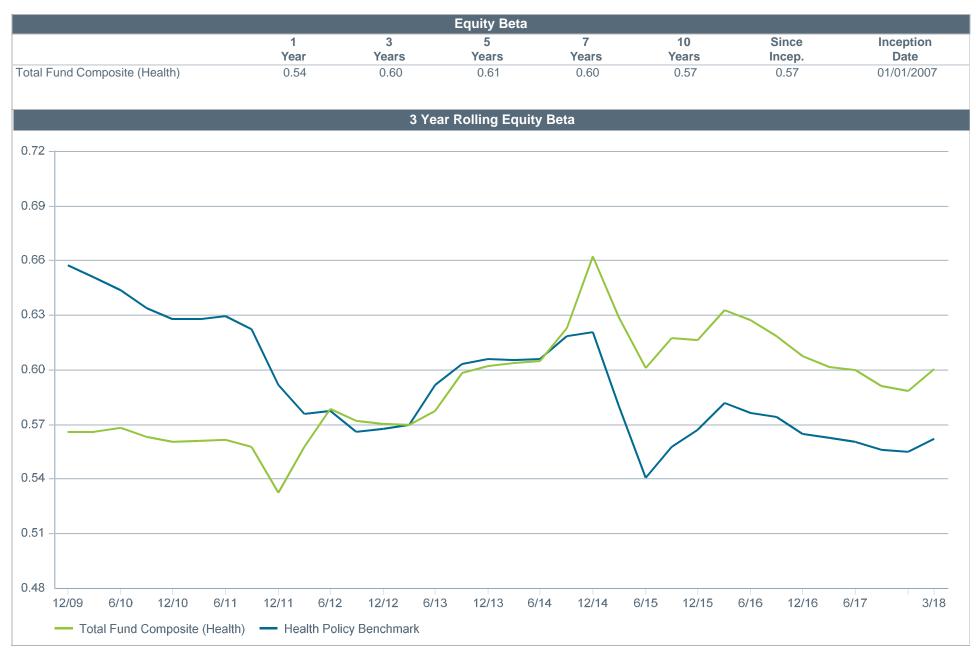




Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



# 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.

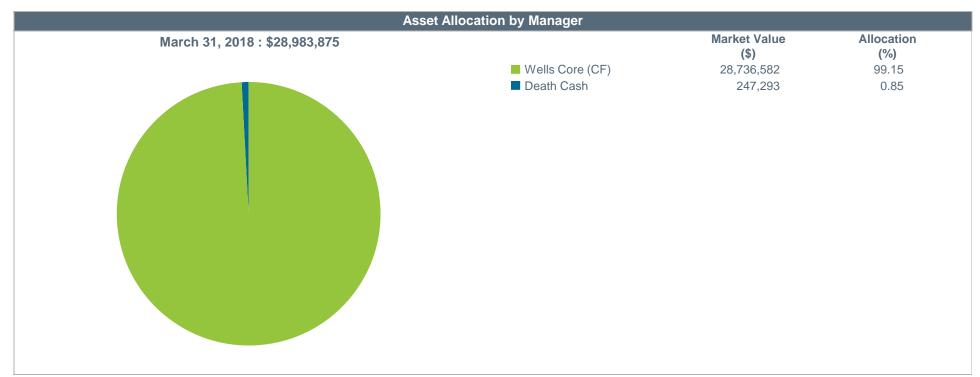


# Total Fund - Death and Disability



# Water and Power Employees' Retirement Plan

# Asset Allocation by Manager and Comparative Performance - Death



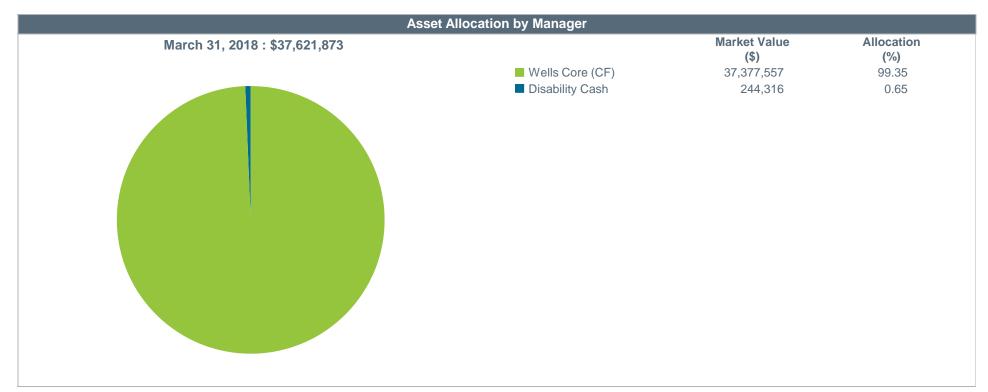
Comparative Performance													
	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date	
Total Fund Composite (Death)	-1.42	-0.17	1.28	1.39	2.04	3.49	4.32	3.41	2.92	1.08	5.28	12/01/1995	
Death Policy Benchmark	-1.39	-0.19	1.20	1.17	1.77	2.82	3.50	3.43	2.55	0.53	4.94		
Difference	-0.03	0.02	0.08	0.22	0.27	0.67	0.82	-0.02	0.37	0.55	0.34		
Wells Core (CF)	-1.43	-0.18	1.30	1.39	2.06	3.60	4.76	3.46	2.98	1.06	4.94	07/01/2004	
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	4.10		
Difference	0.03	0.06	0.10	0.19	0.24	0.68	1.13	-0.08	0.33	0.51	0.84		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	4.53		
Rank	62	71	76	65	57	35	21	88	57	27	19		
Wells Core (CF) - Net	-1.43	-0.18	1.30	1.39	2.06	3.60	4.76	3.46	2.98	1.06	4.69	07/01/2004	
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	4.10		
Difference	0.03	0.06	0.10	0.19	0.24	0.68	1.13	-0.08	0.33	0.51	0.59		

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



# Water and Power Employees' Retirement Plan

# Asset Allocation by Manager and Comparative Performance - Disability



	Comparative Performance													
	QTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	Since Incep.	Inception Date		
Total Fund Composite (Disability)	-1.42	-0.18	1.30	1.40	2.07	3.57	4.50	3.44	2.97	1.10	5.62	12/01/1995		
Disability Policy Benchmark	-1.37	-0.18	1.20	1.17	1.75	2.79	3.46	3.41	2.53	0.53	4.91			
Difference	-0.05	0.00	0.10	0.23	0.32	0.78	1.04	0.03	0.44	0.57	0.71			
Wells Core (CF)	-1.43	-0.18	1.30	1.39	2.06	3.60	4.76	3.46	2.98	1.06	4.93	07/01/2004		
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	4.10			
Difference	0.03	0.06	0.10	0.19	0.24	0.68	1.13	-0.08	0.33	0.51	0.83			
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	4.53			
Rank	62	71	76	65	57	35	21	88	57	27	20			
Wells Core (CF) - Net	-1.43	-0.18	1.30	1.39	2.06	3.60	4.76	3.46	2.98	1.06	4.63	07/01/2004		
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	4.10			
Difference	0.03	0.06	0.10	0.19	0.24	0.68	1.13	-0.08	0.33	0.51	0.53			

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



# **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	2017	2016	2015	2014	2013		
Manager	0.22	16.10	11.10	14.29	12.94	10.01	23.44	11.68	1.96	11.82	36.97		
Benchmark	-0.64	13.81	10.22	13.03	12.39	9.62	21.13	12.74	0.48	12.56	33.55		
Difference	0.86	2.29	0.88	1.26	0.55	0.39	2.31	-1.06	1.48	-0.74	3.42		
Peer Group Median	-0.47	13.80	9.95	12.75	11.95	9.61	20.32	12.90	0.21	11.42	33.76		
Rank	23	13	9	3	4	29	8	76	8	35	5		
Population	106	100	94	76	66	44	93	97	86	48	46		



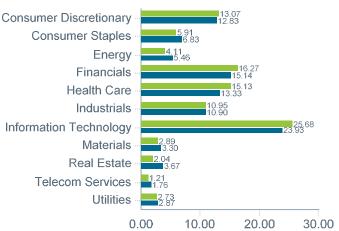




#### Portfolio Characteristics and Dist. of Market Cap (%)



## Sector Weights (%)



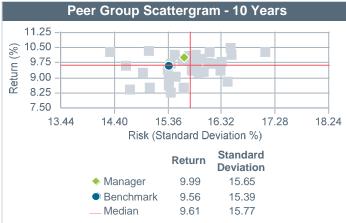
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



# Manager: Domestic Equity Composite - Health

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

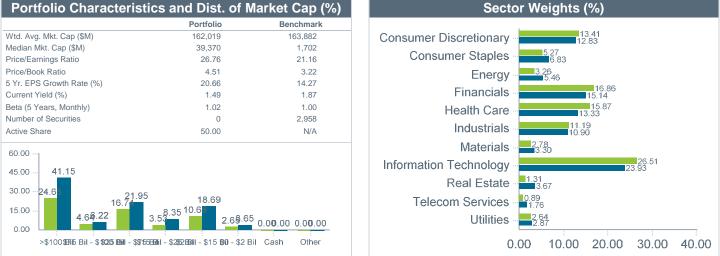
				D										
	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	0.19	16.03	11.07	14.27	13.00	9.99	23.37	11.67	1.99	11.88	36.87			
Benchmark	-0.64	13.81	10.22	13.03	12.39	9.56	21.13	12.74	0.48	12.56	33.55			
Difference	0.83	2.22	0.85	1.24	0.61	0.43	2.24	-1.07	1.51	-0.68	3.32			
Peer Group Median	-0.47	13.80	9.95	12.75	11.95	9.61	20.32	12.90	0.21	11.42	33.76			
Rank	24	13	9	3	4	30	8	76	8	34	6			
Population	106	100	94	76	66	44	93	97	86	48	46			







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



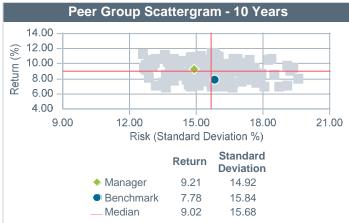
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

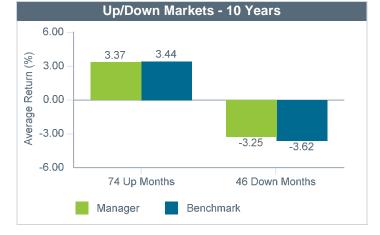


# Manager: MFS Large Cap Value (SA)

Benchmark: Russell 1000 Val Index **Peer Group:** IM U.S. Large Cap Value Equity (SA+CF)

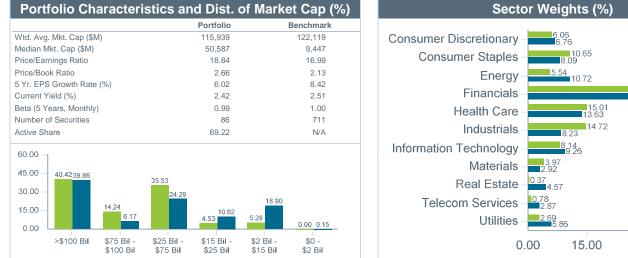
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	-3.02	9.04	9.44	12.40	12.16	9.21	17.82	15.80	-0.06	11.86	36.41		
Benchmark	-2.83	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	13.45	32.53		
Difference	-0.19	2.09	1.56	1.62	1.16	1.43	4.16	-1.54	3.77	-1.59	3.88		
Peer Group Median	-1.95	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	12.24	34.27		
Rank	81	69	37	39	38	45	44	39	29	57	34		
Population	307	307	302	291	278	251	329	361	379	404	406		







#### 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.





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32.07

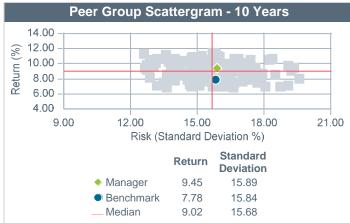
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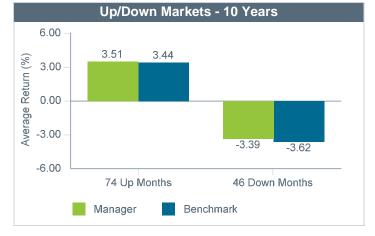
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# Manager: T. Rowe Price Large Cap Value (SA)

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

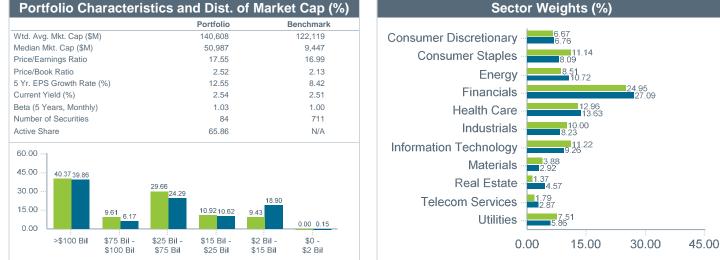
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	-2.52	9.49	9.51	12.42	12.11	9.45	16.74	17.14	-1.90	13.43	35.32		
Benchmark	-2.83	6.95	7.88	10.78	11.00	7.78	13.66	17.34	-3.83	13.45	32.53		
Difference	0.31	2.54	1.63	1.64	1.11	1.67	3.08	-0.20	1.93	-0.02	2.79		
Peer Group Median	-1.95	10.53	8.88	11.99	11.70	9.03	17.22	14.58	-2.25	12.24	34.27		
Rank	66	64	36	39	38	36	58	26	46	35	42		
Population	307	307	302	291	278	251	329	361	379	404	406		







#### 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.

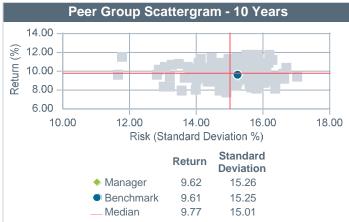


# Manager: BlackRock Russell 1000 Index (CF)

Benchmark: Russell 1000 Index

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

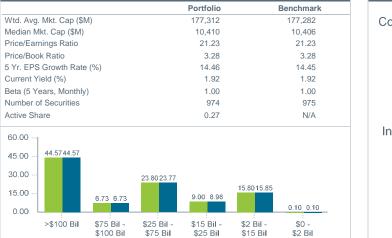
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	-0.69	14.00	10.42	13.20	12.58	9.62	21.70	12.09	0.94	13.27	33.16		
Benchmark	-0.69	13.98	10.39	13.17	12.57	9.61	21.69	12.05	0.92	13.24	33.11		
Difference	0.00	0.02	0.03	0.03	0.01	0.01	0.01	0.04	0.02	0.03	0.05		
Peer Group Median	-0.44	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98		
Rank	58	51	42	55	56	55	52	30	56	52	50		
Population	248	247	243	233	217	194	269	297	315	337	355		



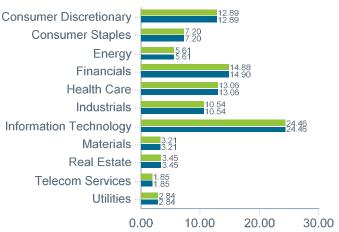




#### Portfolio Characteristics and Dist. of Market Cap (%)



# Sector Weights (%)



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

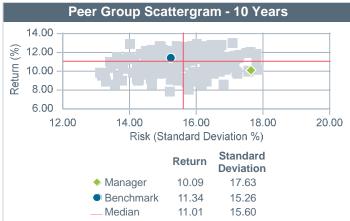


# Manager: Fred Alger Large Cap Growth (SA)

# Benchmark: Russell 1000 Grth Index

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

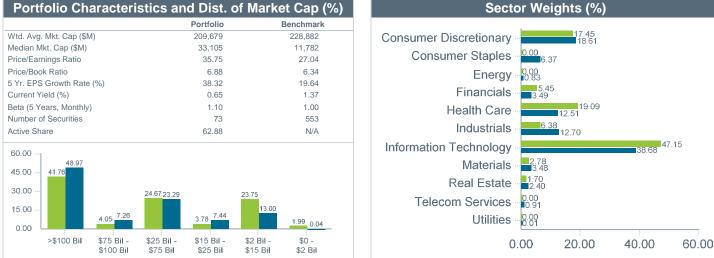
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	4.70	22.55	9.38	14.30	11.62	10.09	29.32	0.38	1.73	11.75	37.29		
Benchmark	1.42	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	13.05	33.48		
Difference	3.28	1.30	-3.52	-1.23	-2.47	-1.25	-0.89	-6.70	-3.94	-1.30	3.81		
Peer Group Median	1.99	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	11.91	34.52		
Rank	18	37	84	63	86	70	42	85	77	54	27		
Population	255	255	249	240	230	217	275	306	334	345	352		







#### 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.

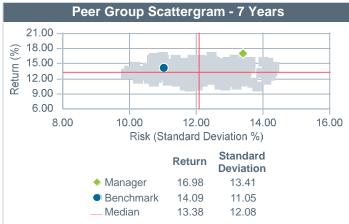


# Manager: T. Rowe Price Large Cap Growth (SA)

## Benchmark: Russell 1000 Grth Index

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

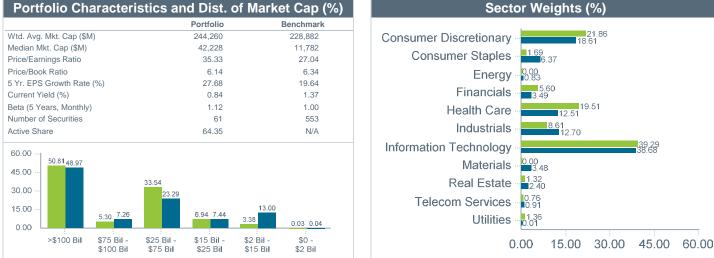
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	4.85	30.05	17.44	19.93	16.98	N/A	36.61	5.78	12.48	9.31	44.58		
Benchmark	1.42	21.25	12.90	15.53	14.09	11.34	30.21	7.08	5.67	13.05	33.48		
Difference	3.43	8.80	4.54	4.40	2.89	N/A	6.40	-1.30	6.81	-3.74	11.10		
Peer Group Median	1.99	20.83	11.66	15.03	13.38	10.99	28.21	4.65	4.93	11.91	34.52		
Rank	17	5	3	2	2	N/A	6	41	7	80	6		
Population	255	255	249	240	230	217	275	306	334	345	352		







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



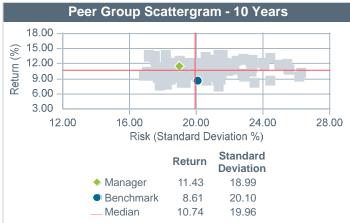
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parenthesis contain percentile ranks.



# 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	2017	2016	2015	2014	2013		
Manager	-1.84	14.51	12.01	14.62	13.16	11.43	23.07	24.79	-2.28	11.11	35.47		
Benchmark	-2.64	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	4.22	34.52		
Difference	0.80	9.38	4.14	4.66	3.74	2.82	15.23	-6.95	5.19	6.89	0.95		
Peer Group Median	-1.78	8.37	8.71	11.68	11.11	10.74	11.60	26.10	-4.27	5.66	38.07		
Rank	53	9	10	4	10	36	4	58	31	6	73		
Population	207	207	200	192	182	167	220	231	240	252	254		



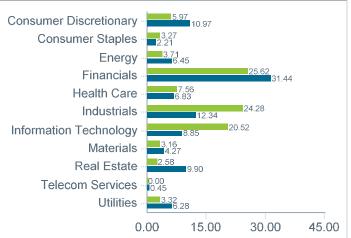




#### Portfolio Characteristics and Dist. of Market Cap (%)



# Sector Weights (%)



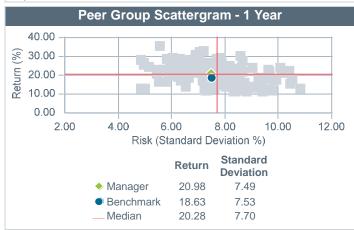
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

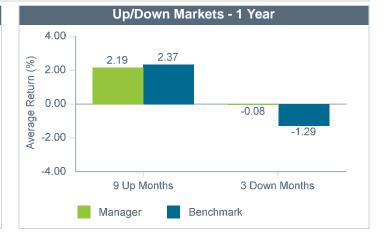


# Manager: Emerald Small Cap Growth (SA)

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

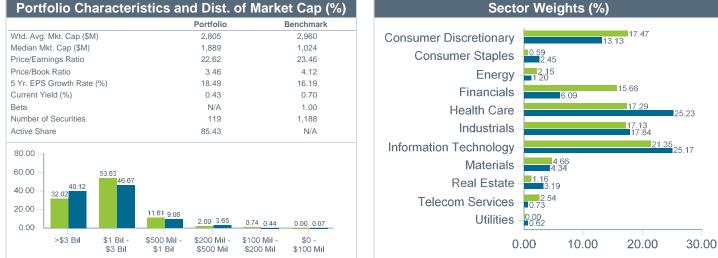
Performance														
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	-1.64	20.98	N/A	N/A	N/A	N/A	29.53	10.02	N/A	N/A	N/A			
Benchmark	2.30	18.63	8.77	12.90	11.29	10.95	22.17	11.32	-1.38	5.60	43.30			
Difference	-3.94	2.35	N/A	N/A	N/A	N/A	7.36	-1.30	N/A	N/A	N/A			
Peer Group Median	2.90	20.28	10.06	13.59	12.14	11.70	23.71	11.40	-0.74	4.13	45.47			
Rank	93	48	N/A	N/A	N/A	N/A	20	59	N/A	N/A	N/A			
Population	162	161	159	153	148	137	173	184	203	213	219			







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



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

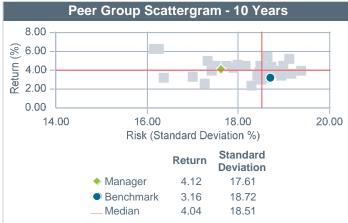


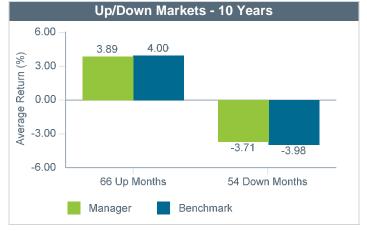


# Manager: International Equity Composite - Retirement

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	2017	2016	2015	2014	2013		
Manager	-0.50	18.83	8.03	7.97	5.56	4.12	29.34	3.09	-1.39	-1.15	19.16		
Benchmark	-1.06	17.10	6.75	6.24	4.52	3.16	27.81	4.41	-4.60	-3.89	15.82		
Difference	0.56	1.73	1.28	1.73	1.04	0.96	1.53	-1.32	3.21	2.74	3.34		
Peer Group Median	-0.32	18.53	7.61	7.19	6.04	4.04	28.59	3.95	-2.60	-2.99	18.71		
Rank	58	44	36	29	71	49	37	68	28	21	45		
Population	99	93	87	71	55	40	90	93	80	46	43		







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



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



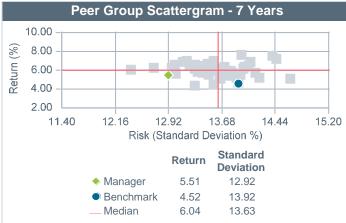
45.00

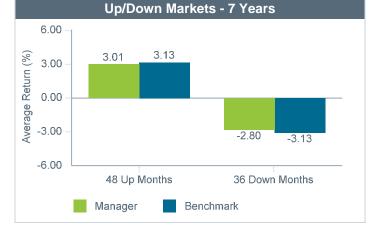
34.52 32.63

# Manager: International Equity Composite - Health

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

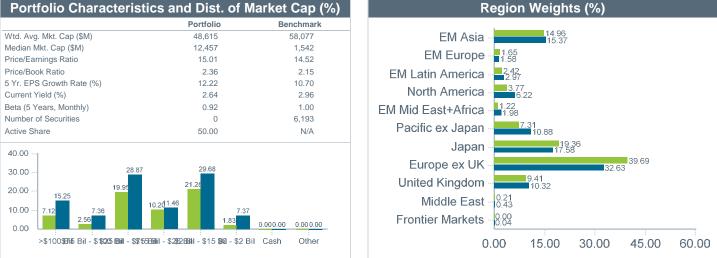
	Performance												
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	-0.47	18.82	8.01	7.89	5.51	N/A	29.29	3.06	-1.40	-1.14	18.81		
Benchmark	-1.06	17.10	6.75	6.24	4.52	3.06	27.81	4.41	-4.60	-3.89	15.82		
Difference	0.59	1.72	1.26	1.65	0.99	N/A	1.48	-1.35	3.20	2.75	2.99		
Peer Group Median	-0.32	18.53	7.61	7.19	6.04	4.04	28.59	3.95	-2.60	-2.99	18.71		
Rank	57	44	38	32	72	N/A	39	69	28	21	50		
Population	99	93	87	71	55	40	90	93	80	46	43		







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



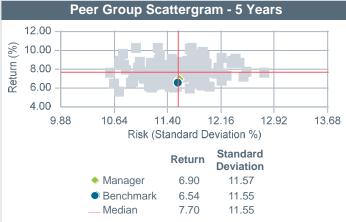
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



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

Benchmark: MSCI Wrld Ex US IM Index (USD) (Net) Peer Group: IM All EAFE (SA+CF)

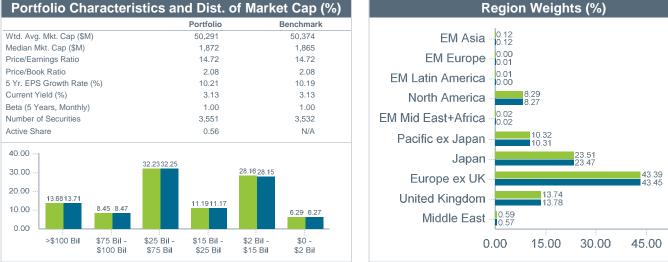
	Performance												
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013		
Manager	-1.86	15.24	6.49	6.90	N/A	N/A	25.71	3.45	-1.62	-4.13	21.90		
Benchmark	-1.81	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	-4.45	21.57		
Difference	-0.05	0.29	0.39	0.36	N/A	N/A	0.54	0.50	0.33	0.32	0.33		
Peer Group Median	-1.28	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	-4.26	24.18		
Rank	74	64	54	73	N/A	N/A	59	21	75	50	71		
Population	166	166	165	161	156	142	182	196	212	209	203		







#### 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.

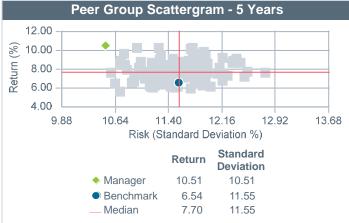


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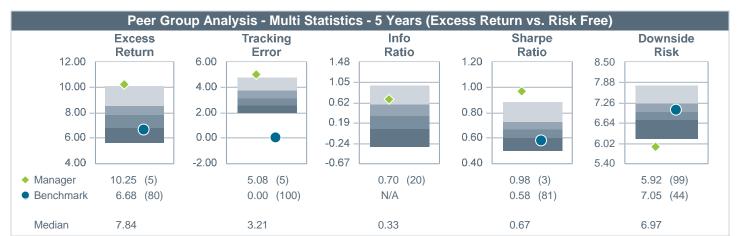
# Manager: MFS Developed Int'l (SA)

# Benchmark: MSCI Wrld Ex US IM Index (USD) (Net) Peer Group: IM All EAFE (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	-0.64	18.61	8.38	10.51	N/A	N/A	27.13	-0.22	7.17	1.31	31.52
Benchmark	-1.81	14.95	6.10	6.54	5.07	3.00	25.17	2.95	-1.95	-4.45	21.57
Difference	1.17	3.66	2.28	3.97	N/A	N/A	1.96	-3.17	9.12	5.76	9.95
Peer Group Median	-1.28	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	-4.26	24.18
Rank	30	25	18	5	N/A	N/A	42	69	6	6	7
Population	166	166	165	161	156	142	182	196	212	209	203





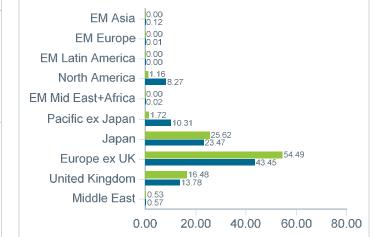


#### Portfolio Characteristics and Dist. of Market Cap (%)





# **Region Weights (%)**

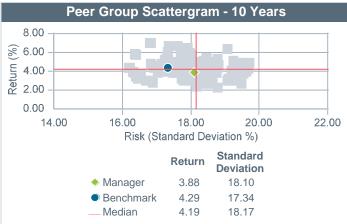


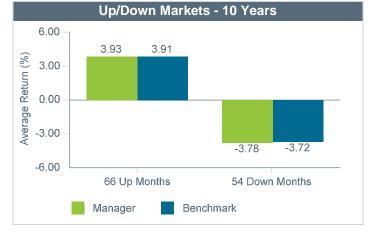
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



# Manager: Fidelity Developed Int'l (SA)

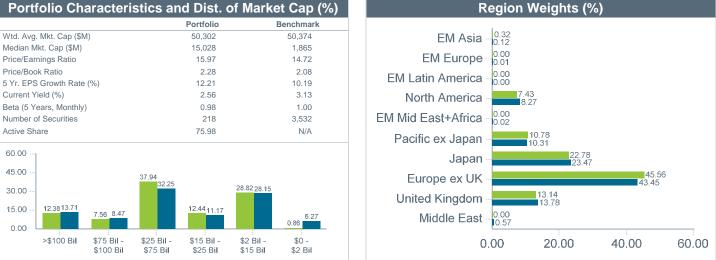
	Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	
Manager	-0.99	16.26	5.98	7.06	5.91	3.88	25.16	-0.70	0.99	-5.94	26.02	
Benchmark	-1.81	14.95	6.10	6.54	5.07	4.29	25.17	2.95	-1.95	-4.45	21.57	
Difference	0.82	1.31	-0.12	0.52	0.84	-0.41	-0.01	-3.65	2.94	-1.49	4.45	
Peer Group Median	-1.28	16.60	6.77	7.70	6.64	4.19	26.38	1.05	1.22	-4.26	24.18	
Rank	40	53	69	69	73	61	65	73	54	80	34	
Population	166	166	165	161	156	142	182	196	212	209	203	







#### 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.



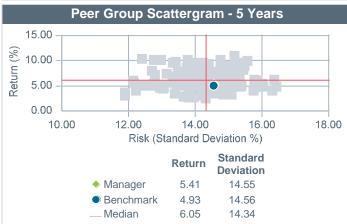
As of March 31, 2018

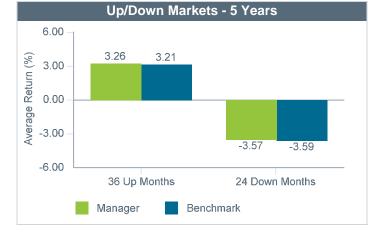


# Manager: LA Capital Emerging (CF)

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

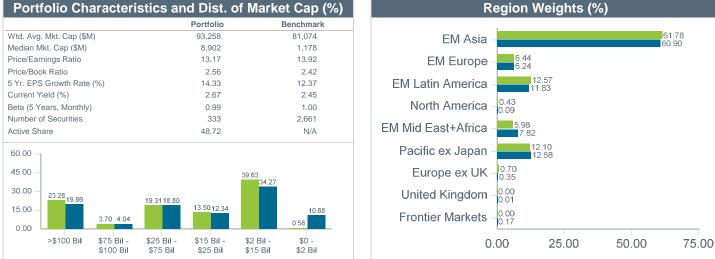
	0 0			,							
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.90	23.85	8.93	5.41	N/A	N/A	37.13	12.18	-15.10	0.24	-1.67
Benchmark	1.25	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	-1.79	-2.20
Difference	-0.35	-0.23	0.34	0.48	N/A	N/A	0.30	2.28	-1.24	2.03	0.53
Peer Group Median	1.81	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	-0.14	0.95
Rank	70	55	64	63	N/A	N/A	50	35	72	47	69
Population	264	263	250	211	158	117	288	304	321	319	303







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



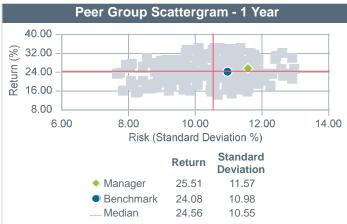
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.

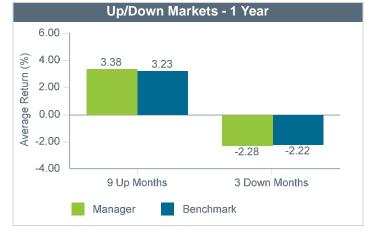


# Manager: Wellington Emerging (SA)

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

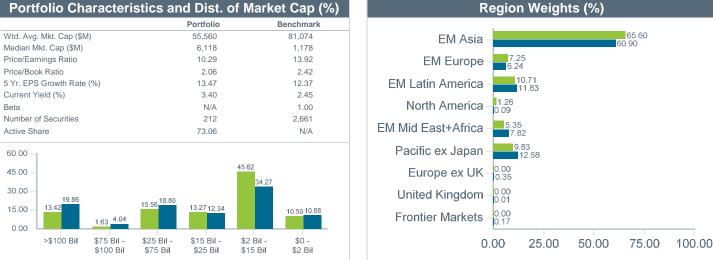
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	1.58	25.51	N/A	N/A	N/A	N/A	41.01	N/A	N/A	N/A	N/A
Benchmark	1.25	24.08	8.59	4.93	2.47	3.22	36.83	9.90	-13.86	-1.79	-2.20
Difference	0.33	1.43	N/A	N/A	N/A	N/A	4.18	N/A	N/A	N/A	N/A
Peer Group Median	1.81	24.56	9.86	6.05	4.48	4.41	37.02	10.08	-12.66	-0.14	0.95
Rank	55	42	N/A	N/A	N/A	N/A	29	N/A	N/A	N/A	N/A
Population	264	263	250	211	158	117	288	304	321	319	303







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



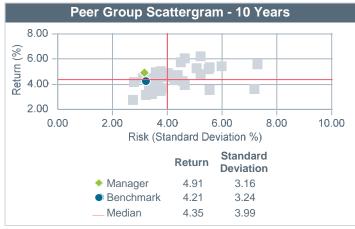
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parenthesis contain percentile ranks.



#### Manager: Fixed Income Composite - Retirement

Peer Group: All Public Plans-US Fixed Income Segment

	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	-0.84	2.58	2.58	2.91	4.13	4.91	4.88	5.00	0.78	6.05	-0.68			
Benchmark	-0.85	1.99	2.39	2.59	3.59	4.21	4.12	5.65	0.11	5.56	-1.35			
Difference	0.01	0.59	0.19	0.32	0.54	0.70	0.76	-0.65	0.67	0.49	0.67			
Peer Group Median	-1.01	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	6.01	-1.39			
Rank	37	34	34	36	35	29	43	40	30	49	37			
Population	99	93	91	78	66	44	86	93	80	49	49			

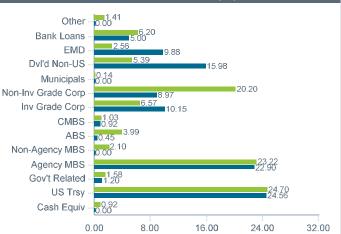






**Portfolio Characteristics** Portfolio **Benchmark** Effective Duration 4.42 N/A Spread Duration 3.62 N/A Avg. Maturity 6.47 6.30 Avg. Quality A2 A2 Yield To Maturity (%) 4.06 3.92 Coupon Rate (%) 4.03 3.67 Current Yield (%) 4 1 1 3.64 Holdings Count 450 N/A

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



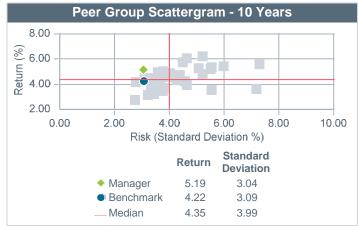
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock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



#### Manager: Fixed Income Composite - Health

Peer Group: All Public Plans-US Fixed Income Segment

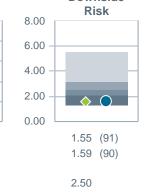
	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	-0.84	2.61	2.56	2.89	4.07	5.19	4.89	4.85	0.83	6.05	-0.82			
Benchmark	-0.85	1.99	2.39	2.59	3.59	4.22	4.12	5.65	0.11	5.56	-1.35			
Difference	0.01	0.62	0.17	0.30	0.48	0.97	0.77	-0.80	0.72	0.49	0.53			
Peer Group Median	-1.01	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	6.01	-1.39			
Rank	37	33	34	36	36	22	43	42	27	49	38			
Population	99	93	91	78	66	44	86	93	80	49	49			

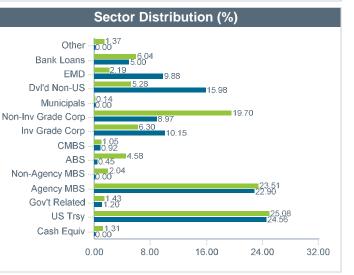




Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free) Tracking Info Sharpe Downside **Excess** Return Error Ratio Ratio Risk 8.00 2.00 8.00 1.88 8.00 6.00 1.32 1.52 6.00 6.00 4.00 0.64 1.16 4.00 4.00 (-0.04 2.00 0.80 2.00 2.00 0.00 -0.72 0.44 0.00 -2.00 -1.40 0.08 0.00 Manager 4.78 (24) 0.74 (100) 1.25 (1) 1.55 (3) 1.55 (91) Benchmark 3.85 (55) 0.00 (100) N/A 1.24 (15) 1.59 (90) 4.00 2.33 0.09 0.98 Median

**Portfolio Characteristics** Portfolio **Benchmark** Effective Duration 4.37 N/A Spread Duration 3.57 N/A Avg. Maturity 5.78 6.30 Avg. Quality A1 A2 Yield To Maturity (%) 4.04 3.92 Coupon Rate (%) 3.99 3.67 Current Yield (%) 4.12 3.64 Holdings Count 438 N/A





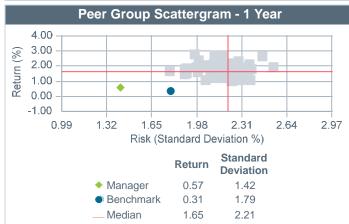
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Composite allocation to Non-Inv Grade Corp may include some Inv Grade Corp and allocation to Agency MBS may include some Non-Agency MBS. Allocation to "Other" consists of Preferred Stock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



#### Manager: JP Morgan Principal Protection (SA)

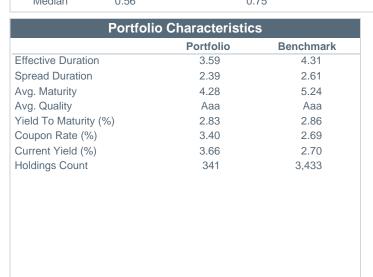
Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

	Performance														
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013				
Manager	-0.66	0.57	N/A	N/A	N/A	N/A	1.86	2.02	N/A	N/A	N/A				
Benchmark	-0.95	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	4.11	-1.27				
Difference	0.29	0.26	N/A	N/A	N/A	N/A	0.06	0.62	N/A	N/A	N/A				
Peer Group Median	-1.37	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	6.16	-1.56				
Rank	6	100	N/A	N/A	N/A	N/A	100	97	N/A	N/A	N/A				
Population	132	132	127	124	120	115	142	157	160	174	186				

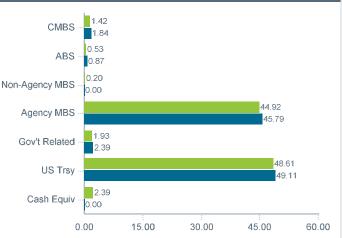




Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free) Excess Tracking Info Sharpe Downside Return Error Ratio Ratio Risk 2.70 1.60 4.06 1.22 2.00 1.91 3.20 1.20 0.80 1.70 1.12 0.80 2.34 0.38 1.40 0.33 0.40 1.48 -0.04  $\bigcirc$ 1.10 -0.46 0.00 0.62 -0.46 ٠ -1.25 -0.40 -0.88 0.80 Manager **-0.52** (100) 0.41 (100) 0.62 (99) -0.36 (100) 0.95 (96) Benchmark **-0.78** (100) 0.00 (100) N/A -0.43 (100) 1.29 (80) 0.56 0.75 0.25 Median 1.77 1.46







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

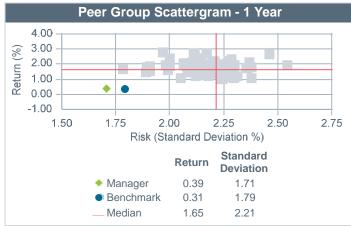


#### Manager: Wells Principal Protection (SA)

Benchmark: Bloomberg US Int Agg Ex Credit

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

	Performance														
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013				
Manager	-0.93	0.39	N/A	N/A	N/A	N/A	1.94	1.86	N/A	N/A	N/A				
Benchmark	-0.95	0.31	0.79	1.25	2.05	2.88	1.80	1.40	1.32	4.11	-1.27				
Difference	0.02	0.08	N/A	N/A	N/A	N/A	0.14	0.46	N/A	N/A	N/A				
Peer Group Median	-1.37	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	6.16	-1.56				
Rank	10	100	N/A	N/A	N/A	N/A	100	98	N/A	N/A	N/A				
Population	132	132	127	124	120	115	142	157	160	174	186				

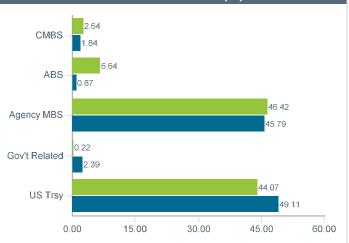






Portfolio Characteristics										
	Portfolio	Benchmark								
Effective Duration	4.34	4.31								
Spread Duration	2.83	2.61								
Avg. Maturity	5.81	5.24								
Avg. Quality	Aaa	Aaa								
Yield To Maturity (%)	3.05	2.86								
Coupon Rate (%)	2.83	2.69								
Current Yield (%)	2.84	2.70								
Holdings Count	448	3,433								

Sector Distribution (%)



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

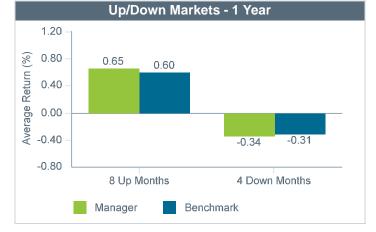


#### Manager: Macquarie Unconstrained (SA)

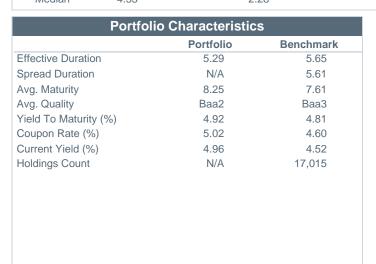
# **Benchmark:** 67% B Global Credit/33% B Global High Yield **Peer Group:** IM Global Fixed Income (SA+CF)

	Performance														
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013				
Manager	-1.72	3.90	N/A	N/A	N/A	N/A	7.86	8.37	N/A	N/A	N/A				
Benchmark	-1.00	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.28	2.58				
Difference	-0.72	0.32	N/A	N/A	N/A	N/A	1.13	-1.67	N/A	N/A	N/A				
Peer Group Median	0.44	5.55	3.57	2.91	3.83	4.09	7.63	5.77	-2.37	2.46	-0.16				
Rank	97	76	N/A	N/A	N/A	N/A	46	35	N/A	N/A	N/A				
Population	219	219	213	189	153	109	230	251	262	264	257				

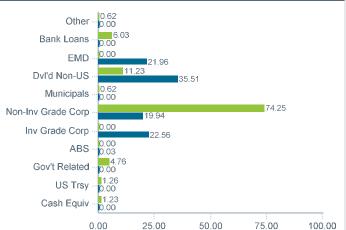








#### Sector Distribution (%)



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

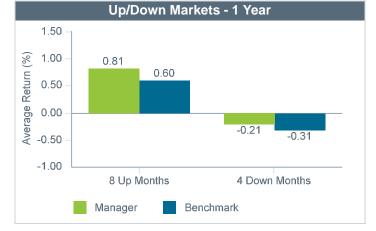


#### Manager: Neuberger Unconstrained (SA)

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

	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	-0.64	5.80	N/A	N/A	N/A	N/A	9.26	9.65	N/A	N/A	N/A			
Benchmark	-1.00	3.58	4.19	4.37	5.63	6.64	6.73	10.04	-0.34	5.28	2.58			
Difference	0.36	2.22	N/A	N/A	N/A	N/A	2.53	-0.39	N/A	N/A	N/A			
Peer Group Median	0.44	5.55	3.57	2.91	3.83	4.09	7.63	5.77	-2.37	2.46	-0.16			
Rank	80	46	N/A	N/A	N/A	N/A	26	31	N/A	N/A	N/A			
Population	219	219	213	189	153	109	230	251	262	264	257			

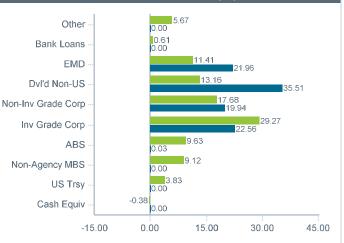






Portfol	io Characteristic	S
	Portfolio	Benchmark
Effective Duration	5.51	5.65
Spread Duration	5.74	5.61
Avg. Maturity	8.23	7.61
Avg. Quality	Ba1	Baa3
Yield To Maturity (%)	5.27	4.81
Coupon Rate (%)	4.84	4.60
Current Yield (%)	4.74	4.52
Holdings Count	846	17,015

#### Sector Distribution (%)

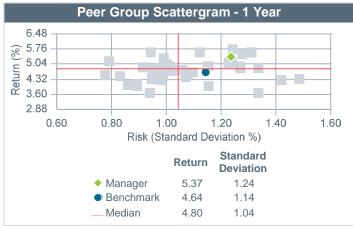


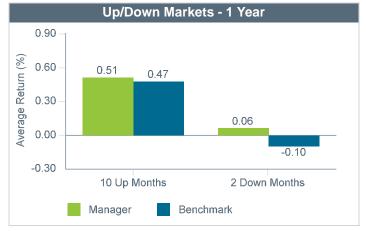
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of CRTs.



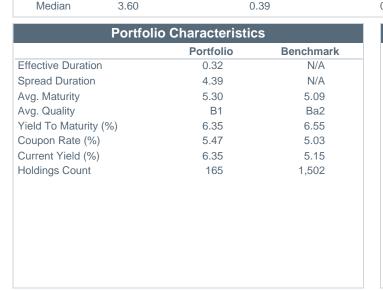
#### Manager: Pacific Asset Bank Loans (SA) Benchmark: CS Lvg'd Loan Index Peer Group: IM U.S. Bank Loans (SA+CF)

Performance 5 1 3 7 10 QTD 2017 2016 2015 2014 2013 Year Years Years Years Years 1.61 5.37 5.48 9.18 N/A N/A N/A Manager N/A N/A N/A N/A Benchmark 1.58 4.64 4.33 4.17 4.52 5.36 4.25 9.88 -0.38 2.06 6.15 Difference 0.03 0.73 N/A N/A N/A N/A 1.23 -0.70 N/A N/A N/A Peer Group Median 1.39 4.80 4.45 4.31 4.88 5.85 4.46 9.51 0.72 2.01 6.29 19 8 58 N/A Rank 14 N/A N/A N/A N/A N/A N/A Population 55 54 53 48 43 26 63 65 68 71 64





Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free) **Excess** Tracking Info Sharpe Downside Return Error Ratio Ratio Risk 5.00 4.00 6.00 1.14 0.60 4.30 0.88 2.00 0.40 4.00 3.60 0.62  $\bigcirc$  $\bigcirc$ 0.00  $\bigcirc$ 0.20  $\diamond$ 2.90 0.36 2.00 -2.00 0.00 2.20 0.10 1.50 -0.16 -4.00 0.00 -0.20 4.15 (19) 0.69 (11) 1.02 (28) 3.38 (47) 0.15 (31) Manager Benchmark N/A 3.45 (61) 0.00 (100) 3.04 (79) 0.15 (31) 0.30 3.35 0.09



**Quality Distribution (%)** 

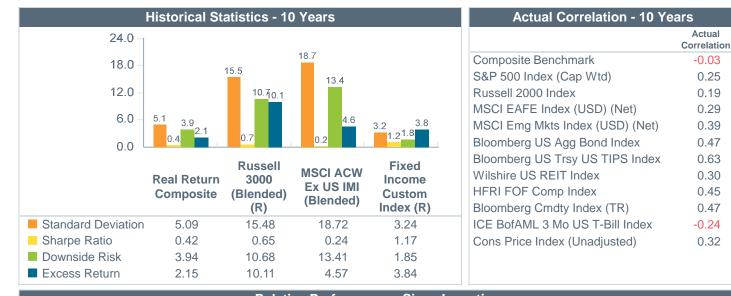


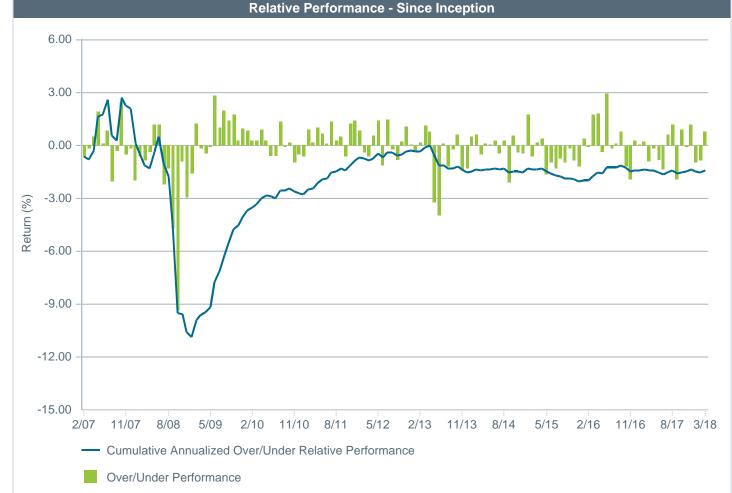
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



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

Dencimark.	encimark. Of 145% (blended)													
	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	0.28	3.86	3.13	1.31	3.19	2.38	4.05	9.90	-2.56	2.21	-4.88			
Benchmark	1.37	5.43	4.93	4.47	4.07	3.91	5.17	5.15	3.68	3.68	4.05			
Difference	-1.09	-1.57	-1.80	-3.16	-0.88	-1.53	-1.12	4.75	-6.24	-1.47	-8.93			





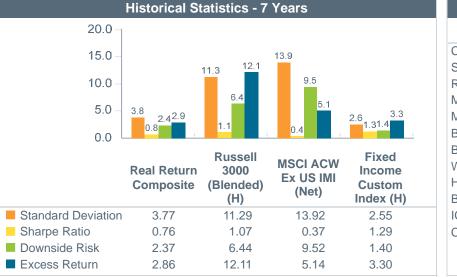
KVK

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

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

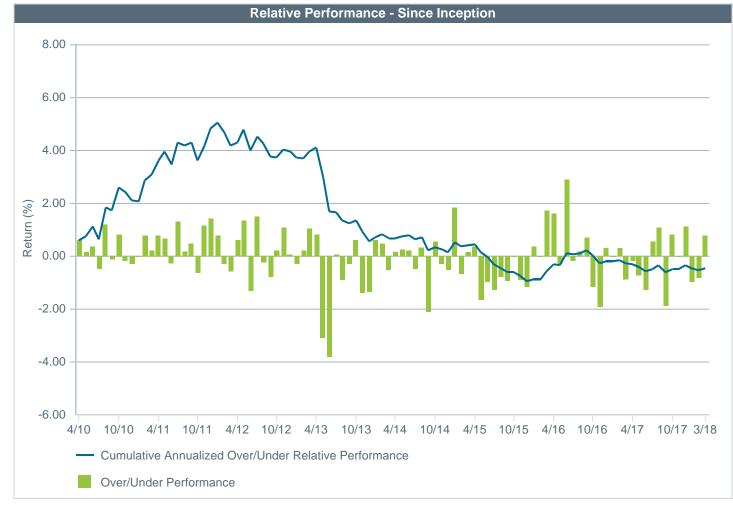
Actual

Deficilitatik.	encimark. Of How (biolace)													
	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	0.33	3.76	2.99	1.34	3.09	N/A	3.97	9.56	-2.58	2.26	-4.45			
Benchmark	1.37	5.43	4.93	4.47	4.07	3.91	5.17	5.15	3.68	3.68	4.05			
Difference	-1.04	-1.67	-1.94	-3.13	-0.98	N/A	-1.20	4.41	-6.26	-1.42	-8.50			



	Correlation
Composite Benchmark	0.08
S&P 500 Index (Cap Wtd)	-0.03
Russell 2000 Index	-0.08
MSCI EAFE Index (USD) (Net)	0.05
MSCI Emg Mkts Index (USD) (Net)	0.24
Bloomberg US Agg Bond Index	0.69
Bloomberg US Trsy US TIPS Index	0.76
Wilshire US REIT Index	0.28
HFRI FOF Comp Index	0.07
Bloomberg Cmdty Index (TR)	0.27
ICE BofAML 3 Mo US T-Bill Index	0.13
Cons Price Index (Unadjusted)	0.05

**Actual Correlation - 7 Years** 





### Manager: Invesco Commodity (CF)

Actual

Correlation

0.90

0.14

0.10

0.18

0.43

0.09

0.35

-0.05

0.16

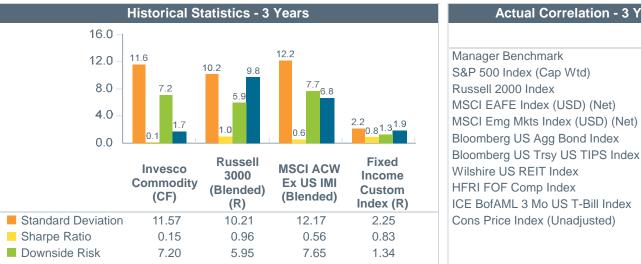
0.25

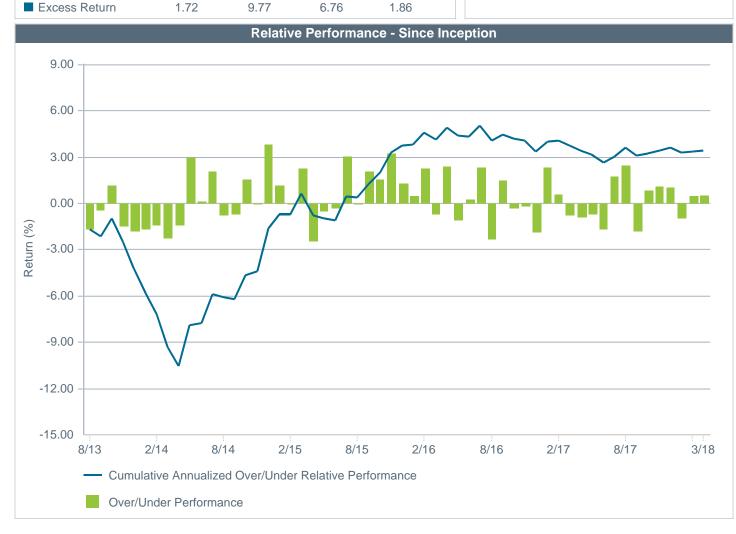
0.28

**Actual Correlation - 3 Years** 

Benchmark: Bloomberg Cmdty Index (TR)

	Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013			
Manager	-0.39	5.89	1.60	N/A	N/A	N/A	6.09	14.61	-15.75	-15.29	N/A			
Benchmark	-0.40	3.71	-3.21	-8.32	-8.77	-7.71	1.70	11.77	-24.66	-17.01	-9.52			
Difference	0.01	2.18	4.81	N/A	N/A	N/A	4.39	2.84	8.91	1.72	N/A			





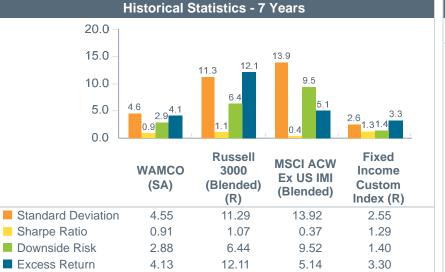
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity.



#### Manager: WAMCO (SA)

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

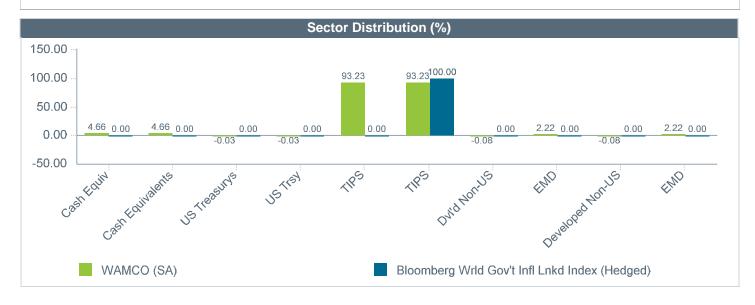
					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	0.40	3.14	3.07	2.72	4.37	N/A	3.33	9.37	-0.22	8.75	-5.64
Benchmark	0.07	2.67	3.24	2.66	4.33	4.24	3.32	10.22	-1.12	9.04	-5.51
Difference	0.33	0.47	-0.17	0.06	0.04	N/A	0.01	-0.85	0.90	-0.29	-0.13



	Actual Correlation
Manager Benchmark	0.97
S&P 500 Index (Cap Wtd)	-0.05
Russell 2000 Index	-0.12
MSCI EAFE Index (USD) (Net)	0.02
MSCI Emg Mkts Index (USD) (Net)	0.15
Bloomberg US Agg Bond Index	0.81
Bloomberg US Trsy US TIPS Index	0.79
Wilshire US REIT Index	0.38
HFRI FOF Comp Index	0.03
Bloomberg Cmdty Index (TR)	-0.06
ICE BofAML 3 Mo US T-Bill Index	-0.01
Cons Price Index (Unadjusted)	-0.10

**Actual Correlation - 7 Years** 

Portfolio Characteristics					
	Portfolio	Benchmark			
Effective Duration	9.08	N/A			
Spread Duration	0.03	N/A			
Avg. Maturity	10.95	11.38			
Avg. Quality	Aa1	Aaa			
Yield To Maturity (%)	2.45	N/A			
Coupon Rate (%)	1.12	N/A			
Yield To Worst (%)	0.43	-0.77			
Current Yield (%)	0.67	N/A			
Holdings Count	52	139			



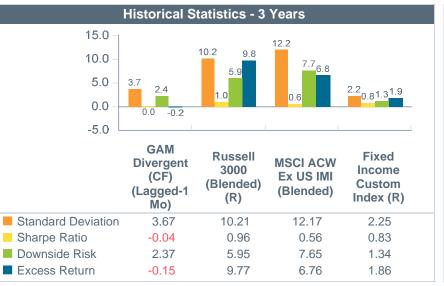
Performance shown is gross of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity. Allocation to "Other" consists of Eurobonds.



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

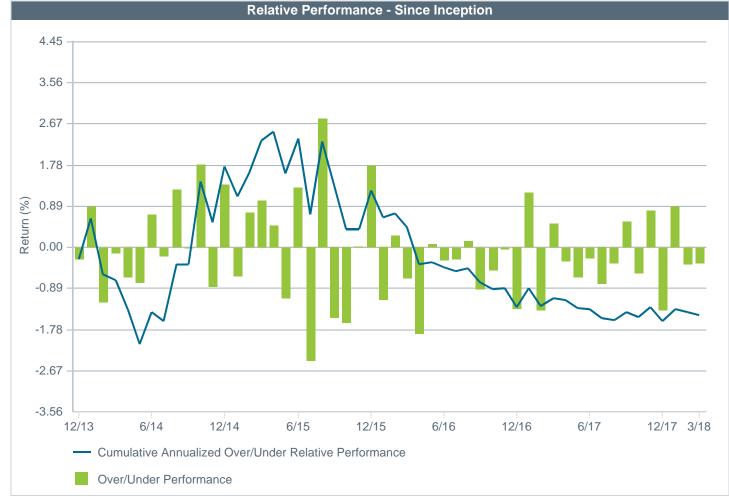
Benchmark: ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)

	-					,,					
					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	1.26	1.24	0.31	N/A	N/A	N/A	1.21	-3.23	3.70	4.82	N/A
Benchmark	1.07	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.05	3.08
Difference	0.19	-2.77	-3.19	N/A	N/A	N/A	-2.60	-6.56	0.68	1.77	N/A



#### Actual Correlation Manager Benchmark 0.01 S&P 500 Index (Cap Wtd) -0.27 Russell 2000 Index -0.11 MSCI EAFE Index (USD) (Net) -0.25 MSCI Emg Mkts Index (USD) (Net) -0.08 Bloomberg US Agg Bond Index -0.39 Bloomberg US Trsy US TIPS Index -0.29 Wilshire US REIT Index -0.39 HFRI FOF Comp Index -0.16 Bloomberg Cmdty Index (TR) 0.03 ICE BofAML 3 Mo US T-Bill Index 0.09 Cons Price Index (Unadjusted) -0.01

**Actual Correlation - 3 Years** 

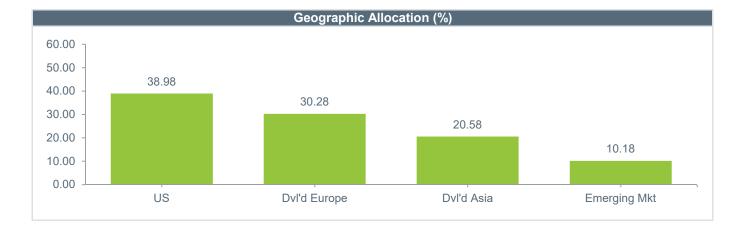


Performance shown is net of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity.



Investment Strategy	Firm Statistics	
The strategy seeks to achieve long term capital appreciation	Year Firm Established	1983
with a diversification of risk. This is sought by allocating the	Firm AUM (\$B)	\$153
Company's assets to one or more Trading Funds managed by	Percentage Employee Owned	15.00%
Trading Advisers who employ a variety of investment techniques and strategies in financial markets worldwide.		
techniques and strategies in inancial markets wondwide.	Fund Statistics	
	Fund Inception	2013
	Fund Size (\$M)	\$99
	Number of Underlying Managers	17
	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.



Macro-Systematic

Relative Value

**YTD Turnover** 

Managed Futures-Trend

Managed Futures-Short

Macro - Discretionary		Allocation (%)
Alphadyne Global Rates II		11.3
LindenGrove		9.7
Karya		7.1
Autonomy Global		6.3
MaxQ Enhanced		4.8
Pharo Trading		5.4
Gemsstock		2.0
Subtotal		46.6
Macro - Systematic		Allocation (%)
QMS Diversified Global Macro		3.4
Two Sigma AR Macro Enhanced		3.1
Two Sigma Compass Enhanced		0.9
Subtotal		7.4
Managed Futures - Trend		Allocation (%)
Winton Futures		6.0
GSA Trend		4.4
Subtotal		10.4
Managed Futures - Short-Term/Active		Allocation (%)
Jefferies Systematic		6.5
Crabel Multi-Product		6.5
Edgestream Nias		6.1
GTS Master Fund		4.0
Subtotal		23.1
Relative Value		Allocation (%)
Laurion Capital		4.2
Subtotal		4.2
Cash and Other		8.4
Turno	over	
Strategy Allocation	New	Terms/Trans
Macro-Discretionary	1	2
Manuel Cristanatia	0	0



0

0

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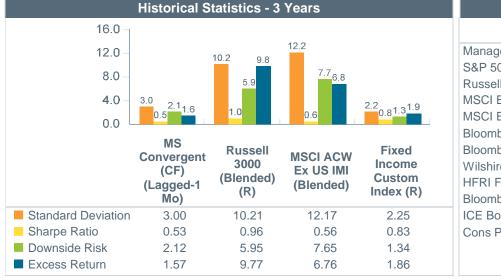
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3

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

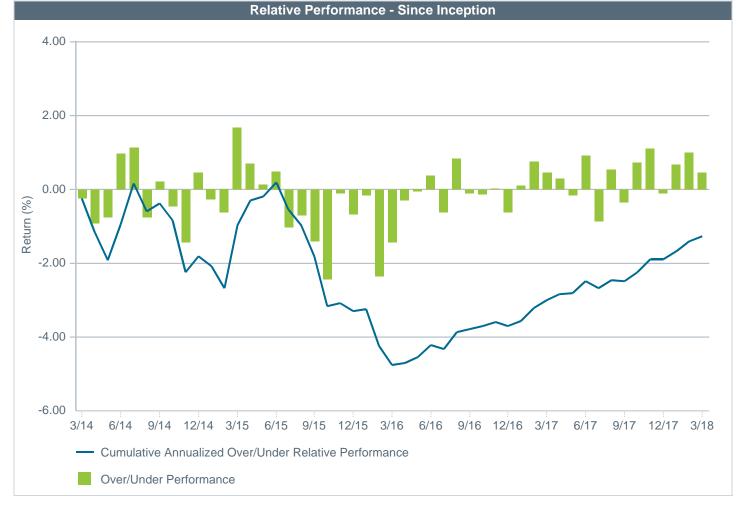
Benchmark: ICE BofAML 3 Mo US T-Bill Index+3% (1 Mo Lag)

					、	,,					
					Perforn	nance					
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013
Manager	3.22	8.47	2.07	N/A	N/A	N/A	7.39	-1.27	-1.34	N/A	N/A
Benchmark	1.07	4.01	3.50	3.32	3.26	3.36	3.81	3.33	3.02	3.05	3.08
Difference	2.15	4.46	-1.43	N/A	N/A	N/A	3.58	-4.60	-4.36	N/A	N/A





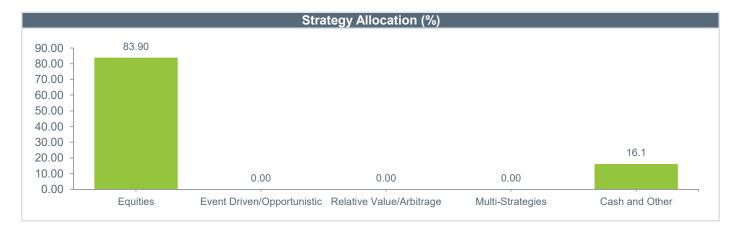
**Actual Correlation - 3 Years** 

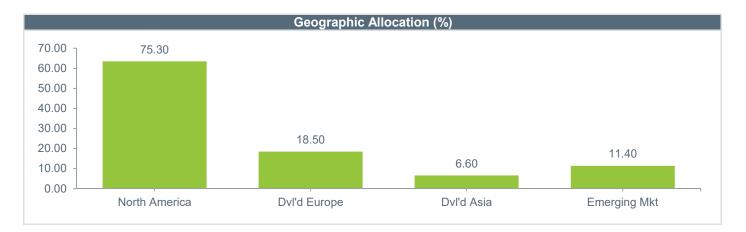


Performance shown is net of fees and representative of the Retirement Plan. Calculation is based on monthly periodicity.



Investment Strategy	Firm Statistics	
Morgan Stanley AIP seeks to provide superior	Year Firm Established	2000
performance with minimal prinicipal loss over a	Firm AUM (\$B)	\$23
complete investment cycle. The fund attempts to	Percentage Employee Owned	0.00%
achieve its objective principally through investing in a		
diversified portfolio of investment funds managed by	Fund Statistics	
third party investment strategies who employ a variety	Fund Inception	2014
of investment strategies.	Fund Size (\$M)	\$8
	Number of Underlying Managers	1
	Maximum Weighting of an Underlying Manager	100%
	Current Leverage (Assets/Equity)	None
	Annual Manager Turnover	11.00%
	Annual Management Fee	0.00%
	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.



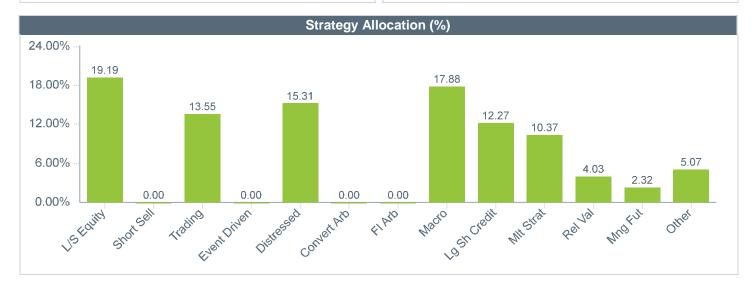
Equity L/S Opportunistic	Allocation (%)
Subtotal	0.0
Event Driven Equity	Allocation (%)
Subtotal	0.0
Equity L/S High Hedge	Allocation (%)
Millennium International, Ltd.	83.9
Subtotal	83.9
Statistical Arbitrage	Allocation (%)
Subtotal	0.0
Mortgage Arbitrage	Allocation (%)
Subtotal	0.0
Multi Strategy	Allocation (%)
Subtotal	0.0
Cash and Other	16.1

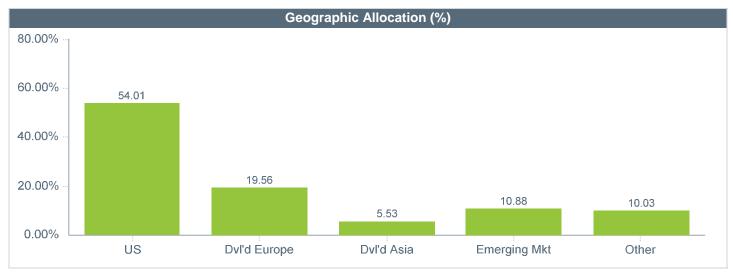
#### Turnover

Strategy Allocation	New	Terms/Trans
Equity L/S Opportunistic	3	11
Event Driven Equity	0	2
Equity L/S High Hedge	0	4
Statistical Artbitrage	0	4
Mortgage Arbitrage	0	3
Multi Strategy	0	3
Cash and Other	0	0
YTD Turnover	3	27



Firm Statistics	
Year Firm Established	1990
Firm AUM (\$M)	75,091
Percentage Employee Owned %	48.00
Fund Statistics	
Fund Inception	2017
Fund Size(\$M)	501
Number of Underlying Managers	33
Maximum Weighting of an Underlying Manager %	7.20
Current Leverage (Assets/Equity)	3.80
Annual Manager Turnover %	N/A
Annual Management Fee %	0.60
Performance Fee %	12.00
Hurdle %	4.40
Initial Lock-Up Periods	No
Redemption Frequency	Daily
Notification Period	60 Days
	Year Firm Established Firm AUM (\$M) Percentage Employee Owned % Fund Inception Fund Size(\$M) Number of Underlying Managers Maximum Weighting of an Underlying Manager % Current Leverage (Assets/Equity) Annual Manager Turnover % Annual Management Fee % Performance Fee % Hurdle % Initial Lock-Up Periods Redemption Frequency





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



#### Water and Power Employees' Retirement Plan Blackstone Hope Street Fund LP (CF) Underlying Manager Allocations

Equities	Allocation (%)
HealthCor, L.P.	3.5
Glenview Inst Ptr LP	3.0
PointState Fund LP	2.1
Alyeska 2 LP	4.7
Covalis Enhanced LP	3.4
Renaissance RIDA LLC	4.9
Trexquant LP	3.5
BlackRock GlobAlp LP	2.6
Squarepoint Focus LP	1.7
Two Sig RP En CSP LP	1.2
Squarepoint Core LP	0.9
GSA QMS LP	0.5
Subtotal	32.0
	02.0
Credit	Allocation (%)
EJF Debt Opps II LP	3.0
Lion Point LP	2.9
SilverRock CSP LP	2.8
Varde Skyway L.P.	5.5
Solus Sola LLC(1)	3.4
Contrarian CSP LP	3.4
Bayview RMBS LP	5.8
Shelter Growth OppLP	4.0
Good Hill Ptnr LP	3.9
EMSO Rose Ltd.	5.1
Subtotal	39.7
Multi-Strategies	Allocation (%)
Magnetar Andrmda LLC(1)	5.5
Elliott Assocs LP	2.3
Subtotal	7.9
oubtotal.	1.9
Масго	Allocation (%)
FI Trading Pod LP	14.6
GSA Trend SMA CSP LP	2.1
Subtotal	16.7
Event Driven/Opportuniatio	Allesstice (0/)
Event Driven/Opportunistic	Allocation (%)
Parallel Investments BSOF Feeder LP-Mgr & Parallel	2.95
	0.5
Subtotal	3.4
	0.3

Strategy Allocation	New	Terms/Trans
Equities	5	0
Credit	3	0
Multi-Strategies	0	0
Macro	0	0
Event Driven/Opportunistic	1	0
Cash and Other	0	0
YTD Turnover	9	0

Turnover



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



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

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



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

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



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

Time Period	Asset Class	Target	Change	Policy Benchmarks
12/1/2017 - Present	Domestic Equity	33.00%	-1.25%	Russell 3000
(Updated Interim	International Equity	19%	-	MSCI ACWI ex U.S. IMI
Targets)	Fixed Income	26.00%	-2.75%	Fixed Income Custom Index (H)
	Real Return	5%	-	CPI+3%
	Hedge Funds	5%	+3%	T-Bill + 3% Lag
	Real Estate	6%	+1%	NCREIF + 0.5% Lag
	Private Equity	5%	-	Russell 3000 + 3% Lag
	Cash	1%	-	T-Bill
2/1/2016 - Present	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 - 0/31/2013	International Equity	21%	-	MSCI ACWI ex U.S. IMI
	Fixed Income	24%	-	B Universal
	Covered Calls	5%	-	CBOE BXM
	Real Estate	5%	_	
	Private Equity	5%	_	NCREIF + 0.5% Lag Russell 3000 + 3% Lag
	Real Return	6%	_	CPI+3%
	Cash	1%	-	T-Bill
7/1/2013 - 9/30/2014		33%	-2%	Russell 3000
7/1/2013 - 9/30/2014	Domestic Equity			
	International Equity Fixed Income	21% 24%	-2%	MSCI ACWI ex U.S. IMI
				B Universal
	Covered Calls	5%	-	
	Real Estate	5%	+2%	NCREIF + 0.5% Lag
	Private Equity	5%	+2%	Russell 3000 + 3% Lag
	Real Return	6%	-	CPI + 3% Lag
4/4/0040_0/20/2042	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%	
	Real Estate	3%	+2%	NCREIF + 0.5% Lag
	Private Equity	3%	+2%	Russell 3000 + 3% Lag
	Real Return	6%	+1%	T-Bill + 3% Lag
	Cash	1%	-	T-Bill
10/1/2011-3/31/2012	Domestic Equity	36%	+2%	Russell 3000
	International Equity	20%	+2%	MSCI ACWI ex U.S. IMI
	Fixed Income	36%	-6%	B Universal
	Real Estate	1%	+1%	NCREIF + 0.5% Lag
	Private Equity	1%	-	Russell 3000 + 3% Lag
	Real Return	5%	+2%	T-Bill + 3% Lag
	Cash	1%	-1%	T-Bill



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

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

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

Manager	Mandate	Funded	Terminated
	2018	Pundeu	Tommatou
Torchlight Debt Opp VI	Real Estate	1Q 2018	
Toronight Dobt opp VI	2017	10,2010	
LaSalle Asia V	Real Estate	4Q 2017	
Blackstone Hope St. LP	Hedge Fund	3Q 2017	
EnCap XI Silver Lake V	Private Equity Private Equity	3Q 2017 1Q 2017	
CD&R X	Private Equity	1Q 2017	
CDarra	2016	10/2017	
FPA Core Plus III	Real Estate	4Q 2016	
Adams Street SMB I	Private Equity	4Q 2016	
Wellington Emerging	Emerging Markets	3Q 2016	
DRA G&I IX	Real Estate	3Q 2016	
Industry Ventures VIII	Private Equity	2Q 2016	
Industry Ven SP Opp III-A	Private Equity	2Q 2016	
Lone Star V	Real Estate	2Q 2016	
Mesa West IV	Real Estate	1Q 2016	
Westbrook X	Real Estate	1Q 2016	
Vista VI	Private Equity	1Q 2016	
	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) Neuberger Unconstrained (SA)	Extended Credit Extended Credit	3Q 2015 3Q 2015	
Pacific Asset Bank Loans (SA)	Bank Loans	3Q 2015	
Harrison Street Core	Real Estate	3Q 2015	
Jamestown Premier	Real Estate	2Q 2015	
Lone Star IV	Real Estate	2Q 2015	
Blackstone Tactical Opps	Private Equity	2Q 2015	
EnCap X	Private Equity	1Q 2015	
	2014		
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 Private Equity	1Q 2014	
Apollo VIII Morgan Stanley	Hedge Fund	1Q 2014 1Q 2014	
Brep Europe IV	Real Estate	1Q 2014	



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

Manager	Mandate	Funded	Terminated
	2013		
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		
Vontobel	Emerging Markets	4Q 2012	3Q 2016
AresCorp. Opp. IV	Private Equity	4Q 2012	
Bristol Value II	Real Estate	4Q 2012	
ARS VI	Real Estate	3Q 2012	
Blackstone	Real Estate	3Q 2012	
PCCP	Real Estate	3Q 2012	
L.A. Capital	Emerging Markets	3Q 2012	
MFS	Developed International	3Q 2012	
BlackRock	Developed International	3Q 2012	
Gateway (non-replication)	Covered Calls	2Q 2012	1Q 2016
Gateway (replication)	Covered Calls	2Q 2012	1Q 2016
AG Core	Real Estate	1Q 2012	
	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	
	2010	00.0040	
WAMCO	GILS	2Q 2010	00.0045
JP Morgan	Core Fixed Income	2Q 2010	3Q 2015
Frontier	Small Cap Growth	2Q 2010	4Q 2015
T. Rowe Price	Large Cap Growth	2Q 2010	
Lexington VIII	Private Equity	1Q 2010	
Mesa West	Real Estate	1Q 2010	
Oaktree V	2009	10 2000	
	Private Equity 2008	1Q 2009	
Landmark XIV	Private Equity	3Q 2008	
CB Richard Ellis	Private Equity	2Q 2008	Q3 2016
Fisher Lynch	Real Estate	2Q 2008	QU 2010
HRJ	Private Equity	1Q 2008	
	2007	10/2000	
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
1000		19,2001	202010



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

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



Strategy	Definition
<b>Relative Value</b>	
Convertible Arbitrage	Seeks to profit from pricing anomalies between a company's convertible securities and its equity. A manager buys the convertible instrument (often a bond) and sells short the common stock.
Fixed Income/Credit Arbitrage	Exploits pricing inefficiencies between fixed income securities with similar characteristics, such as corporate vs. Treasury yield spreads. Offsetting long and short positions typically neutralize exposure to interest rate risk, isolating the pricing discrepancy.
Equity Market Neutral	Exploits relative pricing inefficiencies between equity securities while neutralizing market exposure. Typically the net (total long and short) portfolio exposure is balanced so that there is no directional bias to equity sectors or styles.
<b>Event Driven</b>	
Risk/Merger Arbitrage	Invests in the shares of companies involved in mergers, acquisitions, and LBOs. A common merger arbitrage strategy is to buy the equity of the "target" and sell short the equity of the "acquirer," making a profit if the deal outcome (and timing) is in line with the manager's positioning.
Distressed Securities	Managers pursuing this strategy invest in bank debt, corporate debt, trade claims, common stock, and warrants of companies either in bankruptcy or having financial or operational issues. The goal is to anticipate how corporate events (such as bankruptcies, reorganizations, distressed sales, and restructurings to reverse negative trends) will impact the underlying securities.
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 12/31/2014.

#### Custom Index Comments

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

#### **Miscellaneous Comments**

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



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

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

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

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

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

<u>S&amp;P</u>	Moody's	Explanation	<u>S&amp;P</u>	Moody's	Explanation
Higher Credit Quality – Investment Grade				Credit Quali	ity – 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	
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
			С	Ca	
			D	С	In default

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

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

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

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

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

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

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

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

#### **Capital Markets Review -**

Breakeven Inflation - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the 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."

Cash Flow Effect - The composite's active return minus the sum of each managers' active return minus the benchmark effect.

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Convexity - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

Coupon Rate - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

Current Yield - The annual income of a security divided by the security's current price.

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

**Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.

Earnings Per Share - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

Effective Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield.

Excess Return vs. Market - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

**Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

Excess Risk - A measure of the standard deviation of a portfolio's performance relative to the risk free return.

Expense Ratios - Morningstar is the source for mutual fund expense ratios.

Gain/Loss - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.

Information Ratio - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

Liability Driven Investing (LDI) - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

Estimated Funded Status - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

Estimated PV of Liabilities - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report. Duration of Liabilities - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary. Duration of Assets - The dollar-weighted average duration of all the individual Plan assets.

**Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

Modified Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.



**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.

Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

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

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

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

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

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

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

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



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

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

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

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

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

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

<u>Alpha</u> 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., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

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

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

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

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



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