

# FUND EVALUATION REPORT

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## San Jose Federated City Employees' Retirement System

Quarterly Review  
March 31, 2018



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M E K E T A   I N V E S T M E N T   G R O U P

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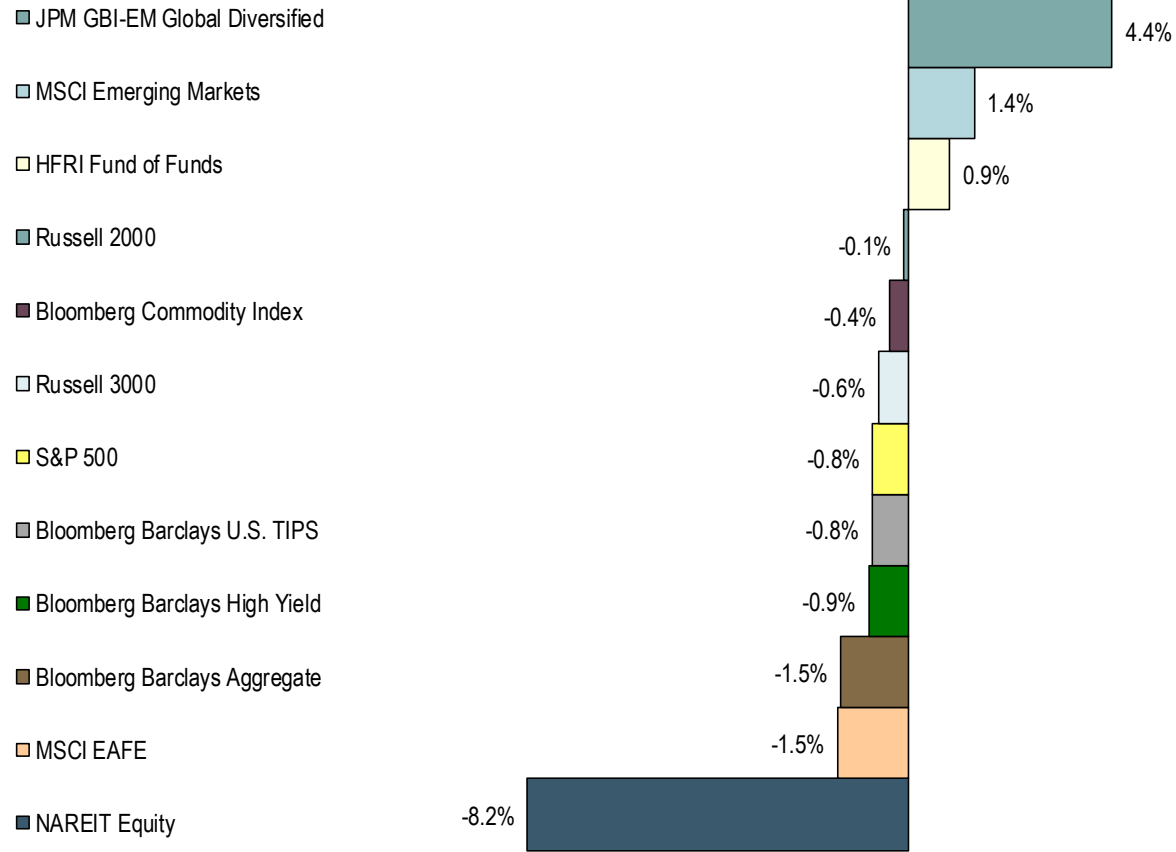
Data is provided for informational purposes only, may not be complete, and cannot be relied upon for any purpose other than for discussion.

Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

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**The World Markets  
First Quarter of 2018**

## The World Markets<sup>1</sup> First Quarter of 2018



<sup>1</sup> Source: InvestorForce.

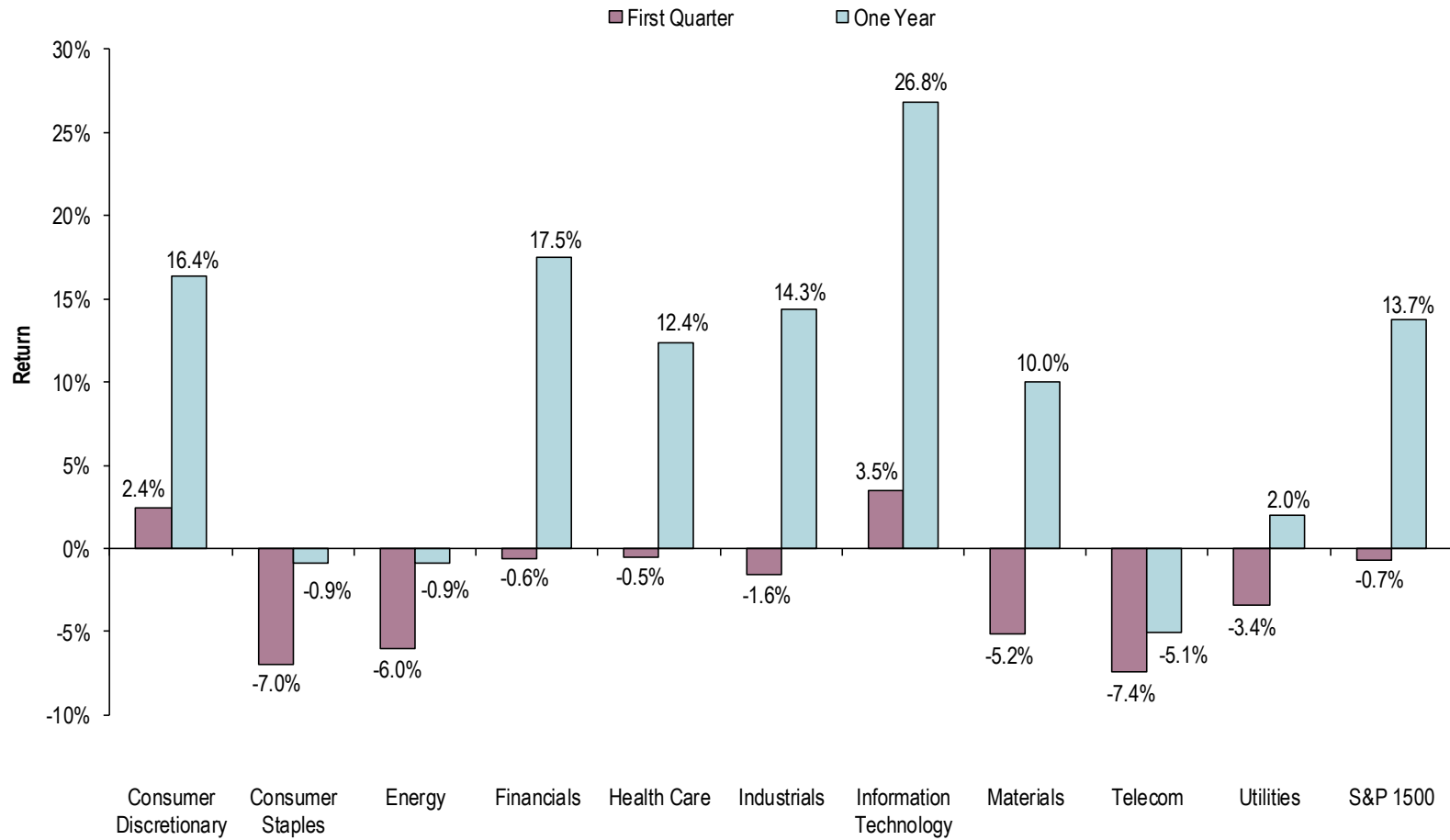


Index Returns<sup>1</sup>

	1Q18 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Domestic Equity</b>					
Russell 3000	-0.6	13.8	10.2	13.0	9.6
Russell 1000	-0.7	14.0	10.4	13.2	9.6
Russell 1000 Growth	1.4	21.3	12.9	15.5	11.3
Russell 1000 Value	-2.8	6.9	7.9	10.8	7.8
Russell MidCap	-0.5	12.2	8.0	12.1	10.2
Russell MidCap Growth	2.2	19.7	9.2	13.3	10.6
Russell MidCap Value	-2.5	6.5	7.2	11.1	9.8
Russell 2000	-0.1	11.8	8.4	11.5	9.8
Russell 2000 Growth	2.3	18.6	8.8	12.9	11.0
Russell 2000 Value	-2.6	5.1	7.9	10.0	8.6
<b>Foreign Equity</b>					
MSCI ACWI (ex. U.S.)	-1.2	16.5	6.2	5.9	2.7
MSCI EAFE	-1.5	14.8	5.6	6.5	2.7
MSCI EAFE (Local Currency)	-4.3	5.3	3.4	8.5	4.5
MSCI EAFE Small Cap	0.2	23.5	12.3	11.1	6.5
MSCI Emerging Markets	1.4	24.9	8.8	5.0	3.0
MSCI Emerging Markets (Local Currency)	0.7	22.0	9.0	8.3	5.4
<b>Fixed Income</b>					
Bloomberg Barclays Universal	-1.4	1.5	1.7	2.2	4.0
Bloomberg Barclays Aggregate	-1.5	1.2	1.2	1.8	3.6
Bloomberg Barclays U.S. TIPS	-0.8	0.9	1.3	0.0	2.9
Bloomberg Barclays High Yield	-0.9	3.8	5.2	5.0	8.3
JPM GBI-EM Global Diversified	4.4	12.9	5.4	-0.7	3.7
<b>Other</b>					
NAREIT Equity	-8.2	-4.5	1.1	5.9	6.4
Bloomberg Commodity Index	-0.4	3.7	-3.2	-8.3	-7.7
HFRI Fund of Funds	0.9	6.2	2.1	3.5	1.6

<sup>1</sup> Source: InvestorForce.

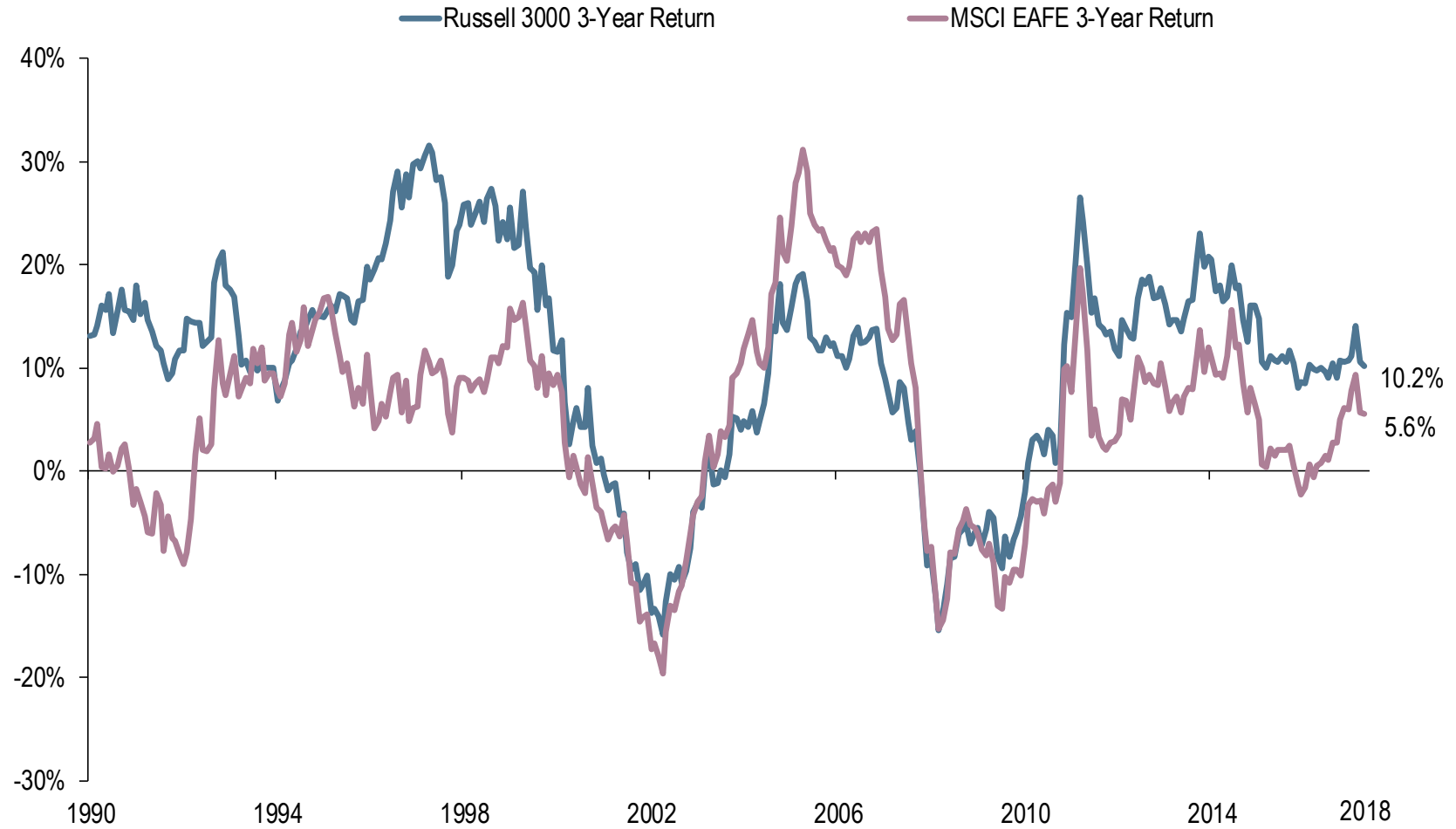
### S&P Sector Returns<sup>1</sup>



<sup>1</sup> Source: InvestorForce. Represents S&P 1500 (All Cap) data.



### U.S. and Developed Market Foreign Equity Rolling Three-Year Returns<sup>1</sup>

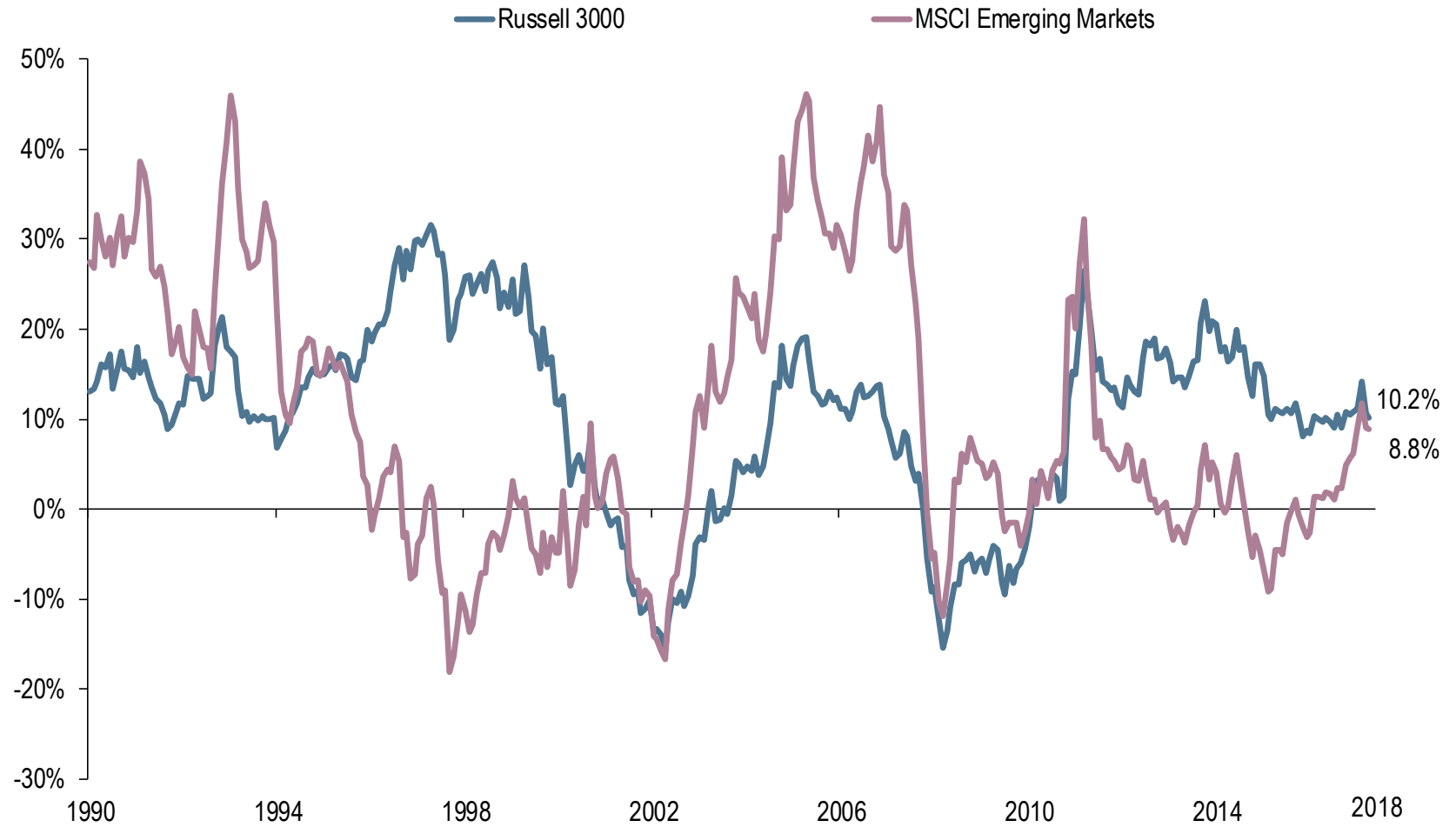


<sup>1</sup> Source: InvestorForce.





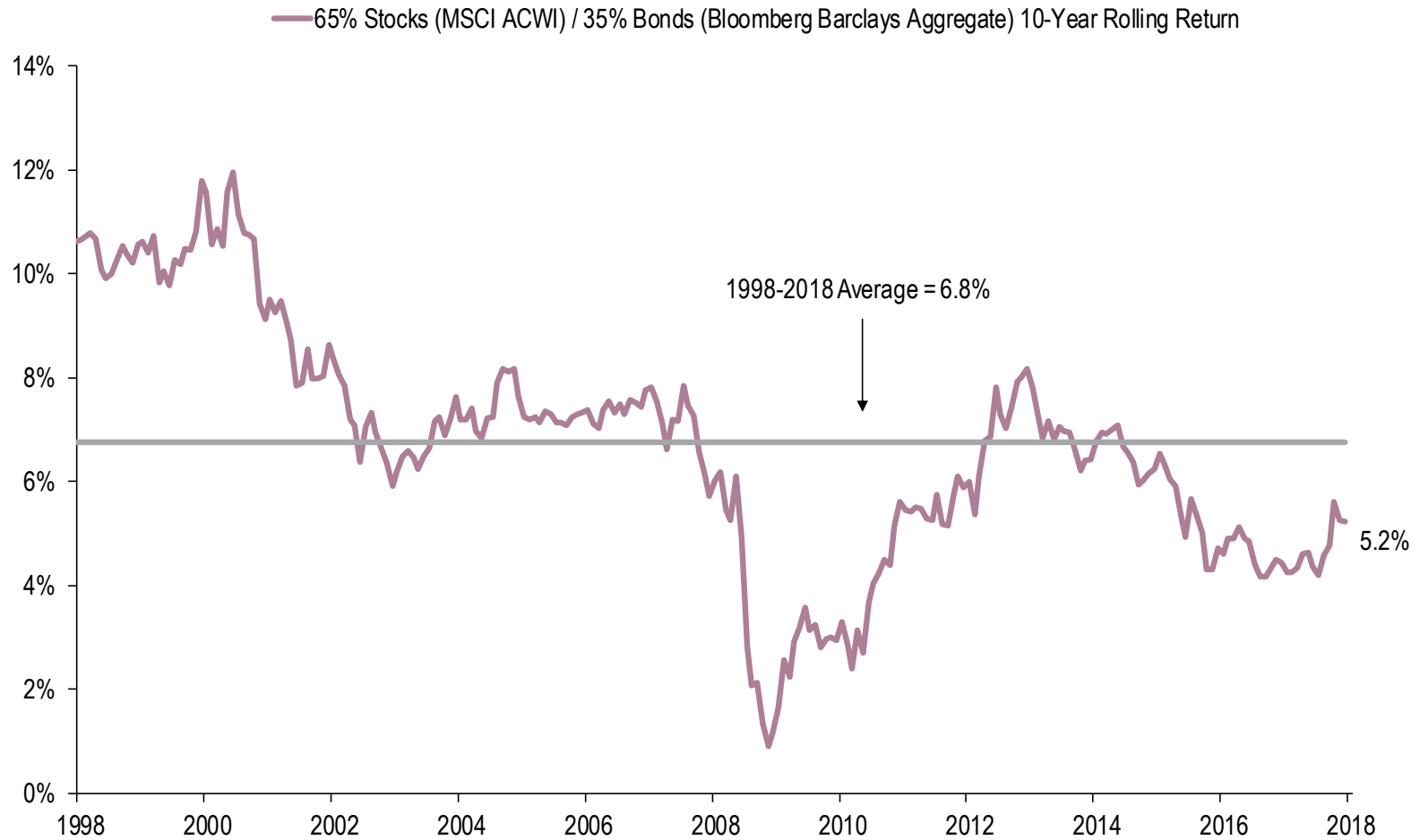
### U.S. and Emerging Market Equity Rolling Three-Year Returns<sup>1</sup>



<sup>1</sup> Source: InvestorForce.



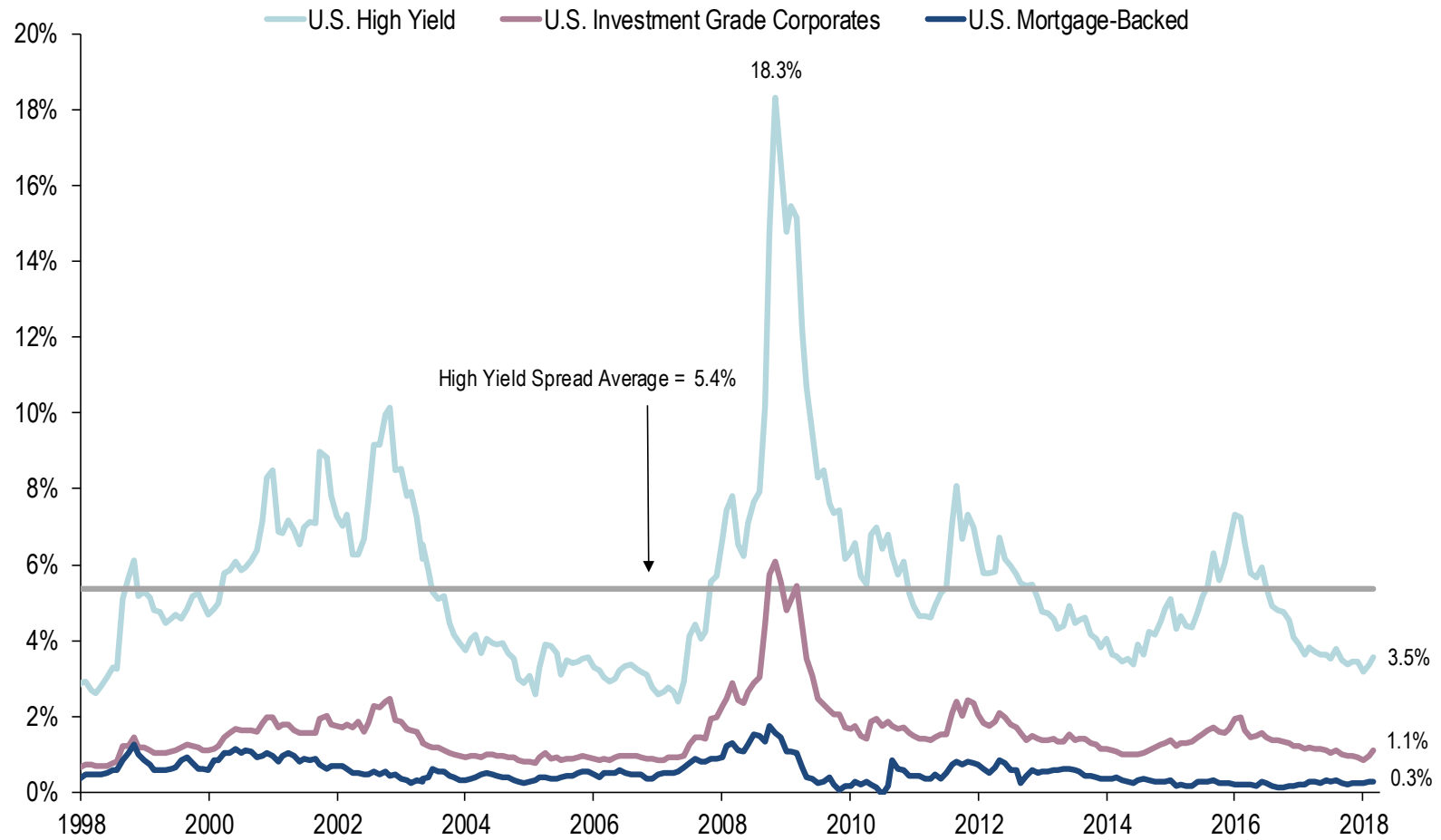
## Rolling Ten-Year Returns: 65% Stocks and 35% Bonds<sup>1</sup>



<sup>1</sup> Source: InvestorForce.



### Credit Spreads vs. U.S. Treasury Bonds<sup>1,2</sup>

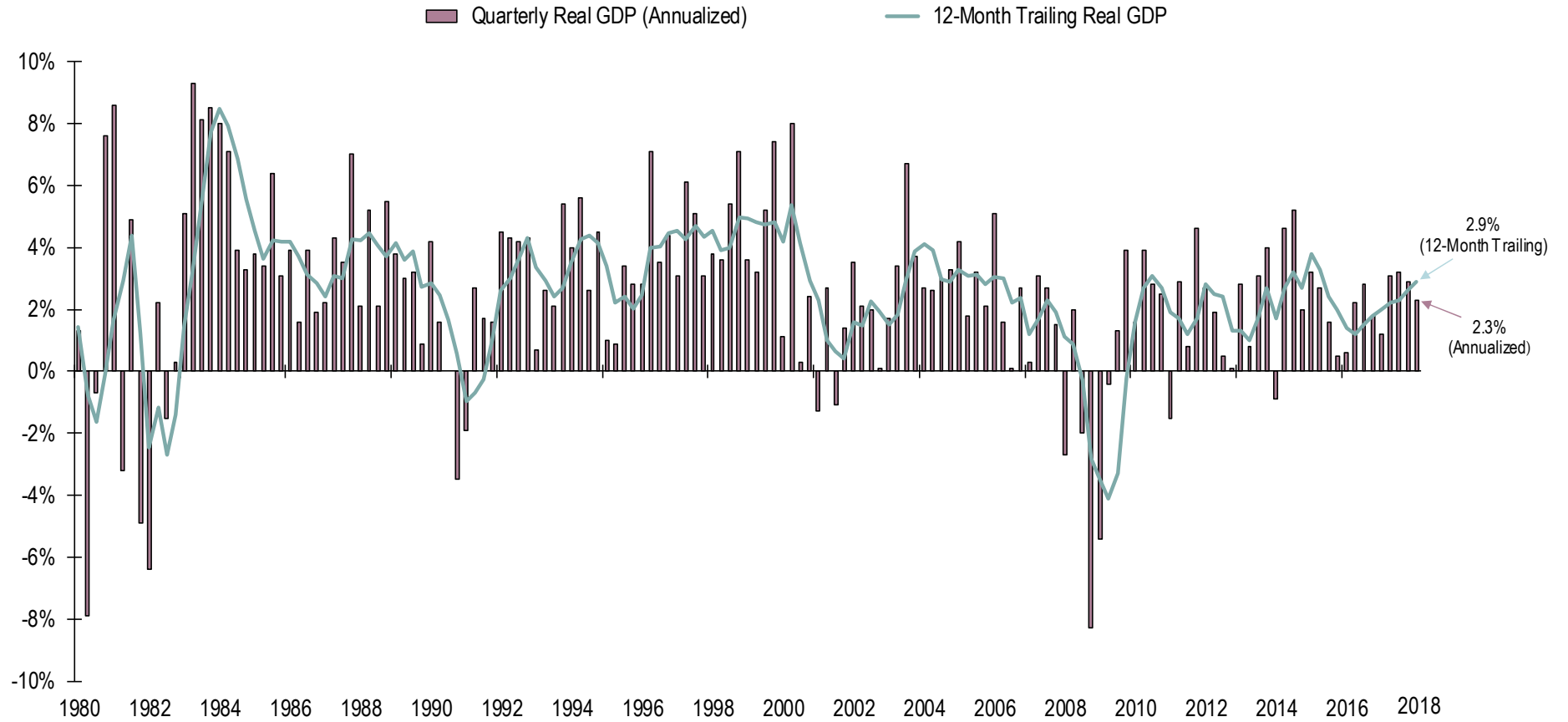


<sup>1</sup> Source: Barclays Live.

<sup>2</sup> The median high yield spread was 4.9% from 1997-2018.



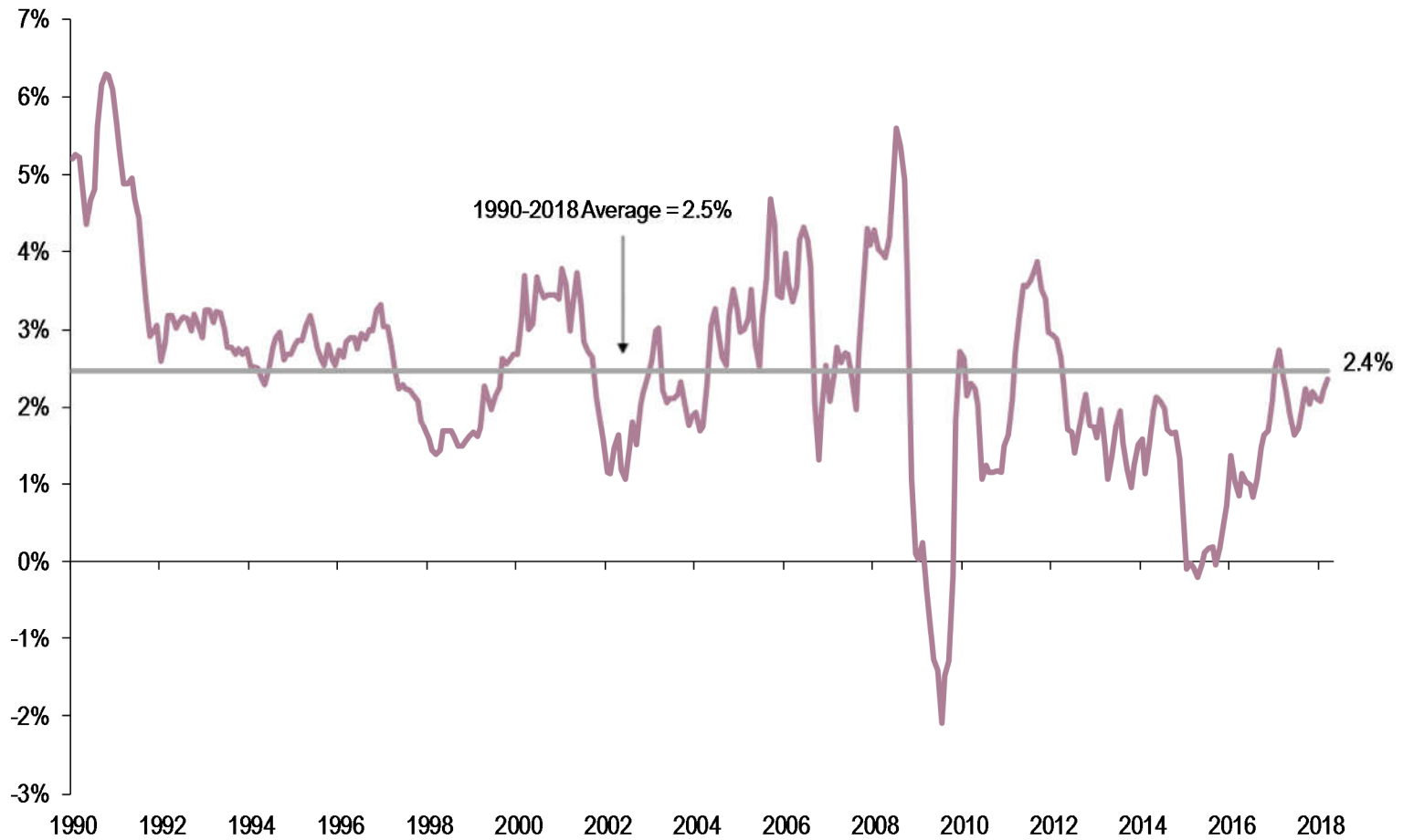
### U.S. Real Gross Domestic Product (GDP) Growth<sup>1</sup>



<sup>1</sup> Source: Bureau of Economic Analysis. Data is as of Q1 2018 and represents the first estimate.



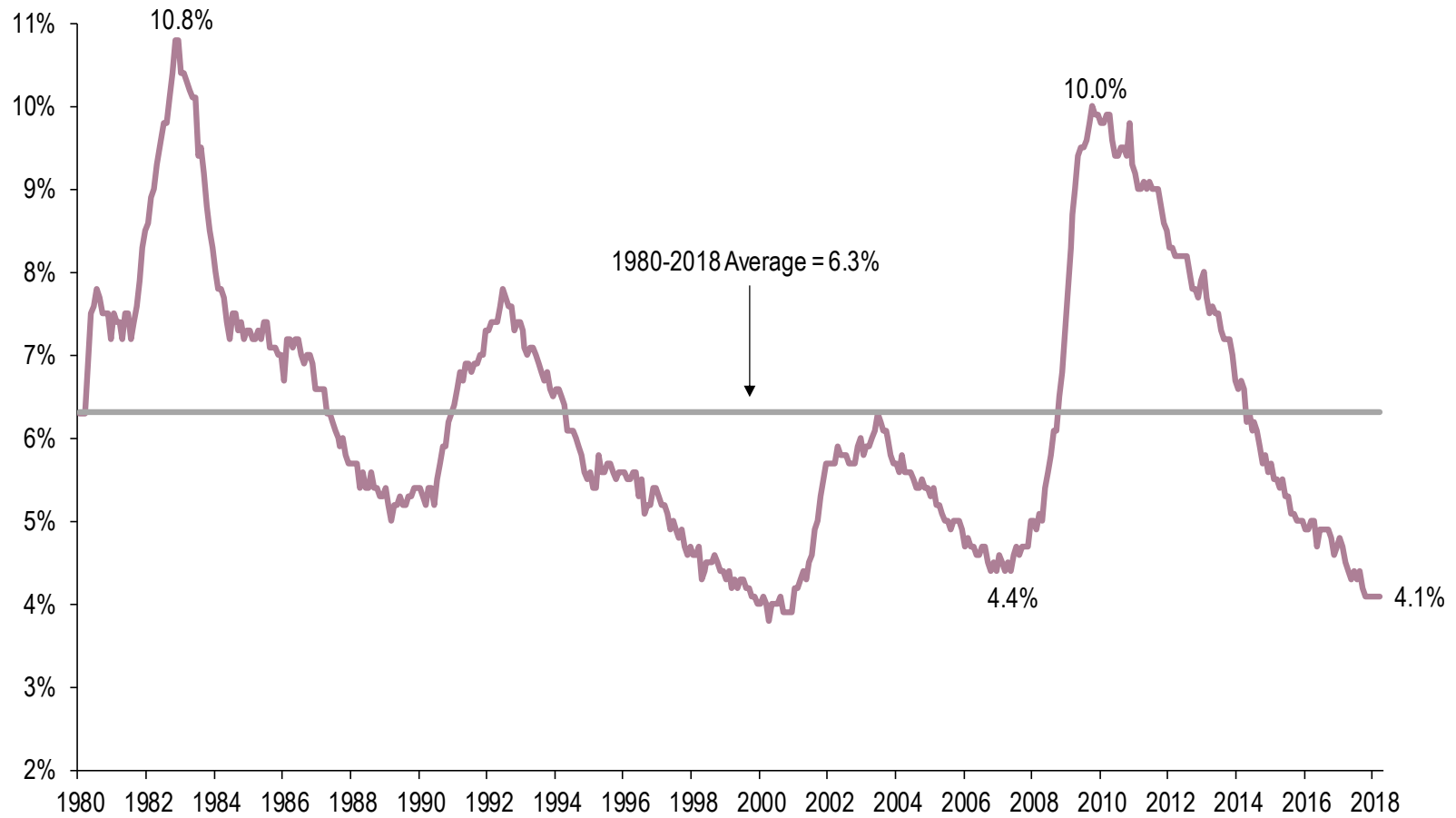
### U.S. Inflation (CPI) Trailing Twelve Months<sup>1</sup>



<sup>1</sup> Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of March 31, 2018.



### U.S. Unemployment<sup>1</sup>



<sup>1</sup> Source: Bureau of Labor Statistics. Data is as of March 31, 2018.



**Executive Summary  
As of March 31, 2018**

**The value of the San Jose Federated City Employees' Retirement System assets was \$2,119.7 million on March 31, 2018, a decrease of approximately \$51.0 million from the end of the prior quarter. The System had net cash outflows of \$51.9 million during the quarter.**

- The Retirement System's net of fees performance for the quarter was +0.0%, underperforming the Policy Benchmark (+0.7%) and Custom Benchmark (+0.2%). The Retirement System narrowly underperformed the peer Public Defined Benefit Plans > \$1 Billion Universe's median return of +0.1%.
- The Retirement System returned +7.7% in the one-year period, compared to +10.2% for the Policy Benchmark, +8.9% for the Custom Benchmark, and +10.4% for the peer median. The Retirement System's standard deviation of returns was 3.7%, exhibiting lower volatility than the peer median (4.3%).
  - Total Global Equity returned -0.1% for the quarter and +15.0% over the one-year period, versus -0.9% and +15.0% for the MSCI ACWI IMI over the same periods, respectively. For the quarter, Global Equity returned -0.6%, U.S. Equity returned -1.1%, International Equity returned -0.7%, Emerging Markets Equity returned +2.0%, and Marketable Alternative Equity returned +1.5%.
  - Global Fixed Income returned +0.2% for the quarter and +3.6% over the one-year period, versus +1.3% and +7.2% for the Custom Benchmark over the same periods, respectively. For the quarter, Global Core returned -0.4%, Non-Investment Grade Credit returned +2.6%, and Emerging Markets Debt returned +2.4%.
  - Real Assets returned -1.0% for the quarter and +8.2% over the one-year period. For the quarter, Real Estate returned +2.7%, Commodities returned -1.1%, Infrastructure returned -4.8%, and Natural Resources returned -2.8%.
- The Retirement System added one investment managers during the quarter: Russell Private Equity Proxy (Private Equity).



## Artisan

- Artisan Global Opportunities returned +3.0% for the quarter, outperforming the MSCI ACWI Growth benchmark by 230 basis points. Compared to peers, Artisan ranks in the 9th and 20th percentiles for the quarter and since inception periods, respectively. Relative outperformance has been broad based throughout the portfolio, driven by a combination of earnings growth, a healthy economy, and the U.S. corporate tax cut.

## Oberweis

- Oberweis International Opportunities outperformed the MSCI World ex USA Small Cap Growth benchmark for the quarter (+2.1% vs. +0.8%). Over the one-year and since inception periods Oberweis has also outperformed the benchmark by 670 and 220 basis points, respectively. The portfolio benefitted from strong stock selection in Industrials and Information Technology, as well as strong returns among Japanese staffing companies, benefitting from a tight labor market in Japan.

## GQG Partners

- GQG Partners Global Emerging Markets returned +3.6% for the quarter, outperforming the MSCI Emerging Markets benchmark by 220 basis points. Since inception in July 2017, GQG has outperformed the benchmark by 350 basis points while ranking in the 14th percentile compared to peers. Sector overweights to Financials and Information Technology were the biggest contributors to outperformance.

## BlueBay

- BlueBay Emerging Market Select Debt outperformed the J.P. Morgan Emerging Market Bond Index for the quarter (+2.4% vs. +1.3%) and one-year period (+11.0% vs. +8.6%). Compared to peers, BlueBay ranks in the 28th and 23rd percentiles for the quarter and one-year periods, respectively.

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<sup>1</sup> Net of management fees.



## First Quarter Manager Summary

Investment Manager	Asset Class	Changes/ Announcements	Performance Concerns	Meketa Recommendation <sup>1</sup>	Comments
Artisan Global Opportunities	Global Equity	Yes	---	Hold	Personnel Changes
Artisan Global Value	Global Equity	---	---	---	---
Cove Street Small Cap Value	U.S. Equity	Yes	---	Hold	Personnel/Lower Fee
Oberweis International Opps.	International Equity	---	---	---	---
Aberdeen Frontier Markets Equity	Frontier Markets Equity	Yes	---	Hold	Personnel Changes
Comgest Global EM	Emerging Markets Equity	---	---	---	---
GQG Partners Global EM	Emerging Markets Equity	---	---	---	---
Dimensional EM Value	Emerging Markets Equity	Yes	---	Hold	Personnel Changes
Senator Global Opportunity	Long-Short Equity	---	---	---	---
Horizon Portfolio I	Long-Short Equity	---	---	---	---
Sandler Plus	Long-Short Equity	---	---	---	---
Marshall Wace Eureka	Long-Short Equity	---	---	---	---
Voya Securitized Credit	Global Credit	---	---	---	---
Davidson Kempner Inst.	Non-Investment Grade Credit	---	---	---	---
Claren Road Credit Fund	Long-Short Credit	---	---	---	---
BlueBay EM Select Debt	Emerging Markets Debt	Yes	---	Hold	Personnel Changes
Credit Suisse Risk Parity	Commodities	Yes	---	Hold	Personnel Changes
Pinnacle Natural Resources	Commodities	---	---	---	---

<sup>1</sup> The Meketa Investment Group recommendations are based on the noted organizational or resource changes at each manager.



**Artisan**

- During the quarter, a Managing Director retired, his intent to retire had been disclosed in March 2017.

**Cove Street**

- At year-end, the President left the firm and her responsibilities have been distributed to two existing team members and one new employee. Cove Street acquired the former President's 10% ownership interest and distributed that ownership, plus 1% contributed by the founder, to 8 other employees.
- In the first quarter, Meketa Investment Group negotiated a 10% management fee discount to 0.72% of assets under management, from 0.80%.

**Aberdeen**

- In the first quarter, two investment analysts on the Frontier Markets Equity team left the firm.

**Dimensional**

- In the first quarter, there were 9 additions and 2 departures on the portfolio management team. Dimensional employs a team approach in all aspects of the firm's management.

**BlueBay**

- In the first quarter, BlueBay appointed two employees as Directors.

**Credit Suisse**

- In the first quarter, the CEO of CSAM LLC left the firm and the position was filled internally.

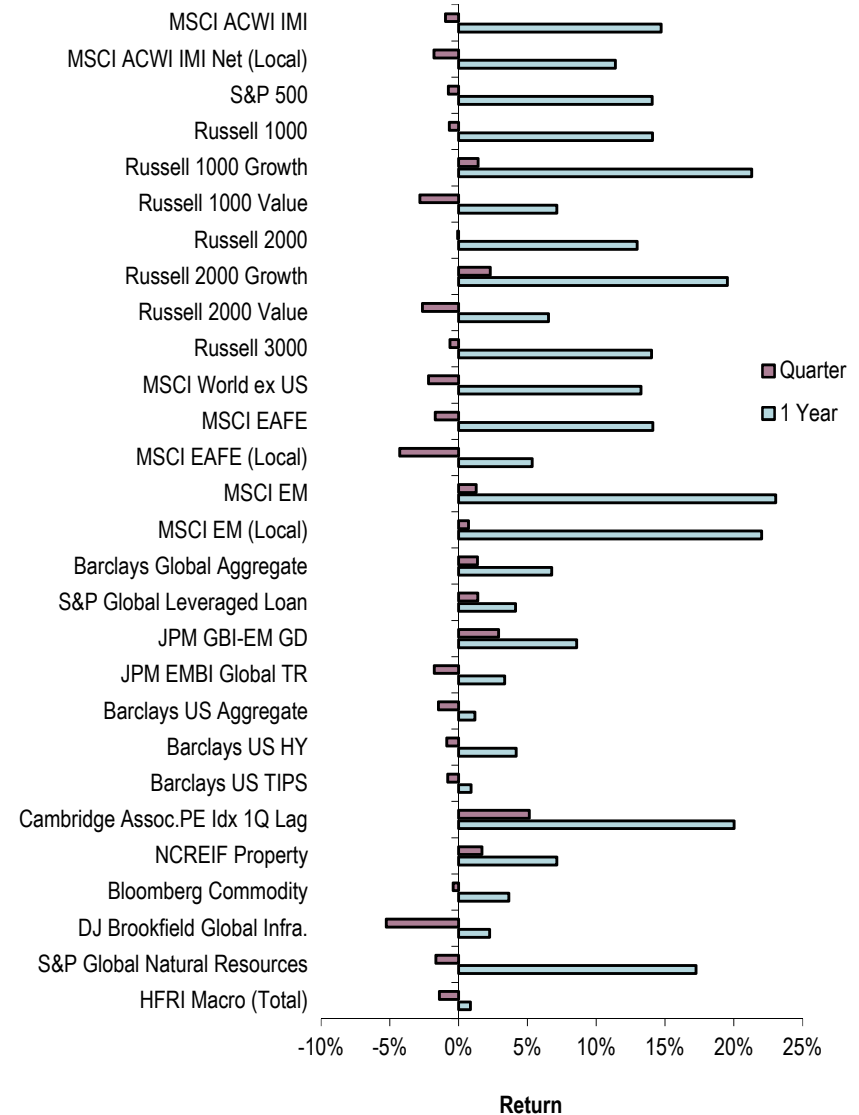
**Watch List<sup>1</sup>**

<b>Investment Manager</b>	<b>Asset Class</b>	<b>Watch List Status</b>	<b>Comments</b>
Aberdeen Frontier Markets	Global Equity	Approved Termination	Underperformance/Structural Change
DE Shaw	Absolute Return	Monitoring	Transparency Concerns
Pinnacle Natural Resources	Real Assets	Approved Termination	Underperformance
Kepos Alpha Fund	Absolute Return	Monitoring	Underperformance

<sup>1</sup> Watch List excludes Private Markets Funds.

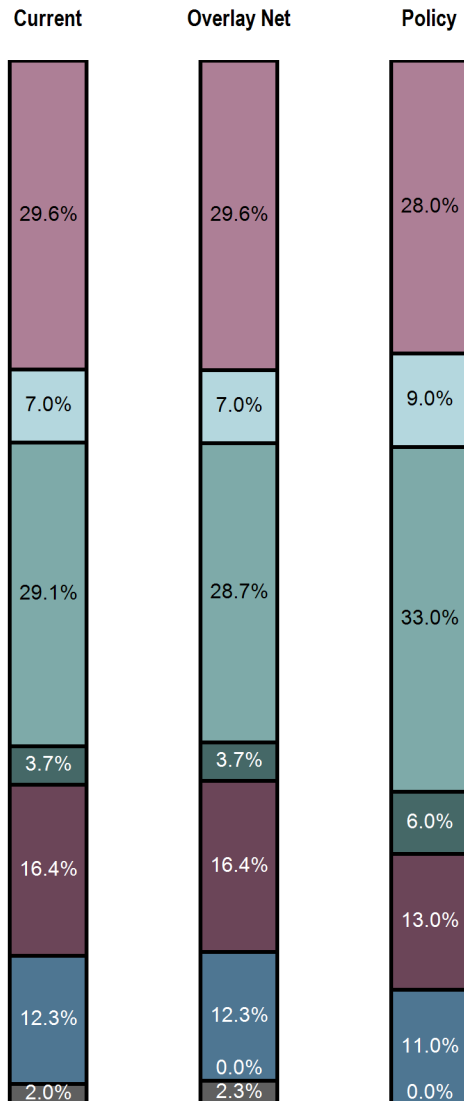


Benchmark	Scope	1Q18 (%)	1 YR (%)	3 YR (%)	5YR (%)	10 YR (%)
<b>Global Equity</b>						
MSCI ACWI IMI	World	-1.0	14.7	8.3	9.3	5.9
MSCI ACWI IMI Net (Local)	World (Local Currency)	-1.8	11.4	7.5	10.5	6.9
<b>Domestic Equity</b>						
S&P 500	Large Core	-0.8	14.1	10.9	13.3	9.6
Russell 1000	Large Core	-0.7	14.1	10.5	13.2	9.7
Russell 1000 Growth	Large Growth	1.4	21.3	12.3	15.5	11.4
Russell 1000 Value	Large Value	-2.8	7.1	8.1	10.8	7.9
Russell 2000	Small Core	-0.1	13.0	8.8	11.5	9.9
Russell 2000 Growth	Small Growth	2.3	19.5	9.1	12.9	11.0
Russell 2000 Value	Small Value	-2.6	6.5	8.2	10.0	8.7
Russell 3000	All Cap Core	-0.6	14.0	10.4	13.0	9.7
<b>International Equity</b>						
MSCI World ex US	World ex-US	-2.2	13.2	4.9	6.0	2.5
MSCI EAFE	International Developed	-1.7	14.1	5.1	6.5	2.7
MSCI EAFE (Local)	International Developed (Local Currency)	-4.3	5.3	3.4	8.5	4.5
MSCI EM	Emerging Markets	1.3	23.1	9.4	5.0	2.9
MSCI EM (Local)	Emerging Markets (Local Currency)	0.7	22.0	9.0	8.3	5.4
<b>Global Fixed Income</b>						
Barclays Global Aggregate	Global Core Bonds	1.4	6.8	3.0	1.5	2.6
S&P Global Leveraged Loan	Bank Loans	1.4	4.1	3.5	3.2	5.4
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	4.4	12.5	5.4	-0.7	3.8
JPM EMBI Global TR	Emerging Market Bonds	-1.8	3.3	5.5	3.9	6.8
<b>Domestic Fixed Income</b>						
Barclays US Aggregate	Core Bonds	-1.5	1.2	1.2	1.8	3.7
Barclays US HY	High Yield	-0.9	4.2	5.2	5.0	8.2
Barclays US TIPS	Inflation	-0.8	1.0	1.3	0.1	3.0
<b>Other</b>						
Cambridge Associates PE Index 1Qtr Lag	Private Equity	5.1	20.0	12.8	14.4	9.1
NCREIF Property	Real Estate	-1.4	7.1	8.7	10.0	6.1
Bloomberg Commodity	Commodities	-0.4	3.7	-3.6	-8.3	-7.9
DJ Brookfield Global Infrastructure	Infrastructure	-5.3	2.3	2.2	5.7	7.1
S&P Global Natural Resources	Natural Resources	-1.7	17.3	7.5	2.5	0.4
HFRI Macro	Hedge Funds	-1.4	0.9	-0.9	0.9	1.4



# 1Q18 Review

As of March 31, 2018



Allocation vs. Targets and Policy							
	Current Balance	Current Allocation	Russell Overlay Net Position	Policy	Policy Range	Within IPS Range?	
<b>Total Global Equity</b>	<b>\$626,740,160</b>	<b>29.6%</b>	<b>29.6%</b>	<b>28.0%</b>	<b>20.0% - 36.0%</b>	<b>Yes</b>	
Global Equity	\$180,160,797	8.5%	5.8%	--	--	--	
US Equity	\$90,674,904	4.3%	10.8%	--	--	--	
International Equity	\$207,917,431	9.8%	5.9%	--	--	--	
Emerging Markets Equity	\$86,143,789	4.1%	4.2%	--	--	--	
Marketable Alternative Equity	\$61,843,240	2.9%	2.9%	--	--	--	
<b>Private Equity</b>	<b>\$148,158,924</b>	<b>7.0%</b>	<b>7.0%</b>	<b>9.0%</b>	<b>4.0% - 14.0%</b>	<b>Yes</b>	
<b>Global Fixed Income</b>	<b>\$617,211,754</b>	<b>29.1%</b>	<b>28.7%</b>	<b>33.0%</b>	<b>23.0% - 43.0%</b>	<b>Yes</b>	
Global Core	\$498,928,127	23.5%	21.3%	25.0%	20.0% - 30.0%	Yes	
Non-Investment Grade Credit	\$40,137,304	1.9%	1.9%	4.0%	0.0% - 6.0%	Yes	
Emerging Markets Debt	\$78,146,324	3.7%	3.7%	4.0%	1.0% - 6.0%	Yes	
<b>Private Debt</b>	<b>\$77,586,572</b>	<b>3.7%</b>	<b>3.7%</b>	<b>6.0%</b>	<b>1.0% - 11.0%</b>	<b>Yes</b>	
<b>Real Assets</b>	<b>\$347,842,852</b>	<b>16.4%</b>	<b>16.4%</b>	<b>13.0%</b>	<b>6.0% - 20.0%</b>	<b>Yes</b>	
Real Estate	\$135,595,518	6.4%	6.4%	8.0%	4.0% - 12.0%	Yes	
Commodities	\$111,131,705	5.2%	5.2%	4.0%	0.0% - 8.0%	Yes	
Infrastructure	\$65,780,743	3.1%	3.1%	1.0%	0.0% - 4.0%	Yes	
Natural Resources	\$35,334,886	1.7%	1.7%	0.0%	0.0% - 5.0%	Yes	
<b>Absolute Return</b>	<b>\$260,281,904</b>	<b>12.3%</b>	<b>12.3%</b>	<b>11.0%</b>	<b>6.0% - 16.0%</b>	<b>Yes</b>	
<b>Opportunistic</b>	--	--	<b>0.0%</b>	<b>0.0%</b>	<b>0.0% - 3.0%</b>	<b>Yes</b>	
<b>Cash</b>	<b>\$41,850,837</b>	<b>2.0%</b>	<b>2.3%</b>	<b>0.0%</b>	<b>0.0% - 10.0%</b>	<b>Yes</b>	
<b>Total</b>	<b>\$2,119,673,004</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>			

<sup>1</sup> Data in the column titled "Russell Overlay Net Position" is based on physical exposures, adjusted for synthetic positions provided by Russell Investments.

<sup>2</sup> Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.



As of March 31, 2018

## Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Aggregate</b>	<b>2,119,673,004</b>	<b>100.0</b>	<b>0.0</b>	<b>5.5</b>	<b>7.7</b>	<b>4.1</b>	<b>4.6</b>	<b>4.1</b>	<b>6.7</b>	<b>Jan-94</b>
Policy Benchmark			0.7	7.6	10.2	5.7	5.8	4.9	7.1	Jan-94
Allocation Index			0.2	6.9	8.9	4.7	4.8	4.1	--	Jan-94
InvestorForce Public DB > \$1B Net Median			0.1	7.2	10.4	6.6	7.5	5.9	7.4	Jan-94
InvestorForce Public DB > \$1B Net Rank			56	97	98	97	96	95	73	Jan-94
<b>Total Global Equity</b>	<b>626,740,160</b>	<b>29.6</b>	<b>-0.1</b>	<b>9.9</b>	<b>15.0</b>	<b>7.5</b>	<b>8.8</b>	<b>--</b>	<b>8.8</b>	<b>May-10</b>
MSCI ACWI IMI Net USD			-0.9	10.3	15.0	8.3	9.3	--	8.9	May-10
eV All Global Equity Net Median			-1.0	9.4	14.2	7.7	9.4	6.3	9.4	May-10
eV All Global Equity Net Rank			34	47	45	52	61	--	62	May-10
<b>Global Equity</b>	<b>180,160,797</b>	<b>8.5</b>	<b>-0.6</b>	<b>8.9</b>	<b>14.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>10.4</b>	<b>Jul-15</b>
MSCI ACWI IMI Net USD			-0.9	10.3	15.0	--	--	--	8.8	Jul-15
eV All Global Equity Net Median			-1.0	9.4	14.2	7.7	9.4	6.3	8.4	Jul-15
eV All Global Equity Net Rank			43	55	50	--	--	--	23	Jul-15
<b>US Equity</b>	<b>90,674,904</b>	<b>4.3</b>	<b>-1.1</b>	<b>7.6</b>	<b>10.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>9.4</b>	<b>Jul-15</b>
Russell 3000			-0.6	10.5	13.8	--	--	--	11.1	Jul-15
eV All US Equity Net Median			-0.8	9.7	12.5	8.6	11.9	9.6	9.4	Jul-15
eV All US Equity Net Rank			57	69	64	--	--	--	49	Jul-15
<b>International Equity</b>	<b>207,917,431</b>	<b>9.8</b>	<b>-0.7</b>	<b>10.6</b>	<b>17.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.2</b>	<b>Jul-15</b>
MSCI World ex USA			-2.0	7.8	13.9	--	--	--	5.6	Jul-15
eV All EAFE Equity Net Median			-1.0	9.6	16.4	6.7	7.5	4.1	6.8	Jul-15
eV All EAFE Equity Net Rank			40	37	42	--	--	--	46	Jul-15

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Please see the Appendix for composition of the Policy Benchmark.<sup>3</sup> Allocation Index consists of the individual benchmarks that comprise the Policy Benchmark weighted accordingly to actual allocations and re-adjusted monthly.<sup>4</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.



As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Equity</b>	<b>86,143,789</b>	<b>4.1</b>	<b>2.0</b>	<b>15.5</b>	<b>20.9</b>	--	--	--	<b>7.5</b>	<b>Jul-15</b>
<i>MSCI Emerging Markets</i>			1.4	17.6	24.9	--	--	--	9.4	<i>Jul-15</i>
<i>eV Emg Mkts Equity Net Median</i>			1.4	17.0	24.0	9.0	5.3	3.9	9.5	<i>Jul-15</i>
<i>eV Emg Mkts Equity Net Rank</i>			36	59	68	--	--	--	78	<i>Jul-15</i>
<b>Marketable Alternative Equity</b>	<b>61,843,240</b>	<b>2.9</b>	<b>1.5</b>	<b>7.4</b>	<b>10.2</b>	<b>4.4</b>	--	--	<b>6.3</b>	<b>Oct-14</b>
<i>HFRI Equity Hedge (Total) Index</i>			0.4	7.4	9.5	5.2	--	--	5.0	<i>Oct-14</i>
<b>Private Equity</b>	<b>148,158,924</b>	<b>7.0</b>	<b>-2.4</b>	<b>5.6</b>	<b>12.5</b>	<b>6.6</b>	<b>10.8</b>	<b>7.1</b>	<b>6.8</b>	<b>Jan-06</b>
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	9.3	11.2	<i>Jan-06</i>
<b>Global Fixed Income</b>	<b>617,211,754</b>	<b>29.1</b>	<b>0.2</b>	<b>2.0</b>	<b>3.6</b>	<b>2.0</b>	<b>1.8</b>	--	<b>2.7</b>	<b>Jan-12</b>
<i>Fixed Income Custom Benchmark</i>			1.3	4.4	7.2	3.6	1.7	--	1.7	<i>Jan-12</i>
<i>eV All Global Fixed Inc Net Median</i>			0.3	2.8	4.9	3.4	2.9	4.3	3.9	<i>Jan-12</i>
<i>eV All Global Fixed Inc Net Rank</i>			51	67	74	87	71	--	74	<i>Jan-12</i>
<b>Global Core</b>	<b>498,928,127</b>	<b>23.5</b>	<b>-0.4</b>	<b>0.9</b>	<b>2.2</b>	--	--	--	<b>1.7</b>	<b>Jul-15</b>
<i>BBgBarc Global Aggregate TR</i>			1.4	4.3	7.0	--	--	--	3.9	<i>Jul-15</i>
<b>Non-Investment Grade Credit</b>	<b>40,137,304</b>	<b>1.9</b>	<b>2.6</b>	<b>3.5</b>	<b>6.3</b>	<b>2.2</b>	<b>1.8</b>	--	<b>2.1</b>	<b>Feb-13</b>
<i>50% BAML Global HY / 50% S&amp;P Global Leveraged Loan</i>			0.4	2.8	4.2	4.7	5.7	--	5.9	<i>Feb-13</i>
<b>Emerging Markets Debt</b>	<b>78,146,324</b>	<b>3.7</b>	<b>2.4</b>	<b>8.0</b>	<b>11.0</b>	--	--	--	<b>5.7</b>	<b>Jul-15</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			1.3	5.5	8.6	--	--	--	6.5	<i>Jul-15</i>
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-0.2	4.3	6.7	5.7	2.9	6.2	6.4	<i>Jul-15</i>
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			28	22	23	--	--	--	69	<i>Jul-15</i>
<b>Private Debt</b>	<b>77,586,572</b>	<b>3.7</b>	<b>2.6</b>	<b>-6.3</b>	<b>-6.2</b>	<b>-0.2</b>	<b>3.2</b>	--	<b>4.2</b>	<b>Dec-10</b>
<i>S&amp;P Global Leveraged Loan +2%</i>			2.4	6.5	9.7	7.4	6.0	--	6.7	<i>Dec-10</i>

<sup>1</sup> Returns for the Fixed income, Private Debt, and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

<sup>2</sup> Prior to 7/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 7/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI-EM GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Assets</b>	<b>347,842,852</b>	<b>16.4</b>	<b>-1.0</b>	<b>7.5</b>	<b>8.2</b>	<b>4.0</b>	<b>1.5</b>	<b>--</b>	<b>1.3</b>	<b>May-10</b>
Real Assets Benchmark			0.5	7.8	8.2	4.4	2.8	--	4.9	May-10
<b>Real Estate</b>	<b>135,595,518</b>	<b>6.4</b>	<b>2.7</b>	<b>8.1</b>	<b>10.2</b>	<b>12.5</b>	<b>14.3</b>	<b>4.6</b>	<b>9.4</b>	<b>Jan-94</b>
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	9.4	Jan-94
<b>Commodities</b>	<b>111,131,705</b>	<b>5.2</b>	<b>-1.1</b>	<b>5.4</b>	<b>5.0</b>	<b>-3.6</b>	<b>-6.5</b>	<b>--</b>	<b>-3.8</b>	<b>May-10</b>
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2	-8.3	--	-5.1	May-10
<b>Infrastructure</b>	<b>65,780,743</b>	<b>3.1</b>	<b>-4.8</b>	<b>-1.4</b>	<b>2.9</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>4.9</b>	<b>Mar-14</b>
DJ Brookfield Global Infrastructure Net TR USD			-5.3	-1.6	2.0	2.2	--	--	4.3	Mar-14
<b>Natural Resources</b>	<b>35,334,886</b>	<b>1.7</b>	<b>-2.8</b>	<b>16.3</b>	<b>12.8</b>	<b>4.7</b>	<b>0.0</b>	<b>--</b>	<b>-0.2</b>	<b>Nov-12</b>
S&P Global Natural Resources Index TR USD			-1.7	18.3	17.2	7.6	2.5	--	2.4	Nov-12
<b>Absolute Return</b>	<b>260,281,904</b>	<b>12.3</b>	<b>1.6</b>	<b>4.3</b>	<b>4.3</b>	<b>1.3</b>	<b>2.6</b>	<b>--</b>	<b>3.5</b>	<b>Nov-12</b>
HFRI Macro (Total) Index			-1.5	1.5	0.8	-0.9	0.8	--	1.2	Nov-12
<b>Relative Value</b>	<b>123,715,501</b>	<b>5.8</b>	<b>1.6</b>	<b>4.4</b>	<b>5.6</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>3.8</b>	<b>Oct-14</b>
HFRI Relative Value (Total) Index			0.2	2.6	3.1	3.6	--	--	3.3	Oct-14
<b>Macro</b>	<b>136,566,404</b>	<b>6.4</b>	<b>1.6</b>	<b>4.2</b>	<b>3.2</b>	<b>-0.4</b>	<b>--</b>	<b>--</b>	<b>1.6</b>	<b>Oct-14</b>
HFRI Macro (Total) Index			-1.5	1.5	0.8	-0.9	--	--	0.8	Oct-14
<b>Opportunistic</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.0</b>	<b>Jul-15</b>
60/40 MSCI ACWI IMI/BC Global			0.0	7.9	11.8	--	--	--	7.0	Jul-15
<b>Cash</b>	<b>36,134,067</b>	<b>1.7</b>								
91 Day T-Bills										

<sup>1</sup> Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.

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## Trailing Net Performance

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Aggregate</b>	<b>2,119,673,004</b>	<b>100.0</b>	<b>0.0</b>	<b>5.5</b>	<b>7.7</b>	<b>4.1</b>	<b>4.6</b>	<b>4.1</b>	<b>6.7</b>	<b>Jan-94</b>
Policy Benchmark			0.7	7.6	10.2	5.7	5.8	4.9	7.1	Jan-94
Allocation Index			0.2	6.9	8.9	4.7	4.8	4.1	--	Jan-94
InvestorForce Public DB > \$1B Net Median			0.1	7.2	10.4	6.6	7.5	5.9	7.4	Jan-94
InvestorForce Public DB > \$1B Net Rank			56	97	98	97	96	95	73	Jan-94
<b>Total Global Equity</b>	<b>626,740,160</b>	<b>29.6</b>	<b>-0.1</b>	<b>9.9</b>	<b>15.0</b>	<b>7.5</b>	<b>8.8</b>	<b>--</b>	<b>8.8</b>	<b>May-10</b>
MSCI ACWI IMI Net USD			-0.9	10.3	15.0	8.3	9.3	--	8.9	May-10
eV All Global Equity Net Median			-1.0	9.4	14.2	7.7	9.4	6.3	9.4	May-10
eV All Global Equity Net Rank			34	47	45	52	61	--	62	May-10
<b>Global Equity</b>	<b>180,160,797</b>	<b>8.5</b>	<b>-0.6</b>	<b>8.9</b>	<b>14.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>10.4</b>	<b>Jul-15</b>
MSCI ACWI IMI Net USD			-0.9	10.3	15.0	--	--	--	8.8	Jul-15
eV All Global Equity Net Median			-1.0	9.4	14.2	7.7	9.4	6.3	8.4	Jul-15
eV All Global Equity Net Rank			43	55	50	--	--	--	23	Jul-15
Artisan Global Value	123,936,220	5.8	-1.7	8.1	14.4	9.7	11.2	--	11.9	Mar-11
MSCI ACWI Value NR USD			-2.6	6.8	9.8	6.6	7.5	--	6.3	Mar-11
eV Global Value Equity Net Median			-1.6	7.0	10.7	7.3	8.7	6.3	7.9	Mar-11
eV Global Value Equity Net Rank			59	38	24	12	6	--	1	Mar-11
Artisan Global Opportunities	56,162,988	2.6	3.0	13.4	--	--	--	--	13.4	Jul-17
MSCI ACWI Growth NR USD			0.7	13.5	--	--	--	--	13.5	Jul-17
eV All Global Equity Net Median			-1.0	9.4	14.2	7.7	9.4	6.3	9.4	Jul-17
eV All Global Equity Net Rank			9	20	--	--	--	--	20	Jul-17
Russell Currency Hedge	61,588	0.0								

<sup>1</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.

<sup>2</sup> Please see final page of the performance report for composition of the Policy Benchmark.

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>US Equity</b>	<b>90,674,904</b>	<b>4.3</b>	<b>-1.1</b>	<b>7.6</b>	<b>10.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>9.4</b>	<b>Jul-15</b>
<i>Russell 3000</i>			-0.6	10.5	13.8	--	--	--	11.1	Jul-15
<i>eV All US Equity Net Median</i>			-0.8	9.7	12.5	8.6	11.9	9.6	9.4	Jul-15
<i>eV All US Equity Net Rank</i>			57	69	64	--	--	--	49	Jul-15
Northern Trust Russell 1000 Index	61,013,065	2.9	-0.4	10.9	14.3	--	--	--	19.3	Nov-16
<i>Russell 1000</i>			-0.7	10.6	14.0	--	--	--	19.0	Nov-16
Cove Street Small Cap Value	16,784,536	0.8	-2.9	-0.3	2.2	5.8	--	--	5.3	May-14
<i>Russell 2000 Value</i>			-2.6	4.4	5.1	7.9	--	--	7.9	May-14
<i>eV US Small Cap Value Equity Net Median</i>			-2.2	6.5	7.1	7.7	10.7	9.6	8.0	May-14
<i>eV US Small Cap Value Equity Net Rank</i>			64	95	89	83	--	--	87	May-14
Northern Trust Russell 2000 Value	12,877,303	0.6	-2.3	--	--	--	--	--	-2.3	Jan-18
<i>Russell 2000 Value</i>			-2.6	--	--	--	--	--	-2.6	Jan-18
<b>International Equity</b>	<b>207,917,431</b>	<b>9.8</b>	<b>-0.7</b>	<b>10.6</b>	<b>17.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.2</b>	<b>Jul-15</b>
<i>MSCI World ex USA</i>			-2.0	7.8	13.9	--	--	--	5.6	Jul-15
<i>eV All EAFE Equity Net Median</i>			-1.0	9.6	16.4	6.7	7.5	4.1	6.8	Jul-15
<i>eV All EAFE Equity Net Rank</i>			40	37	42	--	--	--	46	Jul-15
Northern Trust MSCI World ex. U.S.	166,547,975	7.9	-1.3	8.4	14.7	--	--	--	16.8	Nov-16
<i>MSCI World ex USA</i>			-2.0	7.8	13.9	--	--	--	16.2	Nov-16
Oberweis International Opportunities	41,369,456	2.0	2.1	20.7	31.5	--	--	--	16.7	Nov-15
<i>MSCI World ex US Small Cap Growth</i>			0.8	15.3	24.8	--	--	--	14.5	Nov-15
<i>eV EAFE Small Cap Growth Net Median</i>			1.6	16.6	29.1	14.2	14.5	8.9	16.1	Nov-15
<i>eV EAFE Small Cap Growth Net Rank</i>			43	14	18	--	--	--	47	Nov-15

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Equity</b>	<b>86,143,789</b>	<b>4.1</b>	<b>2.0</b>	<b>15.5</b>	<b>20.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.5</b>	<b>Jul-15</b>
<i>MSCI Emerging Markets</i>			1.4	17.6	24.9	--	--	--	9.4	Jul-15
<i>eV Emg Mkts Equity Net Median</i>			1.4	17.0	24.0	9.0	5.3	3.9	9.5	Jul-15
<i>eV Emg Mkts Equity Net Rank</i>			36	59	68	--	--	--	78	Jul-15
Dimensional Fund Advisors EM Value	26,596,997	1.3	2.2	16.5	19.8	--	--	--	22.1	Nov-16
<i>MSCI Emerging Markets Value NR USD</i>			1.6	14.5	18.1	--	--	--	18.3	Nov-16
<i>eV Emg Mkts Equity Net Median</i>			1.4	17.0	24.0	9.0	5.3	3.9	21.7	Nov-16
<i>eV Emg Mkts Equity Net Rank</i>			29	54	73	--	--	--	47	Nov-16
GQG Partners Global Emerging Markets	30,060,778	1.4	3.6	21.1	--	--	--	--	21.1	Jul-17
<i>MSCI Emerging Markets</i>			1.4	17.6	--	--	--	--	17.6	Jul-17
<i>eV Emg Mkts Equity Net Median</i>			1.4	17.0	24.0	9.0	5.3	3.9	17.0	Jul-17
<i>eV Emg Mkts Equity Net Rank</i>			8	14	--	--	--	--	14	Jul-17
Aberdeen Frontier Markets	11,354,522	0.5	2.7	8.8	17.3	4.2	--	--	1.4	Dec-13
<i>MSCI Frontier Markets</i>			5.1	19.9	27.3	7.9	--	--	6.8	Dec-13
<i>MSCI Frontier Markets ex GCC NR USD</i>			4.9	22.3	33.7	9.8	--	--	5.2	Dec-13
<i>eV Frontier Mkts Equity Net Median</i>			5.6	16.0	25.0	7.7	4.2	--	5.1	Dec-13
<i>eV Frontier Mkts Equity Net Rank</i>			88	96	92	79	--	--	78	Dec-13
Comgest Global Emerging Markets	18,131,492	0.9	-0.7	14.1	20.9	--	--	--	19.1	Mar-17
<i>MSCI Emerging Markets SMID Cap</i>			0.9	15.9	20.4	--	--	--	21.6	Mar-17
<i>eV Emg Mkts Small Cap Equity Net Median</i>			1.2	15.5	23.2	9.5	6.4	7.8	25.1	Mar-17
<i>eV Emg Mkts Small Cap Equity Net Rank</i>			90	59	65	--	--	--	80	Mar-17

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Marketable Alternative Equity</b>	<b>61,843,240</b>	<b>2.9</b>	<b>1.5</b>	<b>7.4</b>	<b>10.2</b>	<b>4.4</b>	<b>--</b>	<b>--</b>	<b>6.3</b>	<b>Oct-14</b>
<i>HFRI Equity Hedge (Total) Index</i>			0.4	7.4	9.5	5.2	--	--	5.0	Oct-14
Senator Global Opportunity Offshore Fund	20,336,959	1.0	-2.1	3.7	7.3	2.5	6.7	--	6.7	Apr-13
<i>HFRI Event-Driven (Total) Index</i>			0.1	3.6	5.2	4.1	4.7	--	4.7	Apr-13
Marshall Wace Eureka Fund	22,518,034	1.1	3.9	10.1	13.5	7.8	--	--	9.0	Apr-14
<i>HFRI Equity Hedge (Total) Index</i>			0.4	7.4	9.5	5.2	--	--	4.6	Apr-14
Sandler Plus Offshore Fund Ltd	18,988,247	0.9	4.0	11.6	14.5	7.7	--	--	8.9	May-13
<i>HFRI Equity Hedge (Total) Index</i>			0.4	7.4	9.5	5.2	--	--	5.7	May-13
<b>Private Equity</b>	<b>148,158,924</b>	<b>7.0</b>	<b>-2.4</b>	<b>5.6</b>	<b>12.5</b>	<b>6.6</b>	<b>10.8</b>	<b>7.1</b>	<b>6.8</b>	<b>Jan-06</b>
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	9.3	11.2	Jan-06
PE Strategic Partnership LP	12,355,016	0.6	0.0	--	--	--	--	--	-5.6	Aug-17
<i>Cambridge PE Composite BM</i>			5.2	--	--	--	--	--	15.3	Aug-17
Pantheon USA Fund VII	20,397,806	1.0	0.0	7.4	15.8	9.4	13.7	--	--	Jan-07
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	--	Jan-07
Partners Group Secondary 2011, L.P.	10,539,684	0.5	4.4	13.2	19.1	11.4	17.0	--	23.0	Nov-12
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	13.3	Nov-12
Pantheon Global Secondary Fund III 'B'	5,255,849	0.2	0.0	6.8	7.3	2.0	2.9	--	--	Jan-07
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	--	Jan-07
Pathway Private Equity Fund VIII	4,777,925	0.2	-0.4	8.1	11.3	1.7	9.5	--	--	Aug-04
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	--	Aug-04

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Great Hill Equity Partners IV, LP	3,657,561	0.2	6.8	60.1	90.4	41.1	34.9	--	--	Oct-08
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	--	Oct-08
Partners Group Secondary 2008, L.P.	1,811,311	0.1	4.3	10.3	23.4	4.2	7.6	--	--	Dec-08
<i>Cambridge PE Composite BM</i>			5.2	15.3	20.0	11.4	12.9	--	--	Dec-08
Russell Private Equity Proxy	89,363,773	4.2	-4.8	--	--	--	--	--	-4.8	Jan-18
<i>Russell 3000</i>			-0.6	--	--	--	--	--	-0.6	Jan-18
<b>Global Fixed Income</b>	<b>617,211,754</b>	<b>29.1</b>	<b>0.2</b>	<b>2.0</b>	<b>3.6</b>	<b>2.0</b>	<b>1.8</b>	<b>--</b>	<b>2.7</b>	<b>Jan-12</b>
<i>Fixed Income Custom Benchmark</i>			1.3	4.4	7.2	3.6	1.7	--	1.7	Jan-12
<i>eV All Global Fixed Inc Net Median</i>			0.3	2.8	4.9	3.4	2.9	4.3	3.9	Jan-12
<i>eV All Global Fixed Inc Net Rank</i>			51	67	74	87	71	--	74	Jan-12
<b>Global Core</b>	<b>498,928,127</b>	<b>23.5</b>	<b>-0.4</b>	<b>0.9</b>	<b>2.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.7</b>	<b>Jul-15</b>
<i>BBgBarc Global Aggregate TR</i>			1.4	4.3	7.0	--	--	--	3.9	Jul-15
Northern Trust Intermediate Gov't 1-10 Year	138,596,478	6.5	-0.7	-0.8	-0.2	0.4	0.7	--	0.7	Oct-12
<i>BBgBarc US Govt Int TR</i>			-0.7	-0.8	-0.1	0.5	0.7	--	0.7	Oct-12
Northern Trust TIPS 0-5 Years	135,612,520	6.4	0.2	0.9	0.4	1.2	--	--	0.2	Jul-14
<i>BBgBarc US Treasury TIPS 0-5 Yr TR</i>			0.2	0.9	0.4	1.2	--	--	0.2	Jul-14
Voya Securitized Credit	96,658,712	4.6	0.6	3.7	7.4	--	--	--	5.9	Jul-15
<i>BBgBarc Global Aggregate Securitized TR</i>			-0.6	1.2	3.0	--	--	--	1.9	Jul-15
BlackRock Long Government Index	38,545,911	1.8	-3.2	-0.3	3.7	--	--	--	-0.7	Jun-16
<i>BBgBarc US Govt Long TR</i>			-3.2	-0.4	3.5	--	--	--	-0.9	Jun-16

<sup>1</sup> Returns for the Fixed Income Aggregate are gross of fees through June 2015 and net of fees thereafter.

<sup>2</sup> Prior to 7/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 7/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI-EM GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.

Total Fund Aggregate

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
BlackRock Global Agg ex US	50,073,771	2.4	0.9	--	--	--	--	--	2.5	Aug-17
<i>BBgBarc Global Aggregate ex US TR</i>			4.0	--	--	--	--	--	5.5	Aug-17
<i>BBgBarc Global Aggregate ex US Tres Hedged TR</i>			0.9	--	--	--	--	--	2.5	Aug-17
BlackRock US Debt Fund	39,440,735	1.9	-1.4	--	--	--	--	--	-0.6	Aug-17
<i>BBgBarc US Aggregate TR</i>			-1.5	--	--	--	--	--	-0.7	Aug-17
<b>Non-Investment Grade Credit</b>	<b>40,137,304</b>	<b>1.9</b>	<b>2.6</b>	<b>3.5</b>	<b>6.3</b>	<b>2.2</b>	<b>1.8</b>	<b>--</b>	<b>2.1</b>	<b>Feb-13</b>
<i>50% BAML Global HY / 50% S&amp;P Global Leveraged Loan</i>			0.4	2.8	4.2	4.7	5.7	--	5.9	Feb-13
Davidson Kempner Institutional Partners, L.P.	39,920,894	1.9	2.7	4.3	6.7	5.1	5.4	--	5.6	Feb-13
<i>HFRI Event-Driven (Total) Index</i>			0.1	3.6	5.2	4.1	4.7	--	4.9	Feb-13
Claren Road Credit Fund	216,410	0.0								
<i>HFRI RV: Fixed Income-Corporate Index</i>										
<b>Emerging Markets Debt</b>	<b>78,146,324</b>	<b>3.7</b>	<b>2.4</b>	<b>8.0</b>	<b>11.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.7</b>	<b>Jul-15</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			1.3	5.5	8.6	--	--	--	6.5	Jul-15
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-0.2	4.3	6.7	5.7	2.9	6.2	6.4	Jul-15
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			28	22	23	--	--	--	69	Jul-15
BlueBay Emerging Market Select Debt	78,146,324	3.7	2.4	8.0	11.0	--	--	--	5.7	Jul-15
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			1.3	5.5	8.6	--	--	--	6.5	Jul-15
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-0.2	4.3	6.7	5.7	2.9	6.2	6.4	Jul-15
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			28	22	23	--	--	--	69	Jul-15



As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Debt</b>	<b>77,586,572</b>	<b>3.7</b>	<b>2.6</b>	<b>-6.3</b>	<b>-6.2</b>	<b>-0.2</b>	<b>3.2</b>	<b>--</b>	<b>4.2</b>	<b>Dec-10</b>
<i>S&amp;P Global Leveraged Loan +2%</i>			2.4	6.5	9.7	7.4	6.0	--	6.7	Dec-10
Medley Opportunity Fund II	30,418,361	1.4	-4.0	-4.4	-3.7	2.6	5.1	--	5.5	Jun-11
<i>3-Month LIBOR + 5%</i>			1.7	5.0	6.6	6.0	5.7	--	5.6	Jun-11
White Oak Direct Lending Account	20,257,190	1.0	18.3	-16.0	-17.9	-6.3	-0.5	--	0.6	Feb-11
<i>3-Month LIBOR + 5%</i>			1.7	5.0	6.6	6.0	5.7	--	5.6	Feb-11
GSO Direct Lending Account	11,814,304	0.6	-1.7	-1.4	-0.3	-0.4	2.2	--	7.0	Mar-11
<i>3-Month LIBOR + 5%</i>			1.7	5.0	6.6	6.0	5.7	--	5.6	Mar-11
Cross Ocean USD ESS II	9,935,207	0.5	2.8	6.7	10.8	--	--	--	15.8	Aug-16
<i>S&amp;P Global Leveraged Loan +2%</i>			2.4	6.5	9.7	--	--	--	9.0	Aug-16
ArrowMark Co-Investment	5,161,509	0.2	3.2	--	--	--	--	--	--	Dec-17
<i>S&amp;P Global Leveraged Loan +2%</i>			2.4	--	--	--	--	--	--	Dec-17
<b>Real Assets</b>	<b>347,842,852</b>	<b>16.4</b>	<b>-1.0</b>	<b>7.5</b>	<b>8.2</b>	<b>4.0</b>	<b>1.5</b>	<b>--</b>	<b>1.3</b>	<b>May-10</b>
<i>Real Assets Benchmark</i>			0.5	7.8	8.2	4.4	2.8	--	4.9	May-10
<b>Real Estate</b>	<b>135,595,518</b>	<b>6.4</b>	<b>2.7</b>	<b>8.1</b>	<b>10.2</b>	<b>12.5</b>	<b>14.3</b>	<b>4.6</b>	<b>9.4</b>	<b>Jan-94</b>
<i>NCREIF Property Index</i>			1.7	5.3	7.1	8.7	10.0	6.1	9.4	Jan-94
American Realty	57,687,182	2.7	1.3	4.5	6.6	8.7	10.0	3.9	4.9	Jan-07
<i>NCREIF ODCE Equal Weighted (Net)</i>			2.0	5.7	7.3	9.3	10.5	4.0	5.0	Jan-07
PRISA	39,429,658	1.9	3.9	5.9	7.4	10.5	11.5	4.1	7.2	Jul-04
<i>NCREIF ODCE Equal Weighted (Net)</i>			2.0	5.7	7.3	9.3	10.5	4.0	6.9	Jul-04

<sup>1</sup> Returns for the Private Debt and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DRA Growth & Income Fund VIII <i>NCREIF Property Index</i>	13,182,261	0.6	-0.3 1.7	10.4 5.3	13.0 7.1	11.8 8.7	-- --	-- --	12.0 9.2	Jan-15 Jan-15
DRA Growth and Income Fund VII <i>NCREIF Property Index</i>	9,886,380	0.5	7.5 1.7	24.4 5.3	31.0 7.1	25.6 8.7	22.0 10.0	-- --	20.6 10.1	Apr-12 Apr-12
DRA Growth and Income Fund IX <i>NCREIF Property Index</i>	6,685,424	0.3	4.0 1.7	9.5 5.3	13.9 7.1	-- --	-- --	-- --	11.8 7.5	Feb-17 Feb-17
Tristan Capital Partners <i>NCREIF Property Index</i>	7,119,035	0.3	7.4 1.7	13.0 5.3	19.9 7.1	-- --	-- --	-- --	10.8 7.4	Jan-16 Jan-16
DRA Growth and Income Fund VI <i>NCREIF Property Index</i>	1,211,819	0.1	2.5 1.7	7.1 5.3	2.9 7.1	10.9 8.7	17.2 10.0	9.8 6.1	9.7 6.1	Jan-08 Jan-08
GEM Realty Fund VI <i>NCREIF Property Index</i>	289,617	0.0	-- --	-- --	-- --	-- --	-- --	-- --	-- --	Nov-17 Nov-17
DRA Growth and Income Fund V <i>NCREIF Property Index</i>	104,142	0.0	-- --	-- --	-- --	-- --	-- --	-- --	-- --	Jan-06 Jan-06
<b>Commodities</b>	<b>111,131,705</b>	<b>5.2</b>	<b>-1.1</b>	<b>5.4</b>	<b>5.0</b>	<b>-3.6</b>	<b>-6.5</b>	<b>--</b>	<b>-3.8</b>	<b>May-10</b>
<i>Bloomberg Commodity Index TR USD</i>			-0.4	6.9	3.7	-3.2	-8.3	--	-5.1	May-10
Credit Suisse Risk Parity Commodity Index <i>Bloomberg Commodity Index TR USD</i>	74,167,025	3.5	-1.9 -0.4	5.7 6.9	5.1 3.7	-0.8 -3.2	-4.3 -8.3	-- --	-5.2 -8.8	Apr-11 Apr-11
Pinnacle Natural Resources, L.P. <i>Bloomberg Commodity Index TR USD</i>	36,964,680	1.7	1.3 -0.4	4.6 6.9	4.9 3.7	-- --	-- --	-- --	-3.4 5.7	Jan-16 Jan-16

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Infrastructure</b>	<b>65,780,743</b>	<b>3.1</b>	<b>-4.8</b>	<b>-1.4</b>	<b>2.9</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>4.9</b>	<b>Mar-14</b>
<i>DJ Brookfield Global Infrastructure Net TR USD</i>			-5.3	-1.6	2.0	2.2	--	--	4.3	Mar-14
Rhumblin DJ Brookfield Global Infrastructure <i>DJ Brookfield Global Infrastructure Net TR USD</i>	56,730,986	2.7	-5.3	-1.4	2.5	--	--	--	2.3	Jun-15
			-5.3	-1.6	2.0	--	--	--	1.8	Jun-15
Global Infrastructure Partners III <i>DJ Brookfield Global Infrastructure Net TR USD</i>	9,049,757	0.4	0.3	-10.2	6.7	--	--	--	-6.9	Sep-16
			-5.3	-1.6	2.0	--	--	--	4.3	Sep-16
<b>Natural Resources</b>	<b>35,334,886</b>	<b>1.7</b>	<b>-2.8</b>	<b>16.3</b>	<b>12.8</b>	<b>4.7</b>	<b>0.0</b>	<b>--</b>	<b>-0.2</b>	<b>Nov-12</b>
<i>S&amp;P Global Natural Resources Index TR USD</i>			-1.7	18.3	17.2	7.6	2.5	--	2.4	Nov-12
Rhumblin S&P Global Large MidCap Commodity & NR <i>S&amp;P Global LargeMidCap Commodity and Resources GR USD</i>	35,327,359	1.7	-2.7	16.5	13.0	--	--	--	3.0	Jun-15
			-2.9	16.1	12.6	--	--	--	3.0	Jun-15
Northern Trust Global LargeMid Natural Resources	7,526	0.0								
<b>Absolute Return</b>	<b>260,281,904</b>	<b>12.3</b>	<b>1.6</b>	<b>4.3</b>	<b>4.3</b>	<b>1.3</b>	<b>2.6</b>	<b>--</b>	<b>3.5</b>	<b>Nov-12</b>
<i>HFRI Macro (Total) Index</i>			-1.5	1.5	0.8	-0.9	0.8	--	1.2	Nov-12
<b>Relative Value</b>	<b>123,715,501</b>	<b>5.8</b>	<b>1.6</b>	<b>4.4</b>	<b>5.6</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>3.8</b>	<b>Oct-14</b>
<i>HFRI Relative Value (Total) Index</i>			0.2	2.6	3.1	3.6	--	--	3.3	Oct-14
DE Shaw <i>HFRI Fund Weighted Composite Index</i>	42,396,888	2.0	2.8	9.0	13.1	8.0	11.4	--	11.4	Apr-13
			0.0	4.8	5.9	3.5	4.2	--	4.2	Apr-13
Hudson Bay <i>HFRI Relative Value (Total) Index</i>	30,744,499	1.5	1.1	--	--	--	--	--	2.5	Aug-17
			0.2	--	--	--	--	--	1.9	Aug-17
Pine River Volatility Arbitrage <i>HFRI Relative Value (Total) Index</i>	24,534,000	1.2	-0.5	-0.1	-1.9	--	--	--	-1.7	Mar-17
			0.2	2.6	3.1	--	--	--	3.2	Mar-17

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
JD Capital	21,622,006	1.0	2.4	5.0	7.4	--	--	--	5.3	Oct-16
<i>HFRI Relative Value (Total) Index</i>			0.2	2.6	3.1	--	--	--	4.8	Oct-16
Pine River Fund Ltd	4,418,107	0.2	1.5	2.0	0.3	-1.1	1.3	--	2.5	Jan-13
<i>HFRI Relative Value (Total) Index</i>			0.2	2.6	3.1	3.6	4.1	--	4.5	Jan-13
<b>Macro</b>	<b>136,566,404</b>	<b>6.4</b>	<b>1.6</b>	<b>4.2</b>	<b>3.2</b>	<b>-0.4</b>	<b>--</b>	<b>--</b>	<b>1.6</b>	<b>Oct-14</b>
<i>HFRI Macro (Total) Index</i>			-1.5	1.5	0.8	-0.9	--	--	0.8	Oct-14
Pharo Management, Ltd.	33,844,923	1.6	8.4	9.3	16.7	--	--	--	14.6	Apr-16
<i>HFRI Macro (Total) Index</i>			-1.5	1.5	0.8	--	--	--	0.1	Apr-16
Systematica	25,038,983	1.2	-5.1	0.7	--	--	--	--	0.7	Jul-17
<i>Barclay BTOP50 Index TR USD</i>			-2.5	1.5	--	--	--	--	1.5	Jul-17
Dymon Asia Macro	25,953,693	1.2	0.3	0.4	-1.3	--	--	--	1.5	Sep-15
<i>HFRI Macro (Total) Index</i>			-1.5	1.5	0.8	--	--	--	0.6	Sep-15
Keynes Leveraged Quantitative Strategies Fund	20,809,400	1.0	5.1	12.9	11.0	--	--	--	1.8	Jan-16
<i>Barclay BTOP50 Index TR USD</i>			-2.5	1.5	-1.6	--	--	--	-3.5	Jan-16
AHL Frontier Fund	14,606,587	0.7	-4.6	7.1	8.2	--	--	--	7.2	Jun-16
<i>Barclay BTOP50 Index TR USD</i>			-2.5	1.5	-1.6	--	--	--	-4.7	Jun-16
Kepos Alpha Fund	15,821,989	0.7	4.2	-3.6	-10.6	-6.3	-3.1	--	-2.5	Mar-13
<i>HFRI Macro: Systematic Diversified Index</i>			-3.1	1.4	0.1	-3.1	0.6	--	0.8	Mar-13
Brevan Howard Fund, Limited	490,829	0.0	1.9	1.3	-4.5	--	--	--	-1.7	Aug-15
<i>HFRI Macro (Total) Index</i>			-1.5	1.5	0.8	--	--	--	0.0	Aug-15

Total Fund Aggregate

As of March 31, 2018

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Opportunistic</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.0</b>	<b>Jul-15</b>
<i>60/40 MSCI ACWI IMI/BC Global</i>			<i>0.0</i>	<i>7.9</i>	<i>11.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>7.0</i>	<i>Jul-15</i>
<b>Cash</b>	<b>41,847,797</b>	<b>2.0</b>								
<i>91 Day T-Bills</i>										
Internal Cash Account	36,134,067	1.7								
Russell Investments Overlay	5,713,730	0.3								

<sup>1</sup> Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.



As of March 31, 2018

**Cash Flow Summary**  
**Quarter Ending June 30, 2018**

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Aberdeen Frontier Markets	\$21,020,983	\$0	-\$10,000,000	-\$10,000,000	\$333,540	\$11,354,522
AHL Frontier Fund	\$15,303,172	\$0	\$0	\$0	-\$696,585	\$14,606,587
American Realty	\$47,974,244	\$9,000,000	-\$99,926	\$8,900,074	\$812,864	\$57,687,182
ArrowMark Co-Investment	\$5,001,528	\$0	\$0	\$0	\$159,981	\$5,161,509
Artisan Global Opportunities	\$54,518,692	\$0	\$0	\$0	\$1,644,296	\$56,162,988
Artisan Global Value	\$126,207,749	\$7,831,378	-\$7,933,501	-\$102,123	-\$2,169,406	\$123,936,220
BlackRock Global Agg ex US	\$29,650,559	\$20,000,000	\$0	\$20,000,000	\$423,211	\$50,073,771
BlackRock Long Government Index	\$39,811,266	\$0	\$0	\$0	-\$1,265,355	\$38,545,911
BlackRock US Debt Fund	\$25,784,871	\$14,000,000	\$0	\$14,000,000	-\$344,136	\$39,440,735
BlueBay Emerging Market Select Debt	\$56,814,049	\$20,000,000	\$0	\$20,000,000	\$1,332,275	\$78,146,324
Brevan Howard Fund, Limited	\$5,534,963	\$0	-\$5,064,017	-\$5,064,017	\$19,883	\$490,829
Claren Road Credit Fund	\$213,520	\$0	\$0	\$0	\$2,890	\$216,410
Comgest Global Emerging Markets	\$18,261,934	\$0	\$0	\$0	-\$130,442	\$18,131,492
Cove Street Small Cap Value	\$17,285,694	\$390,910	-\$390,910	\$0	-\$501,159	\$16,784,536
Credit Suisse Risk Parity Commodity Index	\$100,008,296	\$0	-\$24,092,304	-\$24,092,304	-\$1,748,967	\$74,167,025
Cross Ocean USD ESS II	\$9,758,700	\$0	-\$118,417	-\$118,417	\$294,924	\$9,935,207
Davidson Kempner Institutional Partners, L.P.	\$38,890,241	\$0	-\$98,126	-\$98,126	\$1,128,779	\$39,920,894
DE Shaw	\$41,257,998	\$0	-\$788,089	-\$788,089	\$1,926,980	\$42,396,888
Dimensional Fund Advisors EM Value	\$35,121,081	\$0	-\$10,000,000	-\$10,000,000	\$1,475,916	\$26,596,997
DRA Growth & Income Fund VIII	\$13,696,093	\$0	-\$538,316	-\$538,316	\$24,484	\$13,182,261
DRA Growth and Income Fund IX	\$6,807,150	\$0	-\$436,302	-\$436,302	\$314,576	\$6,685,424
DRA Growth and Income Fund V	\$82,239	\$0	-\$46,000	-\$46,000	\$67,903	\$104,142
DRA Growth and Income Fund VI	\$1,548,139	\$0	-\$379,707	-\$379,707	\$43,387	\$1,211,819
DRA Growth and Income Fund VII	\$9,336,207	\$0	-\$192,225	-\$192,225	\$742,397	\$9,886,380
Dymon Asia Macro	\$25,888,599	\$0	\$0	\$0	\$65,094	\$25,953,693
GEM Realty Fund VI	\$369,801	\$0	-\$60,125	-\$60,125	-\$20,059	\$289,617

## Total Fund Aggregate

As of March 31, 2018

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Global Infrastructure Partners III	\$5,595,310	\$3,426,765	-\$110,544	\$3,316,221	\$138,226	\$9,049,757
GQG Partners Global Emerging Markets	\$29,018,050	\$0	-\$37,821	-\$37,821	\$1,080,549	\$30,060,778
Great Hill Equity Partners IV, LP	\$3,406,772	\$17,500	-\$15,000	\$2,500	\$248,289	\$3,657,561
GSO Direct Lending Account	\$12,012,757	\$0	\$0	\$0	-\$198,453	\$11,814,304
Horizon Portfolio I	\$17,603,890	\$0	-\$17,603,890	-\$17,603,890	\$0	--
Hudson Bay	\$30,424,416	\$0	\$0	\$0	\$320,083	\$30,744,499
Internal Cash Account	\$102,969,428	\$253,773,318	-\$320,810,216	-\$67,036,898	\$201,538	\$36,134,067
JD Capital	\$21,123,071	\$0	-\$78,126	-\$78,126	\$577,062	\$21,622,006
Kepos Alpha Fund	\$15,179,819	\$0	-\$37,950	-\$37,950	\$680,119	\$15,821,989
Keynes Leveraged Quantitative Strategies Fund	\$19,793,600	\$0	\$0	\$0	\$1,015,800	\$20,809,400
Marshall Wace Eureka Fund	\$21,662,441	\$0	-\$104,853	-\$104,853	\$960,446	\$22,518,034
Medley Opportunity Fund II	\$34,733,221	\$0	-\$3,050,684	-\$3,050,684	-\$1,264,176	\$30,418,361
Northern Trust Global LargeMid Natural Resources	\$506,451	\$0	-\$395,448	-\$395,448	-\$103,476	\$7,526
Northern Trust Intermediate Gov't 1-10 Year	\$104,351,593	\$35,000,000	\$0	\$35,000,000	-\$755,115	\$138,596,478
Northern Trust MSCI World ex. U.S.	\$168,820,944	\$0	\$0	\$0	-\$2,272,968	\$166,547,975
Northern Trust Russell 1000 Index	\$74,572,571	\$0	-\$14,000,000	-\$14,000,000	\$440,494	\$61,013,065
Northern Trust Russell 2000 Value	\$17,121,933	\$0	-\$4,000,000	-\$4,000,000	-\$244,630	\$12,877,303
Northern Trust TIPS 0-5 Years	\$97,323,034	\$38,000,000	\$0	\$38,000,000	\$289,486	\$135,612,520
Oberweis International Opportunities	\$40,502,308	\$19,669,569	-\$19,669,569	\$0	\$867,148	\$41,369,456
Pantheon Global Secondary Fund III 'B'	\$5,735,849	\$0	-\$480,000	-\$480,000	\$0	\$5,255,849
Pantheon USA Fund VII	\$23,157,807	\$0	-\$2,760,000	-\$2,760,000	-\$1	\$20,397,806
Partners Group Secondary 2008, L.P.	\$1,736,076	\$0	\$0	\$0	\$75,235	\$1,811,311
Partners Group Secondary 2011, L.P.	\$11,173,472	\$0	-\$1,125,256	-\$1,125,256	\$491,468	\$10,539,684
Pathway Private Equity Fund VIII	\$5,051,202	\$0	-\$252,293	-\$252,293	-\$20,985	\$4,777,925
PE Strategic Partnership LP	\$10,667,522	\$1,687,500	\$0	\$1,687,500	-\$7	\$12,355,016
Pharo Management, Ltd.	\$31,231,571	\$0	\$0	\$0	\$2,613,353	\$33,844,923

## Total Fund Aggregate

As of March 31, 2018

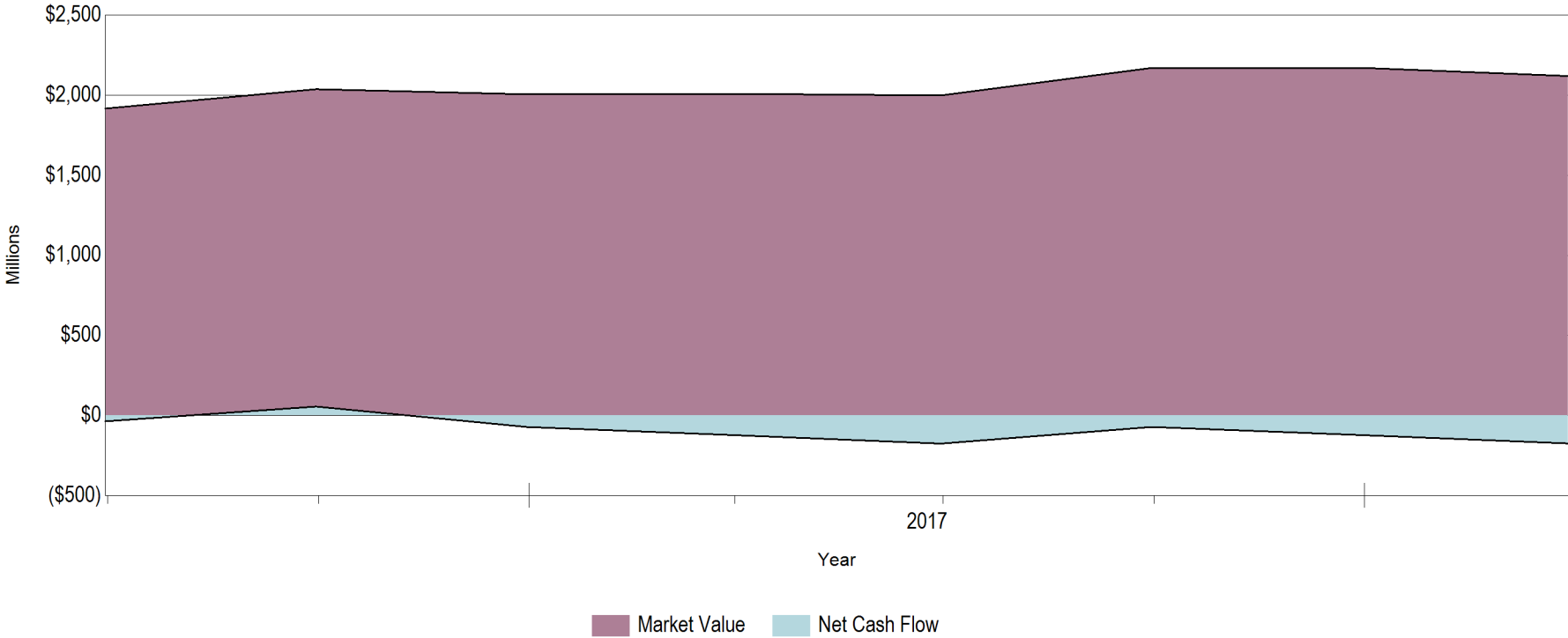
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Pine River Fund Ltd	\$6,540,230	\$0	-\$2,199,724	-\$2,199,724	\$77,602	\$4,418,107
Pine River Volatility Arbitrage	\$24,646,000	\$0	-\$30,878	-\$30,878	-\$81,122	\$24,534,000
Pinnacle Natural Resources, L.P.	\$36,495,040	\$0	\$0	\$0	\$469,640	\$36,964,680
PRISA	\$38,286,170	\$0	-\$341,350	-\$341,350	\$1,484,838	\$39,429,658
Rhumblin DJ Brookfield Global Infrastructure	\$107,268,112	\$25,365,579	-\$70,365,579	-\$45,000,000	-\$5,537,126	\$56,730,986
Rhumblin S&P Global Large MidCap Commodity & NR	\$130,089,432	\$66,551,313	-\$159,500,642	-\$92,949,329	-\$1,812,744	\$35,327,359
Russell Currency Hedge	-\$495,791	\$72,349,603	-\$71,052,283	\$1,297,320	-\$739,941	\$61,588
Russell Investments Overlay	\$12,205,425	\$34,526,138	-\$39,526,138	-\$5,000,000	-\$1,491,695	\$5,713,730
Russell Private Equity Proxy	\$0	\$93,000,000	\$0	\$93,000,000	-\$3,636,227	\$89,363,773
Sandler Plus Offshore Fund Ltd	\$18,261,975	\$0	\$0	\$0	\$726,272	\$18,988,247
Senator Global Opportunity Offshore Fund	\$25,767,983	\$0	-\$4,890,251	-\$4,890,251	-\$540,773	\$20,336,959
SSgA DJ Brookfield Infrastructure Index	\$6,540	\$0	\$0	\$0	-\$6,540	--
State Street Terminated Managers	\$2,982	\$0	\$0	\$0	\$57	\$3,039
Systematica	\$26,374,263	\$0	\$0	\$0	-\$1,335,281	\$25,038,983
Tristan Capital Partners	\$5,306,006	\$1,332,595	-\$51,025	\$1,281,570	\$531,459	\$7,119,035
Voya Securitized Credit	\$71,148,001	\$25,000,000	\$0	\$25,000,000	\$510,711	\$96,658,712
White Oak Direct Lending Account	\$17,184,682	\$0	-\$135,099	-\$135,099	\$3,207,607	\$20,257,190
<b>Total</b>	<b>\$2,170,709,925</b>	<b>\$740,922,169</b>	<b>-\$792,862,584</b>	<b>-\$51,940,414</b>	<b>\$903,493</b>	<b>\$2,119,673,004</b>



Total Fund Asset Growth Summary

As of March 31, 2018

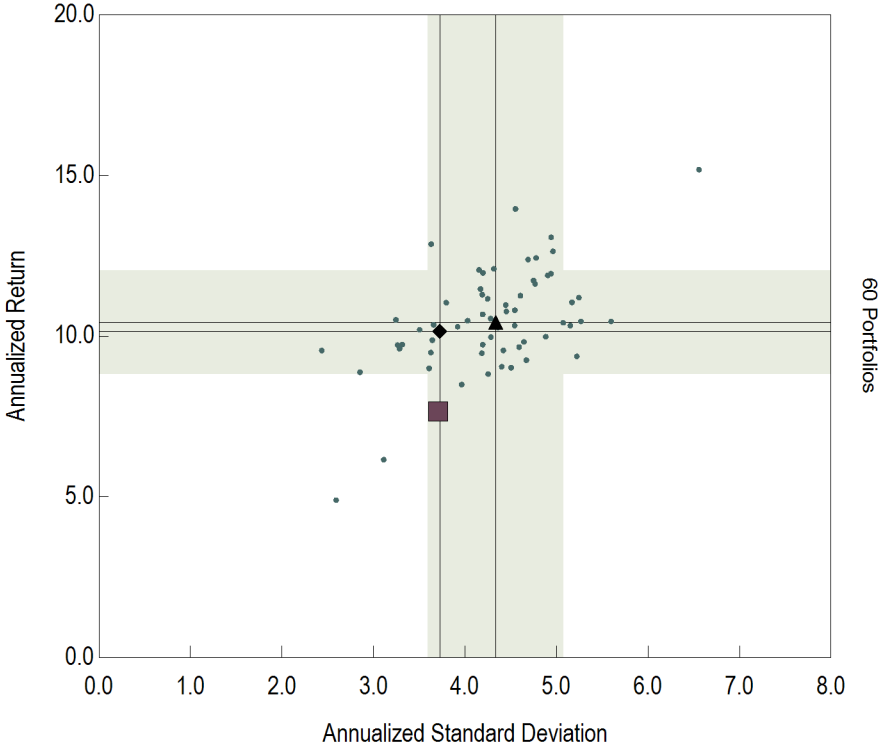
Market Value History  
2 Years Ending March 31, 2018



	First Quarter	One Year	Fiscal Year-To-Date	Two Years
Beginning Market Value	\$2,170,709,925	\$2,008,707,845	\$1,998,468,931	\$1,827,672,242
Net Cash Flow	-\$51,940,414	-\$52,284,927	\$1,074,595	-\$149,131,505
Net Investment Change	\$903,493	\$163,250,086	\$120,129,478	\$441,132,268
Ending Market Value	\$2,119,673,004	\$2,119,673,004	\$2,119,673,004	\$2,119,673,004

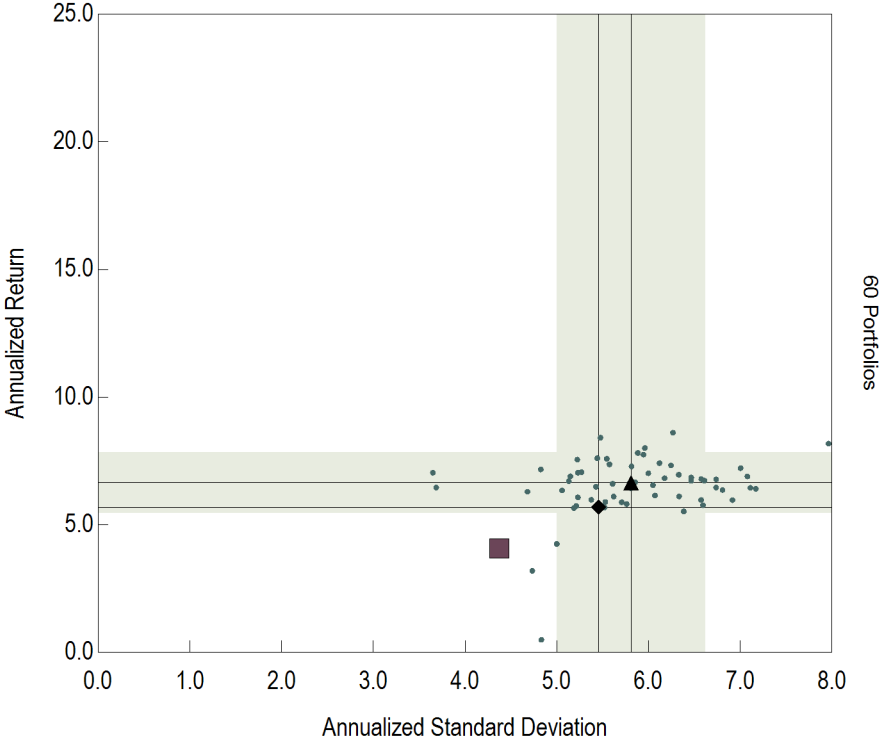


Annualized Return vs. Annualized Standard Deviation  
1 Year Ending March 31, 2018



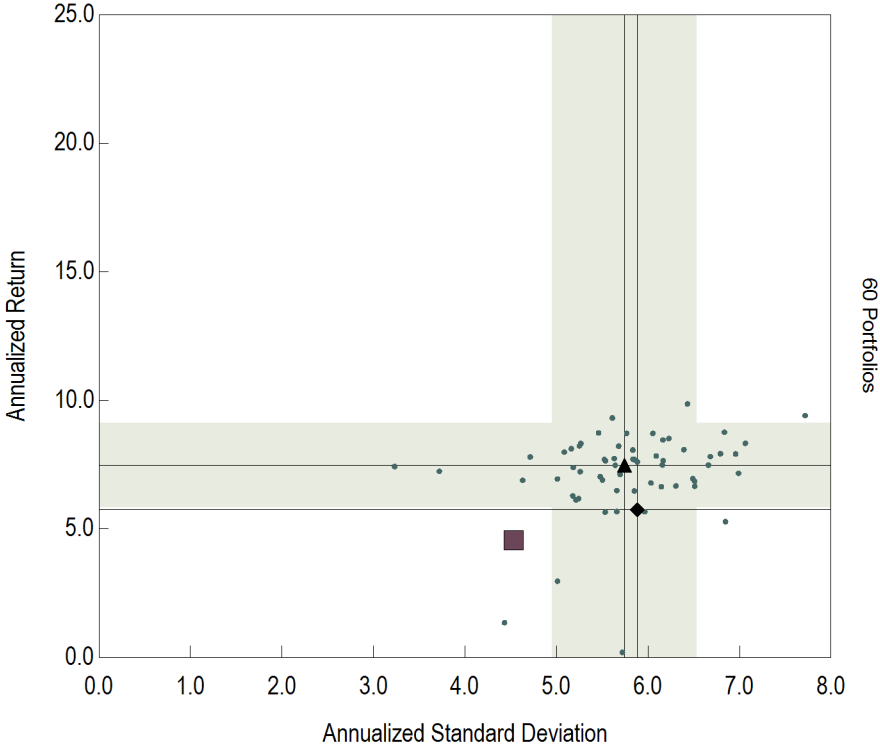
- Total Fund Aggregate
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending March 31, 2018



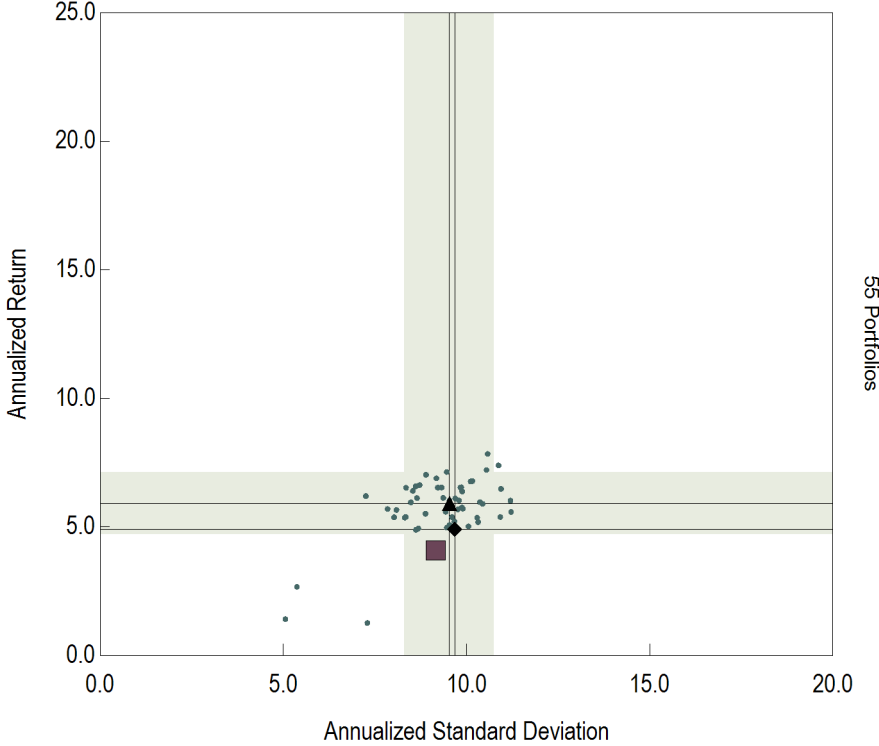
- Total Fund Aggregate
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending March 31, 2018



- Total Fund Aggregate
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending March 31, 2018



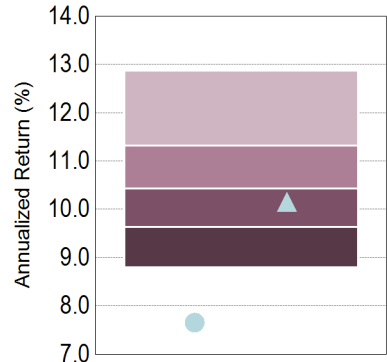
- Total Fund Aggregate
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net



Total Fund Risk Statistics vs. Peer Universe (Trailing 1 Year)

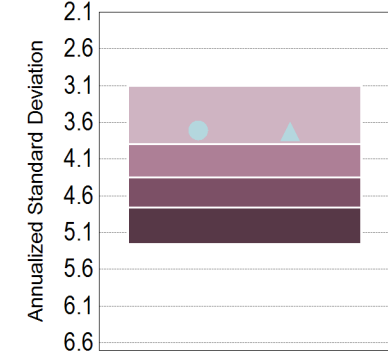
As of March 31, 2018

**Annualized Return (%) vs. InvestorForce Public DB > \$1B Net**



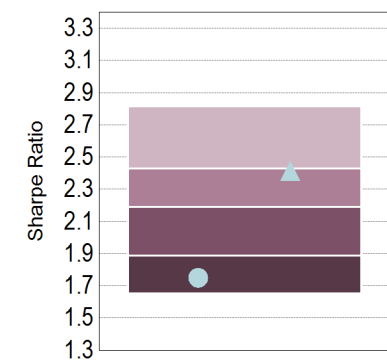
● Total Fund Aggregate	
Value	7.7
Rank	98
▲ Policy Benchmark	
Value	10.2
Rank	62
Universe	
5th %tile	12.9
25th %tile	11.3
Median	10.4
75th %tile	9.6
95th %tile	8.8

**Annualized Standard Deviation vs. InvestorForce Public DB > \$1B Net**



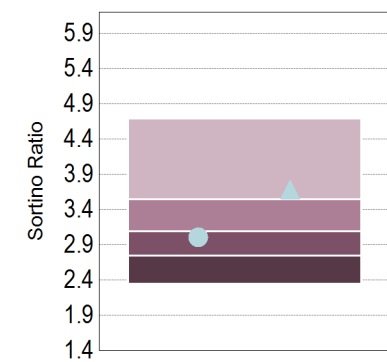
● Total Fund Aggregate	
Value	3.7
Rank	23
▲ Policy Benchmark	
Value	3.7
Rank	23
Universe	
5th %tile	3.1
25th %tile	3.9
Median	4.3
75th %tile	4.8
95th %tile	5.2

**Sharpe Ratio vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	1.7
Rank	92
▲ Policy Benchmark	
Value	2.4
Rank	27
Universe	
5th %tile	2.8
25th %tile	2.4
Median	2.2
75th %tile	1.9
95th %tile	1.7

**Sortino Ratio vs. InvestorForce Public DB > \$1B Net**



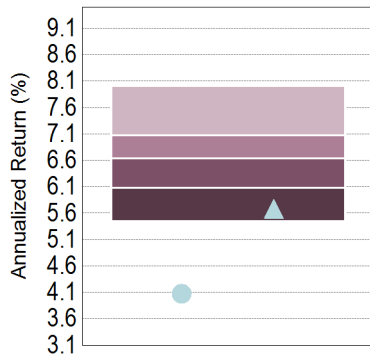
● Total Fund Aggregate	
Value	3.0
Rank	56
▲ Policy Benchmark	
Value	3.7
Rank	22
Universe	
5th %tile	4.7
25th %tile	3.6
Median	3.1
75th %tile	2.7
95th %tile	2.4



Total Fund Risk Statistics vs. Peer Universe (Trailing 3 Years)

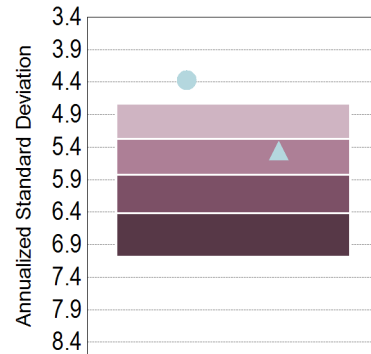
As of March 31, 2018

**Annualized Return (%) vs. InvestorForce Public DB > \$1B Net**



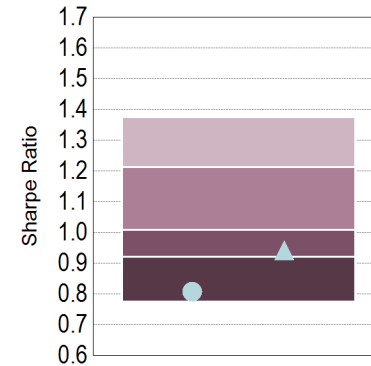
● Total Fund Aggregate	
Value	4.1
Rank	97
▲ Policy Benchmark	
Value	5.7
Rank	92
Universe	
5th %tile	8.0
25th %tile	7.1
Median	6.6
75th %tile	6.1
95th %tile	5.5

**Annualized Standard Deviation vs. InvestorForce Public DB > \$1B Net**



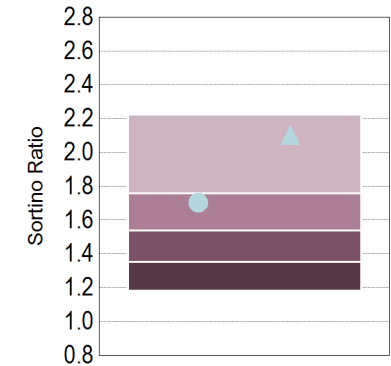
● Total Fund Aggregate	
Value	4.4
Rank	3
▲ Policy Benchmark	
Value	5.5
Rank	32
Universe	
5th %tile	4.7
25th %tile	5.3
Median	5.8
75th %tile	6.4
95th %tile	7.1

**Sharpe Ratio vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	0.8
Rank	91
▲ Policy Benchmark	
Value	0.9
Rank	69
Universe	
5th %tile	1.4
25th %tile	1.2
Median	1.0
75th %tile	0.9
95th %tile	0.8

**Sortino Ratio vs. InvestorForce Public DB > \$1B Net**

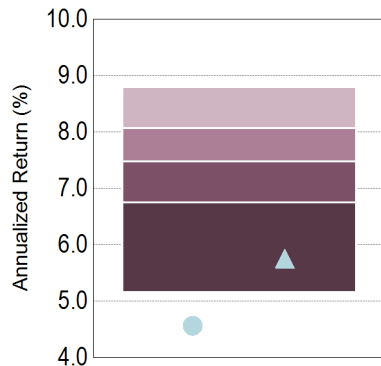


● Total Fund Aggregate	
Value	1.7
Rank	37
▲ Policy Benchmark	
Value	2.1
Rank	10
Universe	
5th %tile	2.2
25th %tile	1.8
Median	1.5
75th %tile	1.4
95th %tile	1.2

Total Fund Risk Statistics vs. Peer Universe (Trailing 5 Years)

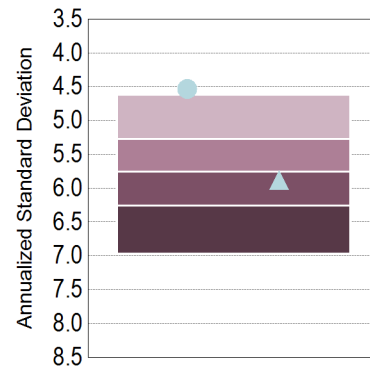
As of March 31, 2018

**Annualized Return (%) vs. InvestorForce Public DB > \$1B Net**



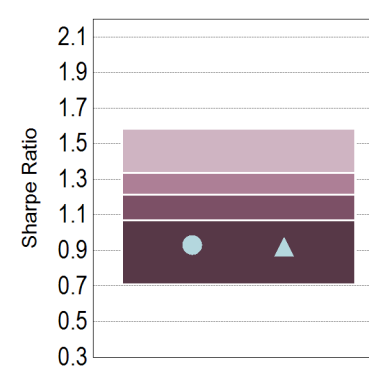
● Total Fund Aggregate	
Value	4.6
Rank	96
▲ Policy Benchmark	
Value	5.8
Rank	90
Universe	
5th %tile	8.8
25th %tile	8.1
Median	7.5
75th %tile	6.8
95th %tile	5.2

**Annualized Standard Deviation vs. InvestorForce Public DB > \$1B Net**



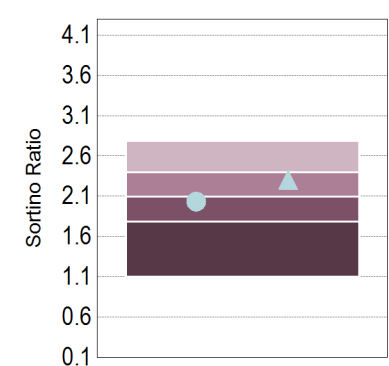
● Total Fund Aggregate	
Value	4.5
Rank	5
▲ Policy Benchmark	
Value	5.9
Rank	60
Universe	
5th %tile	4.6
25th %tile	5.3
Median	5.7
75th %tile	6.2
95th %tile	7.0

**Sharpe Ratio vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	0.9
Rank	92
▲ Policy Benchmark	
Value	0.9
Rank	93
Universe	
5th %tile	1.6
25th %tile	1.3
Median	1.2
75th %tile	1.1
95th %tile	0.7

**Sortino Ratio vs. InvestorForce Public DB > \$1B Net**

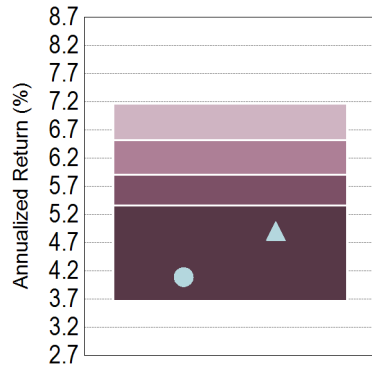


● Total Fund Aggregate	
Value	2.0
Rank	58
▲ Policy Benchmark	
Value	2.3
Rank	33
Universe	
5th %tile	2.8
25th %tile	2.4
Median	2.1
75th %tile	1.8
95th %tile	1.1

Total Fund Risk Statistics vs. Peer Universe (Trailing 10 Years)

As of March 31, 2018

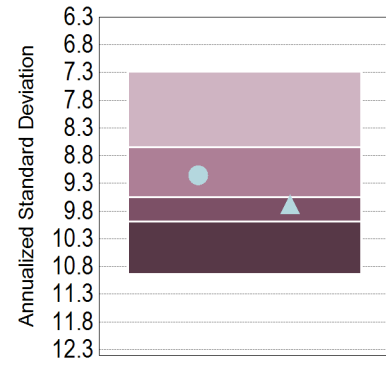
**Annualized Return (%) vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	4.1
Rank	95
▲ Policy Benchmark	
Value	4.9
Rank	92

Universe	
5th %tile	7.2
25th %tile	6.5
Median	5.9
75th %tile	5.4
95th %tile	3.7

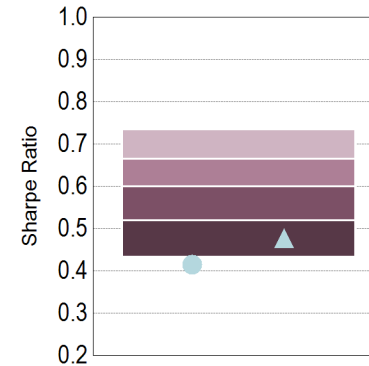
**Annualized Standard Deviation vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	9.2
Rank	36
▲ Policy Benchmark	
Value	9.7
Rank	61

Universe	
5th %tile	7.3
25th %tile	8.6
Median	9.5
75th %tile	10.0
95th %tile	10.9

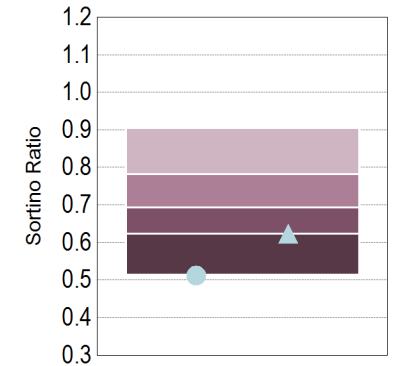
**Sharpe Ratio vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	0.4
Rank	97
▲ Policy Benchmark	
Value	0.5
Rank	87

Universe	
5th %tile	0.7
25th %tile	0.7
Median	0.6
75th %tile	0.5
95th %tile	0.4

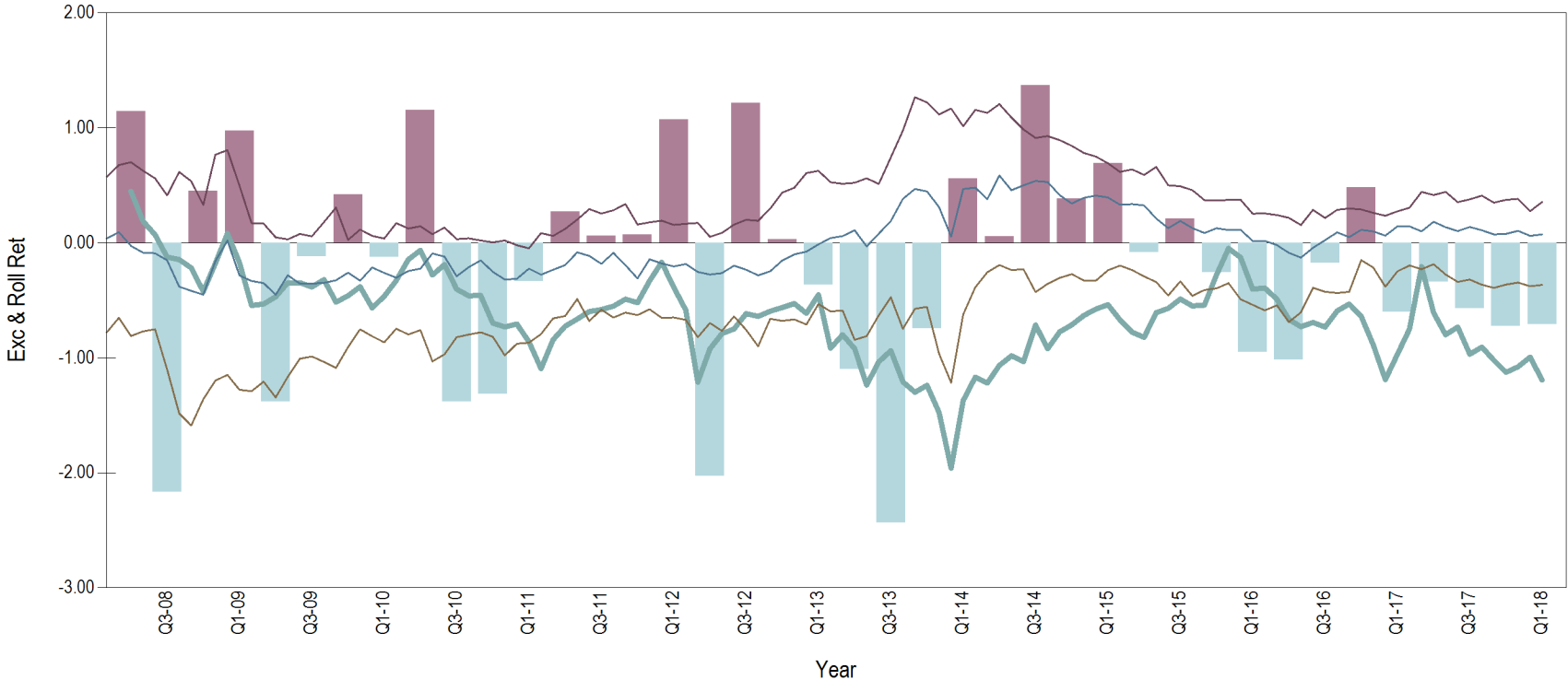
**Sortino Ratio vs. InvestorForce Public DB > \$1B Net**



● Total Fund Aggregate	
Value	0.5
Rank	96
▲ Policy Benchmark	
Value	0.6
Rank	77

Universe	
5th %tile	0.9
25th %tile	0.8
Median	0.7
75th %tile	0.6
95th %tile	0.5

Rolling Annualized Excess Performance

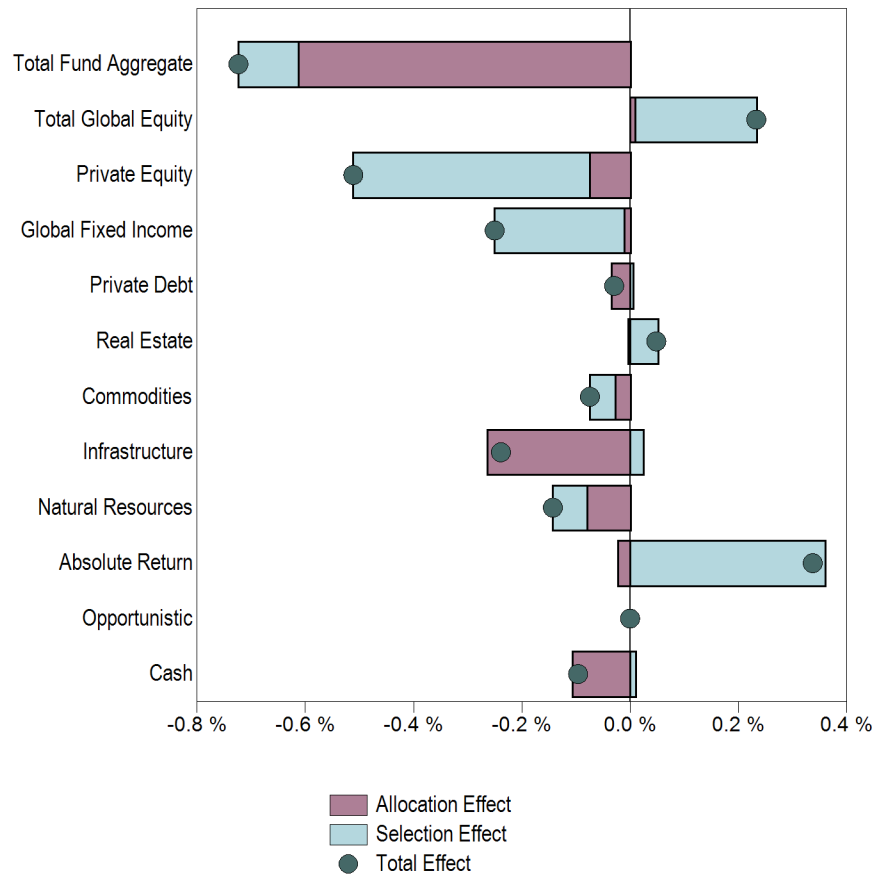


- Quarterly Outperformance
- Quarterly Underperformance
- Rolling 5 Year Excess Performance vs. Benchmark
- Universe Upper Quartile
- Universe Median
- Universe Lower Quartile





**Attribution Effects**  
3 Months Ending March 31, 2018



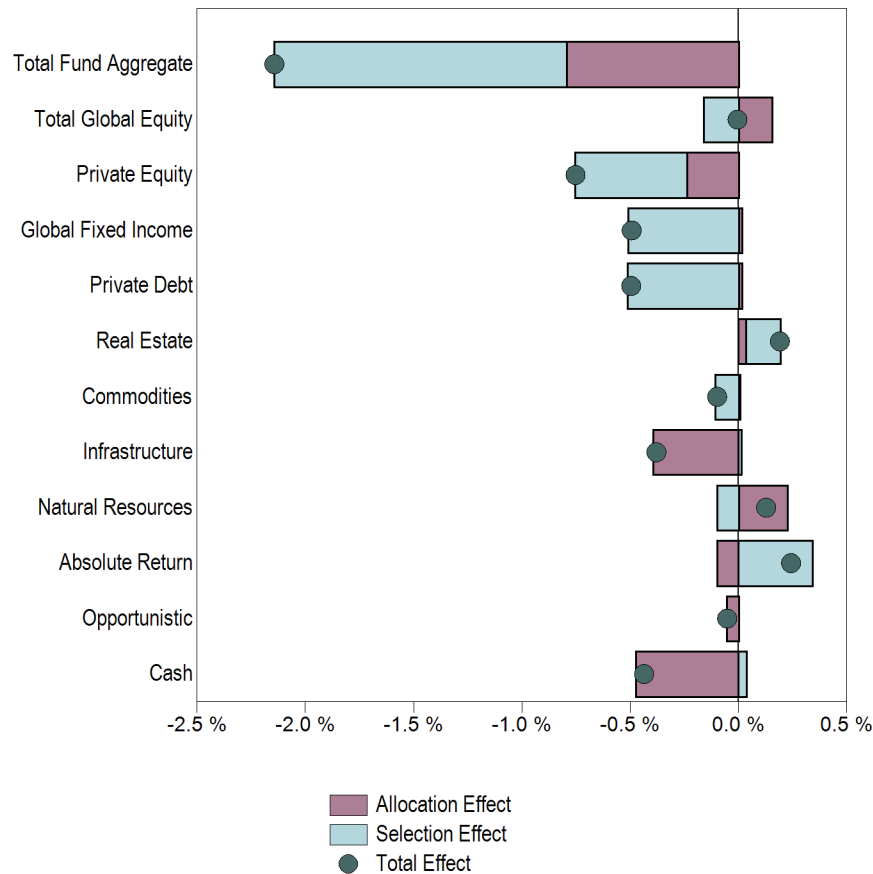
**Attribution Summary**  
3 Months Ending March 31, 2018

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total Global Equity	-0.1%	-0.9%	0.8%	0.2%	0.0%	0.2%
Private Equity	-2.4%	5.2%	-7.6%	-0.4%	-0.1%	-0.5%
Global Fixed Income	0.2%	1.3%	-1.1%	-0.2%	0.0%	-0.3%
Private Debt	2.6%	2.4%	0.1%	0.0%	0.0%	0.0%
Real Estate	2.7%	1.7%	1.0%	0.1%	0.0%	0.0%
Commodities	-1.1%	-0.4%	-0.7%	0.0%	0.0%	-0.1%
Infrastructure	-4.8%	-5.3%	0.4%	0.0%	-0.3%	-0.2%
Natural Resources	-2.8%	-1.7%	-1.2%	-0.1%	-0.1%	-0.1%
Absolute Return	1.6%	-1.5%	3.1%	0.4%	0.0%	0.3%
Opportunistic	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.4%	0.0%	0.4%	0.0%	-0.1%	-0.1%
<b>Total</b>	<b>0.0%</b>	<b>0.7%</b>	<b>-0.7%</b>	<b>-0.1%</b>	<b>-0.6%</b>	<b>-0.7%</b>

<sup>1</sup> Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.



Attribution Effects  
FYTD Ending March 31, 2018

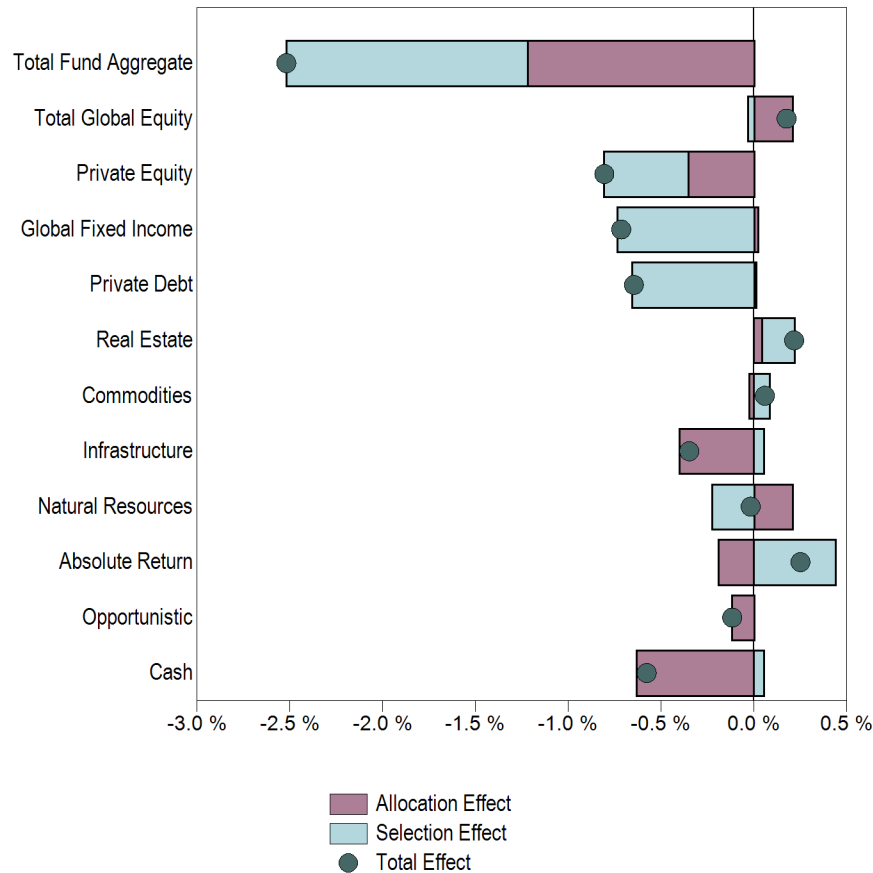


Attribution Summary  
FYTD Ending March 31, 2018

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total Global Equity	9.9%	10.3%	-0.4%	-0.2%	0.2%	0.0%
Private Equity	5.6%	15.3%	-9.7%	-0.5%	-0.2%	-0.8%
Global Fixed Income	2.0%	4.4%	-2.4%	-0.5%	0.0%	-0.5%
Private Debt	-6.3%	6.5%	-12.7%	-0.5%	0.0%	-0.5%
Real Estate	8.1%	5.3%	2.8%	0.2%	0.0%	0.2%
Commodities	5.4%	6.9%	-1.5%	-0.1%	0.0%	-0.1%
Infrastructure	-1.4%	-1.6%	0.2%	0.0%	-0.4%	-0.4%
Natural Resources	16.3%	18.3%	-2.0%	-0.1%	0.2%	0.1%
Absolute Return	4.3%	1.5%	2.9%	0.3%	-0.1%	0.2%
Opportunistic	0.0%	7.9%	-7.9%	0.0%	-0.1%	-0.1%
Cash	0.8%	0.0%	0.8%	0.0%	-0.5%	-0.4%
<b>Total</b>	<b>5.5%</b>	<b>7.7%</b>	<b>-2.2%</b>	<b>-1.4%</b>	<b>-0.8%</b>	<b>-2.2%</b>

<sup>1</sup> Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.

**Attribution Effects  
1 Year Ending March 31, 2018**

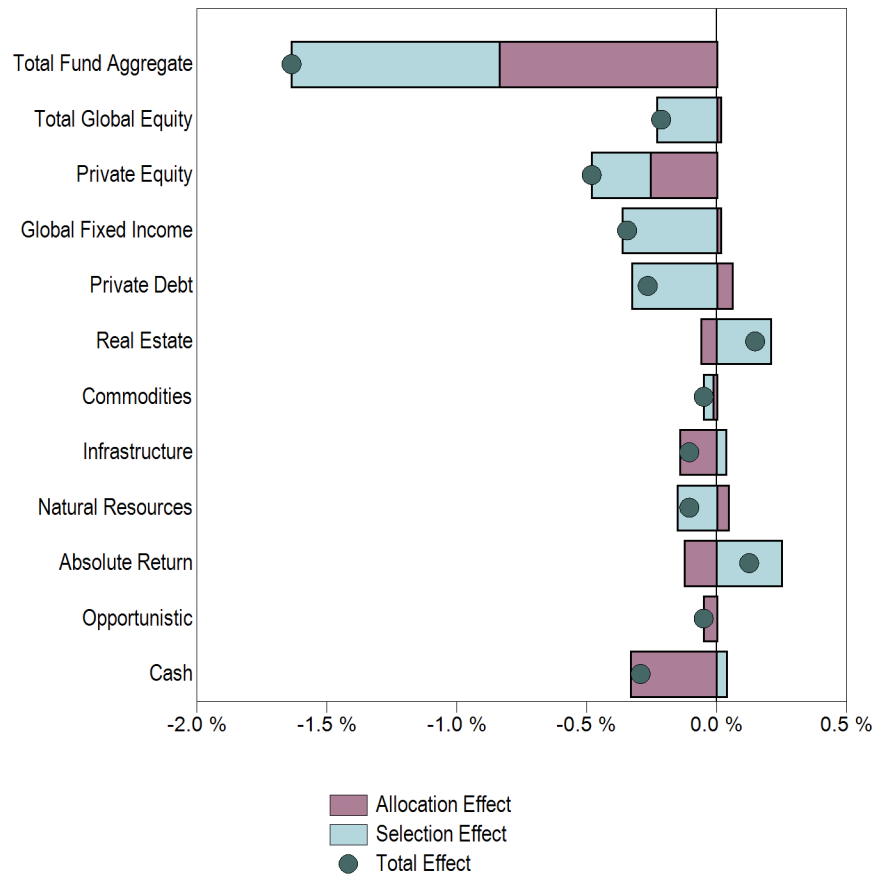


**Attribution Summary  
1 Year Ending March 31, 2018**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total Global Equity	15.0%	15.0%	0.0%	0.0%	0.2%	0.2%
Private Equity	12.5%	20.0%	-7.5%	-0.5%	-0.4%	-0.8%
Global Fixed Income	3.6%	7.2%	-3.5%	-0.7%	0.0%	-0.7%
Private Debt	-6.2%	9.7%	-15.9%	-0.7%	0.0%	-0.6%
Real Estate	10.2%	7.1%	3.1%	0.2%	0.0%	0.2%
Commodities	5.0%	3.7%	1.3%	0.1%	0.0%	0.1%
Infrastructure	2.9%	2.0%	0.9%	0.1%	-0.4%	-0.3%
Natural Resources	12.8%	17.2%	-4.4%	-0.2%	0.2%	0.0%
Absolute Return	4.3%	0.8%	3.5%	0.4%	-0.2%	0.3%
Opportunistic	0.0%	11.8%	-11.8%	0.0%	-0.1%	-0.1%
Cash	1.1%	0.0%	1.1%	0.1%	-0.6%	-0.6%
<b>Total</b>	<b>7.7%</b>	<b>10.2%</b>	<b>-2.5%</b>	<b>-1.3%</b>	<b>-1.2%</b>	<b>-2.5%</b>

<sup>1</sup> Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.

**Attribution Effects**  
3 Years Ending March 31, 2018



**Attribution Summary**  
3 Years Ending March 31, 2018

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total Global Equity	7.5%	8.3%	-0.8%	-0.2%	0.0%	-0.2%
Private Equity	6.6%	11.4%	-4.8%	-0.2%	-0.3%	-0.5%
Global Fixed Income	2.0%	3.6%	-1.6%	-0.4%	0.0%	-0.3%
Private Debt	-0.2%	7.4%	-7.6%	-0.3%	0.1%	-0.3%
Real Estate	12.5%	8.7%	3.8%	0.2%	-0.1%	0.1%
Commodities	-3.6%	-3.2%	-0.4%	0.0%	0.0%	0.0%
Infrastructure	2.8%	2.2%	0.5%	0.0%	-0.1%	-0.1%
Natural Resources	4.7%	7.6%	-2.9%	-0.2%	0.0%	-0.1%
Absolute Return	1.3%	-0.9%	2.2%	0.2%	-0.1%	0.1%
Opportunistic	0.0%	6.3%	-6.3%	0.0%	-0.1%	-0.1%
Cash	0.7%	0.0%	0.7%	0.0%	-0.3%	-0.3%
<b>Total</b>	<b>4.1%</b>	<b>5.7%</b>	<b>-1.6%</b>	<b>-0.8%</b>	<b>-0.8%</b>	<b>-1.6%</b>

<sup>1</sup> Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.



## Total Fund Risk Statistics (Net of Fees)

As of March 31, 2018

## 3 Years Ending March 31, 2018

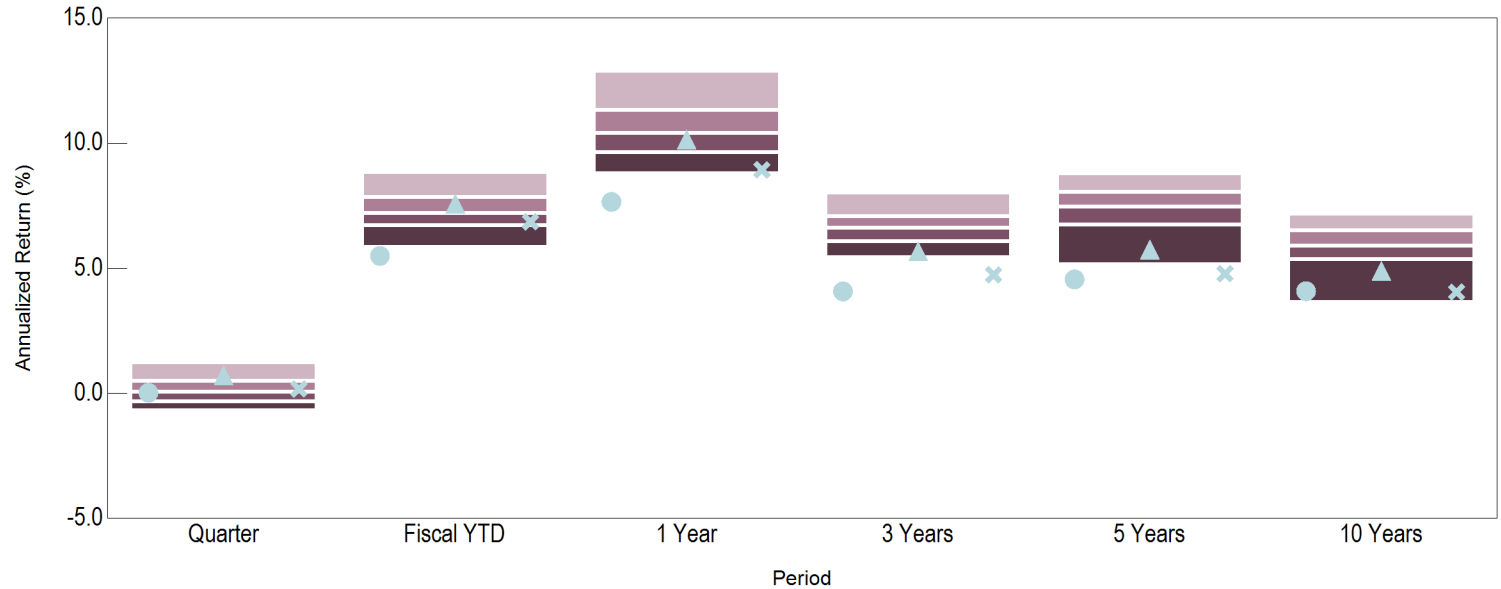
	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Total Fund Aggregate	100.00%	4.07%	97	4.37%	3	-0.41%	77	1.81%	-0.89	92	0.77	0.81
Policy Benchmark	--	5.68%	92	5.45%	32	0.00%	50	0.00%	--	--	1.00	0.94
Total Global Equity	29.57%	7.52%	52	8.83%	8	0.75%	39	2.61%	-0.29	58	0.81	0.79
MSCI ACWI IMI Net USD	--	8.27%	41	10.80%	46	0.00%	49	0.00%	--	--	1.00	0.72
Marketable Alternative Equity	2.92%	4.40%	--	4.08%	--	2.06%	--	4.93%	-0.16	--	0.38	0.94
HFRI Equity Hedge (Total) Index	--	5.21%	--	5.78%	--	0.00%	--	0.00%	--	--	1.00	0.81
Private Equity	6.99%	6.62%	--	3.76%	--	3.80%	--	6.01%	-0.80	--	0.21	1.61
Cambridge PE Composite BM	--	11.43%	--	6.15%	--	0.00%	--	0.00%	--	--	1.00	1.77
Global Fixed Income	29.12%	1.95%	87	2.25%	6	0.25%	61	3.24%	-0.50	85	0.38	0.63
Fixed Income Custom Benchmark	--	3.57%	44	4.79%	54	0.00%	67	0.00%	--	--	1.00	0.63
Non-Investment Grade Credit	1.89%	2.19%	--	3.50%	--	1.27%	--	6.11%	-0.40	--	0.09	0.47
50% BAML Global HY / 50% S&P Global Leveraged Loan	--	4.65%	--	5.54%	--	0.00%	--	0.00%	--	--	1.00	0.74
Private Debt	3.66%	-0.24%	--	7.13%	--	0.50%	--	8.16%	-0.94	--	-0.19	-0.11
S&P Global Leveraged Loan +2%	--	7.39%	--	3.39%	--	0.00%	--	0.00%	--	--	1.00	2.02
Real Assets	16.41%	4.01%	--	8.08%	--	-0.21%	--	3.04%	-0.13	--	0.96	0.43
Real Assets Benchmark	--	4.39%	--	7.84%	--	0.00%	--	0.00%	--	--	1.00	0.49
Real Estate	6.40%	12.48%	--	4.25%	--	13.67%	--	6.12%	0.61	--	-0.21	2.81
NCREIF Property Index	--	8.73%	--	3.68%	--	0.00%	--	0.00%	--	--	1.00	2.22
Commodities	5.24%	-3.62%	--	9.15%	--	-1.69%	--	6.12%	-0.07	--	0.66	-0.46

## Total Fund Risk Statistics (Net of Fees)

As of March 31, 2018

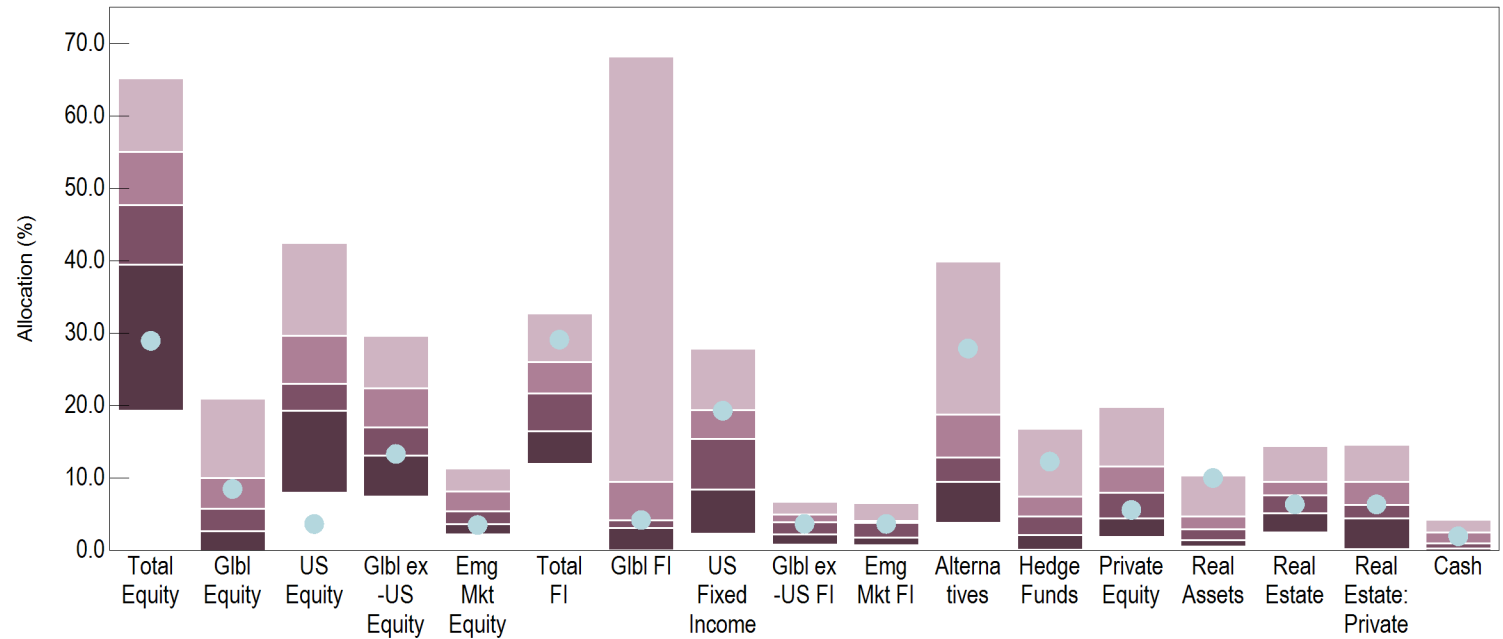
	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Bloomberg Commodity Index TR USD	--	-3.21%	--	12.01%	--	0.00%	--	0.00%	--	--	1.00	-0.31
Infrastructure	3.10%	2.76%	--	11.06%	--	0.58%	--	0.71%	0.76	--	0.98	0.20
DJ Brookfield Global Infrastructure Net TR USD	--	2.22%	--	11.30%	--	0.00%	--	0.00%	--	--	1.00	0.15
Natural Resources	1.67%	4.70%	--	18.28%	--	-2.86%	--	2.41%	-1.20	--	1.00	0.23
S&P Global Natural Resources Index TR USD	--	7.59%	--	18.17%	--	0.00%	--	0.00%	--	--	1.00	0.39
Absolute Return	12.28%	1.26%	--	2.51%	--	1.19%	--	3.64%	0.60	--	0.33	0.28
HFRI Macro (Total) Index	--	-0.93%	--	4.46%	--	0.00%	--	0.00%	--	--	1.00	-0.33
Relative Value	5.84%	2.81%	--	2.85%	--	2.13%	--	3.93%	-0.20	--	0.04	0.79
HFRI Relative Value (Total) Index	--	3.58%	--	2.83%	--	0.00%	--	0.00%	--	--	1.00	1.07
Macro	6.44%	-0.43%	--	5.05%	--	0.26%	--	3.45%	0.14	--	0.84	-0.19
HFRI Macro (Total) Index	--	-0.93%	--	4.46%	--	0.00%	--	0.00%	--	--	1.00	-0.33
Cash	1.70%	0.67%	--	0.14%	--	0.12%	--	0.13%	0.92	--	0.60	0.83
91 Day T-Bills	--	0.55%	--	0.14%	--	0.00%	--	0.00%	--	--	1.00	0.00

InvestorForce Public DB > \$1B Net Return Comparison  
Ending March 31, 2018



	Return (Rank)											
5th Percentile	1.2		8.8		12.9		8.0		8.8		7.2	
25th Percentile	0.5		7.9		11.3		7.1		8.1		6.5	
Median	0.1		7.2		10.4		6.6		7.5		5.9	
75th Percentile	-0.3		6.7		9.6		6.1		6.8		5.4	
95th Percentile	-0.7		5.9		8.8		5.5		5.2		3.7	
# of Portfolios	60		60		60		60		60		55	
● Total Fund Aggregate	0.0	(56)	5.5	(97)	7.7	(98)	4.1	(97)	4.6	(96)	4.1	(95)
▲ Policy Benchmark	0.7	(16)	7.6	(38)	10.2	(62)	5.7	(92)	5.8	(90)	4.9	(92)
× Allocation Index	0.2	(45)	6.9	(66)	8.9	(93)	4.7	(96)	4.8	(96)	4.1	(95)

Total Plan Allocation vs. InvestorForce Public DB > \$1B Net  
As of March 31, 2018



	Allocation																
5th Percentile	65.1	21.0	42.4	29.6	11.3	32.7	68.2	27.8	6.71	6.55	39.8	16.8	19.8	10.3	14.4	14.5	4.25
25th Percentile	55.1	10.0	29.7	22.4	8.21	26.1	9.61	19.4	5.08	4.18	18.8	7.56	11.6	4.80	9.55	9.59	2.61
Median	47.7	5.89	23.1	17.0	5.46	21.7	4.25	15.4	3.97	3.94	12.9	4.80	8.08	3.01	7.73	6.37	1.10
75th Percentile	39.5	2.77	19.4	13.1	3.75	16.5	3.24	8.50	2.30	1.87	9.55	2.21	4.56	1.50	5.23	4.53	0.37
95th Percentile	19.3	0.01	8.04	7.55	2.29	12.0	0.10	2.42	0.87	0.85	3.87	0.17	1.95	0.63	2.58	0.27	0.00
# of Portfolios	55	21	47	50	42	56	26	50	29	26	51	38	48	27	46	43	53
● Total Fund Aggregate Rank	28.9	8.49	3.67	13.3	3.52	29.1	4.22	19.3	3.68	3.68	27.9	12.2	5.60	10.0	6.38	6.38	1.97
	91	43	99	74	78	14	51	26	59	54	12	14	70	7	63	50	35





As of March 31, 2018

Major Benchmark Returns					
Periods Ending March 31, 2018					
Name	Q1-18	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>US Equity</b>					
Russell 3000	-0.6	13.8	10.2	13.0	9.6
S&P 500	-0.8	14.0	10.8	13.3	9.5
Russell 1000	-0.7	14.0	10.4	13.2	9.6
Russell 1000 Growth	1.4	21.3	12.9	15.5	11.3
Russell 1000 Value	-2.8	6.9	7.9	10.8	7.8
Russell MidCap	-0.5	12.2	8.0	12.1	10.2
Russell 2000	-0.1	11.8	8.4	11.5	9.8
Russell 2000 Growth	2.3	18.6	8.8	12.9	11.0
Russell 2000 Value	-2.6	5.1	7.9	10.0	8.6
<b>International Equity</b>					
MSCI ACWI	-1.0	14.8	8.1	9.2	5.6
MSCI World ex USA	-2.0	13.9	5.3	6.0	2.6
MSCI EAFE	-1.5	14.8	5.6	6.5	2.7
MSCI Emerging Markets	1.4	24.9	8.8	5.0	3.0
<b>Fixed Income</b>					
91 Day T-Bills	0.4	1.2	0.5	0.3	0.3
BBgBarc US Aggregate TR	-1.5	1.2	1.2	1.8	3.6
BBgBarc US Govt/Credit TR	-1.6	1.4	1.2	1.8	3.7
BBgBarc US Municipal TR	-1.1	2.7	2.3	2.7	4.4
BBgBarc US High Yield TR	-0.9	3.8	5.2	5.0	8.3
Citi WGBI	2.5	8.5	3.5	1.2	2.0
Citi WGBI ex US	4.4	12.9	5.0	1.4	1.8
<b>Real Estate</b>					
FTSE NAREIT All REIT	-6.7	-1.0	3.1	6.5	7.0
NCREIF Property Index	1.7	7.1	8.7	10.0	6.1
<b>Alternatives</b>					
HFRI Fund of Funds Composite Index	0.3	5.6	1.9	3.4	1.6
<b>Inflation</b>					
Consumer Price Index	1.2	2.4	1.9	1.4	1.6

**Benchmark History**

As of March 31, 2018

Total Fund Aggregate		
11/1/2017	Present	28% MSCI ACWI IMI Net USD / 9% Cambridge PE Composite BM / 33% Fixed Income Custom Benchmark / 6% S&P Global Leveraged Loan +2% / 8% NCREIF Property Index / 4% Bloomberg Commodity Index TR USD / 1% DJ Brookfield Global Infrastructure Net TR USD / 11% HFRI Macro (Total) Index
7/1/2015	10/31/2017	28% MSCI ACWI IMI Net USD / 9% Cambridge Associates Private Equity Composite / 19% Fixed Income Custom Benchmark / 5% S&P Global Leveraged Loan +2% / 7% NCREIF Property Index / 6% Bloomberg Commodity Index TR USD / 5% DJ Brookfield Global Infrastructure Net TR USD / 5% S&P Global LargeMidCap Commodity and Resources GR USD / 11% HFRI Macro (Total) Index / 5% 60/40 MSCI ACWI IMI/BC Global

## **Glossary and Notes**

**Credit Risk:** Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

**Duration:** Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

**Information Ratio:** This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

**Jensen's Alpha:** A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk.  $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$ .

**Market Capitalization:** For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

**Market Weighted:** Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

**Maturity:** The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

**Prepayment Risk:** The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

**Price-Book Value (P/B) Ratio:** The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

**Price-Earnings (P/E) Ratio:** A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

**Quality Rating:** The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

**Sharpe Ratio:** A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

**Standard Deviation:** A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

**STIF Account:** Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

**Style:** The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

**Yield to Maturity:** The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.  
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.