

FUND EVALUATION REPORT

Dallas Police & Fire Pension System

Quarterly Review

As of December 31, 2018



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

BOSTON
MASSACHUSETTS

CHICAGO
ILLINOIS

MIAMI
FLORIDA

PORTLAND
OREGON

SAN DIEGO
CALIFORNIA

LONDON
UNITED KINGDOM

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- 1. Executive Summary**
- 2. 4Q18 Review**
- 3. Disclaimer, Glossary, and Notes**

Executive Summary

DPFP 4Q18 Flash Summary

Category	Result	Notes
Total Fund Performance Return	Negative	-3.6%
Performance vs. Policy Index	Outperformed	-3.6% vs. -7.3% Policy Index
DPFP Public Markets vs. 60/40 ¹	Outperformed	-6.5% vs. -7.6%
Asset Allocation vs. Targets	Additive	Underweight global equity and overweight real estate helped
Safety Reserve Exposure	Sufficient	\$301 million (approximately 15%)
Performance vs. Peers	Outperformed	1st percentile in peer group in 4Q18 ²
Active Management	Additive	PE, Natural Resources and EM Equity
Compliance with Targets	No	Under Investment Grade Bond and EM Debt minimums ³

¹ Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.

² InvestorForce Public DB \$1-\$5 billion net accounts.

³ Investment Grade Bonds and Emerging Market Debt are below target minimums by design due to following the implementation plan approved by the Trustees.



DPFP Trailing One-Year Flash Summary

Category	Trailing 1 YR Result	1 YR Notes
Total Fund Performance Return	Negative	-1.5%
Asset Allocation vs. Targets	Additive	Underweight global equity and overweight RE helped
Performance vs. Policy Index	Outperformed	-1.5% vs. -5.3% Policy Index
Performance vs. Peers	Outperformed	2nd percentile in peer group ¹
Active Management	Additive	NR, RE, PE Positive Selection

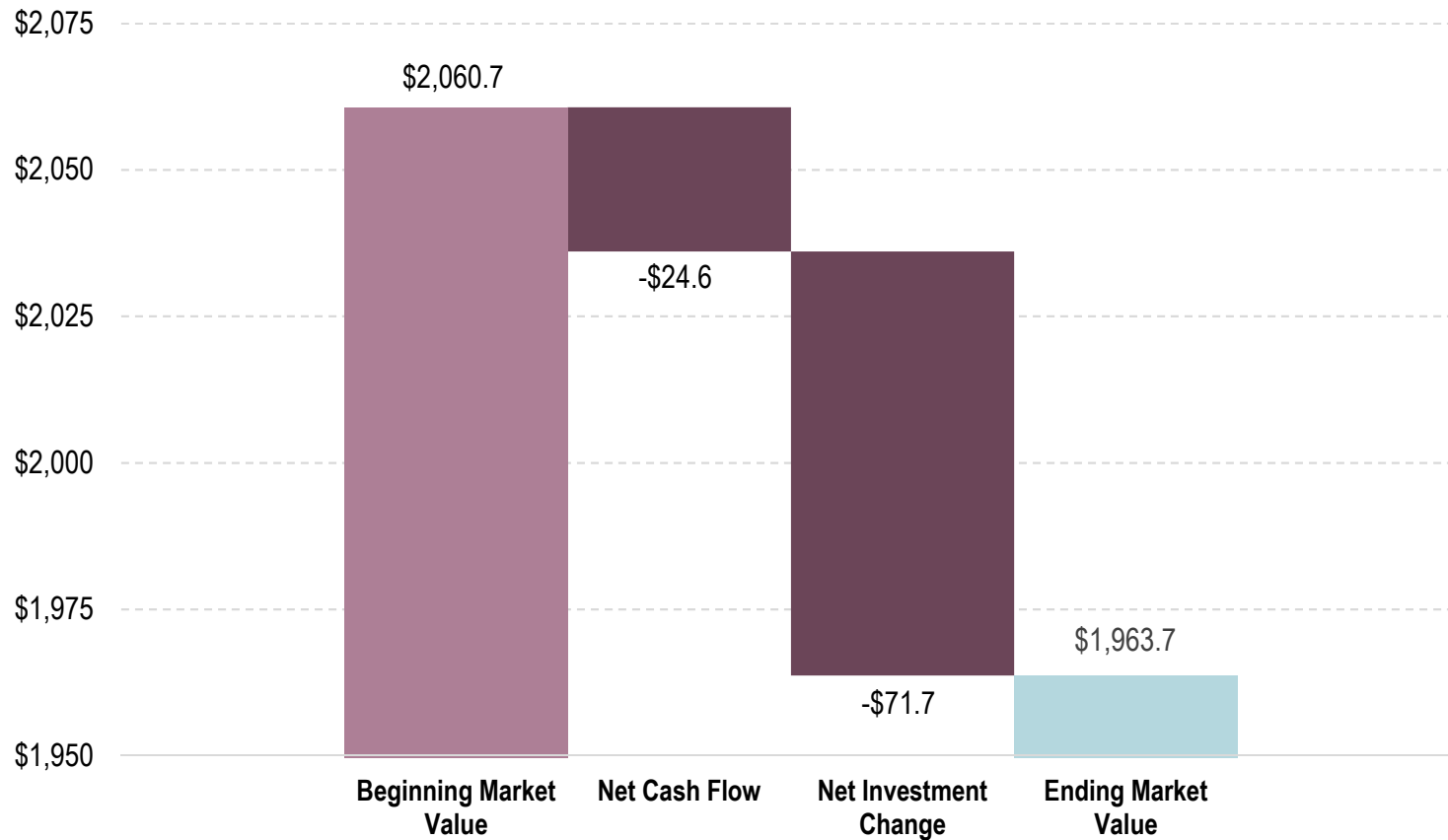
DPFP Trailing Three-Year Flash Summary

Category	Trailing 3 YR Result	3 YR Notes
Total Fund Performance Return	Positive	+2.2%
Performance vs. Policy Index	Trailed	2.2% vs. 6.2% Policy Index
Performance vs. Peers	Trailed	99th percentile in peer group ¹
Active Management	Hurt	PE, NR, RE and PD Negative Selection

¹ InvestorForce Public DB \$1-\$5 billion net accounts.



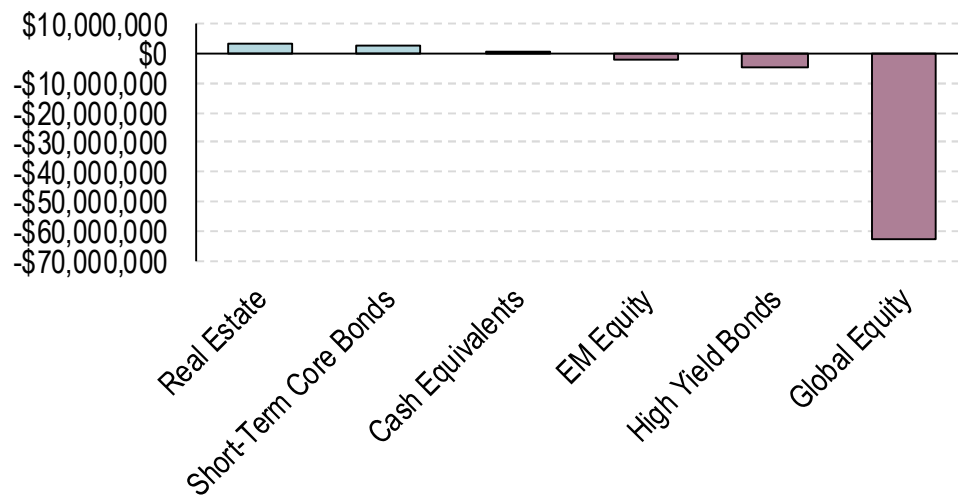
Quarterly Change in Market Value



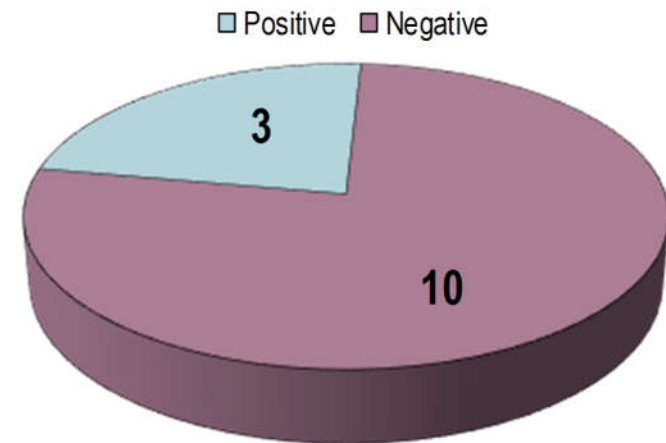
- Total market value decreased due to a combination of negative cash flows and negative investment performance.

Quarterly Absolute Performance

**Asset Classes Dollar¹ Gain/Loss
Top Three and Bottom Three**



Asset Class Absolute Performance



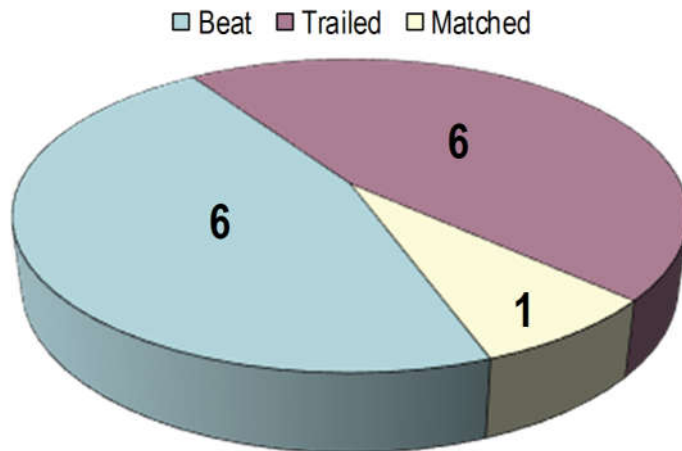
- In absolute terms, global equity depreciated the most during the quarter, losing \$62.6 million in market value.
- Real estate, short-term bonds and cash had small increases in market value in the fourth quarter.
- In the quarter, ten out of thirteen asset classes generated negative absolute performance (approx. 77%).

¹ Estimated gain/loss calculated by multiplying beginning market value by quarterly performance.

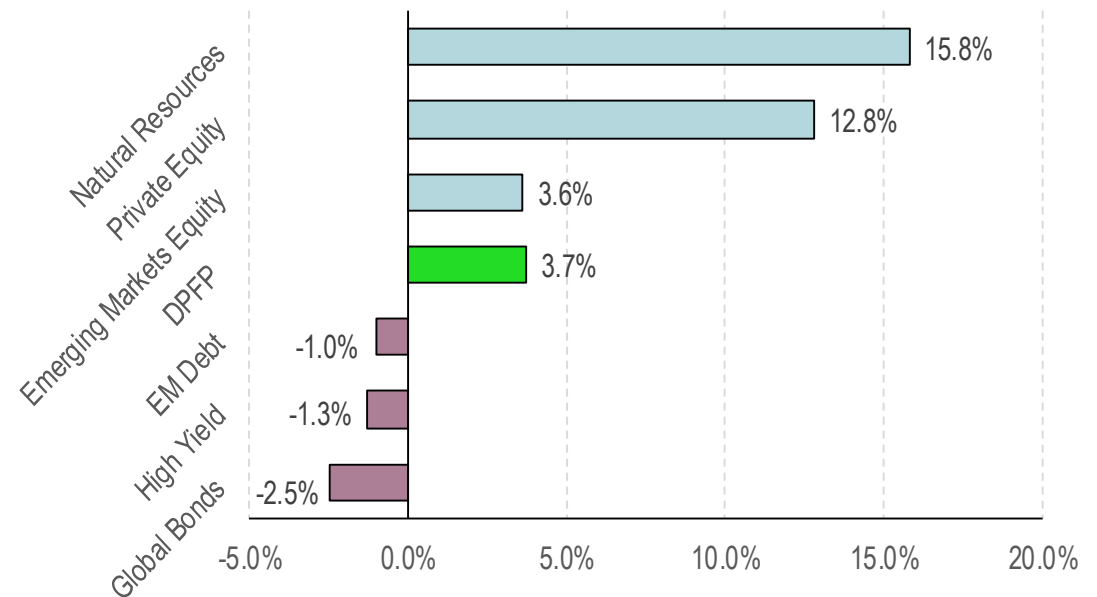


Quarterly Relative Performance

Asset Classes vs. Benchmarks



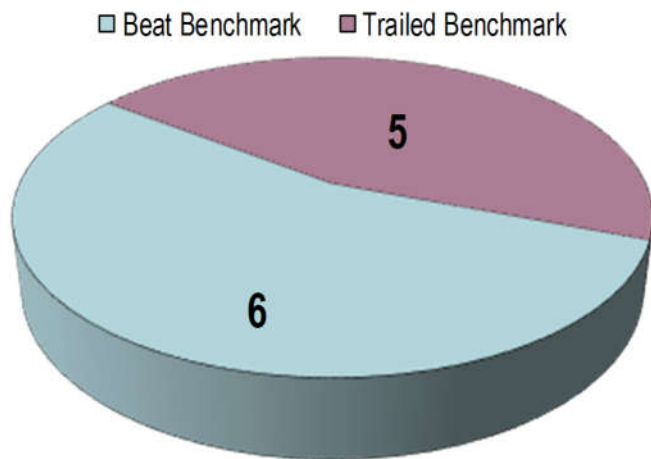
Top Three and Bottom Three Asset Classes vs. Benchmarks



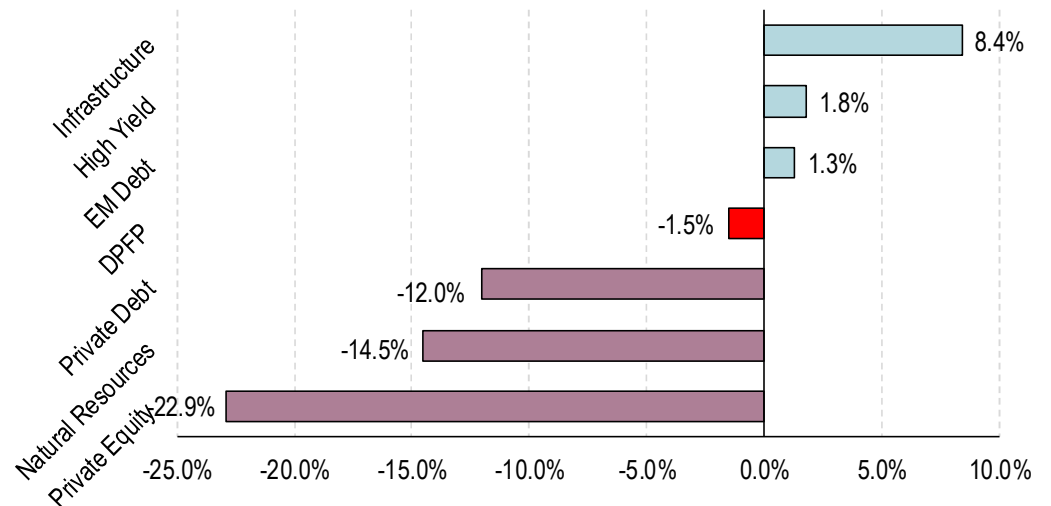
- In the quarter, the best relative performance came from natural resources, private equity and emerging market equities.
- Global bonds, high yield bonds and emerging market debt had the worst relative performance in the quarter.
- Six of the thirteen asset classes delivered positive relative performance versus respective benchmarks.

Trailing Three-Year Relative Performance

Asset Classes vs. Benchmarks



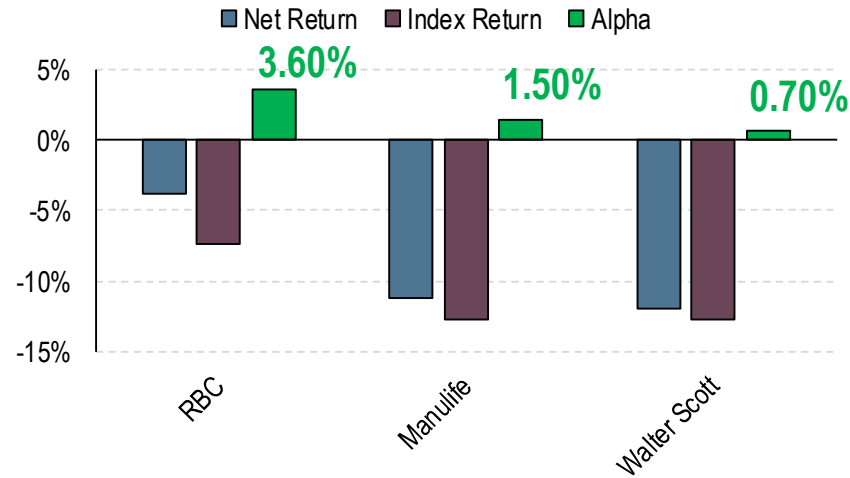
Top Three and Bottom Three Asset Classes vs. Benchmarks



- Six of the eleven asset classes with trailing three-year return history have delivered positive relative performance versus respective benchmarks.
- Over the trailing three-year period, the best relative performance came from infrastructure, high yield bonds and emerging market debt asset classes.
- Private equity, natural resources and private debt had the worst relative performance over the three-year trailing period.

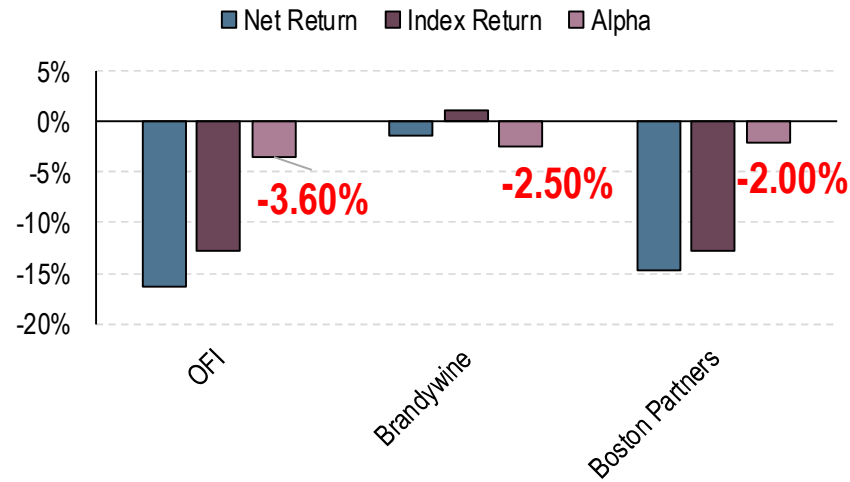
Public Manager Alpha

**Top Three
Outperformers in
Quarter**



\$256 million
combined
exposure

**Bottom Three
Underperformers in
Quarter**



\$253 million
combined
exposure

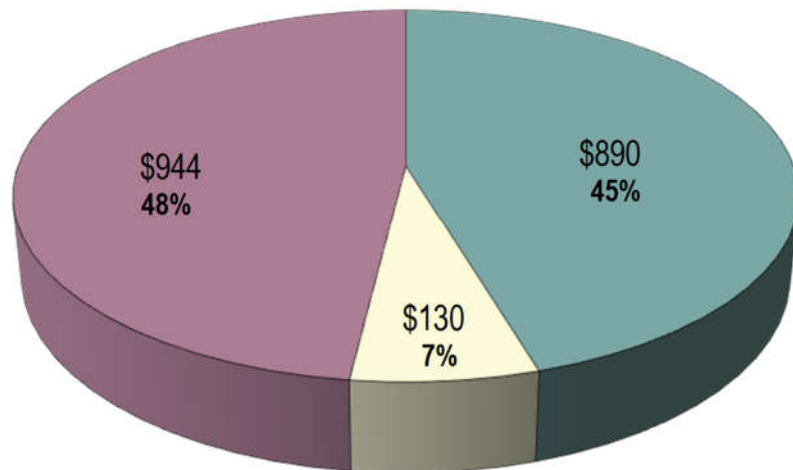
- 7 out of the 11 public markets managers underperformed their respective benchmarks in the quarter.



Liquidity Exposure as of December 31, 2018

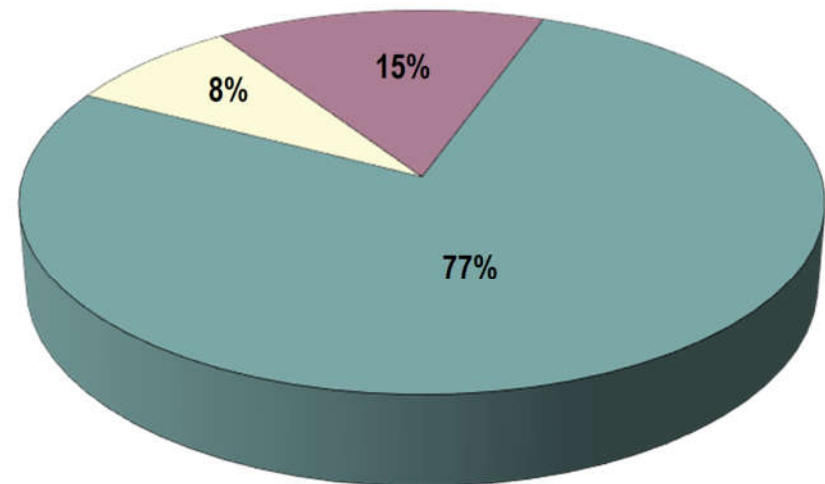
Exposure (\$mm)

■ Daily or Weekly ■ Monthly ■ Illiquid



Targets

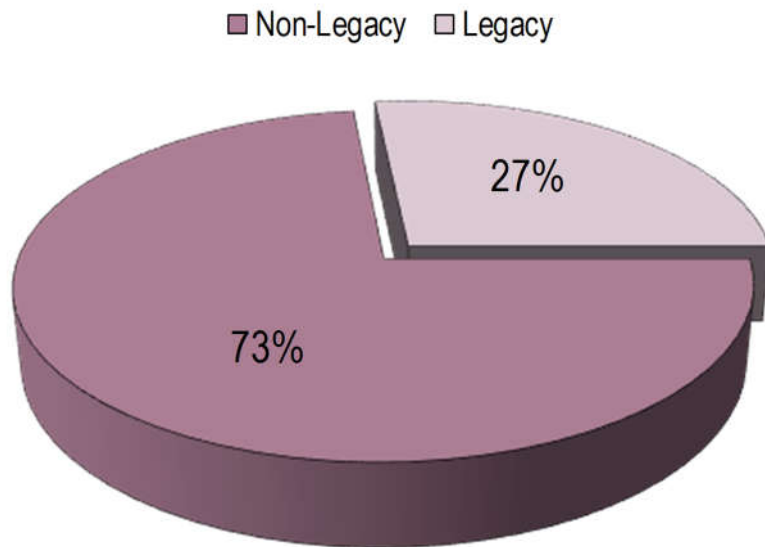
■ Daily or Weekly ■ Monthly ■ Illiquid



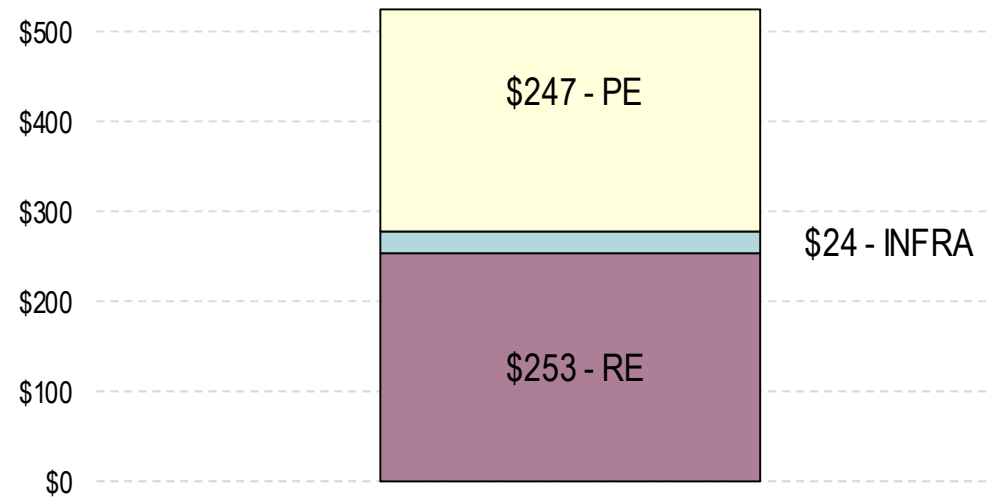
- Approximately 48% of the System’s assets are illiquid versus 15% of the target allocation.

* Assets can be redeemed between monthly and annual basis often with gating, lock-ups or notice of more than 30 days required.

Legacy Assets



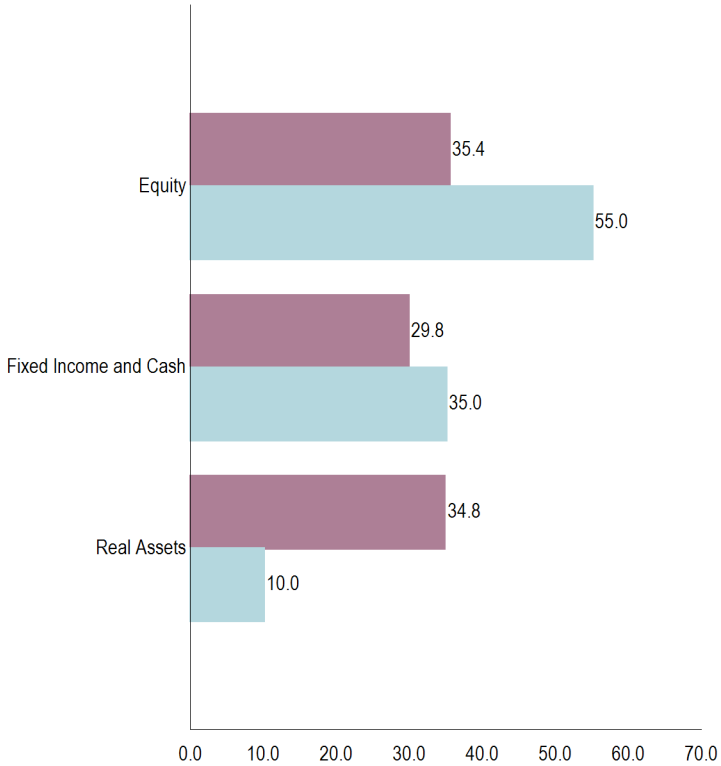
Exposure (\$ mm)



\$524 million
Net Asset Value of Legacy Assets

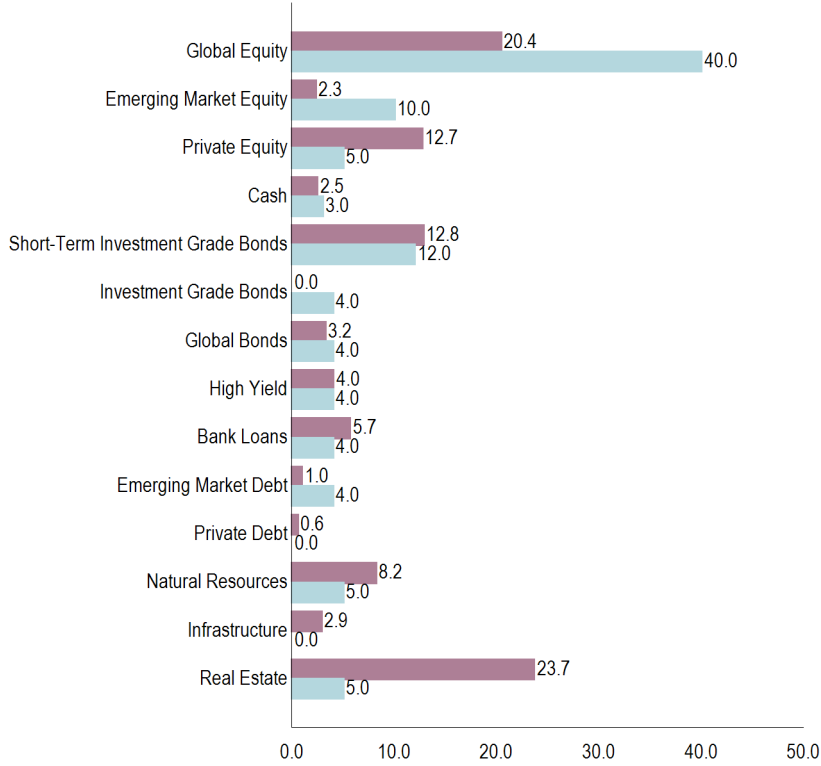
4Q18 Review

**Asset Category
Actual vs Target Allocation (%)
As of December 31, 2018**



Actual Policy

**Asset Classes
Actual vs Target Allocation (%)
As of December 31, 2018**



Actual Policy

As of December 31, 2018

Allocation vs. Targets and Policy

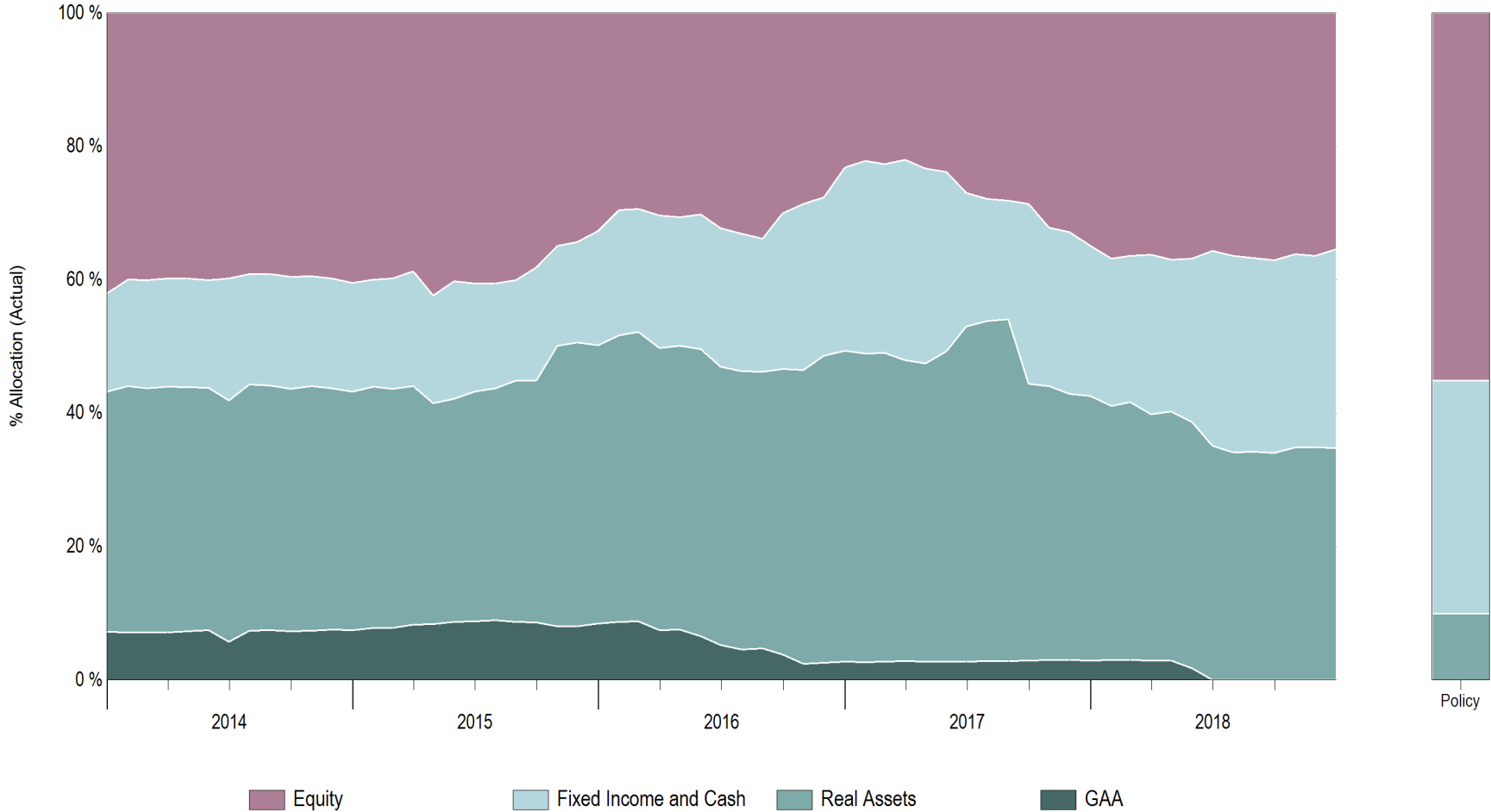
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Equity	\$695,717,169	35%	55%		
Global Equity	\$401,068,748	20%	40%	18% - 48%	Yes
Emerging Market Equity	\$45,076,546	2%	10%	0% - 12%	Yes
Private Equity	\$249,571,875	13%	5%		
Fixed Income and Cash	\$585,144,812	30%	35%		
Cash	\$48,527,296	2%	3%	0% - 5%	Yes
Short-Term Investment Grade Bonds	\$252,325,469	13%	12%	5% - 15%	Yes
Investment Grade Bonds	\$0	0%	4%	2% - 6%	No
Global Bonds	\$63,652,773	3%	4%	2% - 6%	Yes
High Yield	\$79,244,095	4%	4%	2% - 6%	Yes
Bank Loans	\$111,099,111	6%	4%	2% - 6%	Yes
Emerging Market Debt	\$19,162,370	1%	4%	2% - 6%	No
Private Debt	\$11,133,698	1%	0%		
Real Assets	\$682,818,059	35%	10%		
Natural Resources	\$161,460,970	8%	5%		
Infrastructure	\$56,908,601	3%	0%		
Real Estate	\$464,448,488	24%	5%		
Total	\$1,963,680,040	100%	100%		

As of 12/31/2018, the Safety Reserve exposure was approximately \$300.9 million (15.3%).

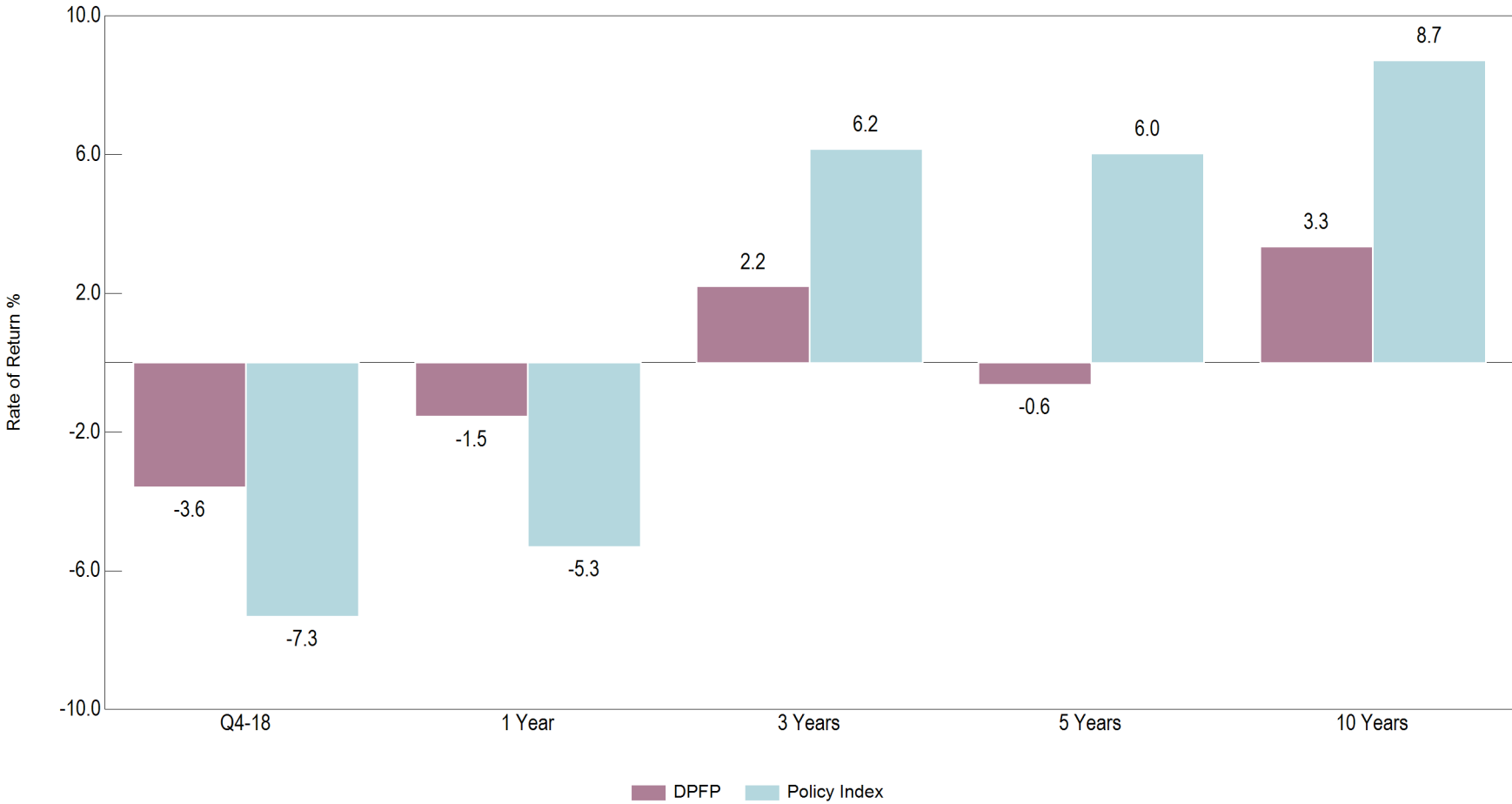
Rebalancing ranges are not established for illiquid assets (Private Equity, Private Debt, Natural Resources, Infrastructure and Real Estate)



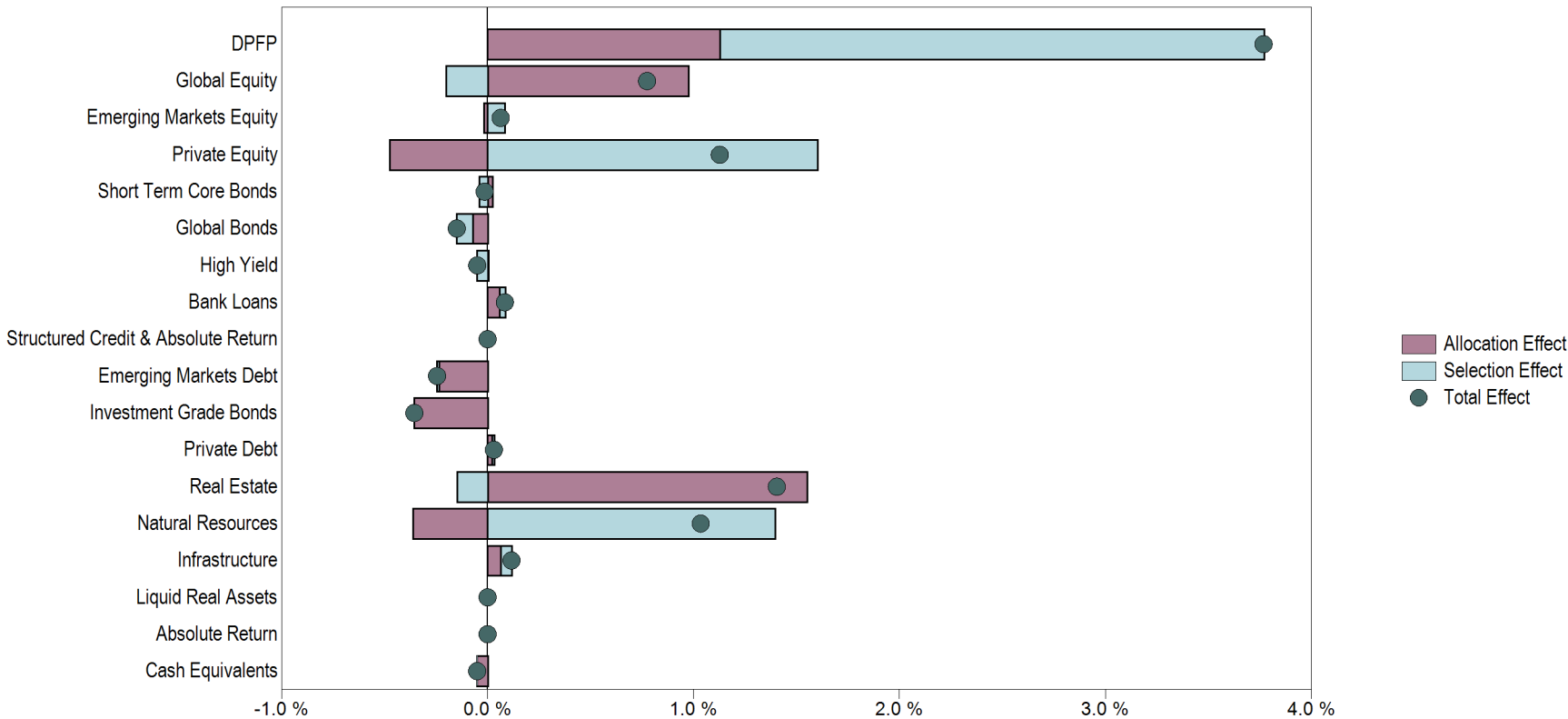
Asset Allocation History vs. Policy
5 Years Ending December 31, 2018



Net Return Summary
Ending December 31, 2018



**Attribution Effects vs. Policy Benchmark
3 Months Ending December 31, 2018**

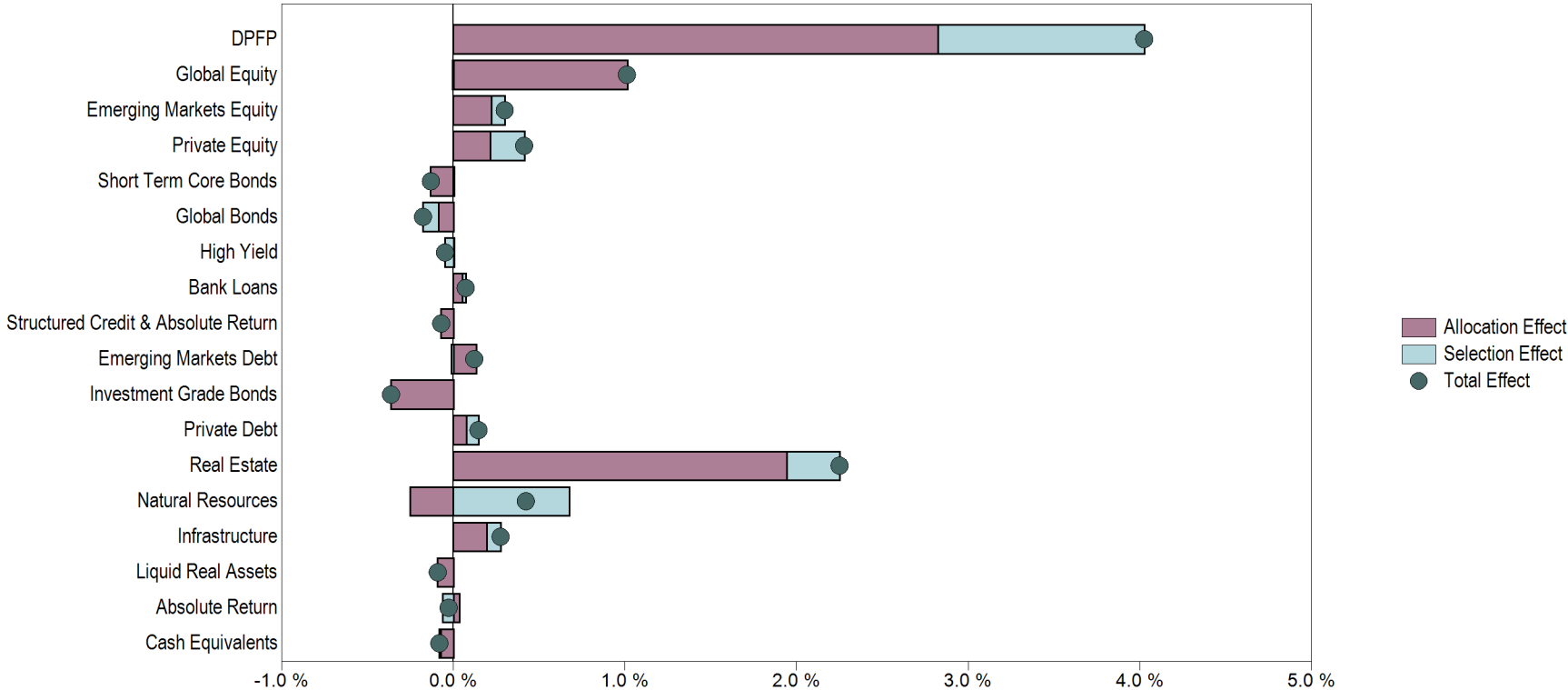


Attribution Summary 3 Months Ending December 31, 2018						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total	-3.6%	-7.3%	3.8%	2.6%	1.1%	3.8%

The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed.



**Attribution Effects vs. Policy Benchmark
1 Year Ending December 31, 2018**



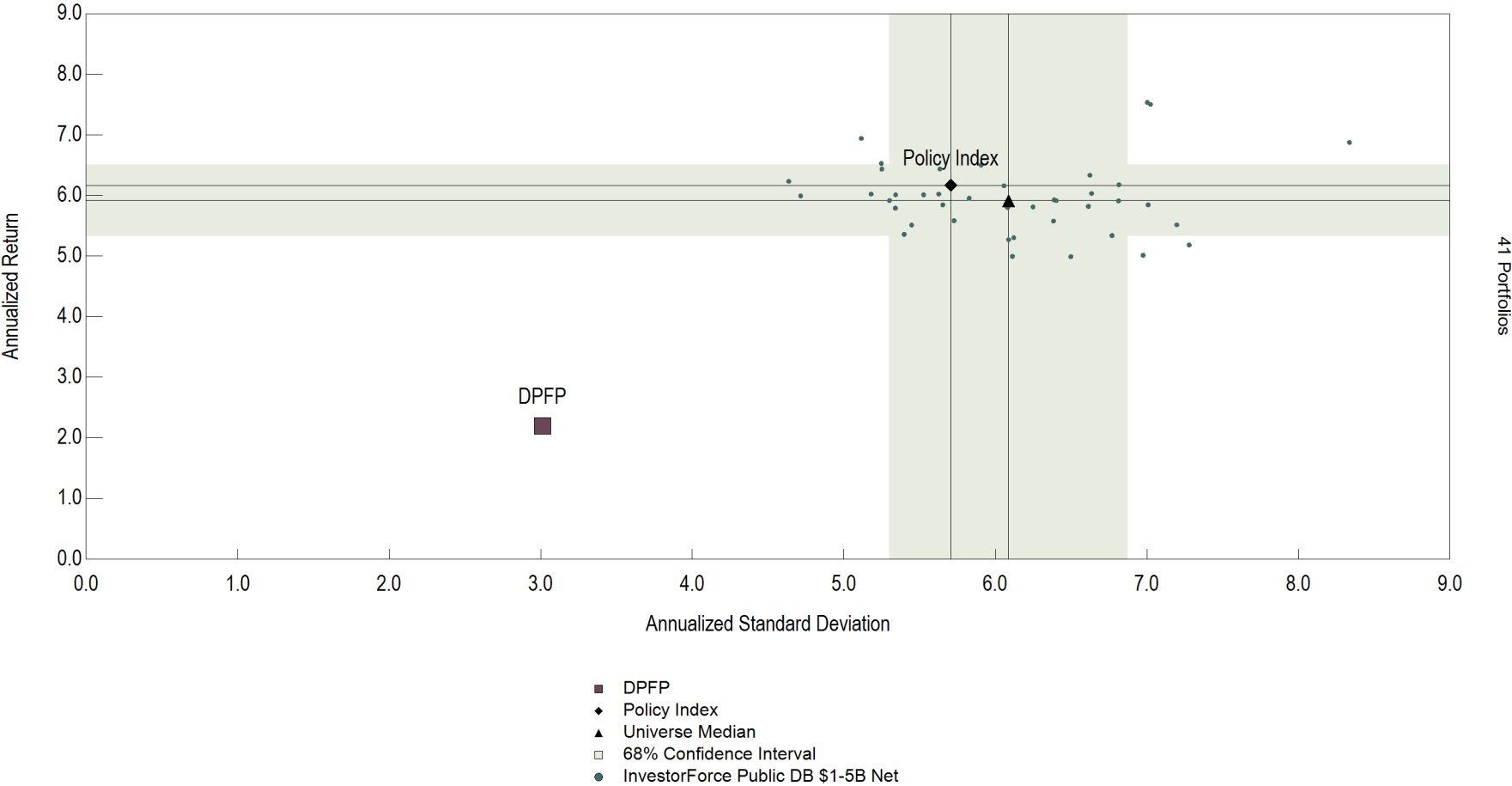
**Attribution Summary
1 Year Ending December 31, 2018**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total	-1.1%	-5.3%	4.2%	1.2%	2.8%	4.0%

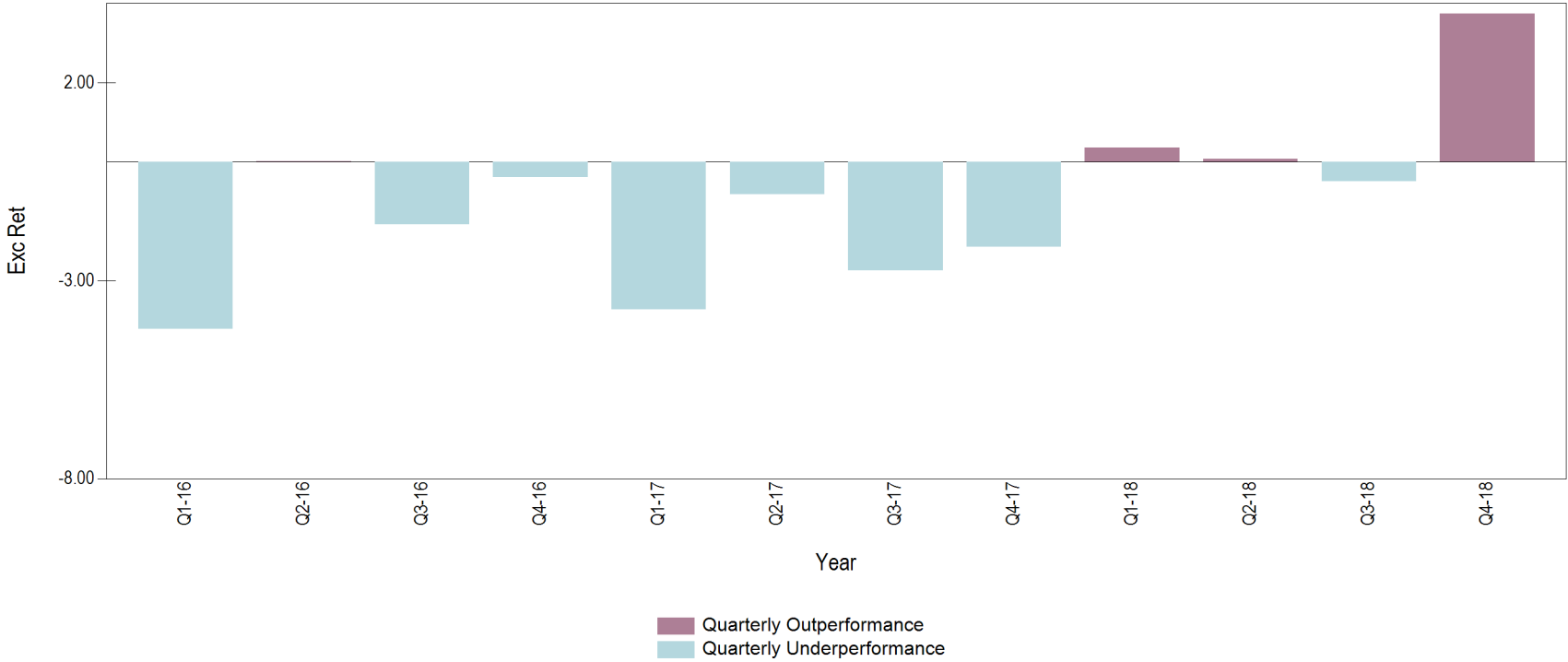
The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed.



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



Quarterly Excess Performance vs. Policy Benchmark



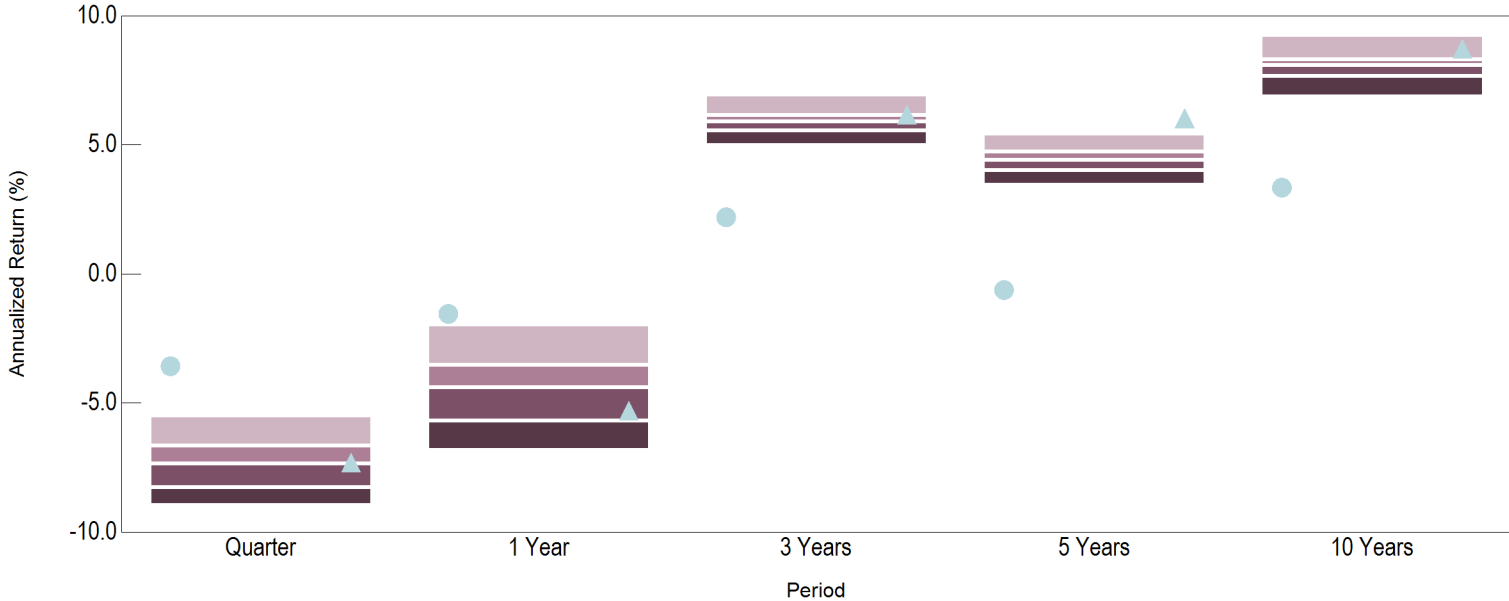
**Total Fund Correlation Matrix
1 Year Ending December 31, 2018**

	<i>DPFP</i>	<i>Policy Index</i>	<i>60% MSCI ACWI/40% Barclays Global Agg</i>
DPFP	1.00	--	--
Policy Index	0.98	1.00	--
60% MSCI ACWI/40% Barclays Global Agg	0.98	0.98	1.00

**Total Fund Correlation Matrix
3 Years Ending December 31, 2018**

	<i>DPFP</i>	<i>Policy Index</i>	<i>60% MSCI ACWI/40% Barclays Global Agg</i>
DPFP	1.00	--	--
Policy Index	0.72	1.00	--
60% MSCI ACWI/40% Barclays Global Agg	0.65	0.96	1.00

Total Plan Allocation vs. InvestorForce Public DB \$1-5B Net Accounts
As of December 31, 2018



	Return (Rank)									
5th Percentile	-5.5		-2.0		6.9		5.4	9.2		
25th Percentile	-6.6		-3.5		6.2		4.8	8.3		
Median	-7.3		-4.4		5.9		4.4	8.1		
75th Percentile	-8.2		-5.7		5.6		4.0	7.7		
95th Percentile	-8.9		-6.8		5.0		3.5	6.9		
# of Portfolios	42		41		41		40	38		
● DPFP	-3.6	(1)	-1.5	(2)	2.2	(99)	-0.6	(99)	3.3	(99)
▲ Policy Index	-7.3	(50)	-5.3	(73)	6.2	(27)	6.0	(4)	8.7	(18)



As of December 31, 2018

Fund Watch List / Compliance
 As of December 31, 2018

Name	Status	1 YR Return Above Benchmark	3 YR Return Above Benchmark	3 YR Sharpe Ratio Above Peers	3 YR Return Above Peers
Global Equity					
Boston Partners Global Equity Fund	Hold	No	--	--	--
Manulife Global Equity Strategy	Hold	No	--	--	--
OFI Global Equity Strategy	Hold	No	No	No	No
Walter Scott Global Equity Fund	Hold	Yes	Yes	Yes	Yes
Emerging Markets Equity					
RBC Emerging Markets Equity	Hold	Yes	--	--	--
Short Term Core Bonds					
IR&M 1-3 Year Strategy	Hold	Yes	--	--	--
Global Bonds					
Brandywine Global Fixed Income	Hold	No	Yes	Yes	Yes
High Yield					
Loomis Sayles High Yield Fund	Hold	No	Yes	Yes	Yes
Bank Loans					
Loomis Sayles Senior Rate and Fixed Income	Hold	Yes	Yes	Yes	Yes
Pacific Asset Management Corporate (Bank) Loan Strategy	Hold	No	--	--	--
Emerging Markets Debt					
Ashmore EM Blended Debt	Hold	No	--	--	--

1 YR Return Above Benchmark - 1 YR Return Above Benchmark
 3 YR Return Above Benchmark - 3 YR Return Above Benchmark
 3 YR Sharpe Ratio Above Peers - 3 YR Sharpe Ratio Above Peer Group Median
 3 YR Return Above Peers - 3 YR Return Above Peer Group Median

Returns are net of fees.



Asset Class Performance Summary (Net)

	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DPFP	1,963,680,040	100.0	-3.6	-1.5	2.2	-0.6	3.3	5.7	Jun-96
Policy Index			-7.3	-5.3	6.2	6.0	8.7	--	Jun-96
Allocation Index			-4.6	-0.6	7.2	6.6	8.1	7.1	Jun-96
Total Fund Ex Private Markets			-6.5	-4.3	7.0	4.1	9.3	--	Jun-96
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index			-7.6	-6.4	5.1	3.1	7.0	--	Jun-96
Global Equity	401,068,748	20.4	-13.5	-9.0	7.4	5.3	10.2	5.4	Jul-06
Global Equity Weighted Index			-12.7	-8.9	7.8	4.7	10.0	5.4	Jul-06
Emerging Markets Equity	45,076,546	2.3	-3.8	-10.8	--	--	--	-10.8	Jan-18
MSCI Emerging Markets Gross			-7.4	-14.2	9.7	2.0	8.4	-14.2	Jan-18
Private Equity	249,571,875	12.7	-0.8	-0.7	-10.7	-9.6	-3.9	-0.7	Oct-05
Private Equity Custom Benchmark			-13.6	-2.4	12.2	11.1	16.5	11.0	Oct-05
Cash Equivalents	48,527,296	2.5	0.6	1.9	1.3	--	--	1.3	Apr-15
91 Day T-Bills			0.6	1.9	1.1	0.6	0.4	0.8	Apr-15
Short Term Core Bonds	252,325,469	12.8	1.0	1.8	--	--	--	1.3	Jun-17
BBgBarc US Treasury 1-3 Yr TR			1.3	1.6	0.9	0.8	1.0	1.0	Jun-17
Global Bonds	63,652,773	3.2	-1.3	-4.0	3.3	1.5	--	2.3	Dec-10
BBgBarc Global Aggregate TR			1.2	-1.2	2.7	1.1	2.5	1.6	Dec-10
High Yield	79,244,095	4.0	-5.8	-3.2	9.0	2.9	--	5.8	Dec-10
BBgBarc US High Yield TR			-4.5	-2.1	7.2	3.8	11.1	5.9	Dec-10
Bank Loans	111,099,111	5.7	-3.0	0.8	5.9	3.5	--	3.5	Jan-14
S&P/LSTA Leveraged Loan			-3.5	0.4	4.8	3.1	--	3.1	Jan-14
Emerging Markets Debt	19,162,370	1.0	-0.6	-6.2	6.9	2.3	--	2.9	Dec-10
50% JPM EMBI/50% JPM GBI-EM			0.4	-5.2	5.6	1.8	--	2.6	Dec-10
Private Debt	11,133,698	0.6	-1.3	11.6	-3.3	--	--	-3.3	Jan-16
Barclays Global High Yield +2%			-3.0	-2.1	8.7	--	--	8.7	Jan-16
Real Estate	464,448,488	23.7	0.7	7.9	2.4	-5.4	-4.4	3.8	Mar-85
NCREIF Property Index			1.4	6.7	7.2	9.3	7.5	8.0	Mar-85
Natural Resources	161,460,970	8.2	-1.1	-4.9	-2.8	1.6	--	3.7	Dec-10
Natural Resources Benchmark (Linked)			-16.9	-13.1	11.7	11.0	--	10.3	Dec-10
Infrastructure	56,908,601	2.9	-3.3	-6.7	15.3	8.3	--	8.0	Jul-12
S&P Global Infrastructure TR USD			-5.1	-9.5	6.9	4.1	7.6	6.5	Jul-12

¹ Please see the Appendix for composition of the Custom Benchmarks ² As of 12/31/2018 the Safety Reserve exposure was approximately \$300.9 million (15.3%).³ All private market data is preliminary until valuations are finalized



As of December 31, 2018

Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DPFP	1,963,680,040	100.0	--	-3.6	-1.5	2.2	-0.6	3.3	5.7	Jun-96
Policy Index				-7.3	-5.3	6.2	6.0	8.7	--	Jun-96
Allocation Index				-4.6	-0.6	7.2	6.6	8.1	7.1	Jun-96
Total Fund Ex Private Markets				-6.5	-4.3	7.0	4.1	9.3	--	Jun-96
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index				-7.6	-6.4	5.1	3.1	7.0	--	Jun-96
InvestorForce Public DB \$1-5B Net Rank				1	2	99	99	99	76	Jun-96
Total Equity	695,717,169	35.4	35.4	-8.7	-6.1	-3.1	-1.0	--	3.2	Dec-10
Total Equity Policy Index				-11.8	-8.6	8.6	--	--	--	Dec-10
Public Equity	446,145,294	22.7	64.1	-12.6	-9.2	7.4	5.3	10.2	5.3	Jul-06
Public Equity Weighted Index				-12.2	-9.5	7.6	4.5	9.9	5.3	Jul-06
eV All Global Equity Net Rank				42	49	25	34	41	43	Jul-06
Global Equity	401,068,748	20.4	89.9	-13.5	-9.0	7.4	5.3	10.2	5.4	Jul-06
Global Equity Weighted Index				-12.7	-8.9	7.8	4.7	10.0	5.4	Jul-06
eV All Global Equity Net Rank				51	48	25	33	41	42	Jul-06
Boston Partners Global Equity Fund	94,917,987	4.8	23.7	-14.7	-12.9	--	--	--	-2.8	Jul-17
MSCI ACWI Gross				-12.7	-8.9	7.2	4.8	10.0	1.0	Jul-17
eV Global Large Cap Value Eq Net Rank				81	64	--	--	--	64	Jul-17
Manulife Global Equity Strategy	103,449,463	5.3	25.8	-11.2	-9.8	--	--	--	-2.9	Jul-17
MSCI ACWI Gross				-12.7	-8.9	7.2	4.8	10.0	1.0	Jul-17
eV Global Large Cap Value Eq Net Rank				30	37	--	--	--	66	Jul-17
OFI Global Equity Strategy	94,764,747	4.8	23.6	-16.3	-12.3	6.3	5.1	11.4	4.8	Oct-07
MSCI ACWI Gross				-12.7	-8.9	7.2	4.8	10.0	3.6	Oct-07
eV Global Large Cap Growth Eq Net Rank				81	75	68	74	55	51	Oct-07
Walter Scott Global Equity Fund	107,936,551	5.5	26.9	-12.0	-1.1	9.4	6.4	--	8.4	Dec-09
MSCI ACWI Gross				-12.7	-8.9	7.2	4.8	10.0	7.7	Dec-09
eV Global Large Cap Growth Eq Net Rank				33	10	28	37	--	74	Dec-09

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Emerging Markets Equity	45,076,546	2.3	10.1	-3.8	-10.8	--	--	--	-10.8	Jan-18
<i>MSCI Emerging Markets Gross</i>				-7.4	-14.2	9.7	2.0	8.4	-14.2	Jan-18
<i>eV Emg Mkts Equity Net Rank</i>				10	11	--	--	--	11	Jan-18
RBC Emerging Markets Equity	45,076,546	2.3	100.0	-3.8	-10.8	--	--	--	-10.8	Jan-18
<i>MSCI Emerging Markets Gross</i>				-7.4	-14.2	9.7	2.0	8.4	-14.2	Jan-18
<i>eV Emg Mkts Equity Net Rank</i>				10	11	--	--	--	11	Jan-18
Private Equity	249,571,875	12.7	35.9	-0.8	-0.7	-10.7	-9.6	-3.9	-0.7	Oct-05
<i>Private Equity Custom Benchmark</i>				-13.6	-2.4	12.2	11.1	16.5	11.0	Oct-05
Total Fixed Income	536,617,516	27.3	27.3	-1.3	0.1	5.1	2.0	8.6	5.2	Jul-06
<i>Total Fixed Income Policy Index</i>				-1.7	-1.6	5.6	--	--	--	Jul-06
<i>eV All Global Fixed Inc Net Rank</i>				62	22	20	52	14	32	Jul-06
Public Fixed Income	525,483,818	26.8	97.9	-1.3	-0.1	7.5	3.1	--	5.1	Dec-10
<i>Public Fixed Income Weighted Index</i>				-0.5	-0.2	5.8	3.3	--	4.7	Dec-10
Short Term Core Bonds	252,325,469	12.8	48.0	1.0	1.8	--	--	--	1.3	Jun-17
<i>BBgBarc US Treasury 1-3 Yr TR</i>				1.3	1.6	0.9	0.8	1.0	1.0	Jun-17
IR&M 1-3 Year Strategy	252,325,469	12.8	100.0	1.0	1.8	--	--	--	1.3	Jul-17
<i>BBgBarc US Treasury 1-3 Yr TR</i>				1.3	1.6	0.9	0.8	1.0	1.0	Jul-17
<i>eV US Short Duration Fixed Inc Net Rank</i>				36	5	--	--	--	32	Jul-17
Global Bonds	63,652,773	3.2	12.1	-1.3	-4.0	3.3	1.5	--	2.3	Dec-10
<i>BBgBarc Global Aggregate TR</i>				1.2	-1.2	2.7	1.1	2.5	1.6	Dec-10
<i>eV All Global Fixed Inc Net Rank</i>				62	76	52	66	--	66	Dec-10
Brandywine Global Fixed Income	63,652,773	3.2	100.0	-1.3	-4.0	3.6	1.6	5.6	4.4	Oct-04
<i>BBgBarc Global Aggregate TR</i>				1.2	-1.2	2.7	1.1	2.5	3.3	Oct-04
<i>eV All Global Fixed Inc Net Rank</i>				62	76	46	63	43	49	Oct-04

¹ Please note, private market data is preliminary until valuations are finalized.

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
High Yield	79,244,095	4.0	15.1	-5.8	-3.2	9.0	2.9	--	5.8	Dec-10
BBgBarc US High Yield TR				-4.5	-2.1	7.2	3.8	11.1	5.9	Dec-10
eV US High Yield Fixed Inc Net Rank				91	76	4	71	--	24	Dec-10
Loomis Sayles High Yield Fund	79,244,095	4.0	100.0	-5.8	-3.2	9.4	3.7	12.5	9.0	Oct-98
BBgBarc US High Yield TR				-4.5	-2.1	7.2	3.8	11.1	6.6	Oct-98
eV US High Yield Fixed Inc Net Rank				91	76	3	31	3	1	Oct-98
Bank Loans	111,099,111	5.7	21.1	-3.0	0.8	5.9	3.5	--	3.5	Jan-14
S&P/LSTA Leveraged Loan				-3.5	0.4	4.8	3.1	--	3.1	Jan-14
eV US Float-Rate Bank Loan Fixed Inc Net Rank				30	11	5	11	--	11	Jan-14
Loomis Sayles Senior Rate and Fixed Income	59,839,413	3.0	53.9	-2.8	0.9	6.0	3.6	--	3.6	Jan-14
S&P/LSTA Leveraged Loan				-3.5	0.4	4.8	3.1	--	3.1	Jan-14
eV US Float-Rate Bank Loan Fixed Inc Net Rank				15	8	4	5	--	5	Jan-14
Pacific Asset Management Corporate (Bank) Loan Strategy	51,259,699	2.6	46.1	-3.3	0.7	--	--	--	1.8	Aug-17
Credit Suisse Leveraged Loan				-3.1	1.1	5.0	3.3	--	1.8	Aug-17
eV US Float-Rate Bank Loan Fixed Inc Net Rank				45	17	--	--	--	14	Aug-17
Emerging Markets Debt	19,162,370	1.0	3.6	-0.6	-6.2	6.9	2.3	--	2.9	Dec-10
50% JPM EMBI/50% JPM GBI-EM				0.4	-5.2	5.6	1.8	--	2.6	Dec-10
eV All Emg Mkts Fixed Inc Net Rank				51	56	11	53	--	58	Dec-10
Ashmore EM Blended Debt	19,162,370	1.0	100.0	-0.6	-6.2	--	--	--	-4.3	Dec-17
Ashmore Blended Debt Benchmark				0.2	-4.5	5.0	2.0	5.3	-3.1	Dec-17
eV All Emg Mkts Fixed Inc Net Rank				51	56	--	--	--	44	Dec-17
Private Debt	11,133,698	0.6	2.1	-1.3	11.6	-3.3	--	--	-3.3	Jan-16
Barclays Global High Yield +2%				-3.0	-2.1	8.7	--	--	8.7	Jan-16

¹ Please note, private market data is preliminary until valuations are finalized.

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Real Assets	682,818,059	34.8	34.8	-0.1	1.5	4.0	-2.2	--	-2.1	Dec-10
<i>Total Real Assets Policy Index</i>				-3.7	-0.6	8.3	--	--	--	<i>Dec-10</i>
Real Estate	464,448,488	23.7	68.0	0.7	7.9	2.4	-5.4	-4.4	3.8	Mar-85
<i>NCREIF Property Index</i>				1.4	6.7	7.2	9.3	7.5	8.0	<i>Mar-85</i>
Natural Resources	161,460,970	8.2	23.6	-1.1	-4.9	-2.8	1.6	--	3.7	Dec-10
<i>Natural Resources Benchmark (Linked)</i>				-16.9	-13.1	11.7	11.0	--	10.3	<i>Dec-10</i>
Infrastructure	56,908,601	2.9	8.3	-3.3	-6.7	15.3	8.3	--	8.0	Jul-12
<i>S&P Global Infrastructure TR USD</i>				-5.1	-9.5	6.9	4.1	7.6	6.5	<i>Jul-12</i>
Cash Equivalents	48,527,296	2.5	2.5	0.6	1.9	1.3	--	--	1.3	Apr-15
<i>91 Day T-Bills</i>				0.6	1.9	1.1	0.6	0.4	0.8	<i>Apr-15</i>

¹ Please note, private market data is preliminary until valuations are finalized.

As of December 31, 2018

Statistics Summary
5 Years Ending December 31, 2018

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
DPFP	-0.5%	5.6%	-1.3	0.5	-0.2	5.5%
Policy Index	6.4%	4.5%	--	1.0	1.3	0.0%
Public Equity	5.3%	11.0%	0.4	1.0	0.4	1.8%
Public Equity Weighted Index	4.5%	11.0%	--	1.0	0.4	0.0%
Global Equity	5.3%	11.0%	0.4	1.0	0.4	1.8%
Global Equity Weighted Index	4.7%	11.0%	--	1.0	0.4	0.0%
Private Equity	-9.5%	16.8%	-1.0	0.0	-0.6	20.3%
Private Equity Custom Benchmark	11.1%	11.2%	--	1.0	0.9	0.0%
Public Fixed Income	3.1%	4.7%	-0.1	1.1	0.5	1.5%
Public Fixed Income Weighted Index	3.3%	4.1%	--	1.0	0.6	0.0%
Global Bonds	1.5%	6.3%	0.1	1.1	0.1	3.8%
BBgBarc Global Aggregate TR	1.1%	4.5%	--	1.0	0.1	0.0%
High Yield	2.9%	6.4%	-0.4	1.2	0.3	2.3%
BBgBarc US High Yield TR	3.8%	5.1%	--	1.0	0.6	0.0%
Emerging Markets Debt	2.3%	8.2%	0.3	1.0	0.2	2.1%
50% JPM EMBI/50% JPM GBI-EM	1.8%	7.9%	--	1.0	0.1	0.0%
Real Estate	-5.4%	13.7%	-0.9	-1.3	-0.4	15.6%
NCREIF Property Index	9.3%	3.9%	--	1.0	2.2	0.0%
Natural Resources	1.9%	5.0%	-0.7	0.0	0.3	13.4%
Natural Resources Benchmark (Linked)	11.0%	12.9%	-	1.0	0.8	0.0%
Infrastructure	9.6%	29.1%	0.2	0.0	0.3	30.9%
S&P Global Infrastructure TR USD	4.1%	10.1%	-	1.0	0.3	0.0%

As of December 31, 2018

Benchmark History

As of December 31, 2018

DPFP		
10/1/2018	Present	40% MSCI ACWI Gross / 10% MSCI Emerging Markets Gross / 5% Private Equity Custom Benchmark / 12% BBgBarc US Treasury 1-3 Yr TR / 4% BBgBarc Global Aggregate TR / 4% BBgBarc Global High Yield TR / 4% S&P/LSTA Leveraged Loan / 4% 50% JPM EMBI/50% JPM GBI-EM / 5% Natural Resources Benchmark (Linked) / 5% NCREIF Property Index / 3% 91 Day T-Bills / 4% BBgBarc US Aggregate TR
4/1/2016	9/30/2018	20% MSCI ACWI Gross / 5% MSCI Emerging Markets Gross / 5% Private Equity Custom Benchmark / 2% BBgBarc US Treasury 1-3 Yr TR / 3% BBgBarc Global Aggregate TR / 5% BBgBarc Global High Yield TR / 6% S&P/LSTA Leveraged Loan / 6% HFRI RV: FI (50/50-ABS/Corp) / 6% 50% JPM EMBI/50% JPM GBI-EM / 5% Barclays Global High Yield +2% / 5% 60% MSCI ACWI/40% Barclays Global Agg / 3% 60% MSCI ACWI/40% Barclays Global Agg / 2% HFRX Absolute Return Index / 5% Natural Resources Benchmark (Linked) / 5% S&P Global Infrastructure TR USD / 12% NCREIF Property Index / 3% CPI + 5% (Seasonally Adjusted) / 2% 91 Day T-Bills
4/1/2014	3/31/2016	15% MSCI ACWI / 15% S&P 500 + 2% / 10% Total Global Natural Resources Custom Benchmark / 15% BBgBarc Global Aggregate TR / 20% CPI + 5% (Seasonally Adjusted) / 10% CPI + 5% (Seasonally Adjusted) / 15% NCREIF Property Index
Total Equity		
10/1/2018	Present	72.73% MSCI ACWI Gross / 18.18% MSCI Emerging Markets Gross / 9.09% Private Equity Custom Benchmark
1/1/2016	9/30/2018	66.67% MSCI ACWI Gross / 16.67% MSCI Emerging Markets Gross / 16.66% Private Equity Custom Benchmark
Public Equity		
2/1/2018	Present	Weighted Average of MSCI ACWI Gross / MSCI Emerging Markets
1/1/2018	1/31/2018	Weighted Average of MSCI ACWI Gross / MSCI Emerging Markets / FTSE EPRA/NAREIT Linked 91 Day Tbill
12/1/2017	12/31/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill
7/1/2006	11/30/2017	100% Global Equity Weighted Index
Global Equity		
2/1/2018	Present	MSCI ACWI Gross
1/1/2018	1/31/2018	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Global
12/1/2017	12/31/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill
8/1/2017	11/30/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / MSCI ACWI Gross Linked 91 Day Tbill
7/1/2017	7/31/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / MSCI ACWI Gross Linked 91 Day Tbill
5/1/2017	6/30/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / MSCI ACWI Gross Linked 91 Day Tbill / MSCI ACWI Gross
4/1/2017	4/30/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / MSCI ACWI Gross Linked 91 Day Tbill / MSCI ACWI Gross / Russell 2000
12/1/2016	3/31/2017	Weighted Average of MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / MSCI ACWI Gross Linked 91 Day Tbill / MSCI ACWI Gross / Russell 2000 / Dow Jones Equal Wtd. Oil & Gas
11/1/2016	11/30/2016	Weighted Average of Russell 2000 / MSCI ACWI Gross Linked 91 Day Tbill / MSCI ACWI Gross / FTSE EPRA/NAREIT Linked 91 Day Tbill / Dow Jones Equal Wtd. Oil & Gas / MSCI ACWI Gross

As of December 31, 2018

9/1/2016	10/31/2016	Weighted Average of Russell 2000 / MSCI ACWI Gross Linked 91 Day TBill / MSCI ACWI Gross / FTSE EPRA/NAREIT Global / Dow Jones Equal Wtd. Oil & Gas / MSCI ACWI Gross
Private Equity		
10/1/2005	Present	Russell 3000+3%
Total Fixed Income		
1/1/2015	Present	6.07% BBgBarc US Treasury 1-3 Yr TR / 9.09% BBgBarc Global Aggregate TR / 15.15% BBgBarc Global High Yield TR / 18.18% S&P/LSTA Leveraged Loan / 18.18% HFRI RV: FI (50/50-ABS/Corp) / 18.18% 50% JPM EMBI/50% JPM GBI-EM / 15.15% Barclays Global High Yield +2%
Public Fixed Income		
5/1/2018	Present	Weighted Average of BBgBarc US Treasury 1-3 Yr TR / BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / Credit Suisse Leveraged Loan / Ashmore Blended Debt Benchmark
12/1/2017	4/30/2018	Weighted Average of BBgBarc US Treasury 1-3 Yr TR / BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / Credit Suisse Leveraged Loan / Ashmore Blended Debt Benchmark / JP Morgan GBI EM Global Diversified TR USD
10/1/2017	11/30/2017	Weighted Average of BBgBarc US Treasury 1-3 Yr TR / BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / Credit Suisse Leveraged Loan / JP Morgan GBI EM Global Diversified TR USD
9/1/2017	9/30/2017	Weighted Average of BBgBarc US Treasury 1-3 Yr TR / BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / JP Morgan GBI EM Global Diversified TR USD / Credit Suisse Leveraged Loan
7/1/2017	8/31/2017	Weighted Average of BBgBarc US Treasury 1-3 Yr TR / BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / JP Morgan GBI EM Global Diversified TR USD
4/1/2017	6/30/2017	Weighted Average of BBgBarc Global Aggregate TR / BBgBarc Global High Yield TR / S&P/LSTA Leveraged Loan / JP Morgan GBI EM Global Diversified TR USD / JP Morgan EMBI Global Diversified
Ashmore EM Blended Debt		
12/1/2017	Present	50% JP Morgan EMBI Global Diversified / 25% JPM ELMI+ TR USD / 25% JP Morgan GBI EM Global Diversified TR USD
Total Real Assets		
1/1/2016	Present	20% Natural Resources Benchmark (Linked) / 20% S&P Global Infrastructure TR USD / 48% NCREIF Property Index / 12% CPI + 5% (Seasonally Adjusted)
Natural Resources		
1/1/2016	Present	S&P Global Natural Resources Net USD
12/31/2010	12/31/2015	Total Global Natural Resources Custom Benchmark

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

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. Portfolio Return- [Risk Free Rate+Beta*(market return-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.