

# FUND EVALUATION REPORT

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## Dallas Police & Fire Pension System

Quarterly Review  
As of June 30, 2019



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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

BOSTON  
MASSACHUSETTS

CHICAGO  
ILLINOIS

MIAMI  
FLORIDA

NEW YORK  
NEW YORK

PORTLAND  
OREGON

SAN DIEGO  
CALIFORNIA

LONDON  
UNITED KINGDOM

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1. **Executive Summary**
2. **2Q19 Review**
3. **Disclaimer, Glossary, and Notes**

# Executive Summary

## DPFP 2Q19 Flash Summary

Category	Result	Notes
Total Fund Performance Return	Flat	0.0%
Performance vs. Policy Index	Trailed	0.0% vs. 2.7%
DPFP Public Markets vs. 60/40 <sup>1</sup>	Trailed	2.9% vs. 3.4%
Asset Allocation vs. Targets	Detracted	Underweight global equity, overweight RE and underweight EMD all detracted
Safety Reserve Exposure	Sufficient	\$323 million (approximately 16%)
Performance vs. Peers	Underperformed	99th percentile in peer group in 2Q19 <sup>2</sup>
Active Management	Hurt	All Private Markets asset classes and High Yield Bonds
Compliance with Targets	No	Under minimums in Investment Grade Bond and EM Debt <sup>3</sup>

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

<sup>2</sup> InvestorForce Public DB \$1-\$5 billion net accounts.

<sup>3</sup> Investment Grade Bonds and Emerging Market Debt are below target minimums in accordance with 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	Positive	2.6%
Performance vs. Policy Index	Trailed	2.6% vs. 3.9%
DPFP Public Markets vs. 60/40 <sup>1</sup>	Outperformed	6.4% vs. 5.4%
Asset Allocation vs. Targets	Detracted	Underweight public equities
Performance vs. Peers	Underperformed	99th percentile in peer group <sup>2</sup>
Active Management	Detracted	All Private Markets - Negative Selection

### DPFP Trailing Three-Year Flash Summary

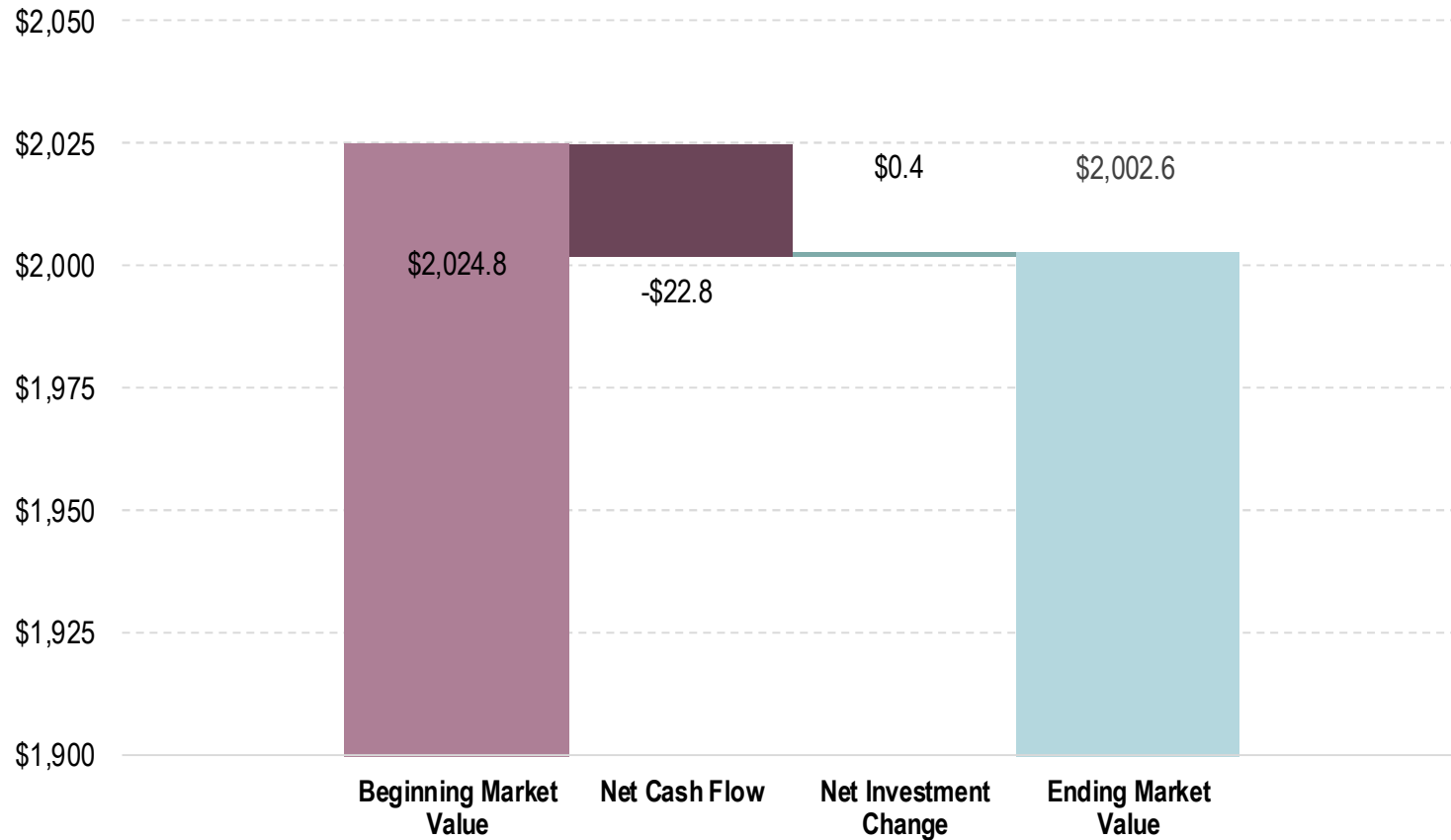
Category	Trailing 3 YR Result	3 YR Notes
Total Fund Performance Return	Positive	3.5%
Performance vs. Policy Index	Trailed	3.5% vs. 7.7%
DPFP Public Markets vs. 60/40 <sup>1</sup>	Outperformed	9.0% vs. 7.6%
Performance vs. Peers	Trailed	99th percentile in peer group <sup>1</sup>
Active Management	Detracted	PE, NR, RE and PD Negative Selection

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

<sup>2</sup> InvestorForce Public DB \$1-\$5 billion net accounts.



### Quarterly Change in Market Value



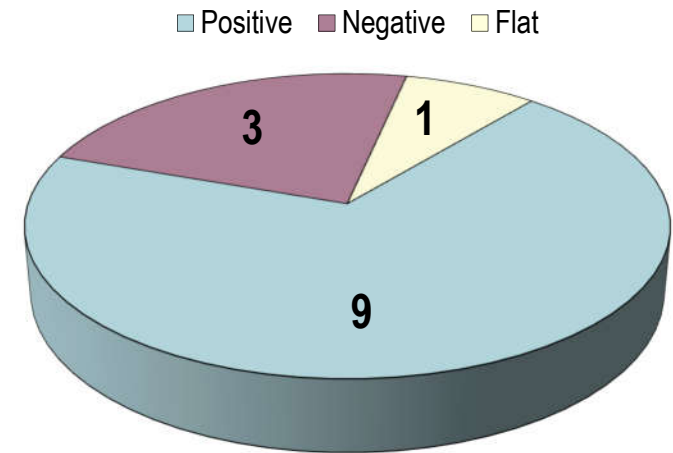
- Total market value decreased due to negative cash flows.

## Quarterly Absolute Performance

**Asset Classes Dollar<sup>1</sup> Gain/Loss**  
Top Three and Bottom Three



**Asset Class Absolute Performance**

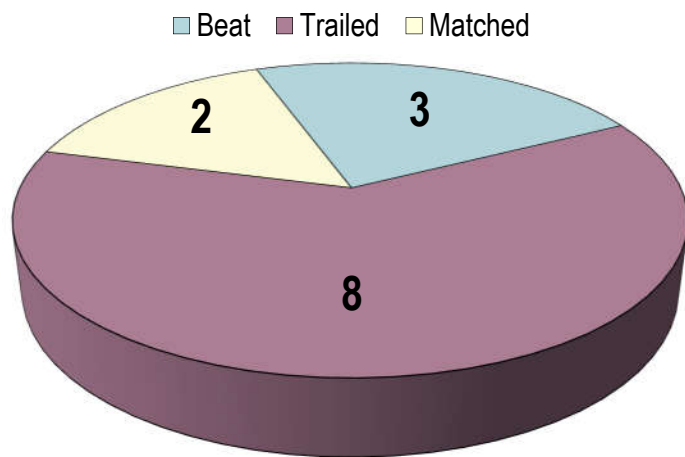


- Asset class performance was mixed during the quarter, but most generated positive absolute performance.
- In absolute terms, global equity appreciated the most, gaining \$17.2 million in market value.
- Private equity depreciated the most, losing \$20.7 million in market value.

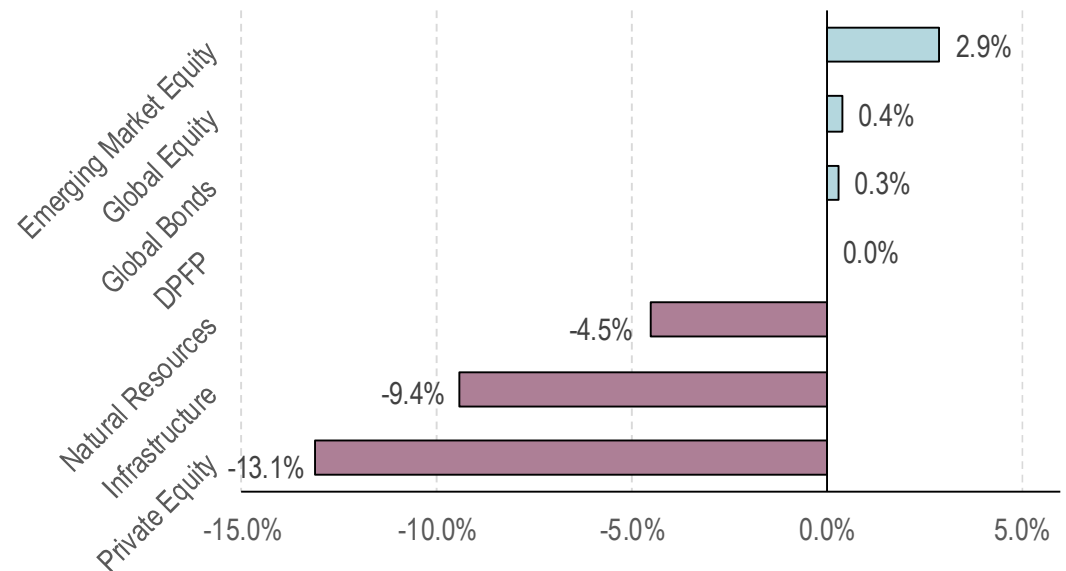
<sup>1</sup> Estimated gain/loss calculated by multiplying beginning market value by quarterly performance.

## Quarterly Relative Performance

**Asset Classes vs. Benchmarks**



**Top Three and Bottom Three Asset Classes vs. Benchmarks**

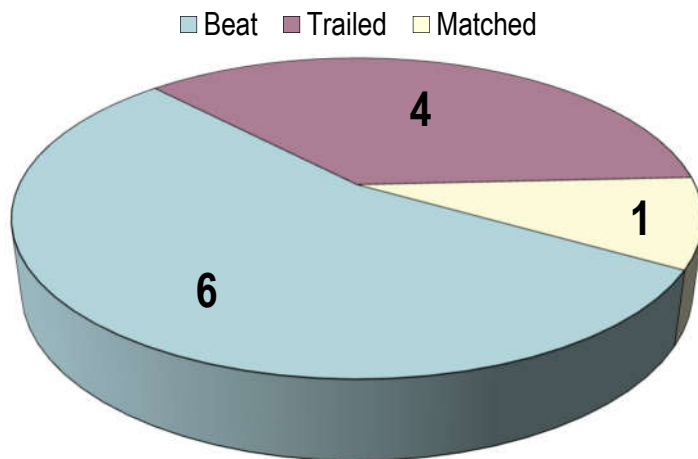


- In the quarter, emerging market equity, global equity and global bonds had the best relative performance.
- Private equity, infrastructure and natural resources had the worst relative performance in the quarter.
- Three of the thirteen asset classes delivered positive relative performance versus respective benchmarks.

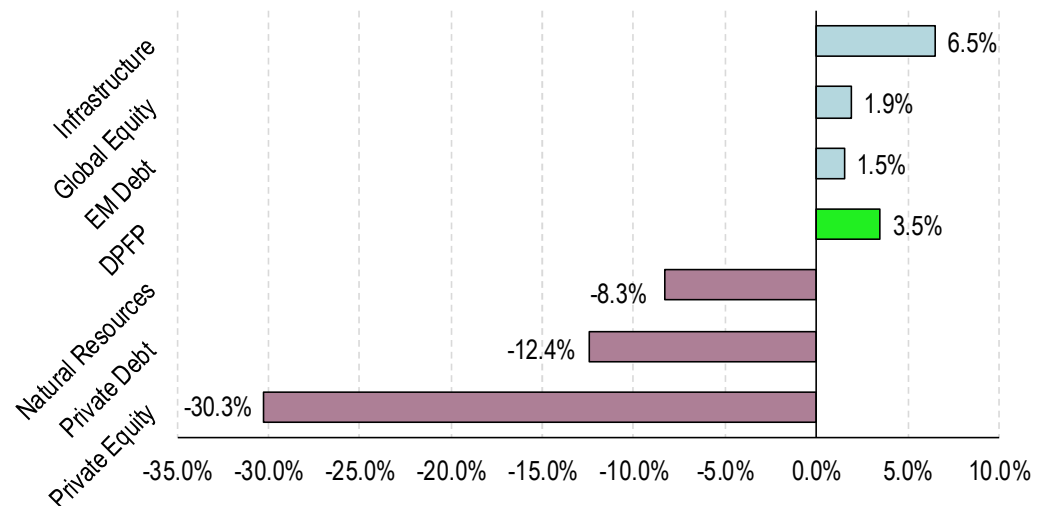


## Trailing Three-Year Relative Performance

**Asset Classes vs. Benchmarks**



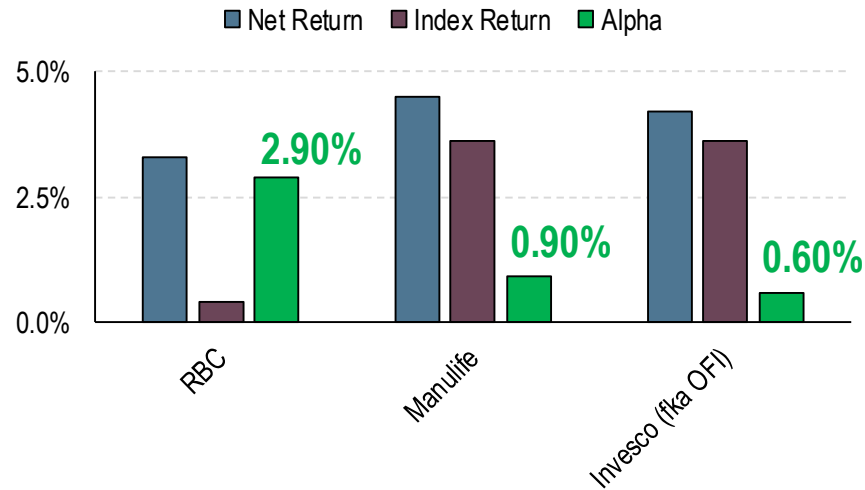
**Top Three and Bottom Three Asset Classes vs. Benchmarks**



- 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, global equity and emerging market debt asset classes.
- Private equity, private debt and natural resources had the worst relative performance over the three-year trailing period.

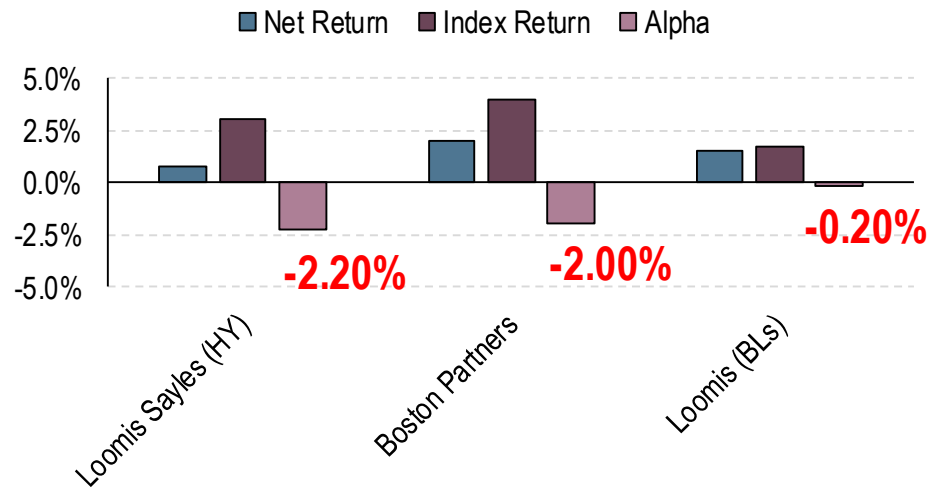
### Public Manager Alpha

**Top Three  
Outperformers in  
Quarter**



**\$290 million**  
combined  
exposure

**Bottom Three  
Underperformers in  
Quarter**



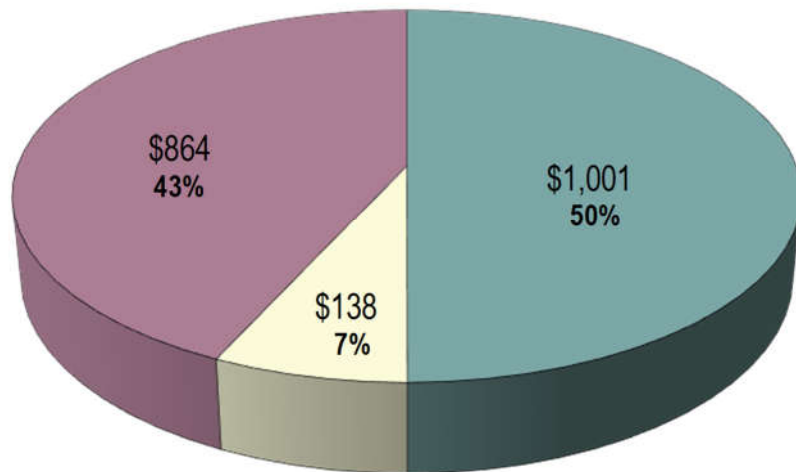
**\$252 million**  
combined  
exposure



## Liquidity Exposure as of June 30, 2019

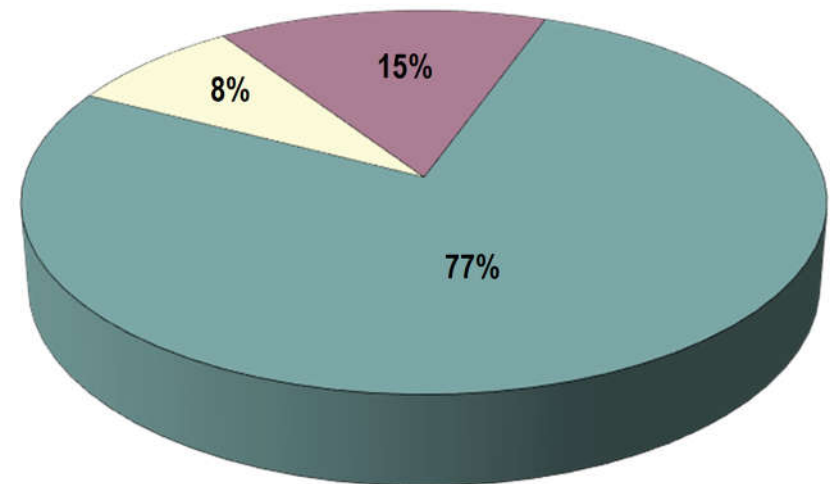
### Exposure (\$mm)

■ Daily or Weekly   ■ Monthly   ■ Illiquid



### Targets

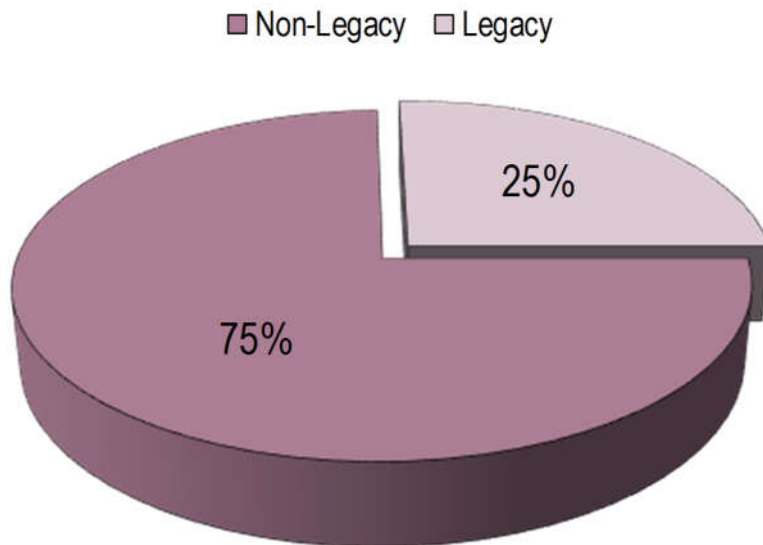
■ Daily or Weekly   ■ Monthly   ■ Illiquid



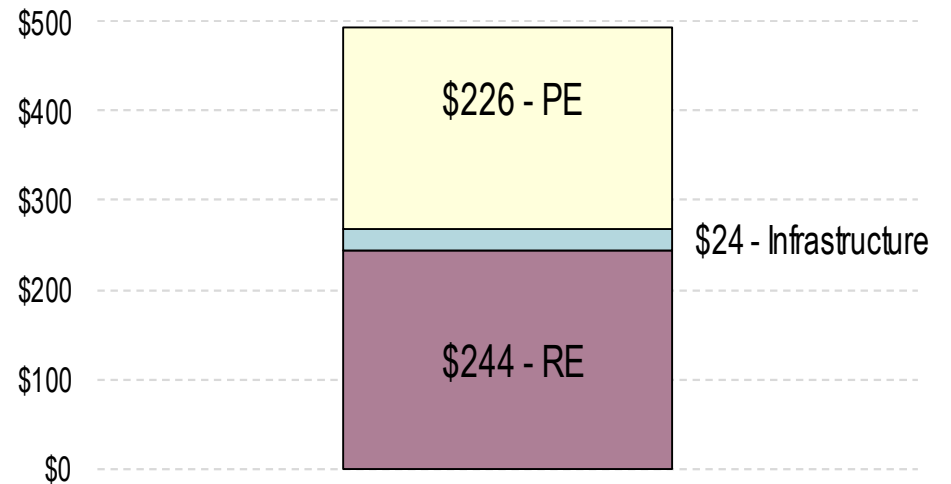
- Approximately 43% of the System's assets are illiquid versus 15% of the target allocation.

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

## Legacy Assets



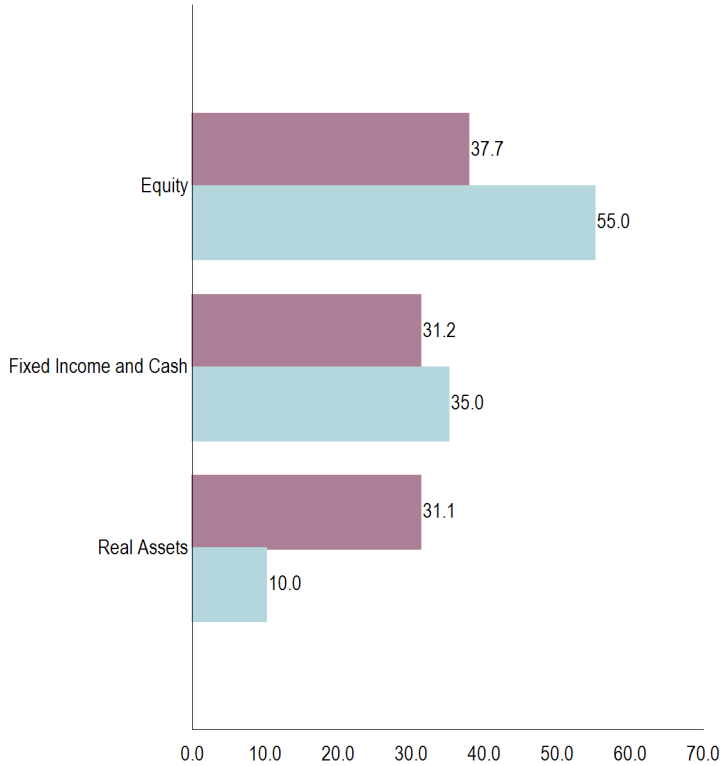
## Exposure (\$ mm)



**\$494 million**  
Net Asset Value of Legacy Assets

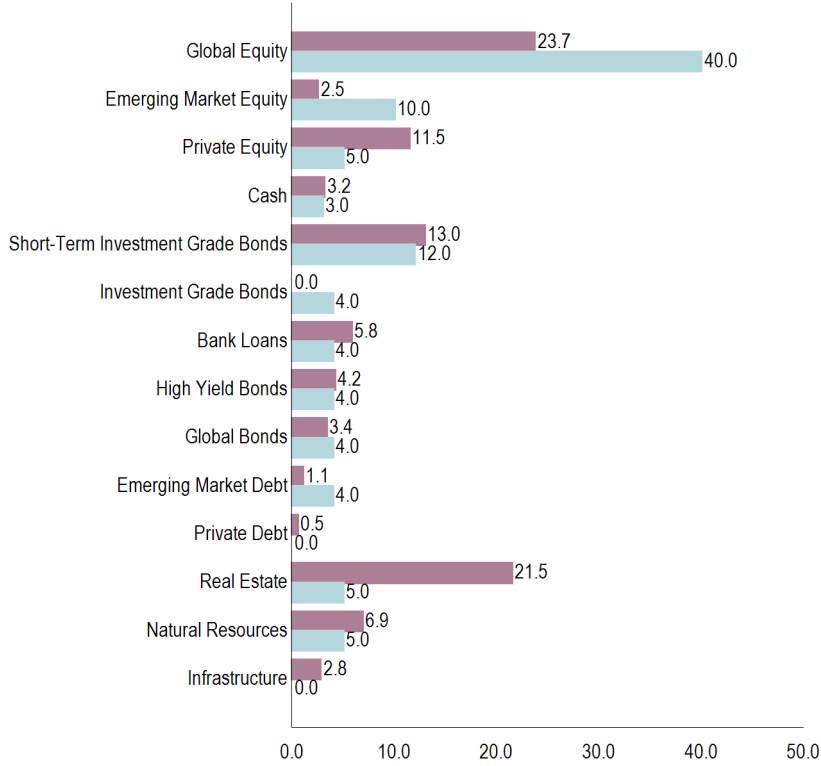
## 2Q19 Review

**Asset Category  
Actual vs Target Allocation (%)  
As of June 30, 2019**



Actual Policy

**Asset Classes  
Actual vs Target Allocation (%)  
As of June 30, 2019**



Actual Policy

As of June 30, 2019

## Allocation vs. Targets and Policy

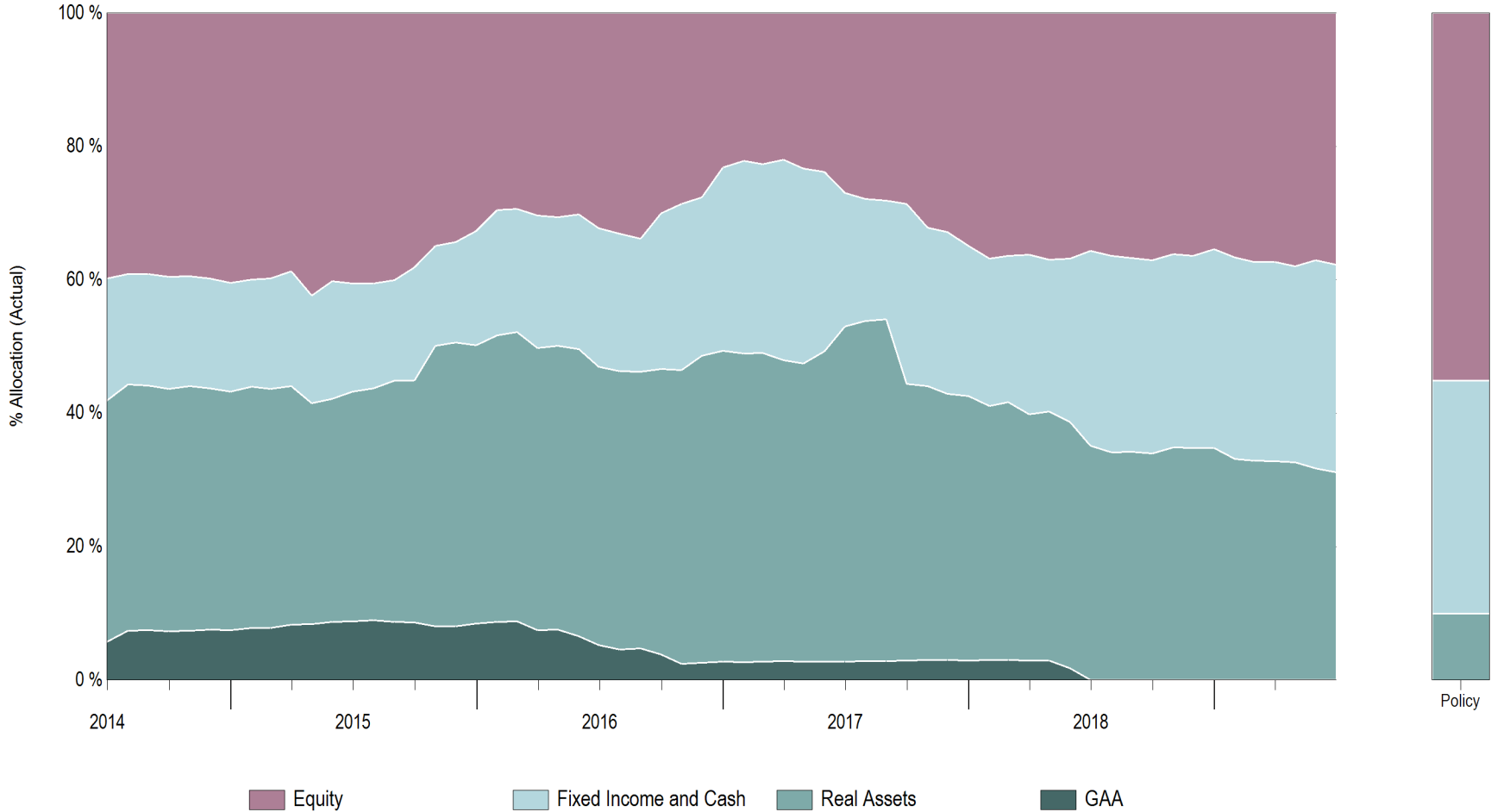
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
<b>Equity</b>	<b>\$755,110,074</b>	<b>38%</b>	<b>55%</b>		
Global Equity	\$474,745,746	24%	40%	18% - 48%	Yes
Emerging Market Equity	\$50,891,986	3%	10%	0% - 12%	Yes
Private Equity	\$229,472,342	11%	5%		
<b>Fixed Income and Cash</b>	<b>\$623,869,773</b>	<b>31%</b>	<b>35%</b>		
Cash	\$63,499,721	3%	3%	0% - 5%	Yes
Short-Term Investment Grade Bonds	\$259,589,918	13%	12%	5% - 15%	Yes
Investment Grade Bonds	\$0	0%	4%	2% - 6%	No
Bank Loans	\$116,621,176	6%	4%	2% - 6%	Yes
High Yield Bonds	\$84,239,552	4%	4%	2% - 6%	Yes
Global Bonds	\$67,989,320	3%	4%	2% - 6%	Yes
Emerging Market Debt	\$21,117,378	1%	4%	2% - 6%	No
Private Debt	\$10,812,707	1%	0%		
<b>Real Assets</b>	<b>\$623,658,120</b>	<b>31%</b>	<b>10%</b>		
Real Estate	\$429,924,240	21%	5%		
Natural Resources	\$138,171,185	7%	5%		
Infrastructure	\$55,562,696	3%	0%		
<b>Total</b>	<b>\$2,002,637,967</b>	<b>100%</b>	<b>100%</b>		

As of 6/30/2019, the Safety Reserve exposure was approximately \$323.1 million (16.2%).

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

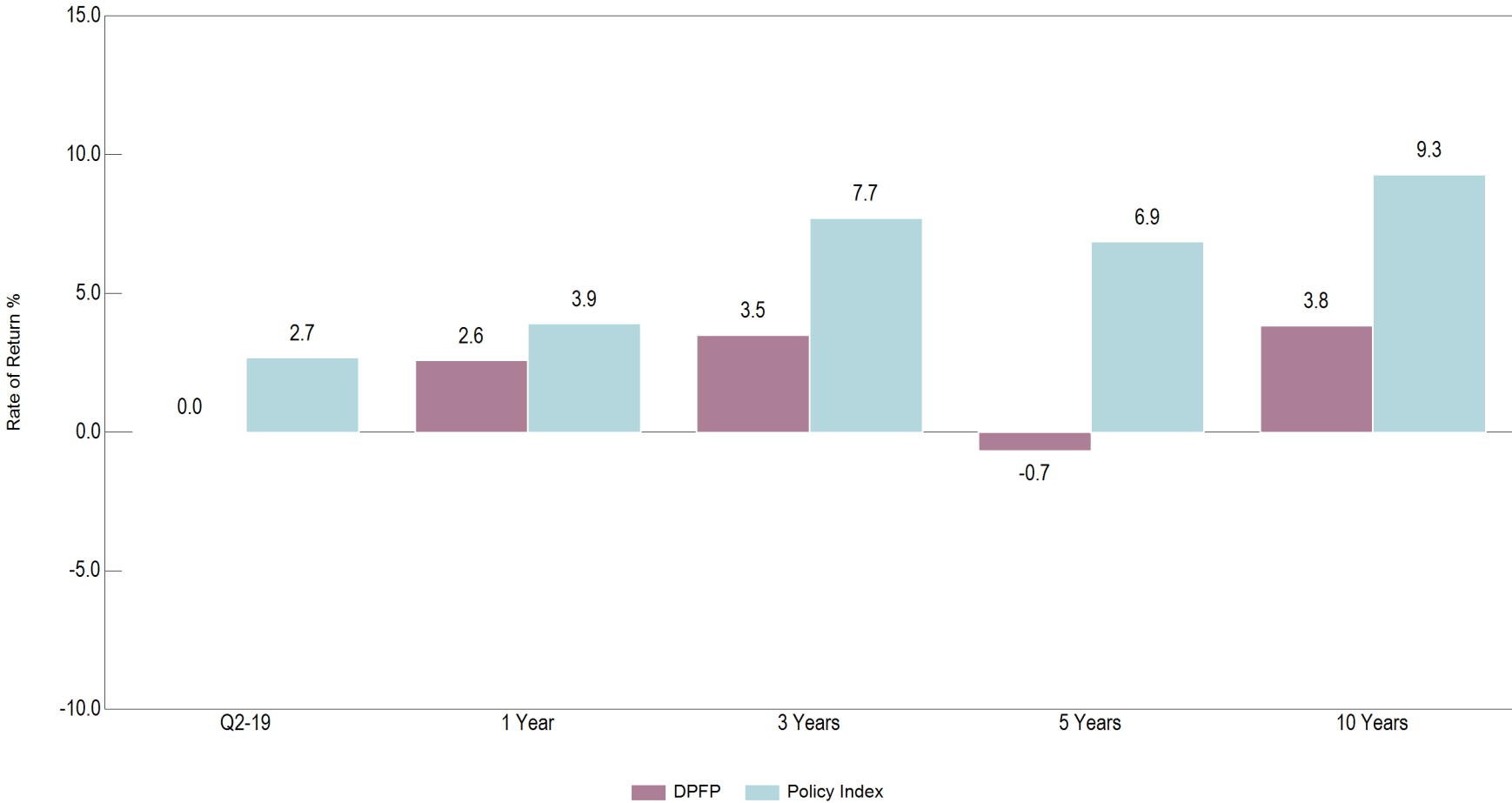


Asset Allocation History vs. Policy  
5 Years Ending June 30, 2019

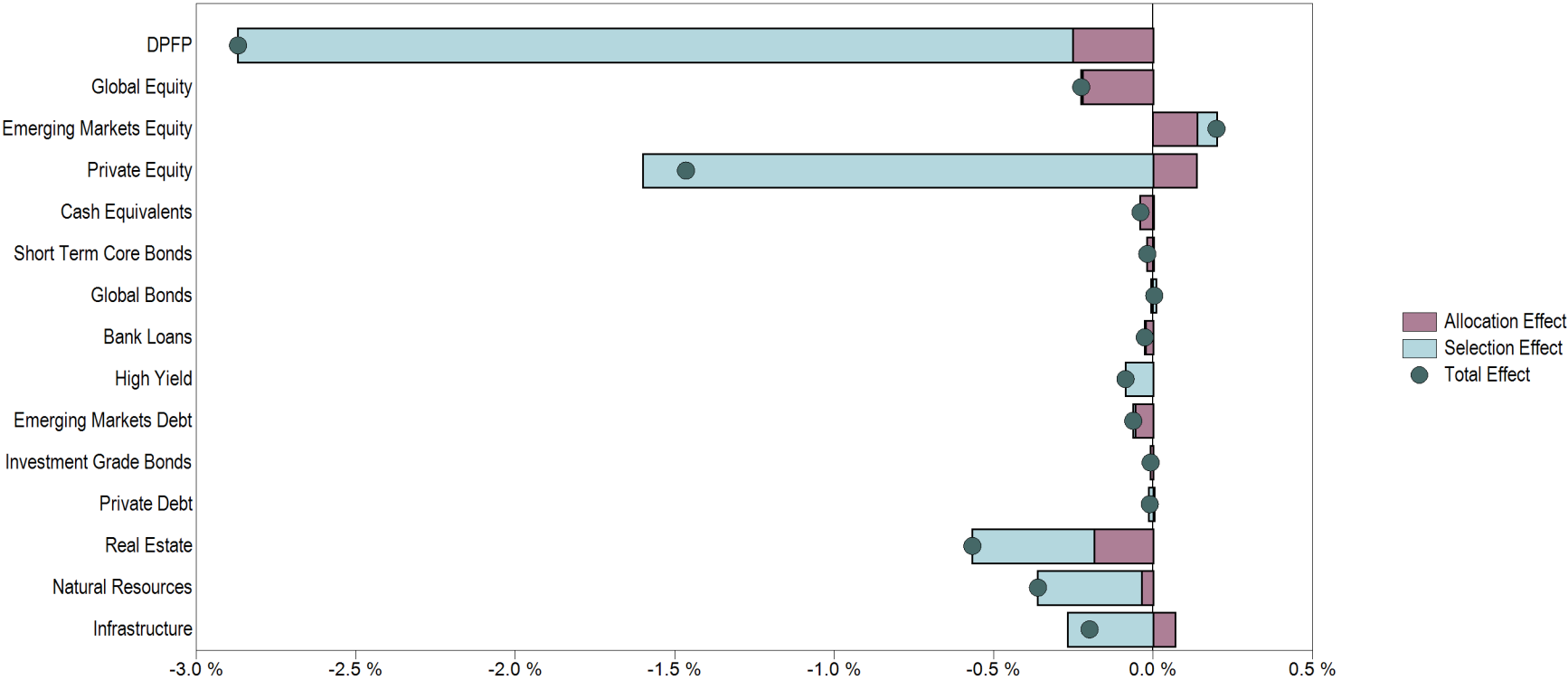




Net Return Summary  
Ending June 30, 2019



**Attribution Effects vs. Policy Benchmark  
3 Months Ending June 30, 2019**



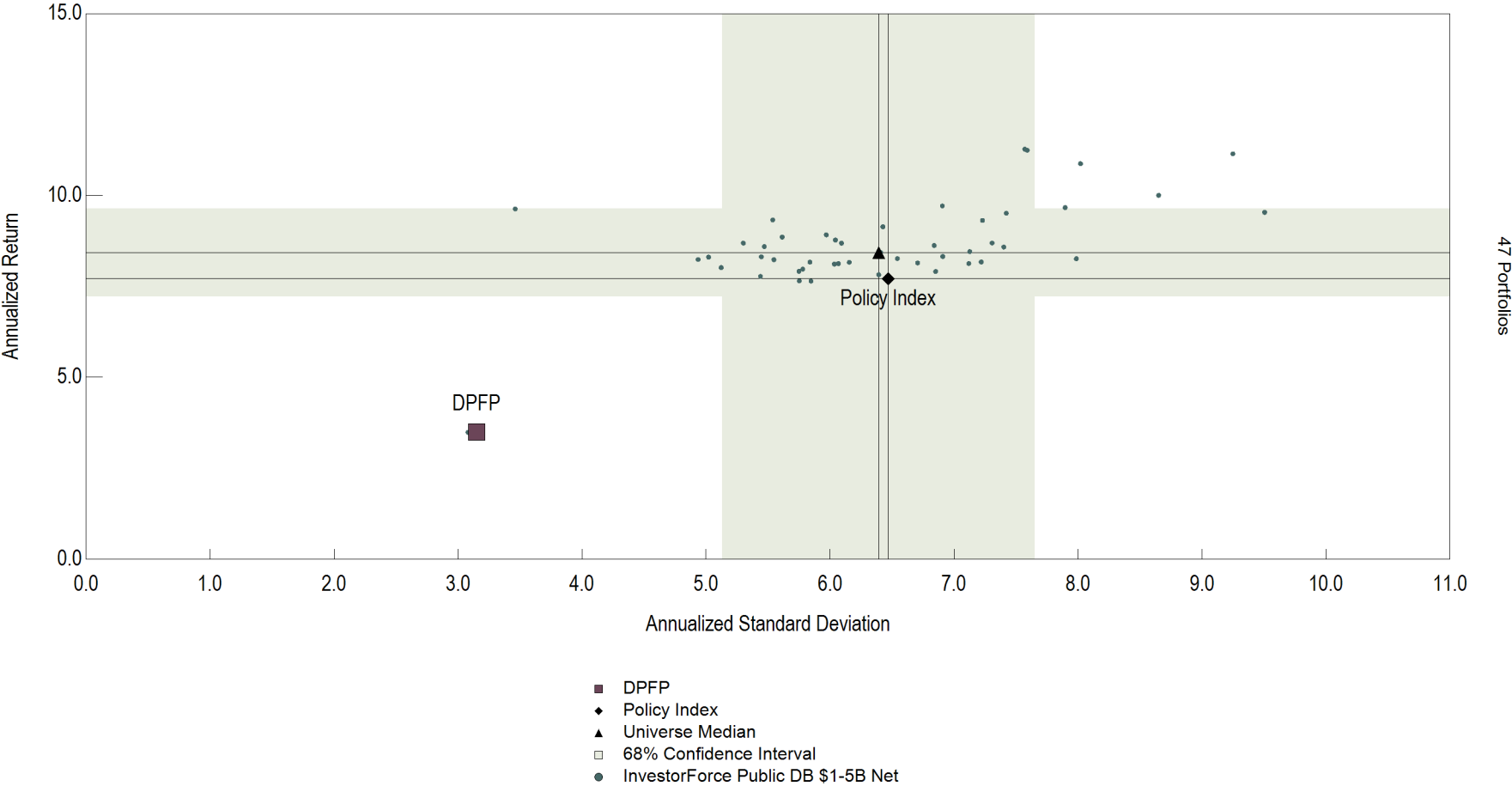
**Attribution Summary  
3 Months Ending June 30, 2019**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
<b>Total</b>	<b>0.0%</b>	<b>2.9%</b>	<b>-2.9%</b>	<b>-2.6%</b>	<b>-0.3%</b>	<b>-2.9%</b>

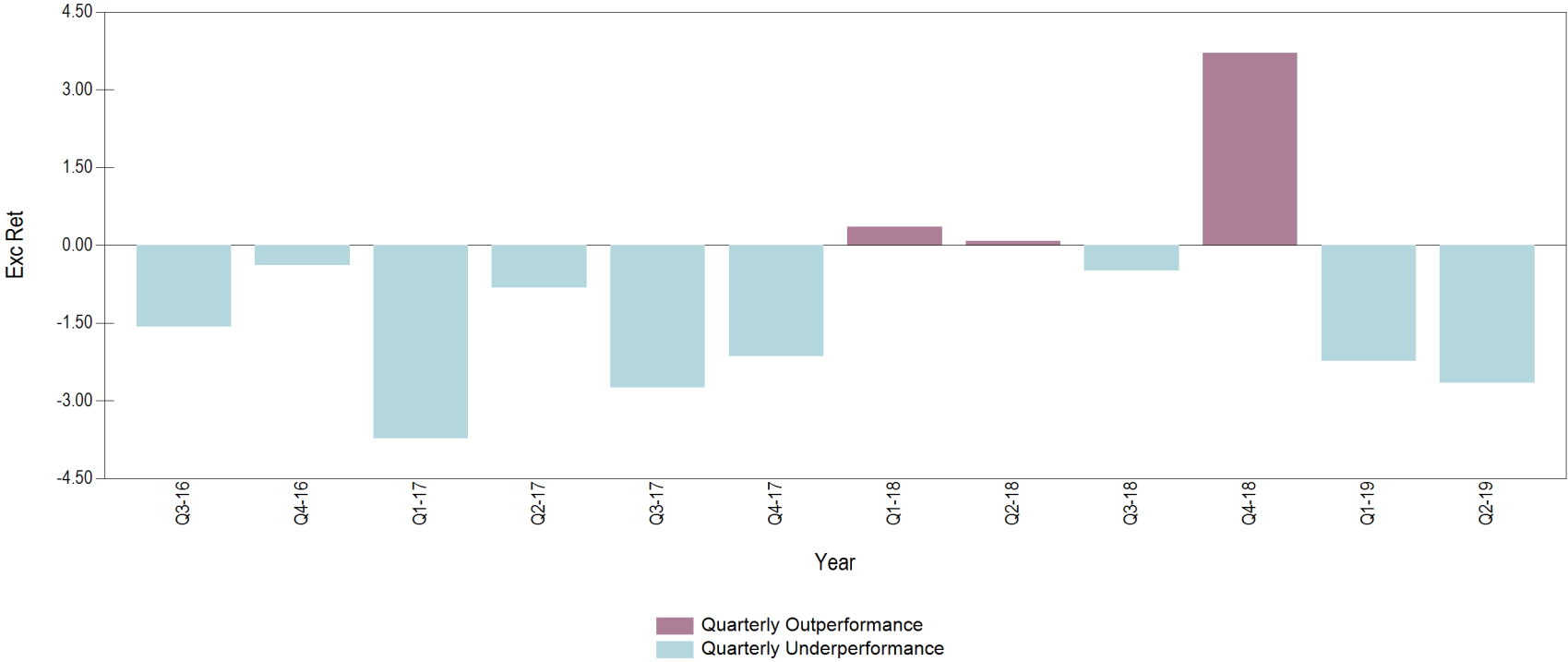
The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not foot due to rounding.



Net Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2019



Quarterly Excess Performance vs. Policy Benchmark



**Total Fund Correlation Matrix  
1 Year Ending June 30, 2019**

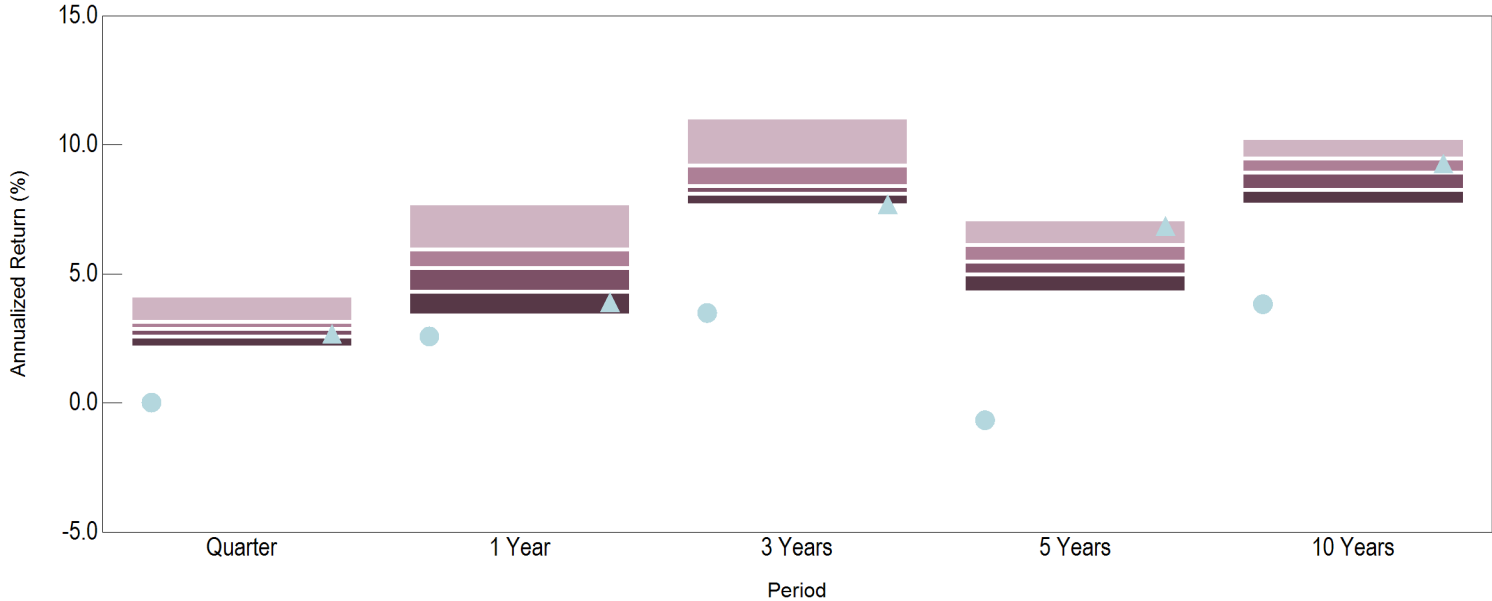
	<i>DPFP</i>	<i>Policy Index</i>	<i>60% MSCI ACWI/40% Barclays Global Agg</i>
DPFP	1.00	-	-
Policy Index	0.92	1.00	-
60% MSCI ACWI/40% Barclays Global Agg	0.90	0.99	1.00

**Total Fund Correlation Matrix  
3 Years Ending June 30, 2019**

	<i>DPFP</i>	<i>Policy Index</i>	<i>60% MSCI ACWI/40% Barclays Global Agg</i>
DPFP	1.00	-	-
Policy Index	0.85	1.00	-
60% MSCI ACWI/40% Barclays Global Agg	0.83	0.98	1.00



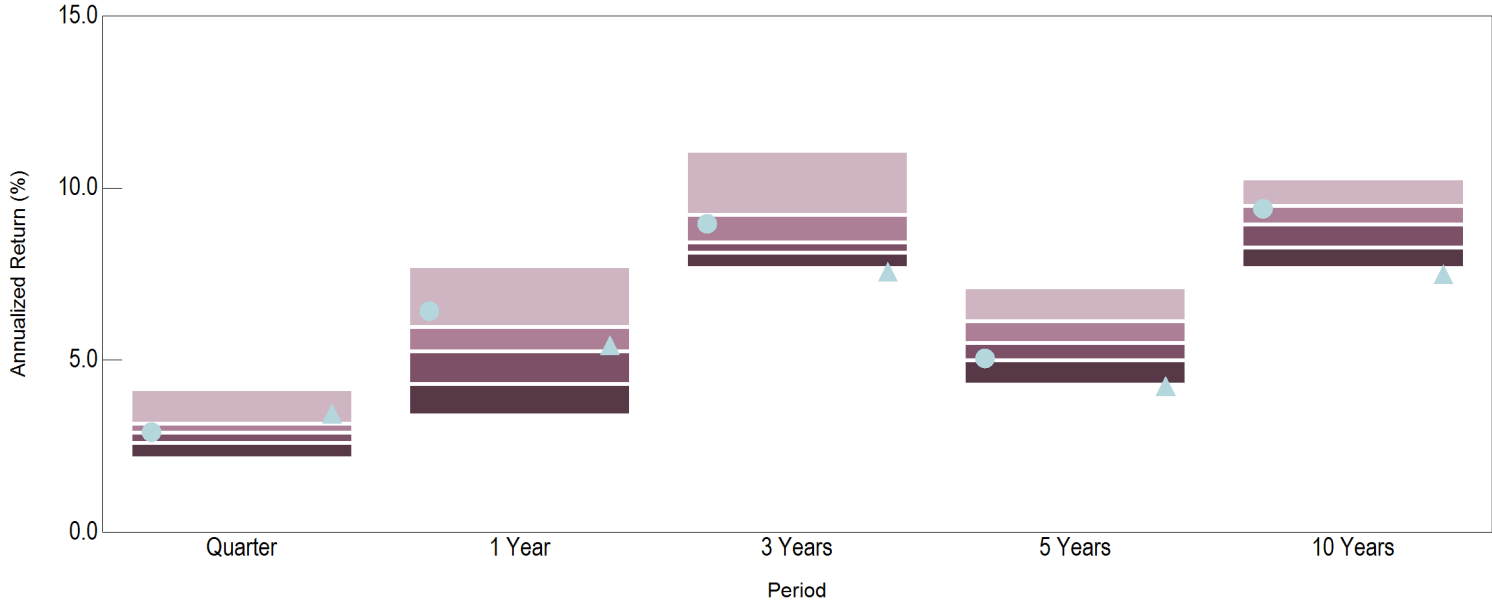
**Total Plan vs. InvestorForce Public DB \$1-5B Net Accounts  
Ending June 30, 2019**



	Return (Rank)									
5th Percentile	4.1		7.7		11.1		7.1		10.3	
25th Percentile	3.2		6.0		9.2		6.1		9.5	
Median	2.9		5.3		8.4		5.5		8.9	
75th Percentile	2.6		4.3		8.1		5.0		8.3	
95th Percentile	2.2		3.4		7.7		4.3		7.7	
# of Portfolios	47		47		47		46		40	
● DPFP	0.0	(99)	2.6	(99)	3.5	(99)	-0.7	(99)	3.8	(99)
▲ Policy Index	2.7	(69)	3.9	(86)	7.7	(95)	6.9	(11)	9.3	(32)



**Total Plan ex Privates vs. InvestorForce Public DB \$1-5B Net Accounts**  
As of June 30, 2019



	Return (Rank)									
5th Percentile	4.1		7.7		11.1		7.1	10.3		
25th Percentile	3.2		6.0		9.2		6.1	9.5		
Median	2.9		5.3		8.4		5.5	8.9		
75th Percentile	2.6		4.3		8.1		5.0	8.3		
95th Percentile	2.2		3.4		7.7		4.3	7.7		
# of Portfolios	47		47		47		46	40		
● Total Fund ex Privates	2.9	(48)	6.4	(19)	9.0	(28)	5.0	(73)	9.4	(29)
▲ 60% MSCI ACWI IMI Net/40% Barclays Global	3.4	(13)	5.4	(41)	7.6	(98)	4.2	(96)	7.5	(96)

As of June 30, 2019

## Asset Class Performance Summary (Net)

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>DPFP</b>	<b>2,002,637,967</b>	<b>100.0</b>	<b>0.0</b>	<b>4.8</b>	<b>2.6</b>	<b>3.5</b>	<b>-0.7</b>	<b>3.8</b>	<b>5.8</b>	<b>Jun-96</b>
Policy Index			2.7	9.9	3.9	7.7	6.9	9.3	--	Jun-96
Allocation Index			2.5	7.1	4.7	7.6	6.9	8.6	7.3	Jun-96
Total Fund Ex Private Markets			2.9	11.0	6.4	9.0	5.0	9.4	5.7	Jun-96
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index			3.4	11.9	5.4	7.6	4.2	7.5	6.1	Jun-96
<b>Global Equity</b>	<b>474,745,746</b>	<b>23.7</b>	<b>3.8</b>	<b>18.3</b>	<b>7.2</b>	<b>13.3</b>	<b>7.8</b>	<b>11.4</b>	<b>6.5</b>	<b>Jul-06</b>
MSCI ACWI IMI Net USD			3.4	16.1	4.6	11.4	6.0	10.3	6.0	Jul-06
<b>Emerging Markets Equity</b>	<b>50,891,986</b>	<b>2.5</b>	<b>3.3</b>	<b>12.9</b>	<b>9.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.9</b>	<b>Jan-18</b>
MSCI Emerging Market IMI Net			0.4	10.2	0.5	10.0	2.3	5.8	-4.3	Jan-18
<b>Private Equity</b>	<b>229,472,342</b>	<b>11.5</b>	<b>-8.3</b>	<b>-8.3</b>	<b>-6.3</b>	<b>-14.0</b>	<b>-11.5</b>	<b>-3.5</b>	<b>-1.3</b>	<b>Oct-05</b>
Cambridge Associates US All PE (1 Qtr Lag)			4.8	4.4	15.4	16.3	12.4	14.9	13.0	Oct-05
<b>Cash Equivalents</b>	<b>63,499,721</b>	<b>3.2</b>	<b>0.6</b>	<b>1.2</b>	<b>2.4</b>	<b>1.4</b>	<b>--</b>	<b>--</b>	<b>1.4</b>	<b>Apr-15</b>
91 Day T-Bills			0.6	1.2	2.3	1.4	0.9	0.5	1.0	Apr-15
<b>Short Term Core Bonds</b>	<b>259,589,918</b>	<b>13.0</b>	<b>1.5</b>	<b>2.9</b>	<b>4.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>Jun-17</b>
BBgBarc US Treasury 1-3 Yr TR			1.5	2.5	4.0	1.3	1.2	1.2	2.0	Jun-17
<b>Global Bonds</b>	<b>67,989,320</b>	<b>3.4</b>	<b>3.6</b>	<b>6.7</b>	<b>5.0</b>	<b>2.8</b>	<b>1.7</b>	<b>--</b>	<b>2.9</b>	<b>Dec-10</b>
BBgBarc Global Aggregate TR			3.3	5.6	5.8	1.6	1.2	2.9	2.1	Dec-10
<b>Bank Loans</b>	<b>116,621,176</b>	<b>5.8</b>	<b>1.6</b>	<b>5.0</b>	<b>3.5</b>	<b>5.8</b>	<b>3.9</b>	<b>--</b>	<b>4.1</b>	<b>Jan-14</b>
S&P/LSTA Leveraged Loan			1.7	5.7	4.0	5.2	3.7	--	3.8	Jan-14
<b>High Yield</b>	<b>84,239,552</b>	<b>4.2</b>	<b>0.8</b>	<b>6.3</b>	<b>1.9</b>	<b>7.8</b>	<b>2.8</b>	<b>--</b>	<b>6.2</b>	<b>Dec-10</b>
BBgBarc Global High Yield TR			3.0	9.5	7.8	6.8	4.0	9.1	6.5	Dec-10
<b>Emerging Markets Debt</b>	<b>21,117,378</b>	<b>1.1</b>	<b>4.3</b>	<b>10.1</b>	<b>11.0</b>	<b>6.4</b>	<b>3.1</b>	<b>--</b>	<b>4.0</b>	<b>Dec-10</b>
50% JPM EMBI/50% JPM GBI-EM			4.9	10.0	10.8	4.9	2.3	--	3.6	Dec-10
<b>Private Debt</b>	<b>10,812,707</b>	<b>0.5</b>	<b>0.9</b>	<b>1.5</b>	<b>3.2</b>	<b>-3.4</b>	<b>--</b>	<b>--</b>	<b>-2.4</b>	<b>Jan-16</b>
Barclays Global High Yield +2%			3.5	10.6	9.9	9.0	--	--	10.5	Jan-16
<b>Real Estate</b>	<b>429,924,240</b>	<b>21.5</b>	<b>0.0</b>	<b>1.2</b>	<b>3.6</b>	<b>5.0</b>	<b>-6.1</b>	<b>-3.5</b>	<b>3.7</b>	<b>Mar-85</b>
NCREIF Property (1-quarter lagged)			1.8	3.2	6.8	7.1	9.1	8.5	8.1	Mar-85
<b>Natural Resources</b>	<b>138,171,185</b>	<b>6.9</b>	<b>-3.8</b>	<b>3.7</b>	<b>-1.3</b>	<b>-1.9</b>	<b>1.3</b>	<b>--</b>	<b>4.0</b>	<b>Dec-10</b>
NCREIF Farmland Total Return Index 1Q Lag			0.7	3.6	6.1	6.4	8.2	11.1	12.2	Dec-10
<b>Infrastructure</b>	<b>55,562,696</b>	<b>2.8</b>	<b>-4.1</b>	<b>-3.2</b>	<b>-10.7</b>	<b>15.3</b>	<b>7.3</b>	<b>--</b>	<b>6.9</b>	<b>Jul-12</b>
S&P Global Infrastructure TR USD			5.3	20.2	12.2	8.8	4.8	9.3	8.9	Jul-12

<sup>1</sup> Please see the Appendix for composition of the Custom Benchmarks. <sup>2</sup> As of 6/30/2019, the Safety Reserve exposure was approximately \$323.1 million (16.2%). <sup>3</sup> All private market data is one quarter lagged, unless otherwise noted.





As of June 30, 2019

## Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>DPFP</b>	<b>2,002,637,967</b>	<b>100.0</b>	<b>--</b>	<b>0.0</b>	<b>4.8</b>	<b>2.6</b>	<b>3.5</b>	<b>-0.7</b>	<b>3.8</b>	<b>5.8</b>	<b>Jun-96</b>
<i>Policy Index</i>				2.7	9.9	3.9	7.7	6.9	9.3	--	Jun-96
<i>Allocation Index</i>				2.5	7.1	4.7	7.6	6.9	8.6	7.3	Jun-96
<i>Total Fund Ex Private Markets</i>				2.9	11.0	6.4	9.0	5.0	9.4	5.7	Jun-96
<i>60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index</i>				3.4	11.9	5.4	7.6	4.2	7.5	6.1	Jun-96
<i>InvestorForce Public DB \$1-5B Net Rank</i>				99	99	99	99	99	99	85	Jun-96
<b>Total Equity</b>	<b>755,110,074</b>	<b>37.7</b>	<b>37.7</b>	<b>-0.2</b>	<b>8.4</b>	<b>2.9</b>	<b>-1.2</b>	<b>-0.4</b>	<b>--</b>	<b>4.0</b>	<b>Dec-10</b>
<i>MSCI ACWI IMI Net USD</i>				3.4	16.1	4.6	11.4	6.0	10.3	7.7	Dec-10
<b>Public Equity</b>	<b>525,637,732</b>	<b>26.2</b>	<b>69.6</b>	<b>3.7</b>	<b>17.8</b>	<b>7.4</b>	<b>13.0</b>	<b>7.7</b>	<b>11.3</b>	<b>6.5</b>	<b>Jul-06</b>
<i>MSCI ACWI IMI Net USD</i>				3.4	16.1	4.6	11.4	6.0	10.3	6.0	Jul-06
<i>eV All Global Equity Net Rank</i>				46	38	35	25	27	38	40	Jul-06
<b>Global Equity</b>	<b>474,745,746</b>	<b>23.7</b>	<b>90.3</b>	<b>3.8</b>	<b>18.3</b>	<b>7.2</b>	<b>13.3</b>	<b>7.8</b>	<b>11.4</b>	<b>6.5</b>	<b>Jul-06</b>
<i>MSCI ACWI IMI Net USD</i>				3.4	16.1	4.6	11.4	6.0	10.3	6.0	Jul-06
<i>eV All Global Equity Net Rank</i>				44	34	37	25	26	37	40	Jul-06
Boston Partners Global Equity Fund	105,610,084	5.3	22.2	2.0	11.3	-0.9	--	--	--	3.2	Jul-17
<i>MSCI World Net</i>				4.0	17.0	6.3	11.8	6.6	10.7	8.7	Jul-17
<i>eV Global Large Cap Value Eq Net Rank</i>				47	70	75	--	--	--	71	Jul-17
Manulife Global Equity Strategy	123,964,112	6.2	26.1	4.5	19.8	12.0	--	--	--	7.0	Jul-17
<i>MSCI ACWI Net</i>				3.6	16.2	5.7	11.6	6.2	10.1	8.2	Jul-17
<i>eV Global Large Cap Value Eq Net Rank</i>				24	1	3	--	--	--	13	Jul-17
Invesco (fka OFI) Global Equity	115,475,442	5.8	24.3	4.2	21.7	3.6	16.8	8.4	12.4	6.3	Oct-07
<i>MSCI ACWI Net</i>				3.6	16.2	5.7	11.6	6.2	10.1	4.2	Oct-07
<i>eV Global Large Cap Growth Eq Net Rank</i>				72	66	85	26	83	73	66	Oct-07
Walter Scott Global Equity Fund	129,696,107	6.5	27.3	4.1	20.2	13.8	14.6	9.6	--	10.1	Dec-09
<i>MSCI ACWI Net</i>				3.6	16.2	5.7	11.6	6.2	10.1	8.4	Dec-09
<i>eV Global Large Cap Growth Eq Net Rank</i>				73	91	22	77	43	--	80	Dec-09

<sup>1</sup>60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index composed of 60% MSCI ACWI (Net)/ 40% Barclays Global Aggregate in periods before 2/1/1997.



As of June 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Equity</b>	<b>50,891,986</b>	<b>2.5</b>	<b>9.7</b>	<b>3.3</b>	<b>12.9</b>	<b>9.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.9</b>	<b>Jan-18</b>
<i>MSCI Emerging Market IMI Net</i>				0.4	10.2	0.5	10.0	2.3	5.8	-4.3	Jan-18
<i>eV Emg Mkts Equity Net Rank</i>				12	40	3	--	--	--	7	Jan-18
RBC Emerging Markets Equity	50,891,986	2.5	100.0	3.3	12.9	9.3	--	--	--	0.9	Jan-18
<i>MSCI Emerging Market IMI Net</i>				0.4	10.2	0.5	10.0	2.3	5.8	-4.3	Jan-18
<i>eV Emg Mkts Equity Net Rank</i>				12	40	3	--	--	--	7	Jan-18
<b>Private Equity</b>	<b>229,472,342</b>	<b>11.5</b>	<b>30.4</b>	<b>-8.3</b>	<b>-8.3</b>	<b>-6.3</b>	<b>-14.0</b>	<b>-11.5</b>	<b>-3.5</b>	<b>-1.3</b>	<b>Oct-05</b>
<i>Cambridge Associates US All PE (1 Qtr Lag)</i>				4.8	4.4	15.4	16.3	12.4	14.9	13.0	Oct-05
<b>Total Fixed Income</b>	<b>623,869,773</b>	<b>31.2</b>	<b>31.2</b>	<b>1.6</b>	<b>4.1</b>	<b>3.9</b>	<b>3.9</b>	<b>1.6</b>	<b>7.8</b>	<b>5.3</b>	<b>Jul-06</b>
<i>BBgBarc Multiverse TR</i>				3.3	5.8	6.0	1.9	1.3	3.1	3.9	Jul-06
<i>eV All Global Fixed Inc Net Rank</i>				86	89	82	52	67	14	35	Jul-06
<b>Cash Equivalents</b>	<b>63,499,721</b>	<b>3.2</b>	<b>10.2</b>	<b>0.6</b>	<b>1.2</b>	<b>2.4</b>	<b>1.4</b>	<b>--</b>	<b>--</b>	<b>1.4</b>	<b>Apr-15</b>
<i>91 Day T-Bills</i>				0.6	1.2	2.3	1.4	0.9	0.5	1.0	Apr-15
<b>Public Fixed Income</b>	<b>549,557,344</b>	<b>27.4</b>	<b>88.1</b>	<b>1.8</b>	<b>4.6</b>	<b>4.1</b>	<b>6.0</b>	<b>2.8</b>	<b>--</b>	<b>5.3</b>	<b>Dec-10</b>
<i>BBgBarc Multiverse TR</i>				3.3	5.8	6.0	1.9	1.3	3.1	2.3	Dec-10
<i>eV All Global Fixed Inc Net Rank</i>				84	86	78	21	49	--	20	Dec-10
<b>Short Term Core Bonds</b>	<b>259,589,918</b>	<b>13.0</b>	<b>47.2</b>	<b>1.5</b>	<b>2.9</b>	<b>4.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>Jun-17</b>
<i>BBgBarc US Treasury 1-3 Yr TR</i>				1.5	2.5	4.0	1.3	1.2	1.2	2.0	Jun-17
IR&M 1-3 Year Strategy	259,589,918	13.0	100.0	1.5	2.9	4.4	--	--	--	2.4	Jul-17
<i>BBgBarc US Treasury 1-3 Yr TR</i>				1.5	2.5	4.0	1.3	1.2	1.2	2.0	Jul-17
<i>eV US Short Duration Fixed Inc Net Rank</i>				52	55	45	--	--	--	43	Jul-17

<sup>1</sup> All Private Equity market values are one quarter lagged unless otherwise noted. Huff, Barings and Lone Star valuations are more than a quarter lagged because updated valuations were not released at the time of report production.

As of June 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Global Bonds</b>	<b>67,989,320</b>	<b>3.4</b>	<b>12.4</b>	<b>3.6</b>	<b>6.7</b>	<b>5.0</b>	<b>2.8</b>	<b>1.7</b>	<b>--</b>	<b>2.9</b>	<b>Dec-10</b>
<i>BBgBarc Global Aggregate TR</i>				3.3	5.6	5.8	1.6	1.2	2.9	2.1	Dec-10
<i>eV All Global Fixed Inc Net Rank</i>				28	53	69	68	66	--	64	Dec-10
Brandywine Global Fixed Income	67,989,320	3.4	100.0	3.6	6.7	5.0	2.8	1.4	5.5	4.7	Oct-04
<i>BBgBarc Global Aggregate TR</i>				3.3	5.6	5.8	1.6	1.2	2.9	3.6	Oct-04
<i>eV All Global Fixed Inc Net Rank</i>				28	53	69	68	72	38	42	Oct-04
<b>Bank Loans</b>	<b>116,621,176</b>	<b>5.8</b>	<b>21.2</b>	<b>1.6</b>	<b>5.0</b>	<b>3.5</b>	<b>5.8</b>	<b>3.9</b>	<b>--</b>	<b>4.1</b>	<b>Jan-14</b>
<i>S&amp;P/LSTA Leveraged Loan</i>				1.7	5.7	4.0	5.2	3.7	--	3.8	Jan-14
<i>eV US Float-Rate Bank Loan Fixed Inc Net Rank</i>				42	68	64	8	18	--	11	Jan-14
Loomis Sayles Senior Rate and Fixed Income	62,457,487	3.1	53.6	1.5	4.4	2.9	5.7	3.8	--	4.1	Jan-14
<i>S&amp;P/LSTA Leveraged Loan</i>				1.7	5.7	4.0	5.2	3.7	--	3.8	Jan-14
<i>eV US Float-Rate Bank Loan Fixed Inc Net Rank</i>				58	86	85	8	21	--	12	Jan-14
Pacific Asset Management Corporate (Bank) Loan Strategy	54,163,689	2.7	46.4	1.8	5.7	4.2	--	--	--	4.3	Aug-17
<i>Credit Suisse Leveraged Loan</i>				1.6	5.4	4.1	5.4	3.9	--	4.2	Aug-17
<i>eV US Float-Rate Bank Loan Fixed Inc Net Rank</i>				8	24	19	--	--	--	6	Aug-17
<b>High Yield</b>	<b>84,239,552</b>	<b>4.2</b>	<b>15.3</b>	<b>0.8</b>	<b>6.3</b>	<b>1.9</b>	<b>7.8</b>	<b>2.8</b>	<b>--</b>	<b>6.2</b>	<b>Dec-10</b>
<i>BBgBarc Global High Yield TR</i>				3.0	9.5	7.8	6.8	4.0	9.1	6.5	Dec-10
<i>eV Global High Yield Fixed Inc Net Rank</i>				99	99	99	8	86	--	44	Dec-10
Loomis Sayles High Yield Fund	84,239,552	4.2	100.0	0.8	6.3	1.9	8.2	3.3	9.9	9.1	Oct-98
<i>BBgBarc Global High Yield TR</i>				3.0	9.5	7.8	6.8	4.0	9.1	8.3	Oct-98
<i>eV Global High Yield Fixed Inc Net Rank</i>				99	99	99	1	82	1	1	Oct-98

As of June 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Debt</b>	<b>21,117,378</b>	<b>1.1</b>	<b>3.8</b>	<b>4.3</b>	<b>10.1</b>	<b>11.0</b>	<b>6.4</b>	<b>3.1</b>	<b>--</b>	<b>4.0</b>	<b>Dec-10</b>
50% JPM EMBI/50% JPM GBI-EM				4.9	10.0	10.8	4.9	2.3	--	3.6	Dec-10
eV All Emg Mkts Fixed Inc Net Rank				48	47	31	18	51	--	56	Dec-10
Ashmore EM Blended Debt	21,117,378	1.1	100.0	4.3	10.1	11.0	--	--	--	3.4	Dec-17
Ashmore Blended Debt Benchmark				4.0	8.7	9.4	4.6	2.4	5.0	3.1	Dec-17
eV All Emg Mkts Fixed Inc Net Rank				48	47	31	--	--	--	43	Dec-17
<b>Private Debt</b>	<b>10,812,707</b>	<b>0.5</b>	<b>1.7</b>	<b>0.9</b>	<b>1.5</b>	<b>3.2</b>	<b>-3.4</b>	<b>--</b>	<b>--</b>	<b>-2.4</b>	<b>Jan-16</b>
Barclays Global High Yield +2%				3.5	10.6	9.9	9.0	--	--	10.5	Jan-16
<b>Total Real Assets</b>	<b>623,658,120</b>	<b>31.1</b>	<b>31.1</b>	<b>-1.2</b>	<b>1.5</b>	<b>1.2</b>	<b>5.8</b>	<b>-2.8</b>	<b>--</b>	<b>-1.9</b>	<b>Dec-10</b>
Total Real Assets Policy Index				1.3	3.4	6.5	6.8	8.7	--	11.4	Dec-10
<b>Real Estate</b>	<b>429,924,240</b>	<b>21.5</b>	<b>68.9</b>	<b>0.0</b>	<b>1.2</b>	<b>3.6</b>	<b>5.0</b>	<b>-6.1</b>	<b>-3.5</b>	<b>3.7</b>	<b>Mar-85</b>
NCREIF Property (1-quarter lagged)				1.8	3.2	6.8	7.1	9.1	8.5	8.1	Mar-85
<b>Natural Resources</b>	<b>138,171,185</b>	<b>6.9</b>	<b>22.2</b>	<b>-3.8</b>	<b>3.7</b>	<b>-1.3</b>	<b>-1.9</b>	<b>1.3</b>	<b>--</b>	<b>4.0</b>	<b>Dec-10</b>
NCREIF Farmland Total Return Index 1Q Lag				0.7	3.6	6.1	6.4	8.2	11.1	12.2	Dec-10
<b>Infrastructure</b>	<b>55,562,696</b>	<b>2.8</b>	<b>8.9</b>	<b>-4.1</b>	<b>-3.2</b>	<b>-10.7</b>	<b>15.3</b>	<b>7.3</b>	<b>--</b>	<b>6.9</b>	<b>Jul-12</b>
S&P Global Infrastructure TR USD				5.3	20.2	12.2	8.8	4.8	9.3	8.9	Jul-12

<sup>1</sup> All Private Market market values are one quarter lagged unless otherwise noted. Huff NAV as of 9/30/2018. Barings and Lone Star NAV as of 12/31/2018.

**Benchmark History**

As of June 30, 2019

DPFP		
1/1/2019	Present	40% MSCI ACWI IMI Net USD / 10% MSCI Emerging Market IMI Net / 5% Cambridge Associates US All PE (1 Qtr Lag) / 12% BBgBarc US Treasury 1-3 Yr TR / 4% BBgBarc Global Aggregate TR / 4% BBgBarc Global High Yield TR / 4% BBgBarc US Aggregate TR / 4% S&P/LSTA Leveraged Loan / 4% 50% JPM EMBI/50% JPM GBI-EM / 5% NCREIF Farmland Total Return Index 1Q Lag / 5% NCREIF Property (1-quarter lagged) / 3% 91 Day T-Bills
10/1/2018	12/31/2018	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% BBgBarc US Aggregate TR / 4% 50% JPM EMBI/50% JPM GBI-EM / 5% Natural Resources Benchmark (Linked) / 5% NCREIF Property Index / 3% 91 Day T-Bills
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
1/1/2014	3/31/2014	15% MSCI ACWI / 15% Private Markets / 10% Total Global Natural Resources Custom Benchmark / 15% BBgBarc Global Aggregate TR / 20% CPI + 5% (Seasonally Adjusted) / 10% Infrastructure / 15% Real Estate
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		
12/31/2010	Present	50% NCREIF Property (1-quarter lagged) / 50% NCREIF Farmland Total Return Index 1Q Lag



## **Disclaimer, Glossary, and Notes**

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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.