

# Dallas Police & Fire Pension System March 31, 2021

## Fund Evaluation Report

MEKETA.COM



Agenda

## Agenda

- 1. Executive Summary as of March 31, 2021
- 2. Performance Update as of March 31, 2021

Executive Summary As of March 31, 2021



#### **Executive Summary**

## DPFP 1Q21 Flash Summary

Category	Results	Notes
Total Fund Performance Return	Positive	1.9%
Performance vs. Policy Index	Underperformed	1.9% vs. 2.6%
Performance vs. Peers <sup>1</sup>	Underperformed	1.9% vs. 3.3% median (90th percentile in peer group)
Asset Allocation vs. Targets	Positive	Underweight Global Bonds and EM Debt helped while equity underweight hurt
Safety Reserve Exposure	Sufficient	\$310 million (approximately 16%)
Public Active Management	Mixed	5/10 public managers beat benchmarks
DPFP Public Markets vs. 60/40²	Outperformed	2.4% vs. 1.2%
DPFP Public Markets vs. Peers	Underperformed	2.4% vs. 3.3% median (80th percentile in peer group)
Compliance with Targets	No	Global Bonds below policy range <sup>3</sup>

<sup>&</sup>lt;sup>1</sup> InvestorForce Public DB \$1-5 billion net

<sup>&</sup>lt;sup>2</sup> Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.

 $<sup>^3</sup>$  Allocation of zero previously approved by Board. Target to Global Bonds is being eliminated.



#### **Executive Summary**

## DPFP Trailing One-Year Flash Summary

Category	Results	Notes
Total Fund Performance Return	Positive	11.3%
Performance vs. Policy Index	Underperformed	11.3% vs. 31.4%
Performance vs. Peers <sup>1</sup>	Underperformed	11.3% vs. 33.0% median (99th percentile in peer group)
Asset Allocation vs. Targets	Detracted	Overweight Real Estate and underweight Public Equities hurt
Public Active Management	Helped	5/8 public managers beat benchmarks
DPFP Public Markets vs. 60/40²	Underperformed	32.6% vs. 34.3%
DPFP Public Markets vs. Peers	Underperformed	32.6% vs. 33.0% median (53rd percentile in peer group)

<sup>&</sup>lt;sup>1</sup> InvestorForce Public DB \$1-5 billion net.

<sup>&</sup>lt;sup>2</sup> Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.



#### **Executive Summary**

## DPFP Trailing Three-Year Flash Summary

Category	Results	Notes
Total Fund Performance Return	Positive	4.3%
Performance vs. Policy Index	Underperformed	4.3% vs. 7.9%
Performance vs. Peers'	Underperformed	4.3% vs. 8.9% median (99th percentile in peer group)
Public Active Management	Mixed	4 of 8 public managers beat their benchmarks
DPFP Public Markets vs. 60/40²	Outperformed	8.7% vs. 8.6%
DPFP Public Markets vs. Peers	Underperformed	8.7% vs. 8.9% median (56th percentile in peer group)

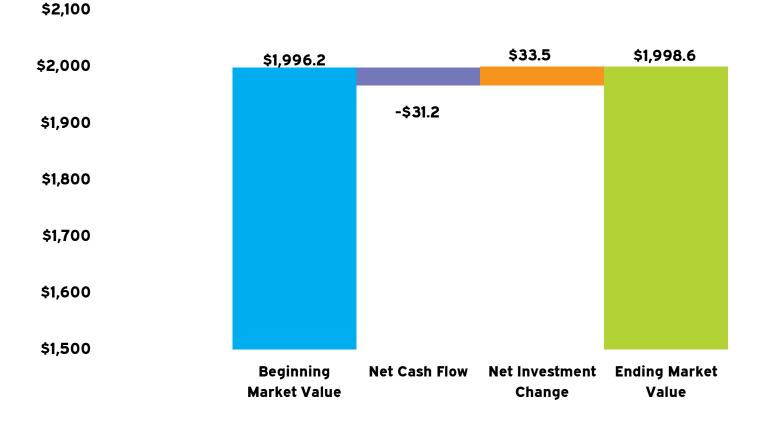
<sup>2</sup> Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.

<sup>&</sup>lt;sup>1</sup> InvestorForce Public DB \$1-5 billion net



**Executive Summary** 

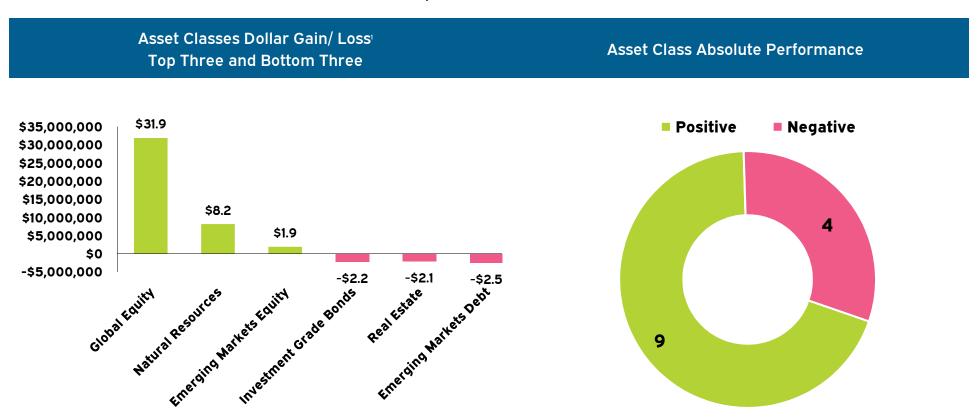




• Total market value increased due to positive investment performance.



**Executive Summary** 



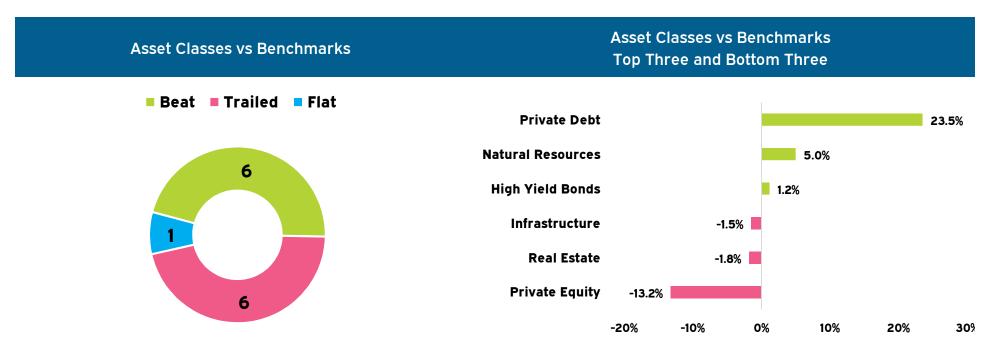
## **Quarterly Absolute Performance**

- In absolute terms, Global Equity appreciated the most, gaining approximately \$31.9 million in market value.
- Emerging Market Debt depreciated the most, losing approximately \$2.5 million in value.

<sup>&</sup>lt;sup>1</sup> Estimated Gain/ Loss calculated by multiplying beginning market value by quarterly performance.



**Executive Summary** 

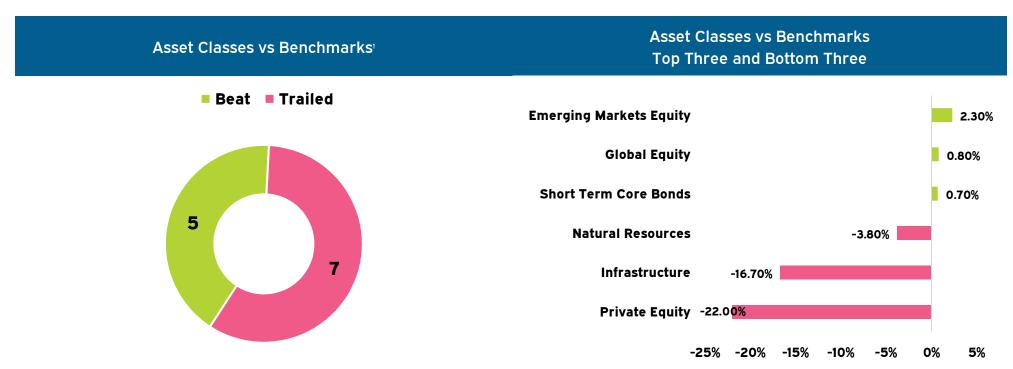


## **Quarterly Relative Performance**

- Six of thirteen asset classes delivered positive relative performance versus respective benchmarks.
- Private Debt, Natural Resources and High Yield bonds had the best relative performance for the quarter.
- Over the quarter, Private Equity, Real Estate and Infrastructure had the worst relative performance.



**Executive Summary** 



## **Trailing 3 Year Relative Performance**

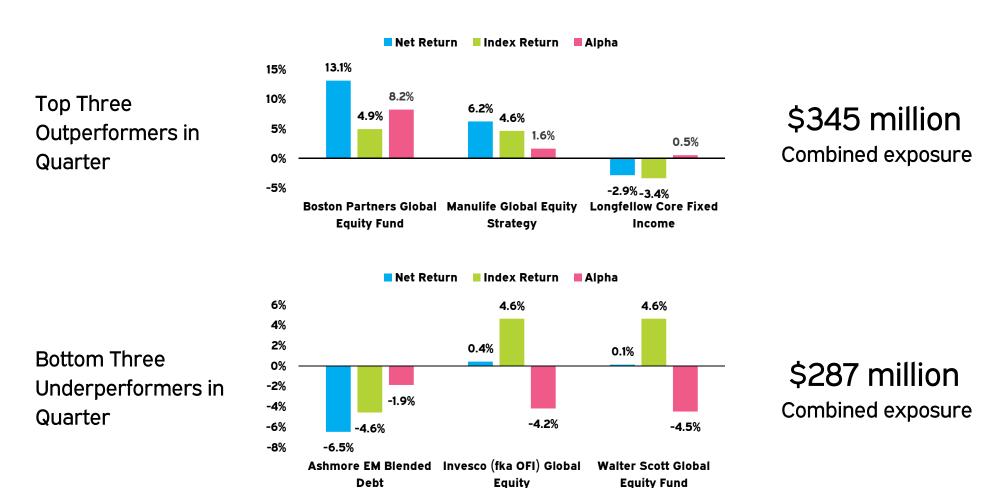
- Five of the twelve asset classes with trailing three-year return history delivered positive relative performance versus respective benchmarks, led by Emerging Markets Equity, Global Equity and Short Term Core Bonds.
- Private Equity, Infrastructure and Natural Resources had the worst relative performance over the trailing three-year period.

<sup>&</sup>lt;sup>1</sup> Analysis excludes asset classes with a performance history of less than three years.



**Executive Summary** 

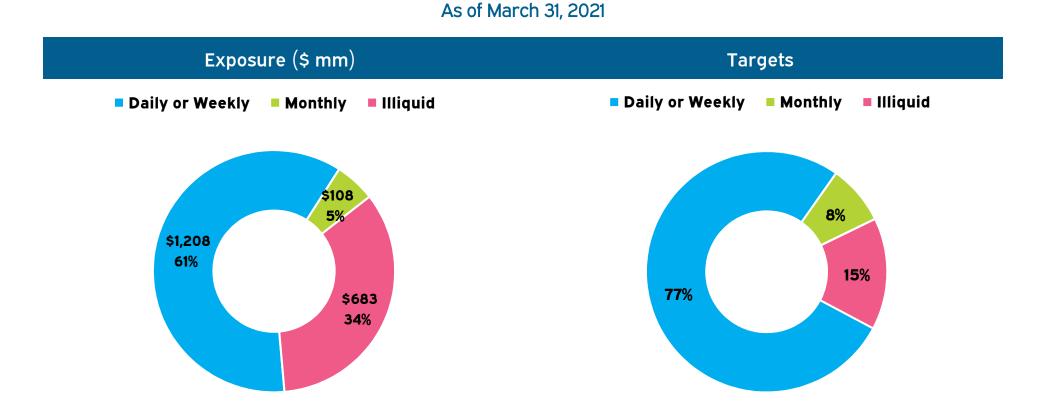




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## **Dallas Police and Fire Pension System**

**Executive Summary** 

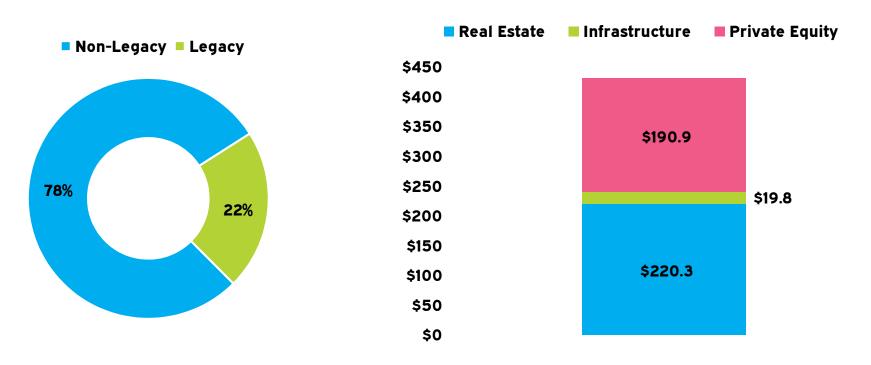


Liquidity Exposure

• Approximately 34% of the System's assets are illiquid versus 15% of the target allocation.



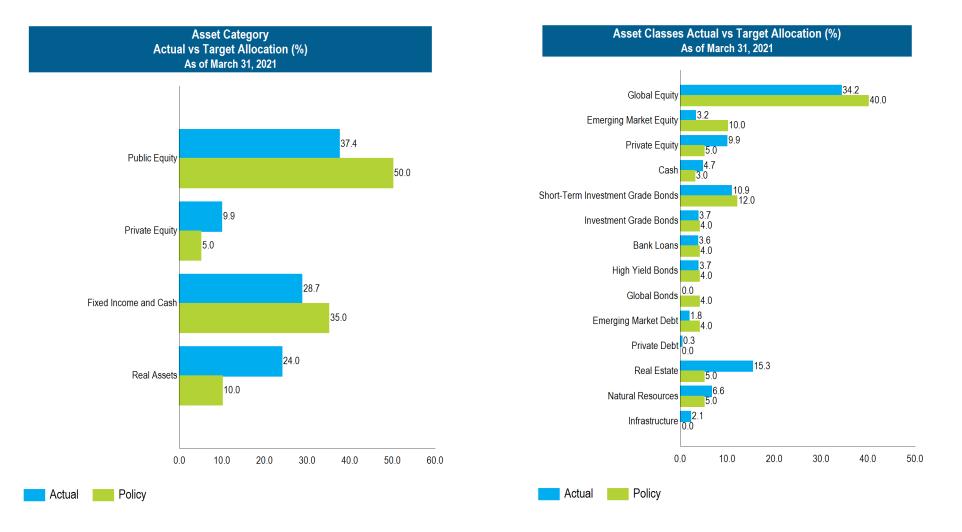
**Executive Summary** 



Legacy Assets

\$430 million Net Asset Value of Legacy Assets Performance Update As of March 31, 2021







DPFP | As of March 31, 2021

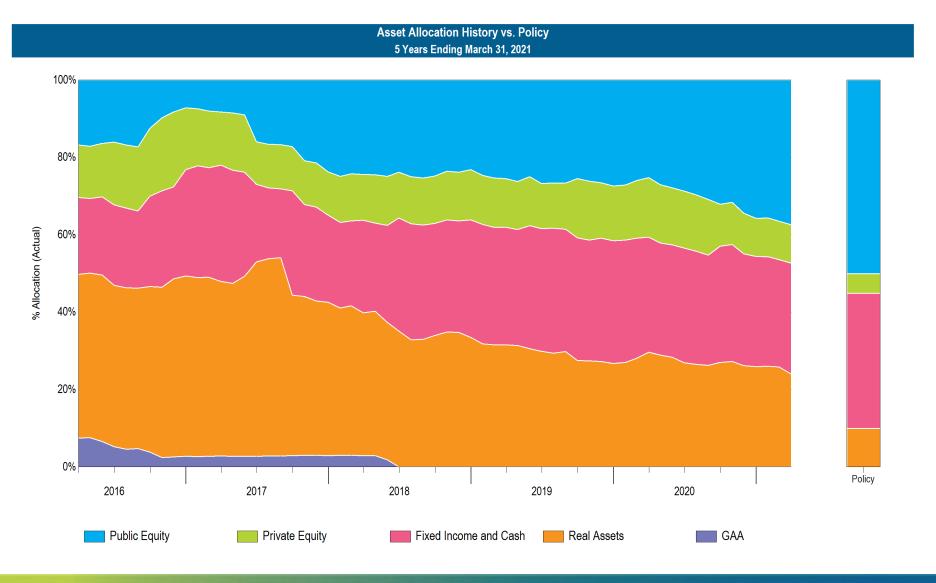
Allocation vs. Targets and Policy										
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?					
Equity	\$945,545,346	47%	50%							
Global Equity	\$684,370,966	34%	40%	22% - 48%	Yes					
Emerging Market Equity	\$63,779,343	3%	10%	3% - 12%	Yes					
Private Equity	\$197,395,037	10%	5%							
Fixed Income and Cash	\$573,382,898	29%	35%							
Cash	\$93,553,466	5%	3%	0% - 5%	Yes					
Short-Term Investment Grade Bonds	\$216,856,551	11%	12%	5% - 15%	Yes					
Investment Grade Bonds	\$74,463,653	4%	4%	2% - 6%	Yes					
Global Bonds			4%	2% - 6%	No					
Bank Loans	\$72,461,003	4%	4%	2% - 6%	Yes					
High Yield Bonds	\$74,659,167	4%	4%	2% - 6%	Yes					
Emerging Market Debt	\$35,835,209	2%	4%	0% - 6%	Yes					
Private Debt	\$5,553,860	0%	0%							
Real Assets	\$479,686,654	24%	10%							
Real Estate	\$305,769,514	15%	5%							
Natural Resources	\$131,356,859	7%	5%							
Infrastructure	\$42,560,281	2%	0%							
Total	\$1,998,614,899	100%	100%							

As of 3/31/2021 the Safety Reserve exposure was approximately \$310.4 million (16%).

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

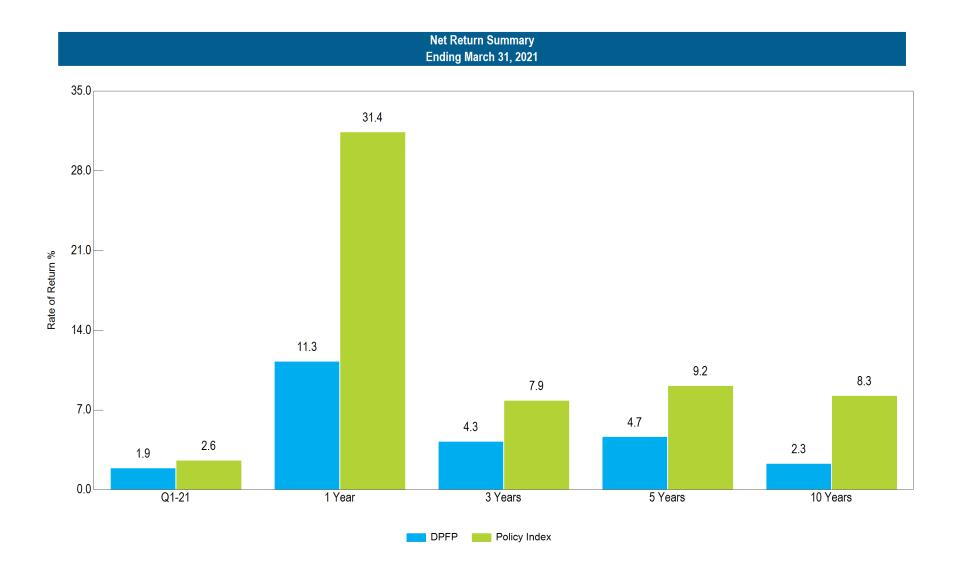


DPFP | As of March 31, 2021



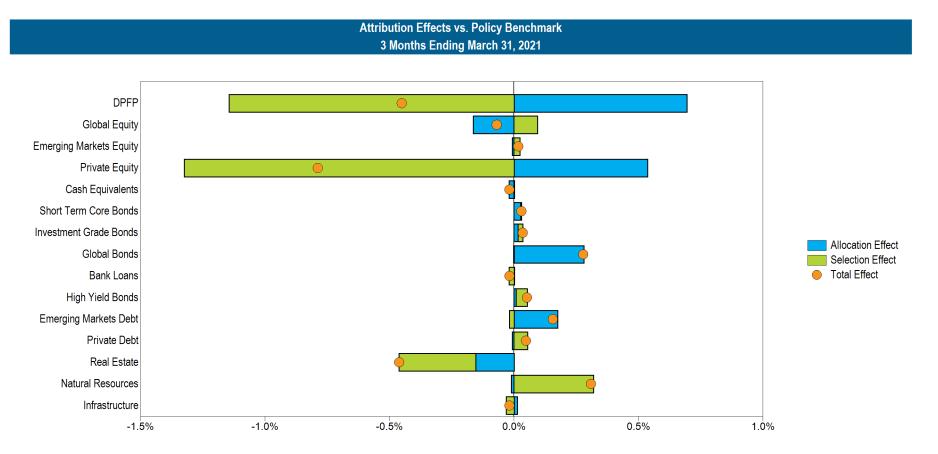
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DPFP | As of March 31, 2021

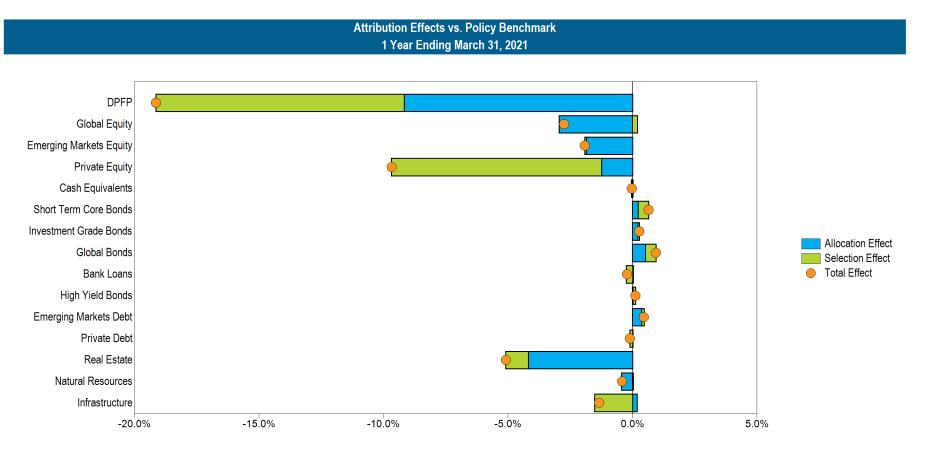


Attribution Summary										
3 Months Ending March 31, 2021										
Wtd. Actu	al Wtd. Index	Excess	Selection	Allocation	Total					
Retu	n Return	Return	Effect	Effect	Effects					
Total 1.9	% 2.4%	-0.5%	-1.1%	0.7%	-0.5%					

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 sum due to rounding.



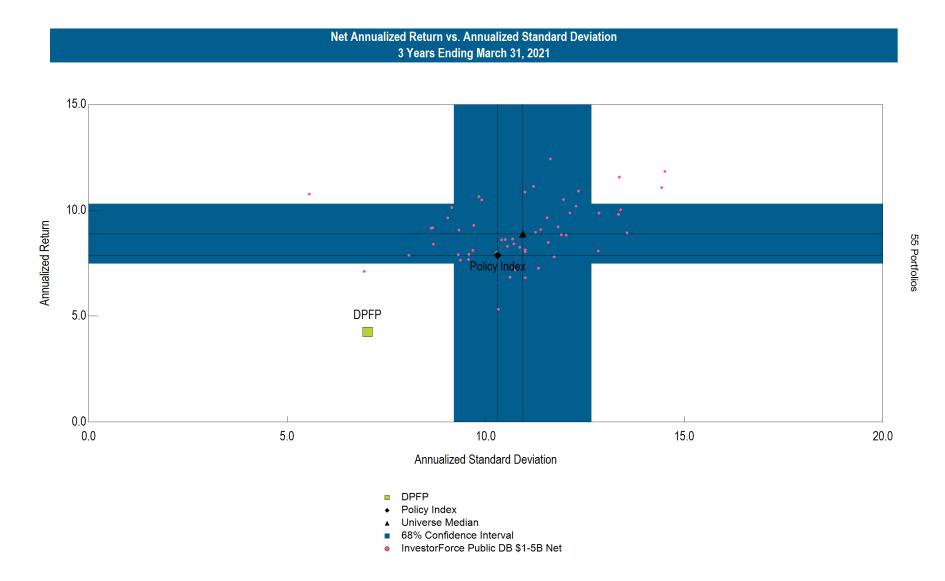
DPFP | As of March 31, 2021



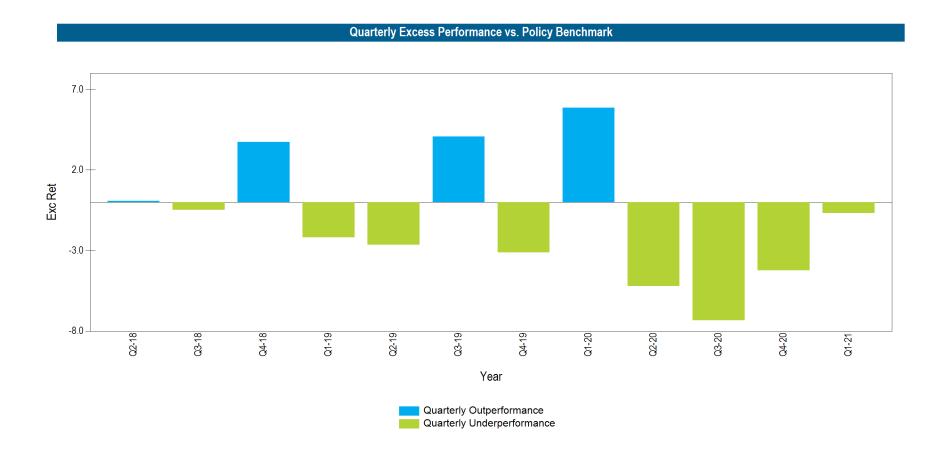
Attribution Summary 1 Year Ending March 31, 2021										
	Selection	Allocation	Total							
	Return	Return	Return	Effect	Effect	Effects				
Total	11.3%	30.5%	-19.1%	-10.0%	- <b>9.2</b> %	-19.1%				

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 sum due to rounding.



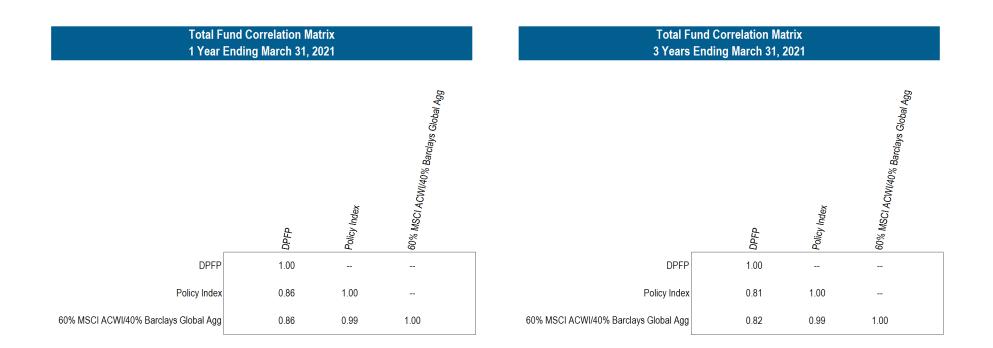




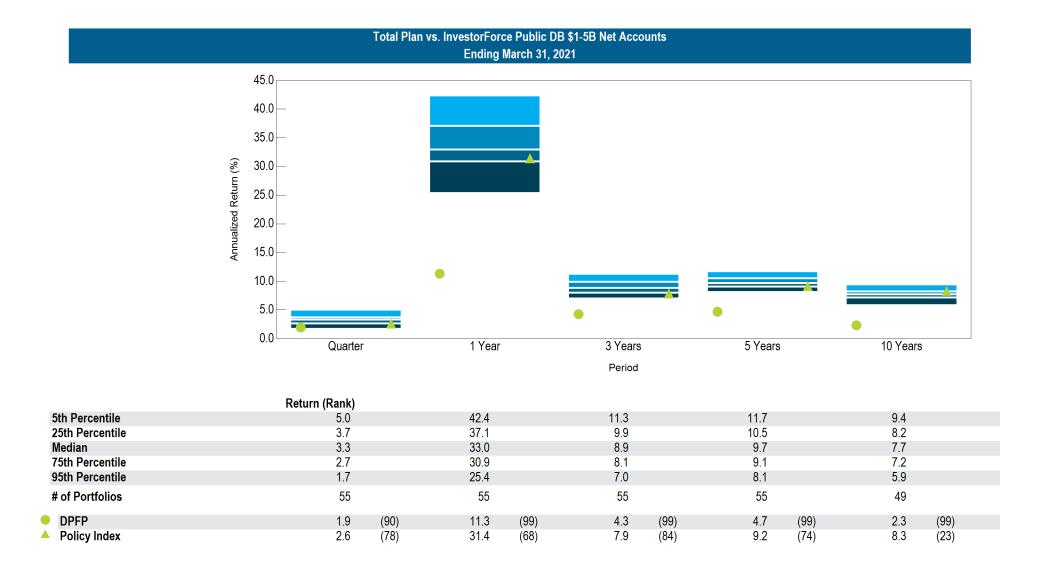


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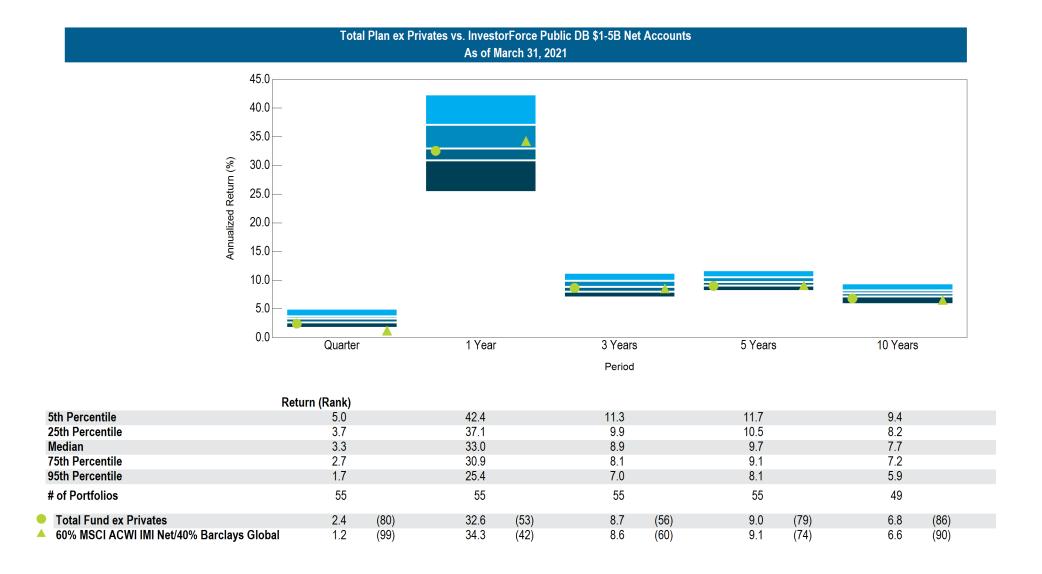
## **Dallas Police & Fire Pension System**













Ass	et Class Performa	nce Summ	ary (Nei	t)					
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
DPFP	1,998,614,899	100.0	1.9	11.3	4.3	4.7	2.3	5.8	Jun-96
Policy Index			2.6	31.4	7.9	9.2	8.3		Jun-96
Total Fund Ex Private Markets			2.4	32.6	8.7	9.0	6.8	5.9	Jun-96
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index			1.2	34.3	8.6	9.1	6.6	6.5	Jun-96
Global Equity	684,370,966	34.2	4.9	55.6	12.7	14.3	9.9	7.7	Jul-06
MSCI ACWI IMI Net USD			5.1	57.6	11.9	13.2	9.2	7.4	Jul-06
Emerging Markets Equity	63,779,343	3.2	3.1	56.2	8.6			7.6	Jan-18
MSCI Emerging Market IMI Net			2.9	61.1	6.3	11.7	3.6	6.2	Jan-18
Private Equity	197,395,037	9.9	-0.1	-32.9	-6.1	-9.3	-5.8	-1.8	Oct-05
Cambridge Associates US All PE (1 Qtr Lag)			13.1	23.6	15.9	15.6	14.0	13.4	Oct-05
Cash Equivalents	93,553,466	4.7	0.0	0.3	1.5	1.3		1.3	Apr-15
91 Day T-Bills			0.0	0.1	1.4	1.1	0.6	1.0	Apr-15
Short Term Core Bonds	216,856,551	10.9	0.0	4.3	3.6			2.9	Jun-17
BBgBarc US Aggregate 1-3 Yr TR			-0.1	1.2	2.9	2.0	1.6	2.3	Jun-17
Investment Grade Bonds	74,463,653	3.7	-2.9	2.2				3.7	Oct-19
BBgBarc US Aggregate TR			-3.4	0.7	4.7	3.1	3.4	2.7	Oct-19
Global Bonds	-								Dec-10
BBgBarc Global Aggregate TR			-4.5	4.7	2.8	2.7	2.2	2.3	Dec-10
Bank Loans	72,461,003	3.6	1.5	14.7	4.2	6.1		4.3	Jan-14
Credit Suisse Leveraged Loan			2.0	20.8	4.1	5.3		4.1	Jan-14
High Yield Bonds	74,659,167	3.7	0.2	27.5	4.5	8.2	5.7	6.2	Dec-10
BBgBarc Global High Yield TR			-1.0	24.7	4.7	6.8	6.0	6.2	Dec-10
Emerging Markets Debt	35,835,209	1.8	-6.5	22.1	-0.4	4.1	2.5	2.9	Dec-10
50% JPM EMBI/50% JPM GBI-EM			-5.6	14.5	1.7	4.1	3.0	3.2	Dec-10
Private Debt	5,553,860	0.3	23.0	3.1	4.2	-1.3		-0.9	Jan-16
Barclays Global High Yield +2%			-0.5	27.2	6.8	8.9		9.4	Jan-16



#### DPFP | As of March 31, 2021

Asset Class Performance Summary (Net)										
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date	
Real Estate	305,769,514	15.3	-0.6	-2.6	1.4	2.9	-3.5	3.5	Mar-85	
NCREIF Property (1-quarter lagged)			1.2	1.6	4.9	5.9	9.0	7.8	Mar-85	
Natural Resources	131,356,859	6.6	6.6	3.2	1.1	0.4	3.2	4.0	Dec-10	
NCREIF Farmland Total Return Index 1Q Lag			1.6	3.1	4.9	5.6	10.4	10.8	Dec-10	
Infrastructure	42,560,281	2.1	1.5	-17.1	-11.0	3.7		2.7	Jul-12	
S&P Global Infrastructure TR USD	_		3.0	37.0	5.7	6.8	6.3	7.3	Jul-12	

<sup>1</sup> Please see the Appendix for composition of the Custom Benchmarks. <sup>2</sup> As of 3/31/2021, the Safety Reserve exposure was approximately \$310.4 million (16%).

<sup>3</sup> All private market data is one quarter lagged, unless otherwise noted. <sup>4</sup> Lone Star Funds 12/31/2019 valuation used <sup>5</sup> North Texas Fund, Museum Tower, Huff Alternative Fund and Huff Energy Fund 9/30/2020 valuation used.



								•		•
	Trailing	g Net Perf	ormance							
	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
DPFP	1,998,614,899	100.0		1.9	11.3	4.3	4.7	2.3	5.8	Jun-96
Policy Index				2.6	31.4	7.9	9.2	8.3		Jun-96
Total Fund Ex Private Markets				2.4	32.6	8.7	9.0	6.8	5.9	Jun-96
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index				1.2	34.3	8.6	9.1	6.6	6.5	Jun-96
InvestorForce Public DB \$1-5B Net Rank				90	99	99	99	99	97	Jun-96
Total Equity	945,545,346	47.3	47.3	3.7	22.2	7.6	4.2	4.9	5.3	Dec-10
MSCI ACWI IMI Net USD				5.1	57.6	11.9	13.2	9.2	9.4	Dec-10
Public Equity	748,150,309	37.4	79.1	4.8	55.7	12.6	14.2	9.9	7.7	Jul-06
MSCI ACWI IMI Net USD				5.1	57.6	11.9	13.2	9.2	7.4	Jul-06
eV All Global Equity Net Rank				54	55	46	34	43	43	Jul-06
Global Equity	684,370,966	34.2	91.5	4.9	55.6	12.7	14.3	9.9	7.7	Jul-06
MSCI ACWI IMI Net USD				5.1	57.6	11.9	13.2	9.2	7.4	Jul-06
eV All Global Equity Net Rank				52	55	45	34	43	43	Jul-06
Boston Partners Global Equity Fund	136,389,795	6.8	19.9	13.1	66.5	8.2			8.9	Jul-17
MSCI World Net				4.9	54.0	12.8	13.4	9.9	12.7	Jul-17
MSCI World Value				9.6	48.3	6.7	9.1	7.1	6.9	Jul-17
eV Global Large Cap Value Eq Net Rank				29	26	38			40	Jul-17
Manulife Global Equity Strategy	134,494,926	6.7	19.7	6.2	48.2	11.5			9.9	Jul-17
MSCI ACWI Net				4.6	54.6	12.1	13.2	9.1	12.4	Jul-17
MSCI ACWI Value NR USD				8.9	48.8	6.2	9.0	6.4	6.8	Jul-17
eV Global Large Cap Value Eq Net Rank				83	75	15			26	Jul-17

DPFP | As of March 31, 2021

<sup>1</sup> All Private Equity market values are one quarter lagged unless otherwise noted.

<sup>2</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.



#### DPFP | As of March 31, 2021

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Invesco (fka OFI) Global Equity	121,718,795	6.1	17.8	0.4	63.7	14.4	17.0	11.4	8.2	Oct-07
MSCI ACWI Net				4.6	54.6	12.1	13.2	9.1	5.9	Oct-07
MSCI ACWI Growth				0.3	59.0	17.5	17.1	11.7	8.0	Oct-07
eV Global Large Cap Growth Eq Net Rank				84	30	86	59	90	63	Oct-07
Walter Scott Global Equity Fund	129,382,951	6.5	18.9	0.1	43.4	15.2	14.9	11.2	11.0	Dec-09
MSCI ACWI Net				4.6	54.6	12.1	13.2	9.1	9.8	Dec-09
MSCI ACWI Growth				0.3	59.0	17.5	17.1	11.7	12.2	Dec-09
eV Global Large Cap Growth Eq Net Rank				85	92	82	89	91	89	Dec-09
NT ACWI Index IMI	162,384,499	8.1	23.7							
Emerging Markets Equity	63,779,343	3.2	8.5	3.1	56.2	8.6			7.6	Jan-18
MSCI Emerging Market IMI Net				2.9	61.1	6.3	11.7	3.6	6.2	Jan-18
eV Emg Mkts Equity Net Rank				53	80	29		-	37	Jan-18
RBC Emerging Markets Equity	63,779,343	3.2	100.0	3.1	56.2	8.6			7.6	Jan-18
MSCI Emerging Market IMI Net				2.9	61.1	6.3	11.7	3.6	6.2	Jan-18
eV Emg Mkts Equity Net Rank				53	80	29			37	Jan-18
Private Equity	197,395,037	9.9	20.9	-0.1	-32.9	-6.1	-9.3	-5.8	-1.8	Oct-05
Cambridge Associates US All PE (1 Qtr Lag)				13.1	23.6	15.9	15.6	14.0	13.4	Oct-05

<sup>1</sup> All Private Equity market values are one quarter lagged unless otherwise noted.

<sup>2</sup> Lone Star Funds 12/31/2019 valuation used.



	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Total Fixed Income and Cash	573,382,898	28.7	28.7	-0.4	9.7	3.2	4.3	4.3	5.1	Jul-06
BBgBarc Multiverse TR				-4.3	5.5	2.9	2.9	2.4	3.8	Jul-06
eV All Global Fixed Inc Net Rank				39	70	72	57	39	37	Jul-06
Cash Equivalents	93,553,466	4.7	16.3	0.0	0.3	1.5	1.3		1.3	Apr-15
91 Day T-Bills				0.0	0.1	1.4	1.1	0.6	1.0	Apr-15
Public Fixed Income	474,275,572	23.7	82.7	-0.8	11.0	3.4	5.9	4.7	5.1	Dec-10
BBgBarc Multiverse TR				-4.3	5.5	2.9	2.9	2.4	2.5	Dec-10
eV All Global Fixed Inc Net Rank				42	63	69	26	31	26	Dec-10
Short Term Core Bonds	216,856,551	10.9	45.7	0.0	4.3	3.6			2.9	Jun-17
BBgBarc US Aggregate 1-3 Yr TR				-0.1	1.2	2.9	2.0	1.6	2.3	Jun-17
IR&M 1-3 Year Strategy	216,856,551	10.9	100.0	0.0	4.3	3.6			2.9	Jul-17
BBgBarc US Aggregate 1-3 Yr TR				-0.1	1.2	2.9	2.0	1.6	2.3	Jul-17
eV US Short Duration Fixed Inc Net Rank				27	34	22			26	Jul-17
Investment Grade Bonds	74,463,653	3.7	15.7	-2.9	2.2				3.7	Oct-19
BBgBarc US Aggregate TR				-3.4	0.7	4.7	3.1	3.4	2.7	Oct-19
eV US Core Fixed Inc Net Rank				25	70				26	Oct-19
Longfellow Core Fixed Income	74,463,653	3.7	100.0	-2.9					-0.9	Jul-20
BBgBarc US Aggregate TR				-3.4	0.7	4.7	3.1	3.4	-2.1	Jul-20
eV US Core Fixed Inc Net Rank				25					35	Jul-20
Global Bonds										



DPFP | As of March 31, 2021

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Bank Loans	72,461,003	3.6	15.3	1.5	14.7	4.2	6.1		4.3	Jan-14
Credit Suisse Leveraged Loan				2.0	20.8	4.1	5.3		4.1	Jan-14
eV US Float-Rate Bank Loan Fixed Inc Net Rank				56	84	18	5		12	Jan-14
Pacific Asset Management Corporate (Bank)	72,331,390	3.6	99.8	1.5	15.0	4.0			4.2	Aug-17
Loans	12,001,000	0.0								-
Credit Suisse Leveraged Loan				2.0	20.8	4.1	5.3		4.2	Aug-17
eV US Float-Rate Bank Loan Fixed Inc Net Rank				52	81	27			26	Aug-17
Loomis Sayles Senior Rate and Fixed Income	129,613	0.0	0.2							
High Yield Bonds	74,659,167	3.7	15.7	0.2	27.5	4.5	8.2	5.7	6.2	Dec-10
BBgBarc Global High Yield TR				-1.0	24.7	4.7	6.8	6.0	6.2	Dec-10
eV Global High Yield Fixed Inc Net Rank				77	26	82	9	85	48	Dec-10
Loomis US High Yield Fund	74,659,167	3.7	100.0	0.4					0.4	Jan-21
BBgBarc US High Yield 2% Issuer Cap TR				0.9	23.6	6.8	8.0	6.5	0.9	Jan-21
eV US High Yield Fixed Inc Net Rank				76				-	76	Jan-21
Emerging Markets Debt	35,835,198	1.8	7.6	-6.5	22.1	-0.4	4.1	2.5	2.9	Dec-10
50% JPM EMBI/50% JPM GBI-EM				-5.6	14.5	1.7	4.1	3.0	3.2	Dec-10
eV All Emg Mkts Fixed Inc Net Rank				82	26	80	67	69	66	Dec-10
Ashmore EM Blended Debt	35,835,198	1.8	100.0	-6.5	22.1	-0.4			0.4	Dec-17
Ashmore Blended Debt Benchmark				-4.6	13.3	1.7	3.9	2.9	2.2	Dec-17
eV All Emg Mkts Fixed Inc Net Rank				82	26	80		-	89	Dec-17
Private Debt	5,553,860	0.3	1.0	23.0	3.1	4.2	-1.3		-0.9	Jan-16
Barclays Global High Yield +2%				-0.5	27.2	6.8	8.9	-	9.4	Jan-16

<sup>1</sup> The Loomis Sayles Senior Rate and Fixed Income market value is a residual balance.



DPFP | As of March 31, 2021

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Total Real Assets	479,686,654	24.0	24.0	1.4	-2.4	0.2	3.3	-1.7	-1.7	Dec-10
Total Real Assets Policy Index				1.4	2.3	4.9	5.7	9.7	10.0	Dec-10
Real Estate	305,769,514	15.3	63.7	-0.6	-2.6	1.4	2.9	-3.5	3.5	Mar-85
NCREIF Property (1-quarter lagged)				1.2	1.6	4.9	5.9	9.0	7.8	Mar-85
Natural Resources	131,356,859	6.6	27.4	6.6	3.2	1.1	0.4	3.2	4.0	Dec-10
NCREIF Farmland Total Return Index 1Q Lag				1.6	3.1	4.9	5.6	10.4	10.8	Dec-10
Infrastructure	42,560,281	2.1	8.9	1.5	-17.1	-11.0	3.7		2.7	Jul-12
S&P Global Infrastructure TR USD				3.0	37.0	5.7	6.8	6.3	7.3	Jul-12

<sup>1</sup> All Private Market market values are one quarter lagged unless otherwise noted.

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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 is 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.

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.

**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.

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.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.



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%.

5% (discount)=1% pro rata, plus=6.26% (yield to maturity)5 (yrs. to maturity)5.26% (current yield)=6.26% (yield to maturity)

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

**NCREIF Property Index (NPI):** Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

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.