

# INVESTMENT MARKET UPDATE

(As of October 31, 2020)



Firefighters' Retirement System of Louisiana

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

# CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Oct	YTD
<b>S&amp;P 500</b>	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	-2.7%	2.8%
<b>Russell 1000</b>	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	-2.4%	3.8%
<b>Russell 2000</b>	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	2.1%	-6.8%
<b>Russell 2500</b>	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	1.8%	-4.1%
<b>MSCI EAFE</b>	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	-4.0%	-10.8%
<b>MSCI EM</b>	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	2.1%	0.9%
<b>MSCI ACWI</b>	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	-2.4%	-1.1%
<b>Private Equity</b>	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	-	-7.3%
<b>BC TIPS</b>	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	-0.6%	8.5%
<b>BC Municipal</b>	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	-0.3%	3.0%
<b>BC Muni High Yield</b>	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	0.2%	0.5%
<b>BC US Corporate HY</b>	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	0.5%	1.1%
<b>BC US Agg Bond</b>	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	-0.4%	6.3%
<b>BC Global Agg</b>	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	0.1%	5.8%
<b>BC Long Treasuries</b>	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	-3.0%	17.7%
<b>BC US Long Credit</b>	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	-0.6%	7.3%
<b>BC US STRIPS 20+ Yr</b>	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	-4.0%	23.7%
<b>JPM GBI-EM Global Div</b>	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	0.4%	-5.9%
<b>JPM EMBI Glob Div</b>	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	0.0%	-0.5%
<b>CS Hedge Fund</b>	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	-	0.0%
<b>BBG Commodity</b>	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	1.4%	-10.8%
<b>Alerian MLP</b>	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	4.4%	-43.8%
<b>FTSE NAREIT Equity REITs</b>	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-2.6%	-19.7%

Source: FactSet, Barclays, Thomson One

\*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag



# MARKET COMMENTARY – OCTOBER

## Market Environment

Developed market equities faltered in October amid a wave of risk aversion fueled by an uptick in new cases and hospitalization rates for COVID-19 in the U.S. and Europe. Domestic equities posted their second straight month of declines as volatility in the final trading days of October, incited by diminishing hopes of a pre-election fiscal stimulus package, triggered losses of 2.7% in the S&P 500 Index. In contrast, emerging market equities gained 2.1% last month, according to the MSCI Emerging Markets Index, amid improving economic data, particularly in emerging Asia, and weakness in the U.S. dollar.

In fixed income, U.S. rates rose with the 10- and 30-year Treasury yields increasing 17 and 19 basis points, respectively. The movement in the long-end of the yield curve and relative steepening detracted from long duration. The Barclays Long Treasury Index lost 3% in October. In Europe, yields broadly declined, reflecting renewed concerns around the coronavirus. As a result, the 10-year German Bund yield fell nine basis points to -0.62%.

Within real assets, spot WTI crude oil declined 10.9% last month, bringing year-to-date losses to 41.6%; the drop reflects ongoing concerns around lower demand because of the pandemic and also increasing supply from Libya.

The recent weakness in equities and associated volatility serve as a reminder of the fragility of the broader market rally. Despite the impressive performance of risk assets over the past few months, significant economic uncertainty remains with the weak macroeconomic backdrop. In addition, with the outcome of the U.S. presidential election likely to be finalized soon, the trajectory of COVID-19 and monetary and fiscal stimulus are of greater importance for financial markets. In the face of such uncertainty, we expect heightened volatility and encourage investors to be disciplined and mindful of market liquidity. To this end, we recommend investors maintain a dedicated allocation to Treasuries to support liquidity levels and cash-flow needs as potential market dislocations can introduce bouts of illiquidity across publicly-traded markets.



## Firefighters' Retirement System of Louisiana

# INVESTMENT PERFORMANCE FLASH REPORT

### Investment Performance Summary - Net of Fees

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Plan Composite</b>	<b>1,843,922,708</b>	<b>100.0</b>	<b>100.0</b>	<b>-1.2</b>	<b>3.1</b>	<b>-0.2</b>	<b>3.5</b>	<b>4.0</b>	<b>6.1</b>	<b>5.1</b>	<b>5.7</b>	<b>Sep-92</b>
Policy Index				-1.0	4.1	1.7	5.4	5.7	7.5	--	--	Sep-92
Allocation Index				-1.1	3.9	1.6	5.2	5.5	7.3	--	--	Sep-92
<b>Total Equity Composite</b>	<b>913,353,819</b>	<b>50.0</b>	<b>49.5</b>	<b>-1.8</b>	<b>4.9</b>	<b>-4.9</b>	<b>1.4</b>	<b>2.7</b>	<b>6.6</b>	<b>7.8</b>	<b>7.0</b>	<b>Sep-92</b>
MSCI ACWI				-2.4	5.5	-1.1	4.9	5.5	8.1	7.9	7.5	Sep-92
<b>Domestic Equity Composite</b>	<b>423,659,526</b>	<b>22.5</b>	<b>23.0</b>	<b>-1.7</b>	<b>5.8</b>	<b>-1.2</b>	<b>5.5</b>	<b>7.2</b>	<b>9.1</b>	<b>10.6</b>	<b>7.8</b>	<b>Sep-92</b>
Russell 3000				-2.2	6.9	3.1	10.1	10.0	11.5	12.8	9.8	Sep-92
Mellon Stock Index Fund	326,581,728		17.7	-2.7	6.0	2.8	9.7	10.4	11.7	--	11.5	Nov-13
S&P 500				-2.7	6.0	2.8	9.7	10.4	11.7	13.0	11.5	Nov-13
<b>SMID Cap Composite</b>	<b>97,077,798</b>	<b>5.5</b>	<b>5.3</b>	<b>1.9</b>	<b>5.1</b>	<b>-13.8</b>	<b>-7.9</b>	<b>-1.3</b>	<b>3.7</b>	<b>--</b>	<b>6.2</b>	<b>Oct-12</b>
Russell 2500				1.8	7.8	-4.1	2.1	4.5	8.2	10.6	10.4	Oct-12
Rothschild U.S. SMID Core	49,635,484		2.7	2.4	5.2	-11.6	-6.0	0.3	5.4	--	4.0	Jul-15
Russell 2500				1.8	7.8	-4.1	2.1	4.5	8.2	10.6	6.6	Jul-15
QMA SMID	47,442,314		2.6	1.4	4.9	-16.0	-9.8	--	--	--	-5.3	Jul-18
Russell 2500				1.8	7.8	-4.1	2.1	4.5	8.2	10.6	1.9	Jul-18
<b>International Equity Composite</b>	<b>215,334,974</b>	<b>12.0</b>	<b>11.7</b>	<b>-2.9</b>	<b>3.1</b>	<b>-10.5</b>	<b>-4.9</b>	<b>-1.8</b>	<b>3.7</b>	<b>--</b>	<b>4.7</b>	<b>Oct-12</b>
MSCI ACWI ex USA				-2.1	4.0	-7.5	-2.6	-0.2	4.3	3.4	4.4	Oct-12
LSV International Equity Value	95,912,982		5.2	-3.0	-0.3	-18.6	-14.5	-5.5	1.7	3.0	4.3	Oct-04
MSCI Custom Benchmark				-2.1	4.0	-7.5	-2.6	-0.2	4.3	3.4	4.6	Oct-04
Fisher All Foreign Equity	119,421,993		6.5	-2.9	5.9	-2.7	4.5	1.6	5.6	5.0	6.5	Oct-04
MSCI ACWI ex USA				-2.1	4.0	-7.5	-2.6	-0.2	4.3	3.4	5.3	Oct-04

Rothschild U.S. SMID Core and QMA SMID are preliminary as of 10/31/2020 and subject to change when finalized.

Returns are net of manager fees.

Results for periods longer than one year are annualized.

Fiscal Year ends June 30th.

SMID Cap Composite start date is 10/1/2012.

International Equity Composites start date is 10/1/2012.

MSCI Custom Benchmark is comprised of the MSCI EAFE until 12/31/2009 and MSCI ACWI ex USA beginning 1/1/2010.

Returns are net of manager fees.



## Firefighters' Retirement System of Louisiana

# INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Global Equity Composite</b>	<b>178,451,325</b>	<b>10.0</b>	<b>9.7</b>	<b>-2.2</b>	<b>3.4</b>	<b>-7.1</b>	<b>-1.6</b>	<b>-0.5</b>	<b>4.0</b>	<b>--</b>	<b>7.3</b>	<b>Oct-12</b>
MSCI ACWI				-2.4	5.5	-1.1	4.9	5.5	8.1	7.9	8.6	Oct-12
Boston Partners Global Equity	89,981,428		4.9	-2.0	1.6	-15.4	-11.5	-2.8	--	--	3.2	Nov-16
MSCI ACWI				-2.4	5.5	-1.1	4.9	5.5	8.1	7.9	9.7	Nov-16
State Street ACWI Index Fund	88,355,162		4.8	-2.4	5.6	-0.8	5.3	--	--	--	8.9	Sep-19
MSCI ACWI				-2.4	5.5	-1.1	4.9	5.5	8.1	7.9	8.5	Sep-19
<b>Emerging Markets Equity</b>	<b>95,907,994</b>	<b>5.5</b>	<b>5.2</b>	<b>1.0</b>	<b>8.4</b>	<b>-3.3</b>	<b>4.3</b>	<b>-0.3</b>	<b>6.6</b>	<b>--</b>	<b>2.7</b>	<b>Oct-13</b>
MSCI Emerging Markets				2.1	11.8	0.9	8.3	1.9	7.9	2.4	4.0	Oct-13
Acadian Emerging Markets Equity	62,277,627		3.4	1.3	8.2	-4.7	3.3	-2.2	5.6	--	2.0	Dec-13
MSCI Emerging Markets				2.1	11.8	0.9	8.3	1.9	7.9	2.4	3.6	Dec-13
Invesco Oppenheimer Developing Markets	33,630,367		1.8	0.4	8.7	-0.7	6.2	3.8	8.7	--	4.0	Jan-14
MSCI Emerging Markets				2.1	11.8	0.9	8.3	1.9	7.9	2.4	3.9	Jan-14
<b>Total Fixed Income Composite</b>	<b>555,091,258</b>	<b>31.0</b>	<b>30.1</b>	<b>-0.4</b>	<b>0.5</b>	<b>6.7</b>	<b>6.7</b>	<b>5.9</b>	<b>4.9</b>	<b>--</b>	<b>2.8</b>	<b>Oct-12</b>
Total Fixed Income Custom Benchmark				-0.3	0.6	4.1	4.6	4.5	4.0	2.8	2.3	Oct-12
<b>Core Fixed Income</b>	<b>473,638,537</b>	<b>26.5</b>	<b>25.7</b>	<b>-0.4</b>	<b>0.2</b>	<b>6.1</b>	<b>6.1</b>	<b>6.3</b>	<b>4.9</b>	<b>--</b>	<b>3.8</b>	<b>Dec-10</b>
BBgBarc US Aggregate TR				-0.4	0.2	6.3	6.2	5.1	4.1	3.6	3.6	Dec-10
Orleans Core Fixed Income	100,733,842		5.5	-0.3	0.5	5.2	5.5	4.8	4.3	3.6	5.7	Aug-92
BBgBarc US Aggregate TR				-0.4	0.2	6.3	6.2	5.1	4.1	3.6	5.4	Aug-92
Blackrock US Debt	372,904,694		20.2	-0.4	0.2	6.3	6.2	5.1	4.1	--	3.7	Nov-14
BBgBarc US Aggregate TR				-0.4	0.2	6.3	6.2	5.1	4.1	3.6	3.7	Nov-14
<b>US TIPS Composite</b>	<b>59,286,481</b>	<b>3.0</b>	<b>3.2</b>									
Blackrock US TIPS Index	59,286,481		3.2	-0.6	2.4	8.5	9.1	--	--	--	7.9	Oct-18
BBgBarc US TIPS TR				-0.6	2.4	8.5	9.1	5.5	4.4	3.2	7.9	Oct-18
<b>Emerging Markets Debt</b>	<b>22,166,240</b>	<b>1.5</b>	<b>1.2</b>									
Wellington Blended Opportunistic EMD	22,166,240		1.2	0.2	1.9	--	--	--	--	--	10.5	May-20
EMD Custom Benchmark				0.2	1.7	--	--	--	--	--	9.5	May-20

Thornburg Global Opportunities market value as of 09/30/2020 is \$106,490.

Boston Partners Global Equity and State Street ACWI Index Fund are preliminary as of 10/31/2020 and subject to change when finalized.

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Global Equity Composite start date is 10/1/2012.

Total Fixed Income Custom Benchmark is comprised of the Barclays Aggregate from 10/1/2012 to 10/31/2013; 75% Barclays Aggregate/25% JPM GBI EM Diversified from 11/1/2013 to 2/29/2016; 85% Barclays Aggregate/15% JPM GBI EM Diversified from 3/1/2016 to 12/31/2018; 70% Barclays Aggregate/20% JPM GBI EM Diversified/ 10% Barclays US TIPS going forward.

EMD Custom Benchmark is comprised of 50% JPMorgan EMBI Global Diversified/50% JPMorgan GBI-EM Global Diversified as of 05/01/2020.

Total Fixed Income Composite start date is 10/1/2012.



## Firefighters' Retirement System of Louisiana

# INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>GAA Composite</b>	<b>172,525,440</b>	<b>8.0</b>	<b>9.4</b>	<b>-1.6</b>	<b>4.3</b>	<b>2.2</b>	<b>5.6</b>	<b>5.1</b>	<b>6.0</b>	<b>--</b>	<b>4.6</b>	<b>Apr-14</b>
60% MSCI World (Net) / 40% FTSE WGBI				-1.9	4.0	2.4	5.6	5.7	6.7	6.1	5.2	Apr-14
Blackrock Global Allocation	98,585,456		5.3	-1.8	5.9	6.6	10.8	6.1	6.7	--	5.4	Apr-14
60% MSCI World (Net) / 40% FTSE WGBI				-1.9	4.0	2.4	5.6	5.7	6.7	6.1	5.2	Apr-14
AQR Global Risk Premium – EL	73,939,983		4.0	-1.4	2.2	-3.3	-0.7	4.1	5.2	--	3.6	May-14
60% MSCI World (Net) / 40% FTSE WGBI				-1.9	4.0	2.4	5.6	5.7	6.7	6.1	5.1	May-14
<b>Total Alternative Composite</b>	<b>186,312,172</b>	<b>11.0</b>	<b>10.1</b>	<b>0.0</b>	<b>1.9</b>	<b>-0.3</b>	<b>1.3</b>	<b>4.0</b>	<b>4.6</b>	<b>1.8</b>	<b>2.2</b>	<b>Jun-05</b>
<b>Private Equity Composite</b>	<b>76,392,390</b>	<b>5.0</b>	<b>4.1</b>	<b>0.0</b>	<b>6.8</b>	<b>-0.2</b>	<b>2.1</b>	<b>5.9</b>	<b>6.2</b>	<b>1.5</b>	<b>-1.9</b>	<b>Jul-05</b>
CJA US All PE (1 Qtr Lag)				0.0	10.3	3.0	4.3	10.9	10.5	13.0	12.7	Jul-05
Murphree Venture (\$2,000,000)	159,096		0.0	0.0	-12.3	-43.2	-54.4	-26.8	-27.6	-13.4	-10.6	Sep-05
Louisiana Fund I (\$1,000,000)	1,438,348		0.1	0.0	-0.1	0.4	0.3	-7.7	-7.2	-2.8	-6.7	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	1,164,171		0.1	0.0	7.0	0.8	-1.6	1.8	4.7	9.0	5.4	Feb-06
Greenspring Associates III (\$9,230,000)	399,074		0.0	0.0	-0.2	-38.9	-31.8	-7.0	-4.9	8.6	3.5	Feb-06
DCM Private Equity II (\$7,500,000)	838,597		0.0	0.0	-0.6	-14.7	-18.3	-8.2	-6.0	-1.1	-2.9	Feb-06
GA Crossover Fund (\$25,000,000)	3,742,808		0.2	0.0	-0.1	28.0	28.1	7.4	9.5	16.1	12.9	Jan-08
CCMP Capital Investors III (\$15,000,000)	14,358,011		0.8	0.0	15.7	7.3	10.0	7.3	9.9	--	9.8	Oct-14
Landmark Equity Partners XV (\$25,000,000)	9,297,473		0.5	0.0	-14.2	-12.4	-5.8	5.6	5.8	--	10.0	Dec-14
Harbourvest IV (\$20,000,000)	18,324,591		1.0	0.0	13.1	1.6	2.1	10.6	--	--	10.0	Nov-16
Mesirow (\$35,000,000)	19,645,306		1.1	0.0	8.2	5.5	5.9	--	--	--	1.2	Dec-18
HarbourVest Partners XI Buyout (\$35,000,000)	7,024,915		0.4	0.0	13.5	0.7	6.4	--	--	--	3.5	Jan-19

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Private Equity valuations are as of 09/30/2020.



## Firefighters' Retirement System of Louisiana

# INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Estate Composite</b>	<b>109,919,782</b>	<b>6.0</b>	<b>6.0</b>	<b>0.0</b>	<b>-1.1</b>	<b>-0.5</b>	<b>0.7</b>	<b>3.1</b>	<b>3.8</b>	<b>5.0</b>	<b>4.7</b>	<b>Dec-09</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	-1.0	1.3	2.7	5.4	6.8	9.7	8.7	Dec-09
Sentinel Real Estate Fund (\$30,000,000)	36,777,902		2.0	0.0	-2.3	0.1	2.6	5.6	6.8	12.9	6.2	Feb-06
JP Morgan India (\$8,990,000)	714,007		0.0	0.0	-1.1	-35.6	-45.3	-37.4	-24.8	-14.6	-18.2	Apr-07
Timbervest Crossover Fund (\$16,000,000)	6,468,873		0.4	0.0	1.4	2.1	0.1	-1.9	-3.0	-0.9	-1.0	Apr-08
AEW Partners VI LP (\$20,000,000)	227,716		0.0	0.0	7.6	38.0	103.9	37.6	29.2	21.4	20.3	Mar-10
AEW Core Property (\$12,000,000)	16,676,946		0.9	0.0	0.0	-0.3	1.2	4.7	5.6	--	6.2	May-15
FRS-GA (Georgia)	3,214,385		0.2	0.0	-7.2	-7.2	-7.2	-2.7	-7.5	-5.3	-8.5	Jun-08
FRS-LB I (NLTP AZ)	7,298,899		0.4	0.0	-0.2	-0.2	-0.2	-0.5	10.2	-9.6	-10.4	Jun-07
FRS-LB III (ST George UT)	9,281,276		0.5	0.0	0.0	0.0	0.0	0.0	3.4	1.2	2.4	Jun-08
ASB Real Estate Fund	14,895,071		0.8	0.0	-0.5	2.5	1.9	5.2	--	--	4.6	Jan-16
Heitman America Real Estate Trust	14,364,707		0.8	0.0	-1.1	-3.8	-1.3	3.1	4.7	--	4.7	Nov-15
<b>Total Cash (\$9 MM)</b>	<b>16,640,018</b>	<b>--</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.7</b>	<b>1.6</b>	<b>1.1</b>	<b>0.6</b>	<b>2.7</b>	<b>Jun-92</b>
<i>91 Day T-Bills</i>				0.0	0.0	0.4	0.7	1.5	1.1	0.6	2.4	Jun-92

Results for periods longer than one year are annualized.  
 Fiscal YTD ends June 30th.  
 Real Estate valuations are as of 09/30/2020.  
 FRS - LB I is part of the Real Estate Composite as of 12/1/2012.



## Firefighters' Retirement System of Louisiana

# CURRENT MONTH CHANGE IN VALUE

### Total Cash Flow Summary

Month Ending October 31, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$61,498,351	\$0	\$0	\$0	-\$116,556	\$779,276	\$62,277,627
AEW Core Property (\$12,000,000)	\$16,676,946	\$0	\$0	\$0	\$0	\$0	\$16,676,946
AEW Partners VI LP (\$20,000,000)	\$227,716	\$0	\$0	\$0	\$0	\$0	\$227,716
AQR Global Risk Premium – EL	\$75,008,005	\$0	\$0	\$0	-\$58,536	-\$1,068,022	\$73,939,983
ASB Real Estate Fund	\$14,895,071	\$0	\$0	\$0	\$0	\$0	\$14,895,071
Blackrock Global Allocation	\$100,373,555	\$0	\$0	\$0	\$0	-\$1,788,099	\$98,585,456
Blackrock US Debt	\$374,546,059	\$0	\$0	\$0	\$0	-\$1,641,364	\$372,904,694
Blackrock US TIPS Index	\$59,668,413	\$0	\$0	\$0	\$0	-\$381,932	\$59,286,481
Boston Partners Global Equity	\$91,795,118	\$0	\$0	\$0	-\$40,617	-\$1,813,690	\$89,981,428
Cash/Clearing Account	\$13,054,357	\$609,261	-\$1,674,427	-\$1,065,166	\$0	\$174	\$11,989,365
CCMP Capital Investors III (\$15,000,000)	\$14,358,011	\$0	\$0	\$0	\$0	\$0	\$14,358,011
DCM Private Equity II (\$7,500,000)	\$838,597	\$0	\$0	\$0	\$0	\$0	\$838,597
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,164,171	\$0	\$0	\$0	\$0	\$0	\$1,164,171
Energy Opportunities Fund	\$2,756	\$0	-\$2,756	-\$2,756	\$0	\$0	\$0
Fisher All Foreign Equity	\$122,930,990	\$0	\$0	\$0	-\$176,574	-\$3,508,997	\$119,421,993
FRS-GA (Georgia)	\$3,214,385	\$0	\$0	\$0	\$0	\$0	\$3,214,385
FRS-LB I (NLTP AZ)	\$7,298,899	\$0	\$0	\$0	\$0	\$0	\$7,298,899
FRS-LB III (ST George UT)	\$9,281,276	\$0	\$0	\$0	\$0	\$0	\$9,281,276
GA Crossover Fund (\$25,000,000)	\$3,742,808	\$0	\$0	\$0	\$0	\$0	\$3,742,808
Greenspring Associates III (\$9,230,000)	\$399,074	\$0	\$0	\$0	\$0	\$0	\$399,074
Harbourvest IV (\$20,000,000)	\$18,324,591	\$0	\$0	\$0	\$0	\$0	\$18,324,591
HarbourVest Partners XI Buyout (\$35,000,000)	\$7,258,270	\$0	-\$233,355	-\$233,355	\$0	\$0	\$7,024,915
Heitman America Real Estate Trust	\$14,364,707	\$0	\$0	\$0	\$0	\$0	\$14,364,707





## Firefighters' Retirement System of Louisiana

# CURRENT MONTH CHANGE IN VALUE

	Month Ending October 31, 2020						Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	
Invesco Oppenheimer Developing Markets	\$33,496,589	\$0	\$0	\$0	-\$24,102	\$133,778	\$33,630,367
JP Morgan India (\$8,990,000)	\$714,007	\$0	\$0	\$0	\$0	\$0	\$714,007
Landmark Equity Partners XV (\$25,000,000)	\$9,297,473	\$0	\$0	\$0	\$0	\$0	\$9,297,473
Liquidating - BlackRock Global Focused	\$8,233	\$0	\$0	\$0	\$0	\$12	\$8,245
Louisiana Asset Management Pool	\$4,649,796	\$0	\$0	\$0	\$0	\$857	\$4,650,653
Louisiana Fund I (\$1,000,000)	\$1,438,348	\$0	\$0	\$0	\$0	\$0	\$1,438,348
LSV International Equity Value	\$98,911,938	\$0	\$0	\$0	-\$170,707	-\$2,998,956	\$95,912,982
Mellon Stock Index Fund	\$335,496,053	\$0	\$0	\$0	-\$21,894	-\$8,914,324	\$326,581,728
Mesirow (\$35,000,000)	\$19,645,306	\$0	\$0	\$0	\$0	\$0	\$19,645,306
Murphree Venture (\$2,000,000)	\$159,096	\$0	\$0	\$0	\$0	\$0	\$159,096
Orleans Core Fixed Income	\$101,015,495	\$0	\$0	\$0	\$0	-\$281,652	\$100,733,842
QMA SMID	\$46,806,115	\$0	\$0	\$0	\$0	\$636,200	\$47,442,314
Rothschild U.S. SMID Core	\$48,483,495	\$0	\$0	\$0	\$0	\$1,151,989	\$49,635,484
Sentinel Real Estate Fund (\$30,000,000)	\$37,151,052	\$0	-\$373,150	-\$373,150	\$0	\$0	\$36,777,902
State Street ACWI Index Fund	\$90,529,873	\$0	\$0	\$0	-\$4,418	-\$2,174,711	\$88,355,162
Thornburg Global Opportunities	\$166,812	\$0	-\$1	-\$1	\$0	-\$60,322	\$106,490
Timbervest Crossover Fund (\$16,000,000)	\$6,468,873	\$0	\$0	\$0	\$0	\$0	\$6,468,873
Wellington Blended Opportunistic EMD	\$22,120,395	\$0	\$0	\$0	-\$10,160	\$45,845	\$22,166,240
<b>Total</b>	<b>\$1,867,481,074</b>	<b>\$609,261</b>	<b>-\$2,283,688</b>	<b>-\$1,674,427</b>	<b>-\$623,563</b>	<b>-\$21,883,939</b>	<b>\$1,843,922,708</b>

Beginning Market Value may not match the Ending Market Value of the previous Flash report due to delayed reporting of private investments (private equity and real estate).



## Firefighters' Retirement System of Louisiana

# CURRENT FYTD CHANGE IN VALUE

### Total Cash Flow Summary

Fiscal YTD Ending October 31, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$57,555,410	\$0	\$0	\$0	-\$217,049	\$4,722,217	\$62,277,627
AEW Core Property (\$12,000,000)	\$16,672,777	\$0	\$0	\$0	\$0	\$4,169	\$16,676,946
AEW Partners VI LP (\$20,000,000)	\$407,908	\$0	-\$226,415	-\$226,415	\$0	\$46,223	\$227,716
AQR Global Risk Premium – EL	\$72,379,028	\$0	\$0	\$0	-\$237,395	\$1,560,955	\$73,939,983
ASB Real Estate Fund	\$14,935,700	\$40,262	\$0	\$40,262	\$0	-\$80,891	\$14,895,071
Blackrock Global Allocation	\$92,987,162	\$124,596	\$0	\$124,596	-\$124,596	\$5,473,698	\$98,585,456
Blackrock US Debt	\$372,207,591	\$31,504	\$0	\$31,504	-\$31,504	\$665,599	\$372,904,694
Blackrock US TIPS Index	\$57,903,123	\$7,177	\$0	\$7,177	-\$7,177	\$1,376,181	\$59,286,481
Boston Partners Global Equity	\$88,424,745	\$0	\$0	\$0	-\$165,813	\$1,556,683	\$89,981,428
Cash/Clearing Account	\$20,996,117	\$1,978,107	-\$10,987,451	-\$9,009,343	\$0	\$2,591	\$11,989,365
CCMP Capital Investors III (\$15,000,000)	\$12,406,335	\$0	-\$1,647	-\$1,647	\$0	\$1,953,323	\$14,358,011
DCM Private Equity II (\$7,500,000)	\$847,449	\$0	-\$3,462	-\$3,462	\$0	-\$5,390	\$838,597
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,088,206	\$0	\$0	\$0	\$0	\$75,965	\$1,164,171
Energy Opportunities Fund	\$2,755	\$0	-\$2,756	-\$2,756	\$0	\$0	\$0
Fisher All Foreign Equity	\$112,749,013	\$0	\$0	\$0	-\$339,219	\$6,672,979	\$119,421,993
FRS-GA (Georgia)	\$3,463,043	\$0	\$0	\$0	\$0	-\$248,658	\$3,214,385
FRS-LB I (NLTP AZ)	\$7,315,110	\$0	\$0	\$0	\$0	-\$16,211	\$7,298,899
FRS-LB III (ST George UT)	\$9,281,546	\$0	\$0	\$0	\$0	-\$270	\$9,281,276
GA Crossover Fund (\$25,000,000)	\$3,747,282	\$0	\$0	\$0	\$0	-\$4,474	\$3,742,808
Greenspring Associates III (\$9,230,000)	\$399,744	\$0	\$0	\$0	\$0	-\$670	\$399,074
Harbourvest IV (\$20,000,000)	\$16,197,069	\$0	\$0	\$0	\$0	\$2,127,522	\$18,324,591
HarbourVest Partners XI Buyout (\$35,000,000)	\$5,697,099	\$769,212	-\$233,355	\$535,857	\$0	\$791,959	\$7,024,915
Heitman America Real Estate Trust	\$14,528,971	\$0	\$0	\$0	\$0	-\$164,264	\$14,364,707



## Firefighters' Retirement System of Louisiana

# CURRENT FYTD CHANGE IN VALUE

	Fiscal YTD Ending October 31, 2020						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Invesco Oppenheimer Developing Markets	\$30,932,506	\$0	\$0	\$0	-\$96,242	\$2,697,861	\$33,630,367
JP Morgan India (\$8,990,000)	\$721,655	\$0	\$0	\$0	\$0	-\$7,648	\$714,007
Landmark Equity Partners XV (\$25,000,000)	\$10,392,974	\$1,009,208	-\$521,890	\$487,318	\$0	-\$1,582,819	\$9,297,473
Liquidating - BlackRock Global Focused	\$8,060	\$0	\$0	\$0	\$0	\$185	\$8,245
Louisiana Asset Management Pool	\$4,647,959	\$0	\$0	\$0	\$0	\$2,695	\$4,650,653
Louisiana Fund I (\$1,000,000)	\$1,439,848	\$0	\$0	\$0	\$0	-\$1,500	\$1,438,348
LSV International Equity Value	\$96,170,249	\$0	\$0	\$0	-\$335,046	-\$257,267	\$95,912,982
Mellon Stock Index Fund	\$308,002,682	\$20,289	\$0	\$20,289	-\$42,182	\$18,558,757	\$326,581,728
Mesirow (\$35,000,000)	\$16,574,177	\$1,575,000	\$0	\$1,575,000	\$0	\$1,496,129	\$19,645,306
Murphree Venture (\$2,000,000)	\$343,996	\$0	-\$162,622	-\$162,622	\$0	-\$22,278	\$159,096
Orleans Core Fixed Income	\$100,244,223	\$0	\$0	\$0	-\$32,561	\$489,620	\$100,733,842
QMA SMID	\$45,208,565	\$0	\$0	\$0	-\$57,504	\$2,233,750	\$47,442,314
Rothschild U.S. SMID Core	\$47,176,206	\$0	\$0	\$0	-\$81,654	\$2,459,277	\$49,635,484
Sentinel Real Estate Fund (\$30,000,000)	\$38,424,846	\$0	-\$770,187	-\$770,187	\$0	-\$876,757	\$36,777,902
State Street ACWI Index Fund	\$83,672,961	\$0	\$0	\$0	-\$18,027	\$4,682,201	\$88,355,162
Thornburg Global Opportunities	\$293,335	\$0	-\$55,775	-\$55,775	\$0	-\$131,071	\$106,490
Timbervest Crossover Fund (\$16,000,000)	\$6,381,300	\$0	\$0	\$0	\$0	\$87,573	\$6,468,873
Wellington Blended Opportunistic EMD	\$21,706,373	\$0	\$0	\$0	-\$40,928	\$459,867	\$22,166,240
<b>Total</b>	<b>\$1,794,535,099</b>	<b>\$5,555,355</b>	<b>-\$12,965,558</b>	<b>-\$7,410,203</b>	<b>-\$1,826,897</b>	<b>\$56,797,812</b>	<b>\$1,843,922,708</b>

Beginning Market Value may not match the Ending Market Value of the previous Flash report due to delayed reporting of private investments (private equity and real estate).



## Firefighters' Retirement System of Louisiana

# SINCE INCEPTION CHANGE IN VALUE

### Total Cash Flow Summary

	Beginning Market Value	Contributions	Ending October 31, 2020			Ending Market Value
			Withdrawals	Net Cash Flow	Net Investment Change	
Acadian Emerging Markets Equity	--	\$65,000,000	-\$10,000,000	\$55,000,000	\$7,277,627	\$62,277,627
AEW Core Property (\$12,000,000)	--	\$12,000,000	\$0	\$12,000,000	\$4,676,946	\$16,676,946
AEW Partners VI LP (\$20,000,000)	--	\$18,420,450	-\$34,766,288	-\$16,345,838	\$16,573,554	\$227,716
AQR Global Risk Premium – EL	--	\$101,500,000	-\$39,700,000	\$61,800,000	\$12,139,983	\$73,939,983
ASB Real Estate Fund	--	\$12,256,541	-\$141,910	\$12,114,631	\$2,780,440	\$14,895,071
Blackrock Global Allocation	--	\$68,927,152	\$0	\$68,927,152	\$29,658,305	\$98,585,456
Blackrock US Debt	--	\$407,601,129	-\$94,500,000	\$313,101,129	\$59,803,565	\$372,904,694
Blackrock US TIPS Index	--	\$50,030,204	-\$4,805	\$50,025,399	\$9,261,082	\$59,286,481
Boston Partners Global Equity	--	\$80,939,406	-\$1,853,209	\$79,086,196	\$10,895,232	\$89,981,428
Cash/Clearing Account	--	\$2,670,081,853	-\$2,661,961,972	\$8,119,881	\$3,869,484	\$11,989,365
CCMP Capital Investors III (\$15,000,000)	--	\$13,421,953	-\$4,743,734	\$8,678,219	\$5,679,792	\$14,358,011
DCM Private Equity II (\$7,500,000)	--	\$8,271,831	-\$7,482,261	\$789,570	\$49,027	\$838,597
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	\$5,480,845	-\$8,437,500	-\$2,956,655	\$4,120,826	\$1,164,171
Energy Opportunities Fund	--	\$50,039,277	-\$44,452,838	\$5,586,439	-\$5,586,439	\$0
Fisher All Foreign Equity	--	\$121,180,807	-\$80,308,187	\$40,872,620	\$78,549,372	\$119,421,993
FRS-GA (Georgia)	--	\$9,416,075	\$0	\$9,416,075	-\$6,201,690	\$3,214,385
FRS-LB I (NLTP AZ)	--	\$24,900,208	\$0	\$24,900,208	-\$17,601,309	\$7,298,899
FRS-LB III (ST George UT)	--	\$6,878,923	\$0	\$6,878,923	\$2,402,353	\$9,281,276
GA Crossover Fund (\$25,000,000)	--	\$25,000,000	-\$47,276,687	-\$22,276,687	\$26,019,495	\$3,742,808
Greenspring Associates III (\$9,230,000)	--	\$8,491,600	-\$15,216,208	-\$6,724,608	\$7,123,682	\$399,074
Harbourvest IV (\$20,000,000)	--	\$17,325,303	-\$4,447,769	\$12,877,534	\$5,447,057	\$18,324,591
HarbourVest Partners XI Buyout (\$35,000,000)	--	\$6,938,533	-\$233,355	\$6,705,178	\$319,737	\$7,024,915

Cash flow statistics exclude management fees and expenses.



## Firefighters' Retirement System of Louisiana

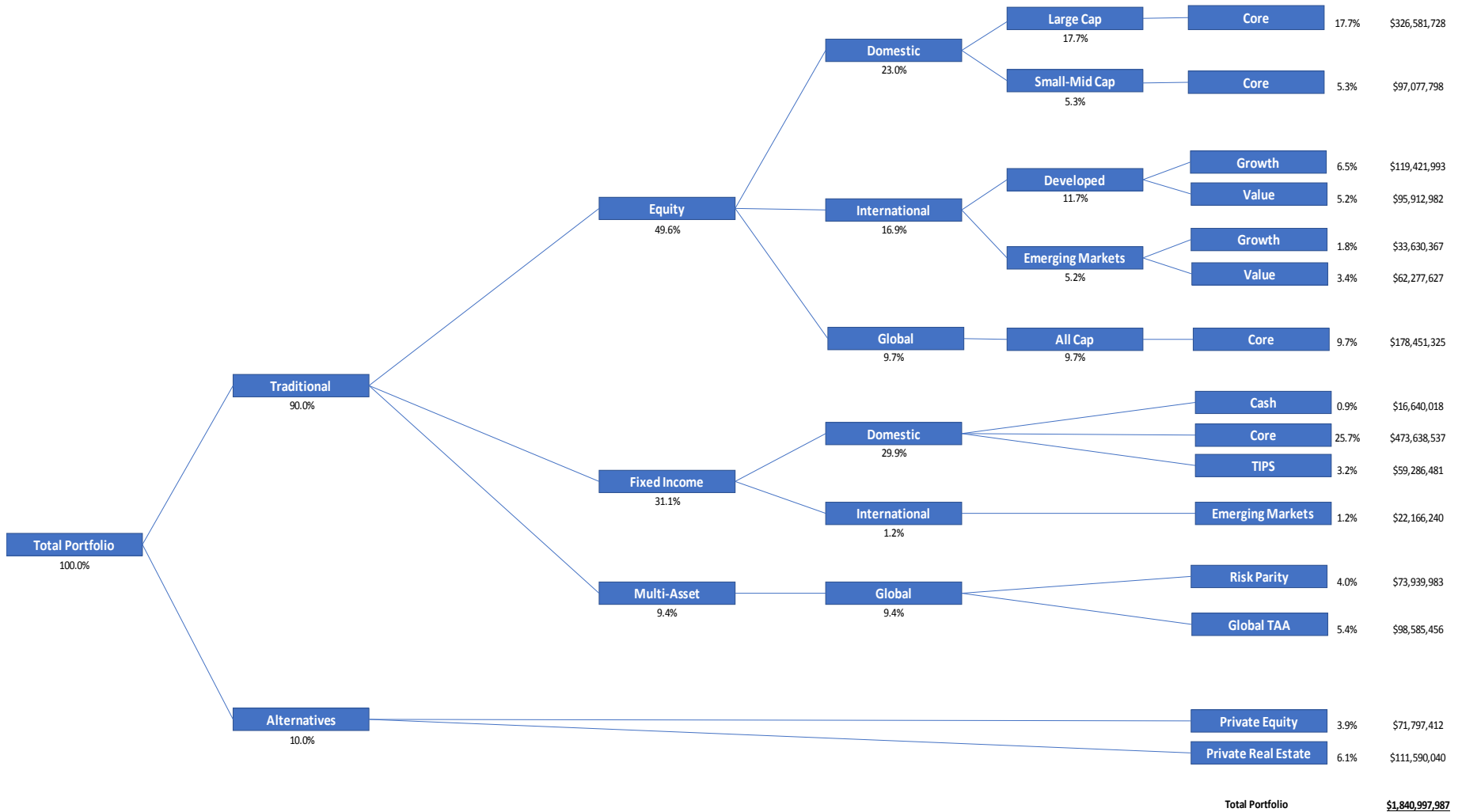
# SINCE INCEPTION CHANGE IN VALUE

	Beginning Market Value	Contributions	Ending October 31, 2020		Net Investment Change	Ending Market Value
			Withdrawals	Net Cash Flow		
Heitman America Real Estate Trust	--	\$12,000,000	-\$329,863	\$11,670,137	\$2,694,570	\$14,364,707
Invesco Oppenheimer Developing Markets	--	\$37,500,000	-\$11,500,000	\$26,000,000	\$7,630,367	\$33,630,367
JP Morgan India (\$8,990,000)	--	\$8,307,355	-\$3,814,303	\$4,493,052	-\$3,779,045	\$714,007
Landmark Equity Partners XV (\$25,000,000)	--	\$19,955,094	-\$14,789,482	\$5,165,613	\$4,131,861	\$9,297,473
Liquidating - BlackRock Global Focused	--	\$46,832,890	-\$59,572,953	-\$12,740,063	\$12,748,308	\$8,245
Louisiana Asset Management Pool	--	\$943,990,965	-\$944,296,689	-\$305,724	\$4,956,378	\$4,650,653
Louisiana Fund I (\$1,000,000)	--	\$1,010,000	\$0	\$1,010,000	\$428,348	\$1,438,348
LSV International Equity Value	--	\$107,818,122	-\$42,314,883	\$65,503,239	\$30,409,743	\$95,912,982
Mellon Stock Index Fund	--	\$280,551,812	-\$175,500,001	\$105,051,811	\$221,529,917	\$326,581,728
Mesirow (\$35,000,000)	--	\$18,828,620	\$0	\$18,828,620	\$816,686	\$19,645,306
Murphree Venture (\$2,000,000)	--	\$2,058,578	-\$1,011,081	\$1,047,497	-\$888,401	\$159,096
Orleans Core Fixed Income	\$0	\$146,099,081	-\$91,022,995	\$55,076,086	\$45,657,756	\$100,733,842
QMA SMID	--	\$51,715,738	\$0	\$51,715,738	-\$4,273,424	\$47,442,314
Rothschild U.S. SMID Core	--	\$60,500,000	-\$27,500,000	\$33,000,000	\$16,635,484	\$49,635,484
Sentinel Real Estate Fund (\$30,000,000)	--	\$30,000,000	-\$20,311,182	\$9,688,818	\$27,089,085	\$36,777,902
State Street ACWI Index Fund	--	\$79,000,000	\$0	\$79,000,000	\$9,355,162	\$88,355,162
Thornburg Global Opportunities	--	\$47,500,000	-\$134,225,804	-\$86,725,804	\$86,832,294	\$106,490
Timbervest Crossover Fund (\$16,000,000)	--	\$13,600,000	-\$8,679,895	\$4,920,105	\$1,548,768	\$6,468,873
Wellington Blended Opportunistic EMD	--	\$20,000,000	\$0	\$20,000,000	\$2,166,240	\$22,166,240

Cash flow statistics exclude management fees and expenses.



# ASSET ALLOCATION DECISION TREE



### **Information Disclaimer**

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
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- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

### **Reporting Methodology**

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

