

# INVESTMENT MARKET UPDATE

(AS OF APRIL 30, 2019)



Firefighters' Retirement System of Louisiana

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

# CALENDAR YEAR INDEX PERFORMANCE

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Q1	Apr	YTD
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	13.6%	4.0%	18.2%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	14.0%	4.0%	18.6%
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	14.6%	3.4%	18.5%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	15.8%	3.5%	19.9%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	10.0%	2.8%	13.1%
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	9.9%	2.1%	12.2%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	12.2%	3.4%	16.0%
<b>Private Equity*</b>	13.7%	19.7%	7.9%	12.5%	20.6%	12.7%	9.6%	8.3%	13.7%	-	-	-	-
<b>BC TIPS</b>	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	3.2%	0.3%	3.5%
<b>BC Municipal Bond</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	2.9%	0.4%	3.3%
<b>BC Muni High Yield</b>	32.7%	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	3.8%	0.6%	4.4%
<b>BC US Corp High Yield</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	7.3%	1.4%	8.8%
<b>BC US Aggregate</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	2.9%	0.0%	3.0%
<b>BC Global Aggregate</b>	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	1.6%	7.5%	-1.2%	2.2%	-0.3%	1.9%
<b>BC Long Treasuries</b>	-12.9%	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	4.7%	-1.8%	2.8%
<b>BC US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	7.9%	0.6%	8.5%
<b>BC US STRIPS 20+ Yr</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	6.3%	-2.8%	3.2%
<b>JPM GBI-EM Glob Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	2.9%	-0.2%	2.7%
<b>JPM EMBI Glob Div</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.1%	-4.3%	7.0%	0.2%	7.2%
<b>CS Leveraged Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	4.2%	1.1%	3.8%	1.6%	5.4%
<b>CS Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	4.0%	-	4.0%
<b>BBG Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	6.3%	-0.4%	5.9%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	16.8%	-1.3%	15.3%
<b>FTSE NAREIT Eqy REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	16.3%	-0.2%	16.1%

Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse, Thomson One  
 \*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag



# MARKET COMMENTARY – APRIL 2019

## Market Environment

Coming off a strong first quarter, stocks continued their run in April amid the Federal Reserve's more dovish stance. The US led the way, with the S&P 500 Index increasing 4% during the month – pushing year-to-date returns to 18.2%. International equities were up 2.8%, according to the MSCI EAFE Index, while emerging market stocks gained 2.1%, according to the MSCI Emerging Markets Index.

Within fixed income, global yields moved modestly higher while spreads declined, causing dispersion in rates and credit index returns. The 30-year Treasury yield increased 11 basis points to 2.93%, which caused the Barclays Long Treasury Index to decline 1.8% in April. High-yield spreads saw the most significant decline with the Barclays US High Yield Index falling 33 basis points to 3.58%, corresponding to returns of 1.4%. In emerging markets, local debt, as measured by the JPM GBI-EM Global Diversified Index, fell 0.2%, underscoring the strength of the US dollar, and political and economic uncertainties in Argentina and Turkey.

In real assets, spot WTI Crude Oil maintained its winning streak, up 6.1% last month – racking up returns of 41.4% so far this year. The rally was fueled by news that the United States will discontinue temporary waivers for nations, such as China and India, that import Iranian oil.

While we have seen minimal volatility in 2019 so far, we still believe the US is in the late stage of an economic cycle, a phase often characterized by greater risks and volatility. To this end, we remind investors of the importance of diversification. We encourage rebalancing in light of the hefty returns from risky assets and advocate increasing exposure to safe-haven fixed income.



# Firefighters' Retirement System of Louisiana

## INVESTMENT PERFORMANCE FLASH REPORT

### Investment Performance Summary - Net of Fees

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Plan Composite</b>	<b>1,724,658,303</b>	<b>100.0</b>	<b>100.0</b>	<b>1.9</b>	<b>9.7</b>	<b>3.1</b>	<b>2.4</b>	<b>7.9</b>	<b>4.6</b>	<b>6.9</b>	<b>5.8</b>	<b>Sep-92</b>
Policy Index				1.9	10.4	4.5	4.5	8.8	6.3	--	--	Sep-92
Allocation Index				1.8	9.9	4.3	4.1	8.6	5.9	--	--	Sep-92
<b>Total Equity Composite</b>	<b>850,259,836</b>	<b>54.0</b>	<b>49.3</b>	<b>3.5</b>	<b>15.9</b>	<b>3.2</b>	<b>2.0</b>	<b>10.6</b>	<b>6.3</b>	<b>11.6</b>	<b>7.3</b>	<b>Sep-92</b>
MSCI ACWI				3.4	16.0	5.5	5.1	11.4	7.0	11.1	7.6	Sep-92
<b>Domestic Equity Composite</b>	<b>382,197,127</b>	<b>22.0</b>	<b>22.2</b>	<b>3.7</b>	<b>18.3</b>	<b>6.2</b>	<b>9.3</b>	<b>12.6</b>	<b>8.6</b>	<b>13.8</b>	<b>8.0</b>	<b>Sep-92</b>
Russell 3000				4.0	18.6	8.9	12.7	14.7	11.2	15.3	9.9	Sep-92
Mellon Stock Index Fund	289,940,778		16.8	4.0	18.2	10.1	13.4	14.9	11.6	--	12.1	Nov-13
S&P 500				4.0	18.2	10.1	13.5	14.9	11.6	15.3	12.1	Nov-13
<b>SMID Cap Composite ex Energy</b>	<b>92,237,197</b>	<b>--</b>	<b>5.3</b>	<b>2.6</b>	<b>18.1</b>	<b>-0.1</b>	<b>3.1</b>	<b>10.6</b>	<b>5.5</b>	<b>--</b>	<b>9.2</b>	<b>Oct-12</b>
Russell 2500				3.5	19.9	2.3	7.9	13.3	9.0	15.0	12.5	Oct-12
Rothschild U.S. SMID Core	46,271,303		2.7	2.4	17.1	0.4	5.1	12.2	--	--	7.5	Jul-15
Russell 2500				3.5	19.9	2.3	7.9	13.3	9.0	15.0	8.6	Jul-15
QMA SMID	45,965,894		2.7	2.9	19.2	--	--	--	--	--	-2.8	Aug-18
Russell 2500				3.5	19.9	2.3	7.9	13.3	9.0	15.0	0.4	Aug-18
<b>International Equity Composite</b>	<b>212,232,271</b>	<b>16.0</b>	<b>12.3</b>	<b>3.4</b>	<b>14.3</b>	<b>1.4</b>	<b>-3.7</b>	<b>8.8</b>	<b>3.5</b>	<b>--</b>	<b>6.3</b>	<b>Oct-12</b>
MSCI ACWI ex USA				2.6	13.2	1.0	-3.2	8.1	2.8	7.7	5.6	Oct-12
LSV International Equity Value	104,014,249		6.0	2.5	11.6	-0.2	-6.8	8.3	2.9	8.9	5.7	Oct-04
MSCI Custom Benchmark				2.6	13.2	1.0	-3.2	8.1	2.8	7.5	5.1	Oct-04
Fisher All Foreign Equity	108,218,022		6.3	4.3	17.2	3.0	-0.5	9.3	4.0	9.4	6.8	Oct-04
MSCI ACWI ex USA				2.6	13.2	1.0	-3.2	8.1	2.8	7.7	5.9	Oct-04
<b>Global Equity Composite</b>	<b>162,953,847</b>	<b>10.0</b>	<b>9.4</b>	<b>4.0</b>	<b>15.0</b>	<b>-0.5</b>	<b>-2.2</b>	<b>8.3</b>	<b>5.0</b>	<b>--</b>	<b>9.2</b>	<b>Oct-12</b>
MSCI ACWI				3.4	16.0	5.5	5.1	11.4	7.0	11.1	9.4	Oct-12
Thornburg Global Opportunities	62,708,951		3.6	5.0	19.1	-1.9	-4.4	7.0	5.9	12.4	10.1	Oct-04
MSCI ACWI				3.4	16.0	5.5	5.1	11.4	7.0	11.1	7.3	Oct-04
Boston Partners Global Equity	100,236,935		5.8	3.4	12.6	0.4	-0.8	--	--	--	9.8	Nov-16
MSCI ACWI				3.4	16.0	5.5	5.1	11.4	7.0	11.1	12.4	Nov-16
<b>Emerging Markets Equity</b>	<b>92,876,592</b>	<b>6.0</b>	<b>5.4</b>	<b>1.7</b>	<b>11.8</b>	<b>-0.1</b>	<b>-8.2</b>	<b>10.5</b>	<b>3.1</b>	<b>--</b>	<b>2.8</b>	<b>Oct-13</b>
MSCI Emerging Markets				2.1	12.2	2.7	-5.0	11.3	4.0	7.5	3.9	Oct-13
Acadian Emerging Markets Equity	61,339,126		3.6	1.0	9.8	-1.8	-12.1	9.5	2.7	--	2.3	Dec-13
MSCI Emerging Markets				2.1	12.2	2.7	-5.0	11.3	4.0	7.5	3.4	Dec-13
OFI Emerging Markets	31,537,466		1.8	3.1	15.9	3.4	0.5	13.0	4.5	--	3.9	Jan-14
MSCI Emerging Markets				2.1	12.2	2.7	-5.0	11.3	4.0	7.5	3.8	Jan-14

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.

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



## Firefighters' Retirement System of Louisiana

# INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fixed Income Composite</b>	<b>505,292,934</b>	<b>26.0</b>	<b>29.3</b>	<b>0.1</b>	<b>3.2</b>	<b>3.9</b>	<b>2.4</b>	<b>3.0</b>	<b>2.0</b>	<b>--</b>	<b>1.5</b>	<b>Oct-12</b>
<i>Total Fixed Income Custom Benchmark</i>				<i>0.0</i>	<i>3.0</i>	<i>4.5</i>	<i>3.8</i>	<i>2.0</i>	<i>1.5</i>	<i>3.1</i>	<i>1.2</i>	<i>Oct-12</i>
<b>Core Fixed Income</b>	<b>377,892,903</b>	<b>18.0</b>	<b>21.9</b>	<b>0.1</b>	<b>3.2</b>	<b>4.8</b>	<b>5.4</b>	<b>3.6</b>	<b>3.2</b>	<b>--</b>	<b>3.1</b>	<b>Dec-10</b>
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>3.0</i>	<i>4.7</i>	<i>5.3</i>	<i>1.9</i>	<i>2.6</i>	<i>3.7</i>	<i>2.9</i>	<i>Dec-10</i>
Orleans Core Fixed Income	90,384,168		5.2	0.2	3.7	5.1	5.6	2.2	2.6	4.3	5.6	Aug-92
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>3.0</i>	<i>4.7</i>	<i>5.3</i>	<i>1.9</i>	<i>2.6</i>	<i>3.7</i>	<i>5.3</i>	<i>Aug-92</i>
Blackrock US Debt	287,508,735		16.7	0.0	3.0	4.7	5.3	1.9	--	--	2.4	Nov-14
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>3.0</i>	<i>4.7</i>	<i>5.3</i>	<i>1.9</i>	<i>2.6</i>	<i>3.7</i>	<i>2.3</i>	<i>Nov-14</i>
<b>US TIPS Composite</b>	<b>52,186,273</b>	<b>3.0</b>	<b>3.0</b>	<b>0.3</b>	<b>3.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.2</b>	<b>Oct-18</b>
Blackrock US TIPS Index	52,186,273		3.0	0.3	3.5	--	--	--	--	--	3.2	Oct-18
<i>BBgBarc US TIPS TR</i>				<i>0.3</i>	<i>3.5</i>	<i>2.3</i>	<i>3.1</i>	<i>1.7</i>	<i>1.7</i>	<i>3.6</i>	<i>3.1</i>	<i>Oct-18</i>
<b>Emerging Markets Debt</b>	<b>75,213,758</b>	<b>5.0</b>	<b>4.4</b>	<b>0.2</b>	<b>3.1</b>	<b>1.1</b>	<b>-8.5</b>	<b>0.9</b>	<b>-2.5</b>	<b>--</b>	<b>-2.8</b>	<b>Nov-13</b>
<i>JP Morgan GBI - EM Global Diversified Index</i>				<i>-0.2</i>	<i>2.7</i>	<i>3.0</i>	<i>-4.9</i>	<i>2.3</i>	<i>-1.0</i>	<i>3.5</i>	<i>-1.2</i>	<i>Nov-13</i>
Stone Harbor	75,213,758		4.4	0.2	3.1	1.1	-8.5	0.9	-2.5	--	-2.8	Nov-13
<i>JP Morgan GBI - EM Global Diversified Index</i>				<i>-0.2</i>	<i>2.7</i>	<i>3.0</i>	<i>-4.9</i>	<i>2.3</i>	<i>-1.0</i>	<i>3.5</i>	<i>-1.2</i>	<i>Nov-13</i>

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Fiscal YTD ends June 30th.

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

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

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<b>GAA Composite</b>	<b>163,790,963</b>	<b>10.0</b>	<b>9.5</b>	<b>1.6</b>	<b>10.4</b>	<b>2.6</b>	<b>3.0</b>	<b>6.3</b>	<b>3.8</b>	<b>--</b>	<b>3.7</b>	<b>Apr-14</b>
60% MSCI World (Net) / 40% FTSE WGBI				1.9	10.2	4.3	4.1	7.0	4.6	7.9	4.8	Apr-14
Blackrock Global Allocation	84,936,204		4.9	1.7	9.5	2.9	2.3	6.4	4.1	--	4.1	Apr-14
60% MSCI World (Net) / 40% FTSE WGBI				1.9	10.2	4.3	4.1	7.0	4.6	7.9	4.8	Apr-14
AQR Global Risk Premium – EL	78,854,759		4.6	1.4	10.8	3.7	5.0	6.3	3.4	--	3.4	May-14
60% MSCI World (Net) / 40% FTSE WGBI				1.9	10.2	4.3	4.1	7.0	4.6	7.9	4.6	May-14
<b>Total Alternative Composite</b>	<b>180,557,540</b>	<b>10.0</b>	<b>10.5</b>	<b>0.0</b>	<b>0.0</b>	<b>2.6</b>	<b>4.9</b>	<b>6.6</b>	<b>2.6</b>	<b>4.3</b>	<b>2.2</b>	<b>Jun-05</b>
<b>Private Equity Composite</b>	<b>61,281,943</b>	<b>4.0</b>	<b>3.6</b>	<b>0.0</b>	<b>0.0</b>	<b>4.4</b>	<b>8.5</b>	<b>9.7</b>	<b>0.9</b>	<b>3.0</b>	<b>-2.3</b>	<b>Jul-05</b>
Cambridge Associates US All PE				0.0	0.0	1.6	7.1	13.4	10.7	14.1	12.4	Jul-05
Murphree Venture (\$2,000,000)	694,114		0.0	0.0	0.0	-0.6	-10.0	-23.4	-16.0	-7.6	-6.1	Sep-05
Louisiana Fund I (\$1,000,000)	1,734,415		0.1	0.0	0.0	0.0	-0.1	-6.0	-3.7	-1.0	-6.2	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	1,278,367		0.1	0.0	0.0	-5.3	-3.2	5.6	5.2	8.2	5.7	Feb-06
Greenspring Associates III (\$9,230,000)	3,151,140		0.2	0.0	0.0	-8.7	-8.7	1.0	6.2	11.9	5.4	Feb-06
DCM Private Equity II (\$7,500,000)	1,315,464		0.1	0.0	0.0	-1.9	-1.5	-0.6	-4.0	2.3	-1.3	Feb-06
FECF II (\$20,000,000)	185,502		0.0	0.0	0.0	-12.3	-10.9	9.1	0.1	9.5	9.3	Mar-08
GA Crossover Fund (\$25,000,000)	4,410,228		0.3	0.0	0.0	0.8	3.3	10.3	10.8	18.7	13.9	Jan-08
CCMP Capital Investors III (\$15,000,000)	13,933,690		0.8	0.0	0.0	-3.0	4.0	10.0	--	--	9.9	Oct-14
Landmark Equity Partners XV (\$25,000,000)	10,299,259		0.6	0.0	0.0	5.8	10.5	14.5	--	--	16.1	Dec-14
Harbourvest IV (\$20,000,000)	17,391,584		1.0	0.0	0.0	7.4	11.4	--	--	--	11.5	Nov-16
Mesirov (\$35,000,000)												

Results for periods longer than one year are annualized. Results are preliminary and subject to change.  
Fiscal YTD ends June 30th.

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.  
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 (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Estate Composite</b>	<b>119,275,596</b>	<b>6.0</b>	<b>6.9</b>	<b>0.0</b>	<b>0.0</b>	<b>1.7</b>	<b>3.3</b>	<b>5.3</b>	<b>5.1</b>	<b>--</b>	<b>5.0</b>	<b>Dec-09</b>
<i>NCREIF Property Index</i>				0.0	1.8	4.9	6.8	7.1	9.1	8.5	10.1	Dec-09
Sentinel Real Estate Fund (\$30,000,000)	36,872,376		2.1	0.0	0.0	3.2	5.5	7.1	8.8	10.1	6.4	Feb-06
JP Morgan India (\$8,990,000)	1,962,601		0.1	0.0	0.0	-6.1	-14.3	-13.4	-8.6	-3.6	-13.4	Apr-07
Timbervest Crossover Fund (\$16,000,000)	6,585,791		0.4	0.0	0.0	-1.9	1.4	-4.9	-4.1	-1.1	-1.5	Apr-08
AEW Partners VI LP (\$20,000,000)	8,818,338		0.5	0.0	0.0	11.9	13.5	14.6	16.7	--	14.0	Mar-10
AEW Core Property (\$12,000,000)	16,039,437		0.9	0.0	0.0	3.1	5.2	6.3	--	--	7.5	May-15
FRS-GA (Georgia)	3,463,900		0.2	0.0	0.0	0.0	-0.8	-10.0	-8.7	-9.8	-9.0	Jun-08
FRS-LB I (NLTP AZ)	7,380,981		0.4	0.0	0.0	0.0	-0.3	18.1	11.5	-13.6	-11.5	Jun-07
FRS-LB III (ST George UT)	9,288,030		0.5	0.0	0.0	0.0	0.0	5.8	3.5	3.0	2.8	Jun-08
ASB Real Estate Fund	14,091,392		0.8	0.0	0.0	3.2	5.2	5.4	--	--	5.2	Jan-16
Heitman America Real Estate Trust	14,772,750		0.9	0.0	0.0	2.5	4.4	6.2	--	--	7.0	Nov-15
<b>Total Cash (\$9 MM)</b>	<b>24,757,029</b>	<b>--</b>	<b>1.4</b>	<b>0.2</b>	<b>0.8</b>	<b>1.9</b>	<b>2.2</b>	<b>1.2</b>	<b>0.8</b>	<b>0.5</b>	<b>2.8</b>	<b>Jun-92</b>
<i>91 Day T-Bills</i>				0.2	0.8	1.9	2.2	1.3	0.8	0.4	2.4	Jun-92

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Real Estate valuations are as of 12/31/2018 and adjusted for cash flows.

FRS - LB I is part of the Real Estate Composite as of 12/1/2012.

Harbourvest IV was funded 10/01/2016.

Private Equity valuations are as of 12/31/2018 and adjusted for cash flows.



## Firefighters' Retirement System of Louisiana

# CURRENT MONTH CHANGE IN VALUE

### Total Cash Flow Summary

Month Ending April 30, 2019

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$60,727,118	\$0	\$0	\$0	-\$102,430	\$612,007	\$61,339,126
AEW Core Property (\$12,000,000)	\$16,039,437	\$0	\$0	\$0	\$0	\$0	\$16,039,437
AEW Partners VI LP (\$20,000,000)	\$8,818,338	\$0	\$0	\$0	\$0	\$0	\$8,818,338
AQR Global Risk Premium – EL	\$77,763,053	\$0	\$0	\$0	-\$62,427	\$1,091,706	\$78,854,759
ASB Real Estate Fund	\$14,091,392	\$0	\$0	\$0	\$0	\$0	\$14,091,392
Blackrock Global Allocation	\$83,488,712	\$0	\$0	\$0	\$0	\$1,447,492	\$84,936,204
Blackrock US Debt	\$287,446,854	\$0	\$0	\$0	\$0	\$61,882	\$287,508,735
Blackrock US TIPS Index	\$52,013,252	\$0	\$0	\$0	\$0	\$173,021	\$52,186,273
Boston Partners Global Equity	\$96,876,184	\$0	\$0	\$0	-\$44,890	\$3,360,751	\$100,236,935
Cash/Clearing Account	\$14,383,203	\$28,030,168	-\$22,251,661	\$5,778,507	\$0	\$39,417	\$20,201,127
CCMP Capital Investors III (\$15,000,000)	\$13,933,690	\$0	\$0	\$0	\$0	\$0	\$13,933,690
DCM Private Equity II (\$7,500,000)	\$1,315,464	\$0	\$0	\$0	\$0	\$0	\$1,315,464
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,278,367	\$0	\$0	\$0	\$0	\$0	\$1,278,367
Energy Opportunities Fund	\$19,121	\$0	\$0	\$0	\$0	\$31	\$19,152
FECP II (\$20,000,000)	\$224,002	\$0	-\$38,500	-\$38,500	\$0	\$0	\$185,502
Fisher All Foreign Equity	\$103,746,598	\$0	\$0	\$0	\$0	\$4,471,424	\$108,218,022
FRS-GA (Georgia)	\$3,463,900	\$0	\$0	\$0	\$0	\$0	\$3,463,900
FRS-LB I (NLTP AZ)	\$7,380,981	\$0	\$0	\$0	\$0	\$0	\$7,380,981
FRS-LB III (ST George UT)	\$9,288,030	\$0	\$0	\$0	\$0	\$0	\$9,288,030
GA Crossover Fund (\$25,000,000)	\$4,410,228	\$0	\$0	\$0	\$0	\$0	\$4,410,228
Greenspring Associates III (\$9,230,000)	\$3,151,140	\$0	\$0	\$0	\$0	\$0	\$3,151,140
Harbourvest IV (\$20,000,000)	\$16,637,515	\$754,069	\$0	\$754,069	\$0	\$0	\$17,391,584
HarbourVest Partners XI Buyout (\$35,000,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0





## Firefighters' Retirement System of Louisiana

# CURRENT MONTH CHANGE IN VALUE

	Month Ending April 30, 2019							Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change		
Heitman America Real Estate Trust	\$14,772,750	\$0	\$0	\$0	\$0	\$0	\$0	\$14,772,750
JP Morgan India (\$8,990,000)	\$1,962,601	\$0	\$0	\$0	\$0	\$0	\$0	\$1,962,601
Landmark Equity Partners XV (\$25,000,000)	\$10,001,667	\$297,592	\$0	\$297,592	\$0	\$0	\$0	\$10,299,259
Liquidating - BlackRock Global Focused	\$7,989	\$0	\$0	\$0	\$0	-\$28	-\$28	\$7,961
Louisiana Asset Management Pool	\$4,546,608	\$0	\$0	\$0	\$0	\$9,294	\$9,294	\$4,555,902
Louisiana Fund I (\$1,000,000)	\$1,734,415	\$0	\$0	\$0	\$0	\$0	\$0	\$1,734,415
LSV International Equity Value	\$101,432,813	\$0	\$0	\$0	-\$205,508	\$2,581,436	\$2,375,928	\$104,014,249
Mellon Stock Index Fund	\$278,658,651	\$0	\$0	\$0	\$0	\$11,282,127	\$11,282,127	\$289,940,778
Mesirow (\$35,000,000)	\$6,888,180	\$0	\$0	\$0	\$0	\$0	\$0	\$6,888,180
Murphree Venture (\$2,000,000)	\$694,114	\$0	\$0	\$0	\$0	\$0	\$0	\$694,114
OFI Emerging Markets	\$30,589,025	\$0	\$0	\$0	-\$22,602	\$948,441	\$925,839	\$31,537,466
Orleans Core Fixed Income	\$70,247,365	\$20,000,000	\$0	\$20,000,000	\$0	\$136,802	\$136,802	\$90,384,168
Putnam Risk Parity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
QMA SMID	\$44,679,779	\$0	\$0	\$0	\$0	\$1,286,115	\$1,286,115	\$45,965,894
Rothschild U.S. SMID Core	\$45,198,406	\$0	\$0	\$0	\$0	\$1,072,898	\$1,072,898	\$46,271,303
Sentinel Real Estate Fund (\$30,000,000)	\$37,253,300	\$0	-\$380,924	-\$380,924	\$0	\$0	\$0	\$36,872,376
Stone Harbor	\$75,032,082	\$0	\$0	\$0	-\$53,276	\$181,676	\$128,400	\$75,213,758
Thornburg Global Opportunities	\$59,739,751	\$0	\$0	\$0	\$0	\$2,969,200	\$2,969,200	\$62,708,951
Timbervest Crossover Fund (\$16,000,000)	\$7,161,686	\$0	-\$575,895	-\$575,895	\$0	\$0	\$0	\$6,585,791
<b>Total</b>	<b>\$1,667,097,762</b>	<b>\$49,081,829</b>	<b>-\$23,246,980</b>	<b>\$25,834,850</b>	<b>-\$491,133</b>	<b>\$31,725,691</b>	<b>\$31,725,691</b>	<b>\$1,724,658,303</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 April 30, 2019

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$57,333,700	\$5,000,000	\$0	\$5,000,000	-\$424,495	-\$994,574	\$61,339,126
AEW Core Property (\$12,000,000)	\$15,558,497	\$0	\$0	\$0	\$0	\$480,940	\$16,039,437
AEW Partners VI LP (\$20,000,000)	\$8,213,548	\$0	-\$370,947	-\$370,947	\$0	\$975,737	\$8,818,338
AQR Global Risk Premium – EL	\$45,839,208	\$61,400,000	-\$30,700,000	\$30,700,000	-\$373,638	\$2,315,552	\$78,854,759
ASB Real Estate Fund	\$13,622,620	\$37,851	\$0	\$37,851	\$0	\$430,921	\$14,091,392
Blackrock Global Allocation	\$82,124,034	\$403,544	\$0	\$403,544	-\$403,544	\$2,408,626	\$84,936,204
Blackrock US Debt	\$206,535,451	\$70,057,915	\$0	\$70,057,915	-\$57,915	\$10,915,370	\$287,508,735
Blackrock US TIPS Index	--	\$50,000,000	\$0	\$50,000,000	\$0	\$2,186,273	\$52,186,273
Boston Partners Global Equity	\$100,016,730	\$0	-\$602,380	-\$602,380	-\$440,956	\$822,585	\$100,236,935
Cash/Clearing Account	\$35,957,739	\$236,028,666	-\$252,022,153	-\$15,993,487	\$0	\$236,876	\$20,201,127
CCMP Capital Investors III (\$15,000,000)	\$14,180,095	\$179,575	\$0	\$179,575	\$0	-\$425,980	\$13,933,690
DCM Private Equity II (\$7,500,000)	\$1,727,569	\$2,152	-\$384,782	-\$382,630	\$0	-\$29,474	\$1,315,464
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,729,658	\$0	-\$375,000	-\$375,000	\$0	-\$76,291	\$1,278,367
Energy Opportunities Fund	\$16,635,881	\$0	-\$11,447,207	-\$11,447,207	-\$108,405	-\$5,169,522	\$19,152
FECF II (\$20,000,000)	\$388,146	\$0	-\$166,100	-\$166,100	\$0	-\$36,544	\$185,502
Fisher All Foreign Equity	\$130,665,252	\$0	-\$25,141,738	-\$25,141,738	-\$545,019	\$2,694,508	\$108,218,022
FRS-GA (Georgia)	\$3,463,900	\$0	\$0	\$0	\$0	\$0	\$3,463,900
FRS-LB I (NLTP AZ)	\$7,380,981	\$0	\$0	\$0	\$0	\$0	\$7,380,981
FRS-LB III (ST George UT)	\$9,288,030	\$0	\$0	\$0	\$0	\$0	\$9,288,030
GA Crossover Fund (\$25,000,000)	\$4,373,664	\$0	\$0	\$0	\$0	\$36,564	\$4,410,228
Greenspring Associates III (\$9,230,000)	\$4,105,060	\$0	-\$627,640	-\$627,640	\$0	-\$326,280	\$3,151,140
Harbourvest IV (\$20,000,000)	\$15,779,871	\$1,602,396	-\$1,157,769	\$444,627	\$0	\$1,167,086	\$17,391,584
HarbourVest Partners XI Buyout (\$35,000,000)	--	\$0	\$0	\$0	\$0	\$0	\$0



## Firefighters' Retirement System of Louisiana

# CURRENT FYTD CHANGE IN VALUE

	Fiscal YTD Ending April 30, 2019						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Heitman America Real Estate Trust	\$14,416,665	\$0	\$0	\$0	\$0	\$356,085	\$14,772,750
JP Morgan India (\$8,990,000)	\$2,089,471	\$0	\$0	\$0	\$0	-\$126,870	\$1,962,601
Landmark Equity Partners XV (\$25,000,000)	\$11,931,304	\$863,962	-\$3,107,810	-\$2,243,848	\$0	\$611,803	\$10,299,259
Liquidating - BlackRock Global Focused	\$12,561	\$0	-\$4,409	-\$4,409	\$0	-\$190	\$7,961
Louisiana Asset Management Pool	\$4,470,256	\$0	\$0	\$0	\$0	\$85,645	\$4,555,902
Louisiana Fund I (\$1,000,000)	\$1,734,135	\$0	\$0	\$0	\$0	\$280	\$1,734,415
LSV International Equity Value	\$129,346,061	\$0	-\$25,030,096	-\$25,030,096	-\$848,194	-\$301,717	\$104,014,249
Mellon Stock Index Fund	\$331,287,394	\$62,705	-\$70,000,000	-\$69,937,295	-\$62,705	\$28,590,678	\$289,940,778
Mesirow (\$35,000,000)	--	\$7,103,620	\$0	\$7,103,620	\$0	-\$215,440	\$6,888,180
Murphree Venture (\$2,000,000)	\$697,980	\$0	\$0	\$0	\$0	-\$3,866	\$694,114
OFI Emerging Markets	\$27,471,846	\$6,000,000	-\$3,000,000	\$3,000,000	-\$194,061	\$1,065,620	\$31,537,466
Orleans Core Fixed Income	\$66,932,337	\$20,000,000	\$0	\$20,000,000	-\$71,854	\$3,451,831	\$90,384,168
Putnam Risk Parity	\$31,359,572	\$579,825	-\$31,259,096	-\$30,679,271	-\$145,432	-\$680,301	\$0
QMA SMID	\$43,078,804	\$3,000,469	\$0	\$3,000,469	-\$110,610	-\$113,379	\$45,965,894
Rothschild U.S. SMID Core	\$46,082,566	\$0	\$0	\$0	-\$265,265	\$188,738	\$46,271,303
Sentinel Real Estate Fund (\$30,000,000)	\$37,256,961	\$0	-\$1,542,399	-\$1,542,399	\$0	\$1,157,814	\$36,872,376
Stone Harbor	\$74,365,185	\$0	\$0	\$0	-\$522,913	\$848,572	\$75,213,758
Thornburg Global Opportunities	\$63,913,049	\$0	\$0	\$0	-\$269,079	-\$1,204,098	\$62,708,951
Timbervest Crossover Fund (\$16,000,000)	\$7,948,376	\$0	-\$1,215,895	-\$1,215,895	\$0	-\$146,690	\$6,585,791
Z-Terminated Advisory Research SMID	\$2,776	\$0	-\$2,776	-\$2,776	\$0	\$0	--
<b>Total</b>	<b>\$1,669,316,932</b>	<b>\$462,322,679</b>	<b>-\$458,158,197</b>	<b>\$4,164,482</b>	<b>-\$4,844,085</b>	<b>\$51,176,888</b>	<b>\$1,724,658,303</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	Ending April 30, 2019				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Acadian Emerging Markets Equity	--	\$65,000,000	-\$10,000,000	\$55,000,000	\$6,339,126	\$61,339,126
AEW Core Property (\$12,000,000)	--	\$12,000,000	\$0	\$12,000,000	\$4,039,437	\$16,039,437
AEW Partners VI LP (\$20,000,000)	--	\$18,420,450	-\$24,051,444	-\$5,630,994	\$14,449,332	\$8,818,338
AQR Global Risk Premium – EL	--	\$101,500,000	-\$30,700,000	\$70,800,000	\$8,054,759	\$78,854,759
ASB Real Estate Fund	--	\$12,254,130	-\$141,910	\$12,112,220	\$1,979,172	\$14,091,392
Blackrock Global Allocation	--	\$68,445,535	\$0	\$68,445,535	\$16,490,669	\$84,936,204
Blackrock US Debt	--	\$327,470,382	-\$58,500,000	\$268,970,382	\$18,538,353	\$287,508,735
Blackrock US TIPS Index	--	\$50,000,000	\$0	\$50,000,000	\$2,186,273	\$52,186,273
Boston Partners Global Equity	--	\$80,939,406	-\$1,200,438	\$79,738,968	\$20,497,967	\$100,236,935
Cash/Clearing Account	--	\$2,408,836,697	-\$2,392,230,195	\$16,606,502	\$3,594,625	\$20,201,127
CCMP Capital Investors III (\$15,000,000)	--	\$11,821,975	-\$1,607,574	\$10,214,401	\$3,719,289	\$13,933,690
DCM Private Equity II (\$7,500,000)	--	\$8,232,280	-\$7,231,883	\$1,000,397	\$315,067	\$1,315,464
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	\$5,480,845	-\$8,287,500	-\$2,806,655	\$4,085,022	\$1,278,367
Energy Opportunities Fund	--	\$50,034,322	-\$44,450,083	\$5,584,239	-\$5,565,087	\$19,152
FCEP II (\$20,000,000)	--	\$19,188,998	-\$22,302,362	-\$3,113,364	\$3,298,866	\$185,502
Fisher All Foreign Equity	--	\$117,180,807	-\$80,307,355	\$36,873,452	\$71,344,570	\$108,218,022
FRS-GA (Georgia)	--	\$9,416,075	\$0	\$9,416,075	-\$5,952,175	\$3,463,900
FRS-LB I (NLTP AZ)	--	\$24,900,208	\$0	\$24,900,208	-\$17,519,227	\$7,380,981
FRS-LB III (ST George UT)	--	\$6,878,923	\$0	\$6,878,923	\$2,409,107	\$9,288,030
GA Crossover Fund (\$25,000,000)	--	\$25,000,000	-\$46,276,687	-\$21,276,687	\$25,686,915	\$4,410,228
Greenspring Associates III (\$9,230,000)	--	\$8,491,600	-\$12,881,018	-\$4,389,418	\$7,540,558	\$3,151,140
Harbourvest IV (\$20,000,000)	--	\$17,325,303	-\$2,907,769	\$14,417,534	\$2,974,050	\$17,391,584

Cash flow statistics exclude management fees and expenses.



## Firefighters' Retirement System of Louisiana

# SINCE INCEPTION CHANGE IN VALUE

	Beginning Market Value	Ending April 30, 2019			Net Investment Change	Ending Market Value
		Contributions	Withdrawals	Net Cash Flow		
HarbourVest Partners XI Buyout (\$35,000,000)	--	\$0	\$0	\$0	\$0	\$0
Heitman America Real Estate Trust	--	\$12,000,000	\$0	\$12,000,000	\$2,772,750	\$14,772,750
JP Morgan India (\$8,990,000)	--	\$8,307,355	-\$3,814,303	\$4,493,052	-\$2,530,451	\$1,962,601
Landmark Equity Partners XV (\$25,000,000)	--	\$17,791,330	-\$12,676,387	\$5,114,943	\$5,184,316	\$10,299,259
Liquidating - BlackRock Global Focused	--	\$46,832,890	-\$59,572,953	-\$12,740,063	\$12,748,025	\$7,961
Louisiana Asset Management Pool	--	\$943,990,965	-\$944,296,689	-\$305,724	\$4,861,626	\$4,555,902
Louisiana Fund I (\$1,000,000)	--	\$1,010,000	\$0	\$1,010,000	\$724,415	\$1,734,415
LSV International Equity Value	--	\$103,818,122	-\$42,313,413	\$61,504,709	\$42,509,540	\$104,014,249
Mellon Stock Index Fund	--	\$275,475,823	-\$164,500,001	\$110,975,822	\$178,964,956	\$289,940,778
Mesirow (\$35,000,000)	--	\$7,103,620	\$0	\$7,103,620	-\$215,440	\$6,888,180
Murphree Venture (\$2,000,000)	--	\$2,058,578	-\$848,459	\$1,210,119	-\$516,005	\$694,114
OFI Emerging Markets	--	\$37,500,000	-\$11,500,000	\$26,000,000	\$5,537,466	\$31,537,466
Orleans Core Fixed Income	\$0	\$146,099,081	-\$91,022,995	\$55,076,086	\$35,308,082	\$90,384,168
Putnam Risk Parity	--	\$27,979,825	-\$31,259,096	-\$3,279,271	\$3,279,271	\$0
QMA SMID	--	\$3,000,469	\$0	\$3,000,469	\$42,965,425	\$45,965,894
Rothschild U.S. SMID Core	--	\$55,500,000	-\$27,500,000	\$28,000,000	\$18,271,303	\$46,271,303
Sentinel Real Estate Fund (\$30,000,000)	--	\$30,000,000	-\$17,963,220	\$12,036,780	\$24,835,596	\$36,872,376
Stone Harbor	--	\$86,000,000	\$0	\$86,000,000	-\$10,786,242	\$75,213,758
Thornburg Global Opportunities	--	\$47,500,000	-\$70,306,258	-\$22,806,258	\$85,515,209	\$62,708,951
Timbervest Crossover Fund (\$16,000,000)	--	\$13,600,000	-\$8,263,895	\$5,336,105	\$1,249,686	\$6,585,791

Cash flow statistics exclude management fees and expenses.



### **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.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
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### **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.

