

# INVESTMENT MARKET UPDATE

(As of April 30, 2020)



Firefighters' Retirement System of Louisiana

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

# MARKET ENVIRONMENT

Following a disappointing first quarter, risk assets moved higher in April as central banks and governments stepped in with monetary and fiscal stimuli to stem the fallout from the COVID-19 pandemic. While the virus continued to spread, new data indicated a slowing pace in infections and hospitalization rates in some regions. To that end, the focus is shifting toward reopening economies, providing a tailwind for global risk assets. In the US, the S&P 500 increased 12.8% last month, though the index is down 9.3% for the year. International and emerging market equities were also in the black in April though weak economic data dampened sentiment; the MSCI EAFE Index posted returns of 6.5% and the MSCI Emerging Markets increased 9.2%.

The Federal Reserve, in its meeting last month, expanded its programs announced in March that are aimed at supporting consumers and small businesses. In addition, rates held steady at a range of 0.00% to 0.25%, nearly unchanged month-over-month. Within credit, spreads moved significantly lower following the widening in March. The option-adjusted spread on the Barclays Investment Grade Credit Index declined 70 basis points to 2.02%, with the index returning 4.6% for the month. Lower-quality credit experienced a larger movement with the spread on the Barclays US Corporate High Yield Index declining 136 basis points to 7.44%, though spreads are 408 basis points higher so far this year; the index increased 4.5% during the month. Meanwhile, emerging market debt posted gains in April with local-currency debt outperforming hard currency; the JPM GBI-EM Global Diversified Index was up 3.9% bolstered by a modestly weaker dollar. Real assets continued to be volatile last month as the tumult in energy impacted market pricing and sentiment. Spot WTI Crude Oil declined 8.1% last month, reflecting concerns around oversupply, storage capacity and demand. Mid-month, the May WTI crude oil contract fell to -\$36.98, marking the first time in history a contract traded in negative territory. While commodities still face headwinds, most listed real assets rallied significantly off March lows. The midstream space experienced the biggest bounce with the Alerian Midstream Energy Index up 29.5% for the month, though it is still down 31.3% year-to-date.

April offered some respite to risk assets, yet economic uncertainty remains. Recent economic data have provided a preview of the dramatic impact of COVID-19 on the economy, labor market and consumer confidence. We anticipate additional weakness in the second quarter, with a larger impact to corporate earnings as foreshadowed by recent revisions and suspended guidance. We expect volatility to continue across capital markets and remind investors to be disciplined and mindful of market liquidity.



# CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Apr	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%	12.8%	-9.3%
<b>Russell 1000</b>	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	13.2%	-9.7%
<b>Russell 2000</b>	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	13.7%	-21.1%
<b>Russell 2500</b>	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	14.6%	-19.5%
<b>MSCI EAFE</b>	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	6.5%	-17.8%
<b>MSCI EM</b>	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	9.2%	-16.6%
<b>MSCI ACWI</b>	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	10.7%	-12.9%
<b>Private Equity</b>	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	10.4%	-	10.4%
<b>BC TIPS</b>	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	2.8%	4.5%
<b>BC Municipal</b>	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	-1.3%	-1.9%
<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%	-3.4%	-10.0%
<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%	4.5%	-8.8%
<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%	1.8%	5.0%
<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%	2.0%	1.6%
<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%	2.0%	23.4%
<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%	6.7%	1.7%
<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%	2.1%	32.7%
<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%	3.9%	-11.9%
<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%	2.2%	-11.4%
<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%	-	-9.0%
<b>BBG Commodity</b>	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-1.5%	-24.5%
<b>Alerian MLP</b>	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	49.6%	-35.9%
<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%	8.3%	-21.3%

Source: FactSet, Barclays, Thomson One

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



## 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>1,725,647,767</b>	<b>100.0</b>	<b>100.0</b>	<b>6.0</b>	<b>-7.2</b>	<b>-1.3</b>	<b>-0.2</b>	<b>3.8</b>	<b>3.7</b>	<b>4.8</b>	<b>5.5</b>	<b>Sep-92</b>
Policy Index				6.3	-6.8	-1.2	0.5	5.2	5.1	--	--	Sep-92
Allocation Index				6.1	-5.9	-0.3	1.2	5.3	5.0	--	--	Sep-92
<b>Total Equity Composite</b>	<b>808,173,145</b>	<b>49.0</b>	<b>46.8</b>	<b>10.6</b>	<b>-15.8</b>	<b>-8.0</b>	<b>-8.7</b>	<b>1.7</b>	<b>2.8</b>	<b>6.9</b>	<b>6.7</b>	<b>Sep-92</b>
MSCI ACWI				10.7	-12.9	-5.2	-5.0	4.5	4.4	6.9	7.1	Sep-92
<b>Domestic Equity Composite</b>	<b>373,305,113</b>	<b>21.5</b>	<b>21.6</b>	<b>13.3</b>	<b>-12.9</b>	<b>-4.0</b>	<b>-4.3</b>	<b>5.3</b>	<b>5.9</b>	<b>9.5</b>	<b>7.5</b>	<b>Sep-92</b>
Russell 3000				13.2	-10.4	-1.1	-1.0	8.0	8.3	11.3	9.5	Sep-92
Mellon Stock Index Fund	288,267,233		16.7	12.8	-9.3	0.6	0.9	9.0	9.1	--	10.3	Nov-13
S&P 500				12.8	-9.3	0.6	0.9	9.0	9.1	11.7	10.3	Nov-13
<b>SMID Cap Composite</b>	<b>85,035,124</b>	<b>5.5</b>	<b>4.9</b>	<b>15.0</b>	<b>-24.5</b>	<b>-18.5</b>	<b>-20.2</b>	<b>-3.7</b>	<b>-0.1</b>	<b>--</b>	<b>4.8</b>	<b>Oct-12</b>
Russell 2500				14.6	-19.5	-13.7	-14.2	1.1	3.6	8.7	8.6	Oct-12
Rothschild U.S. SMID Core	43,582,285		2.5	13.7	-22.4	-16.9	-17.9	-1.7	--	--	1.6	Jul-15
Russell 2500				14.6	-19.5	-13.7	-14.2	1.1	3.6	8.7	3.4	Jul-15
QMA SMID	41,452,839		2.4	16.4	-26.6	-20.2	-22.6	--	--	--	-13.3	Jul-18
Russell 2500				14.6	-19.5	-13.7	-14.2	1.1	3.6	8.7	-6.9	Jul-18
<b>International Equity Composite</b>	<b>191,704,842</b>	<b>12.0</b>	<b>11.1</b>	<b>7.0</b>	<b>-20.3</b>	<b>-13.6</b>	<b>-14.0</b>	<b>-1.6</b>	<b>-0.5</b>	<b>--</b>	<b>3.4</b>	<b>Oct-12</b>
MSCI ACWI ex USA				7.6	-17.5	-11.8	-11.5	-0.3	-0.2	2.9	3.1	Oct-12
LSV International Equity Value	90,826,440		5.3	7.5	-22.9	-16.5	-17.1	-3.4	-1.3	3.2	4.1	Oct-04
MSCI Custom Benchmark				7.6	-17.5	-11.8	-11.5	-0.3	-0.2	2.9	4.0	Oct-04
Fisher All Foreign Equity	100,878,402		5.8	6.7	-17.8	-10.9	-11.0	0.2	0.2	4.1	5.6	Oct-04
MSCI ACWI ex USA				7.6	-17.5	-11.8	-11.5	-0.3	-0.2	2.9	4.7	Oct-04

Rothschild U.S. SMID Core and QMA SMID are preliminary as of 04/30/2020, 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 (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Global Equity Composite</b>	<b>161,330,982</b>	<b>10.0</b>	<b>9.3</b>	<b>10.1</b>	<b>-15.9</b>	<b>-7.8</b>	<b>-9.9</b>	<b>-1.1</b>	<b>0.5</b>	<b>--</b>	<b>6.4</b>	<b>Oct-12</b>
<i>MSCI ACWI</i>				10.7	-12.9	-5.2	-5.0	4.5	4.4	6.9	7.4	Oct-12
Boston Partners Global Equity	83,406,881		4.8	9.3	-21.5	-15.7	-16.8	-2.6	--	--	1.4	Nov-16
<i>MSCI ACWI</i>				10.7	-12.9	-5.2	-5.0	4.5	4.4	6.9	7.2	Nov-16
State Street ACWI Index Fund	77,628,784		4.5	11.1	-12.6	--	--	--	--	--	-2.6	Sep-19
<i>MSCI ACWI</i>				10.7	-12.9	-5.2	-5.0	4.5	4.4	6.9	-3.2	Sep-19
<b>Emerging Markets Equity</b>	<b>81,832,209</b>	<b>5.5</b>	<b>4.7</b>	<b>8.2</b>	<b>-17.5</b>	<b>-11.6</b>	<b>-11.9</b>	<b>-1.0</b>	<b>-0.2</b>	<b>--</b>	<b>0.5</b>	<b>Oct-13</b>
<i>MSCI Emerging Markets</i>				9.2	-16.6	-10.7	-12.0	0.6	-0.1	1.4	1.3	Oct-13
Acadian Emerging Markets Equity	53,545,540		3.1	8.3	-18.0	-12.3	-12.7	-2.7	-1.5	--	-0.2	Dec-13
<i>MSCI Emerging Markets</i>				9.2	-16.6	-10.7	-12.0	0.6	-0.1	1.4	0.9	Dec-13
Invesco Oppenheimer Developing Markets	28,286,669		1.6	8.2	-16.5	-10.1	-10.3	2.8	2.2	--	1.5	Jan-14
<i>MSCI Emerging Markets</i>				9.2	-16.6	-10.7	-12.0	0.6	-0.1	1.4	1.1	Jan-14
<b>Total Fixed Income Composite</b>	<b>523,540,711</b>	<b>31.0</b>	<b>30.3</b>	<b>2.2</b>	<b>4.5</b>	<b>7.4</b>	<b>11.0</b>	<b>5.8</b>	<b>4.1</b>	<b>--</b>	<b>2.7</b>	<b>Oct-12</b>
<i>Total Fixed Income Custom Benchmark</i>				2.3	1.5	4.3	8.1	4.2	2.9	3.1	2.1	Oct-12
<b>Core Fixed Income</b>	<b>466,464,854</b>	<b>23.0</b>	<b>27.0</b>	<b>2.1</b>	<b>4.5</b>	<b>7.2</b>	<b>10.4</b>	<b>6.4</b>	<b>4.5</b>	<b>--</b>	<b>3.8</b>	<b>Dec-10</b>
<i>BBgBarc US Aggregate TR</i>				1.8	5.0	7.6	10.8	5.2	3.8	4.0	3.7	Dec-10
Orleans Core Fixed Income	98,362,756		5.7	3.4	2.7	5.6	8.8	4.7	3.7	3.9	5.7	Aug-92
<i>BBgBarc US Aggregate TR</i>				1.8	5.0	7.6	10.8	5.2	3.8	4.0	5.5	Aug-92
Blackrock US Debt	368,102,098		21.3	1.8	5.0	7.5	10.8	5.2	3.8	--	3.8	Nov-14
<i>BBgBarc US Aggregate TR</i>				1.8	5.0	7.6	10.8	5.2	3.8	4.0	3.8	Nov-14
<b>US TIPS Composite</b>	<b>57,075,857</b>	<b>3.0</b>	<b>3.3</b>	<b>2.8</b>	<b>4.5</b>	<b>6.7</b>	<b>9.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.9</b>	<b>Oct-18</b>
Blackrock US TIPS Index	57,075,857		3.3	2.8	4.5	6.7	9.3	--	--	--	7.9	Oct-18
<i>BBgBarc US TIPS TR</i>				2.8	4.5	6.8	9.5	4.2	3.1	3.5	7.9	Oct-18

Thornburg Global Opportunities market value as of 04/30/2020 is \$287,290.

Boston Partners Global Equity and State Street ACWI Index Fund are preliminary as of 04/30/2020, 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.

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>GAA Composite</b>	<b>158,110,191</b>	<b>10.0</b>	<b>9.2</b>	<b>5.3</b>	<b>-6.2</b>	<b>-0.3</b>	<b>2.2</b>	<b>4.2</b>	<b>3.0</b>	<b>--</b>	<b>3.5</b>	<b>Apr-14</b>
60% MSCI World (Net) / 40% FTSE WGBI				7.0	-6.1	-0.7	1.2	5.0	4.4	5.8	4.2	Apr-14
Blackrock Global Allocation	87,785,052		5.1	8.3	-4.8	1.8	3.1	4.2	3.5	--	3.9	Apr-14
60% MSCI World (Net) / 40% FTSE WGBI				7.0	-6.1	-0.7	1.2	5.0	4.4	5.8	4.2	Apr-14
AQR Global Risk Premium – EL	70,325,139		4.1	1.7	-8.1	-2.8	0.8	4.5	2.2	--	3.0	May-14
60% MSCI World (Net) / 40% FTSE WGBI				7.0	-6.1	-0.7	1.2	5.0	4.4	5.8	4.0	May-14
<b>Total Alternative Composite</b>	<b>185,654,325</b>	<b>10.0</b>	<b>10.8</b>	<b>0.0</b>	<b>0.3</b>	<b>3.6</b>	<b>5.1</b>	<b>5.5</b>	<b>5.0</b>	<b>2.0</b>	<b>2.3</b>	<b>Jun-05</b>
<b>Private Equity Composite</b>	<b>73,427,992</b>	<b>4.0</b>	<b>4.3</b>	<b>0.0</b>	<b>-0.5</b>	<b>5.7</b>	<b>7.4</b>	<b>6.5</b>	<b>6.1</b>	<b>2.3</b>	<b>-2.0</b>	<b>Jul-05</b>
Cambridge Associates US All PE (1 Qtr Lag)				0.0	4.0	9.0	14.3	14.1	12.1	13.8	13.2	Jul-05
Murphree Venture (\$2,000,000)	531,565		0.0	0.0	0.0	-24.1	-23.4	-31.0	-19.0	-8.3	-7.4	Sep-05
Louisiana Fund I (\$1,000,000)	1,432,178		0.1	0.0	0.0	-0.2	-0.3	-8.0	-7.3	-2.9	-7.0	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	1,154,559		0.1	0.0	0.0	-0.6	1.9	6.0	4.3	9.5	5.5	Feb-06
Greenspring Associates III (\$9,230,000)	408,792		0.0	0.0	-37.5	-20.0	-15.3	-6.1	-3.1	9.0	3.8	Feb-06
DCM Private Equity II (\$7,500,000)	983,305		0.1	0.0	-2.5	-8.4	-11.8	-4.7	-3.9	0.2	-2.1	Feb-06
GA Crossover Fund (\$25,000,000)	3,484,182		0.2	0.0	19.1	6.0	6.0	-0.4	7.5	16.0	12.8	Jan-08
CCMP Capital Investors III (\$15,000,000)	14,043,395		0.8	0.0	4.9	10.8	12.9	9.0	11.0	--	10.3	Oct-14
Landmark Equity Partners XV (\$25,000,000)	9,530,483		0.6	0.0	-4.9	6.4	5.6	9.8	9.3	--	12.7	Dec-14
Harbourvest IV (\$20,000,000)	18,351,597		1.1	0.0	1.8	12.2	16.7	13.9	--	--	11.6	Nov-16
Mesirow (\$35,000,000)	17,055,811		1.0	0.0	0.0	0.8	0.0	--	--	--	-2.2	Dec-18
HarbourVest Partners XI Buyout (\$35,000,000)	6,452,124		0.4	0.0	0.0	5.7	5.7	--	--	--	4.3	Jan-19

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Private Equity valuations are as of 03/31/2020 and cash adjusted to date with the exception of Murphree Venture, DTC Private Equity II, Mesirow, and HarbourVest Partners XI which are valued as of 12/31/2019 and cash adjusted to date.



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	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>112,226,334</b>	<b>6.0</b>	<b>6.5</b>	<b>0.0</b>	<b>0.8</b>	<b>2.5</b>	<b>3.8</b>	<b>5.0</b>	<b>4.5</b>	<b>5.2</b>	<b>5.0</b>	<b>Dec-09</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.6	4.5	6.4	6.7	8.2	10.2	9.2	Dec-09
Sentinel Real Estate Fund (\$30,000,000)	38,000,350		2.2	0.0	1.4	5.4	7.5	7.6	8.1	13.2	6.5	Feb-06
JP Morgan India (\$8,990,000)	1,108,014		0.1	0.0	0.0	-43.5	-43.5	-26.7	-18.7	-9.7	-16.0	Apr-07
Timbervest Crossover Fund (\$16,000,000)	6,317,952		0.4	0.0	-0.2	1.0	2.2	-2.7	-4.2	-1.1	-1.2	Apr-08
AEW Partners VI LP (\$20,000,000)	257,056		0.0	0.0	15.6	73.6	74.8	31.8	25.7	19.5	19.3	Mar-10
AEW Core Property (\$12,000,000)	16,860,294		1.0	0.0	0.8	3.6	5.1	6.6	7.0	--	7.0	May-15
FRS-GA (Georgia)	3,463,043		0.2	0.0	0.0	0.0	0.0	-10.1	-6.0	-9.8	-8.3	Jun-08
FRS-LB I (NLTP AZ)	7,315,110		0.4	0.0	0.0	-0.9	-0.9	17.9	11.3	-10.3	-10.7	Jun-07
FRS-LB III (ST George UT)	9,281,546		0.5	0.0	0.0	-0.1	-0.1	0.0	3.4	1.2	2.5	Jun-08
ASB Real Estate Fund	14,680,736		0.9	0.0	1.3	2.1	4.2	5.5	--	--	4.9	Jan-16
Heitman America Real Estate Trust	14,942,233		0.9	0.0	0.0	2.1	3.4	5.2	--	--	6.2	Nov-15
<b>Total Cash (\$9 MM)</b>	<b>50,169,395</b>	<b>--</b>	<b>2.9</b>	<b>0.0</b>	<b>0.4</b>	<b>1.4</b>	<b>1.8</b>	<b>1.7</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	0.4	1.3	1.7	1.7	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 03/31/2020 and cash adjusted to date with the exception of FRS-GA, FRS-LB, FRS-LB III which are valued as of 09/30/2019 and cash adjusted to date.

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 April 30, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$49,448,159	\$0	\$0	\$0	-\$112,164	\$4,097,381	\$53,545,540
AEW Core Property (\$12,000,000)	\$16,860,294	\$0	\$0	\$0	\$0	\$0	\$16,860,294
AEW Partners VI LP (\$20,000,000)	\$898,566	\$0	-\$641,510	-\$641,510	\$0	\$0	\$257,056
AQR Global Risk Premium – EL	\$69,174,962	\$0	\$0	\$0	-\$55,674	\$1,150,178	\$70,325,139
ASB Real Estate Fund	\$14,680,736	\$0	\$0	\$0	\$0	\$0	\$14,680,736
Blackrock Global Allocation	\$81,026,391	\$0	\$0	\$0	\$0	\$6,758,661	\$87,785,052
Blackrock US Debt	\$381,279,140	\$0	-\$20,000,000	-\$20,000,000	\$0	\$6,822,958	\$368,102,098
Blackrock US TIPS Index	\$55,499,611	\$0	\$0	\$0	\$0	\$1,576,245	\$57,075,857
Boston Partners Global Equity	\$76,269,218	\$0	\$0	\$0	-\$37,878	\$7,137,663	\$83,406,881
Cash/Clearing Account	\$37,410,553	\$23,329,067	-\$15,221,047	\$8,108,019	\$0	\$7,629	\$45,526,201
CCMP Capital Investors III (\$15,000,000)	\$14,043,395	\$0	\$0	\$0	\$0	\$0	\$14,043,395
DCM Private Equity II (\$7,500,000)	\$983,305	\$0	\$0	\$0	\$0	\$0	\$983,305
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,154,559	\$0	\$0	\$0	\$0	\$0	\$1,154,559
Energy Opportunities Fund	\$2,634	\$0	\$0	\$0	\$0	\$121	\$2,755
FECP II (\$20,000,000)	\$37,466	\$0	-\$48,589	-\$48,589	\$0	\$11,124	\$1
Fisher All Foreign Equity	\$94,567,622	\$0	\$0	\$0	\$0	\$6,310,780	\$100,878,402
FRS-GA (Georgia)	\$3,463,043	\$0	\$0	\$0	\$0	\$0	\$3,463,043
FRS-LB I (NLTP AZ)	\$7,315,110	\$0	\$0	\$0	\$0	\$0	\$7,315,110
FRS-LB III (ST George UT)	\$9,281,546	\$0	\$0	\$0	\$0	\$0	\$9,281,546
GA Crossover Fund (\$25,000,000)	\$3,484,182	\$0	\$0	\$0	\$0	\$0	\$3,484,182
Greenspring Associates III (\$9,230,000)	\$2,347,092	\$0	-\$1,938,300	-\$1,938,300	\$0	\$0	\$408,792
Harbourvest IV (\$20,000,000)	\$18,351,597	\$0	\$0	\$0	\$0	\$0	\$18,351,597
HarbourVest Partners XI Buyout (\$35,000,000)	\$6,452,124	\$0	\$0	\$0	\$0	\$0	\$6,452,124





## Firefighters' Retirement System of Louisiana

# CURRENT MONTH CHANGE IN VALUE

	Month Ending April 30, 2020						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Heitman America Real Estate Trust	\$14,942,233	\$0	\$0	\$0	\$0	\$0	\$14,942,233
Invesco Oppenheimer Developing Markets	\$26,153,649	\$0	\$0	\$0	-\$20,272	\$2,133,020	\$28,286,669
JP Morgan India (\$8,990,000)	\$1,108,014	\$0	\$0	\$0	\$0	\$0	\$1,108,014
Landmark Equity Partners XV (\$25,000,000)	\$9,530,483	\$0	\$0	\$0	\$0	\$0	\$9,530,483
Liquidating - BlackRock Global Focused	\$8,001	\$0	\$0	\$0	\$0	\$26	\$8,027
Louisiana Asset Management Pool	\$4,639,389	\$0	\$0	\$0	\$0	\$3,806	\$4,643,194
Louisiana Fund I (\$1,000,000)	\$1,432,178	\$0	\$0	\$0	\$0	\$0	\$1,432,178
LSV International Equity Value	\$84,526,723	\$0	\$0	\$0	\$0	\$6,299,717	\$90,826,440
Mellon Stock Index Fund	\$250,515,919	\$5,000,000	\$0	\$5,000,000	\$0	\$32,751,314	\$288,267,233
Mesirow (\$35,000,000)	\$14,955,811	\$2,100,000	\$0	\$2,100,000	\$0	\$0	\$17,055,811
Murphree Venture (\$2,000,000)	\$531,565	\$0	\$0	\$0	\$0	\$0	\$531,565
Orleans Core Fixed Income	\$95,086,267	\$0	\$0	\$0	\$0	\$3,276,489	\$98,362,756
QMA SMID	\$35,609,504	\$0	\$0	\$0	\$0	\$5,843,335	\$41,452,839
Rothschild U.S. SMID Core	\$38,327,533	\$0	\$0	\$0	\$0	\$5,254,752	\$43,582,285
Sentinel Real Estate Fund (\$30,000,000)	\$38,383,004	\$0	-\$382,654	-\$382,654	\$0	\$0	\$38,000,350
State Street ACWI Index Fund	\$64,901,139	\$5,000,000	\$0	\$5,000,000	-\$3,881	\$7,727,645	\$77,628,784
Thornburg Global Opportunities	\$287,185	\$0	\$0	\$0	\$0	\$105	\$287,290
Timbervert Crossover Fund (\$16,000,000)	\$6,317,952	\$0	\$0	\$0	\$0	\$0	\$6,317,952
<b>Total</b>	<b>\$1,631,287,853</b>	<b>\$35,429,067</b>	<b>-\$38,232,101</b>	<b>-\$2,803,034</b>	<b>-\$229,869</b>	<b>\$97,162,948</b>	<b>\$1,725,647,767</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, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$61,087,956	\$0	\$0	\$0	-\$450,184	-\$7,542,416	\$53,545,540
AEW Core Property (\$12,000,000)	\$16,269,443	\$0	\$0	\$0	\$0	\$590,851	\$16,860,294
AEW Partners VI LP (\$20,000,000)	\$8,874,888	\$0	-\$10,488,429	-\$10,488,429	\$0	\$1,870,597	\$257,056
AQR Global Risk Premium – EL	\$81,793,968	\$0	-\$9,000,000	-\$9,000,000	-\$645,160	-\$2,468,828	\$70,325,139
ASB Real Estate Fund	\$14,375,136	\$0	\$0	\$0	\$0	\$305,600	\$14,680,736
Blackrock Global Allocation	\$86,219,909	\$0	\$0	\$0	\$0	\$1,565,143	\$87,785,052
Blackrock US Debt	\$296,301,894	\$80,000,000	-\$36,000,000	\$44,000,000	\$0	\$27,800,204	\$368,102,098
Blackrock US TIPS Index	\$53,502,426	\$0	\$0	\$0	\$0	\$3,573,431	\$57,075,857
Boston Partners Global Equity	\$98,946,150	\$0	-\$400,867	-\$400,867	-\$431,084	-\$15,138,402	\$83,406,881
Cash/Clearing Account	\$10,592,120	\$258,685,677	-\$223,959,949	\$34,725,729	\$0	\$208,352	\$45,526,201
CCMP Capital Investors III (\$15,000,000)	\$15,762,009	\$46,091	-\$3,134,513	-\$3,088,422	\$0	\$1,369,808	\$14,043,395
DCM Private Equity II (\$7,500,000)	\$1,190,696	\$0	-\$112,979	-\$112,979	\$0	-\$94,412	\$983,305
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,311,002	\$0	-\$150,000	-\$150,000	\$0	-\$6,443	\$1,154,559
Energy Opportunities Fund	\$33	\$0	\$0	\$0	\$0	\$2,722	\$2,755
FECP II (\$20,000,000)	\$197,102	\$0	-\$343,001	-\$343,001	\$0	\$145,900	\$1
Fisher All Foreign Equity	\$108,054,069	\$4,000,000	-\$630	\$3,999,370	-\$477,847	-\$11,175,038	\$100,878,402
FRS-GA (Georgia)	\$3,463,900	\$0	\$0	\$0	\$0	-\$857	\$3,463,043
FRS-LB I (NLTP AZ)	\$7,380,981	\$0	\$0	\$0	\$0	-\$65,871	\$7,315,110
FRS-LB III (ST George UT)	\$9,288,030	\$0	\$0	\$0	\$0	-\$6,484	\$9,281,546
GA Crossover Fund (\$25,000,000)	\$4,408,965	\$0	-\$1,000,000	-\$1,000,000	\$0	\$75,217	\$3,484,182
Greenspring Associates III (\$9,230,000)	\$3,098,632	\$0	-\$2,104,440	-\$2,104,440	\$0	-\$585,400	\$408,792
Harbourvest IV (\$20,000,000)	\$17,901,972	\$0	-\$1,540,000	-\$1,540,000	\$0	\$1,989,625	\$18,351,597
HarbourVest Partners XI Buyout (\$35,000,000)	\$154,001	\$6,169,321	\$0	\$6,169,321	\$0	\$128,802	\$6,452,124



## Firefighters' Retirement System of Louisiana

# CURRENT FYTD CHANGE IN VALUE

	Fiscal YTD Ending April 30, 2020						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Heitman America Real Estate Trust	\$14,962,989	\$0	-\$320,339	-\$320,339	\$0	\$299,583	\$14,942,233
Invesco Oppenheimer Developing Markets	\$31,465,066	\$0	\$0	\$0	-\$219,959	-\$3,178,397	\$28,286,669
JP Morgan India (\$8,990,000)	\$1,962,601	\$0	\$0	\$0	\$0	-\$854,587	\$1,108,014
Landmark Equity Partners XV (\$25,000,000)	\$9,208,194	\$1,006,990	-\$1,276,519	-\$269,529	\$0	\$591,818	\$9,530,483
Liquidating - BlackRock Global Focused	\$8,142	\$0	\$0	\$0	\$0	-\$116	\$8,027
Louisiana Asset Management Pool	\$4,574,500	\$0	\$0	\$0	\$0	\$68,694	\$4,643,194
Louisiana Fund I (\$1,000,000)	\$1,435,336	\$0	\$0	\$0	\$0	-\$3,158	\$1,432,178
LSV International Equity Value	\$103,194,258	\$4,000,000	-\$1,470	\$3,998,530	-\$544,209	-\$16,366,349	\$90,826,440
Mellon Stock Index Fund	\$290,644,592	\$5,038,152	-\$11,000,000	-\$5,961,848	-\$79,357	\$3,584,489	\$288,267,233
Mesirow (\$35,000,000)	\$8,397,499	\$8,575,000	\$0	\$8,575,000	\$0	\$83,312	\$17,055,811
Murphree Venture (\$2,000,000)	\$700,593	\$0	\$0	\$0	\$0	-\$169,028	\$531,565
Orleans Core Fixed Income	\$93,124,492	\$0	\$0	\$0	-\$60,971	\$5,238,265	\$98,362,756
QMA SMID	\$44,604,801	\$5,000,000	\$0	\$5,000,000	-\$178,230	-\$8,151,962	\$41,452,839
Rothschild U.S. SMID Core	\$45,743,366	\$5,000,000	\$0	\$5,000,000	-\$242,823	-\$7,161,081	\$43,582,285
Sentinel Real Estate Fund (\$30,000,000)	\$37,587,805	\$0	-\$1,572,645	-\$1,572,645	\$0	\$1,985,189	\$38,000,350
State Street ACWI Index Fund	--	\$79,000,000	\$0	\$79,000,000	-\$14,157	-\$1,371,216	\$77,628,784
Thornburg Global Opportunities	\$60,232,986	\$0	-\$63,863,771	-\$63,863,771	-\$149,003	\$3,918,075	\$287,290
Timbervest Crossover Fund (\$16,000,000)	\$6,661,868	\$0	-\$416,000	-\$416,000	\$0	\$72,084	\$6,317,952
Z TERMINATED - Stone Harbor	\$79,483,138	\$0	-\$81,027,382	-\$81,027,382	\$0	\$1,544,244	--
<b>Total</b>	<b>\$1,734,167,508</b>	<b>\$456,521,232</b>	<b>-\$447,712,932</b>	<b>\$8,808,299</b>	<b>-\$3,492,984</b>	<b>-\$17,328,040</b>	<b>\$1,725,647,767</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 April 30, 2020		Net Investment Change	Ending Market Value
			Withdrawals	Net Cash Flow		
Acadian Emerging Markets Equity	--	\$65,000,000	-\$10,000,000	\$55,000,000	-\$1,454,460	\$53,545,540
AEW Core Property (\$12,000,000)	--	\$12,000,000	\$0	\$12,000,000	\$4,860,294	\$16,860,294
AEW Partners VI LP (\$20,000,000)	--	\$18,420,450	-\$34,539,873	-\$16,119,423	\$16,376,479	\$257,056
AQR Global Risk Premium – EL	--	\$101,500,000	-\$39,700,000	\$61,800,000	\$8,525,139	\$70,325,139
ASB Real Estate Fund	--	\$12,216,279	-\$141,910	\$12,074,369	\$2,606,367	\$14,680,736
Blackrock Global Allocation	--	\$68,682,390	\$0	\$68,682,390	\$19,102,661	\$87,785,052
Blackrock US Debt	--	\$407,536,521	-\$94,500,000	\$313,036,521	\$55,065,577	\$368,102,098
Blackrock US TIPS Index	--	\$50,016,034	-\$4,805	\$50,011,229	\$7,064,628	\$57,075,857
Boston Partners Global Equity	--	\$80,939,406	-\$1,731,015	\$79,208,390	\$4,198,491	\$83,406,881
Cash/Clearing Account	--	\$2,668,085,628	-\$2,626,422,881	\$41,662,747	\$3,863,454	\$45,526,201
CCMP Capital Investors III (\$15,000,000)	--	\$13,421,953	-\$4,742,087	\$8,679,866	\$5,363,529	\$14,043,395
DCM Private Equity II (\$7,500,000)	--	\$8,232,280	-\$7,421,096	\$811,184	\$172,121	\$983,305
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	\$5,480,845	-\$8,437,500	-\$2,956,655	\$4,111,214	\$1,154,559
Energy Opportunities Fund	--	\$50,039,277	-\$44,450,083	\$5,589,194	-\$5,586,439	\$2,755
FECP II (\$20,000,000)	--	\$19,188,998	-\$22,645,363	-\$3,456,365	\$3,456,366	\$1
Fisher All Foreign Equity	--	\$121,180,807	-\$80,308,187	\$40,872,620	\$60,005,782	\$100,878,402
FRS-GA (Georgia)	--	\$9,416,075	\$0	\$9,416,075	-\$5,953,032	\$3,463,043
FRS-LB I (NLTP AZ)	--	\$24,900,208	\$0	\$24,900,208	-\$17,585,098	\$7,315,110
FRS-LB III (ST George UT)	--	\$6,878,923	\$0	\$6,878,923	\$2,402,623	\$9,281,546
GA Crossover Fund (\$25,000,000)	--	\$25,000,000	-\$47,276,687	-\$22,276,687	\$25,760,869	\$3,484,182
Greenspring Associates III (\$9,230,000)	--	\$8,491,600	-\$15,216,208	-\$6,724,608	\$7,133,400	\$408,792
Harbourvest IV (\$20,000,000)	--	\$17,325,303	-\$4,447,769	\$12,877,534	\$5,474,063	\$18,351,597

Cash flow statistics exclude management fees and expenses.



## Firefighters' Retirement System of Louisiana

# SINCE INCEPTION CHANGE IN VALUE

	Beginning Market Value	Contributions	Ending April 30, 2020			Ending Market Value
			Withdrawals	Net Cash Flow	Net Investment Change	
HarbourVest Partners XI Buyout (\$35,000,000)	--	\$6,169,321	\$0	\$6,169,321	\$282,803	\$6,452,124
Heitman America Real Estate Trust	--	\$12,000,000	-\$320,339	\$11,679,661	\$3,262,572	\$14,942,233
Invesco Oppenheimer Developing Markets	--	\$37,500,000	-\$11,500,000	\$26,000,000	\$2,286,669	\$28,286,669
JP Morgan India (\$8,990,000)	--	\$8,307,355	-\$3,814,303	\$4,493,052	-\$3,385,038	\$1,108,014
Landmark Equity Partners XV (\$25,000,000)	--	\$18,804,165	-\$14,267,592	\$4,536,573	\$4,993,910	\$9,530,483
Liquidating - BlackRock Global Focused	--	\$46,832,890	-\$59,572,953	-\$12,740,063	\$12,748,090	\$8,027
Louisiana Asset Management Pool	--	\$943,990,965	-\$944,296,689	-\$305,724	\$4,948,918	\$4,643,194
Louisiana Fund I (\$1,000,000)	--	\$1,010,000	\$0	\$1,010,000	\$422,178	\$1,432,178
LSV International Equity Value	--	\$107,818,122	-\$42,314,883	\$65,503,239	\$25,323,201	\$90,826,440
Mellon Stock Index Fund	--	\$280,513,975	-\$175,500,001	\$105,013,974	\$183,253,259	\$288,267,233
Mesirow (\$35,000,000)	--	\$17,253,620	\$0	\$17,253,620	-\$197,809	\$17,055,811
Murphree Venture (\$2,000,000)	--	\$2,058,578	-\$848,459	\$1,210,119	-\$678,554	\$531,565
Orleans Core Fixed Income	\$0	\$146,099,081	-\$91,022,995	\$55,076,086	\$43,286,670	\$98,362,756
QMA SMID	--	\$51,715,738	\$0	\$51,715,738	-\$10,262,899	\$41,452,839
Rothschild U.S. SMID Core	--	\$60,500,000	-\$27,500,000	\$33,000,000	\$10,582,285	\$43,582,285
Sentinel Real Estate Fund (\$30,000,000)	--	\$30,000,000	-\$19,541,086	\$10,458,914	\$27,541,435	\$38,000,350
State Street ACWI Index Fund	--	\$79,000,000	\$0	\$79,000,000	-\$1,371,216	\$77,628,784
Thornburg Global Opportunities	--	\$47,500,000	-\$134,170,030	-\$86,670,030	\$86,957,319	\$287,290
Timbervest Crossover Fund (\$16,000,000)	--	\$13,600,000	-\$8,679,895	\$4,920,105	\$1,397,847	\$6,317,952

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.
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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.



# ASSET ALLOCATION DECISION TREE

