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**Firefighters' Retirement System of Louisiana**

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**Investment Market Update**  
**(As of June 30, 2017)**

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## Index Performance Summary as of 06/30/2017

	2009	2010	2011	2012	2013	2014	2015	2016	Q1	April	May	June	Q2	YTD
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	11.4%	2.2%	3.0%	1.0%	6.3%	18.4%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	7.2%	2.5%	3.7%	-0.2%	6.1%	13.8%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	6.9%	1.6%	2.2%	0.5%	4.3%	11.5%
<b>JPM GBI-EM Global Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	6.5%	1.2%	2.0%	0.5%	3.6%	10.4%
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	6.1%	1.0%	1.4%	0.6%	3.1%	9.3%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	6.0%	1.1%	1.3%	0.7%	3.1%	9.3%
<b>BC US STRIPS 20+ Yr</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	1.8%	1.8%	3.1%	1.1%	6.1%	8.0%
<b>BC US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	1.7%	1.6%	2.1%	1.0%	4.7%	6.4%
<b>JPM EMBI Glob Div</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	3.9%	1.6%	0.9%	-0.1%	2.2%	6.2%
<b>BC US Govt/Cred Long</b>	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	6.7%	1.6%	1.6%	2.0%	0.8%	4.4%	6.0%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	3.8%	0.8%	-1.1%	2.5%	2.1%	6.0%
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	2.5%	1.1%	-2.0%	3.5%	2.5%	5.0%
<b>BC US Corporate HY</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	2.7%	1.2%	0.9%	0.1%	2.2%	4.9%
<b>BC Global Agg</b>	-6.5%	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	1.8%	1.1%	1.5%	-0.1%	2.6%	4.4%
<b>BC Municipal</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	1.6%	0.7%	1.6%	-0.4%	2.0%	3.6%
<b>CS Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	2.1%	0.4%	0.8%	-	1.3%	3.4%
<b>FTSE NAREIT Eqy REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	1.2%	0.1%	-0.8%	2.2%	1.5%	2.7%
<b>BC US Agg Bond</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	0.8%	0.8%	0.8%	-0.1%	1.4%	2.3%
<b>CS Leveraged Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	1.2%	0.4%	0.4%	-0.1%	0.8%	2.0%
<b>BC US Agg Interm</b>	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.0%	0.7%	0.6%	0.5%	-0.3%	0.9%	1.6%
<b>BC TIPS</b>	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	1.3%	0.6%	0.0%	-0.9%	-0.4%	0.9%
<b>BC US Govt/Cred 1-3 Yr</b>	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.3%	0.4%	0.2%	0.2%	0.0%	0.3%	0.7%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	3.9%	-1.3%	-4.5%	-0.6%	-6.4%	-2.7%
<b>BBG Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	-2.3%	-1.5%	-1.4%	-0.3%	-3.2%	-5.6%

Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse

### Market Environment

Global equities were modestly up in June with the MSCI ACWI Index returning 0.5%. At home, small-cap stocks bested large-cap equities with the S&P 500 Index gaining 0.6% and the Russell 2000 Index returning 3.5%. In Europe, stocks sold off as the European Central Bank hinted it may slow down its quantitative easing program as reflationary pressures build. The MSCI Europe Index fell 1.1% in June, but losses were partially offset as the euro gained 1.6% against the US dollar. The MSCI EAFE was nearly flat as Japanese equities rallied to balance losses in Europe. Emerging market equities rose 1.0% with the MSCI EM Index ending June up 18.4% this year.

In fixed-income, the 10-year Treasury yield rose to 2.31% and the 10-year German bund yield jumped 16 basis points to 0.47%, eroding returns in the US and Europe. The Barclays US Aggregate Bond Index fell 0.2% and the Barclays Global Aggregate Index declined 0.1% on the month. In the US, rising real rates fueled a decline in inflation-protected securities with the Barclays US TIPS Index falling 0.9%. Emerging market bonds were little changed in June, with the JPM Morgan GBI-EM Global Diversified Index eking out a return of 0.5%.

Many investors have likely realized strong gains due to a sustained rally in global equities through the first half of the year. We maintain our overweight recommendation for non-US developed market equities and emerging market stocks. Given the continued spread compression in US high-yield debt, we recommend investors employ dynamic credit strategies and suggest allocating to TIPS in place of core bonds.

# Firefighters' Retirement System of Louisiana Investment Performance Flash Report

June 30, 2017

## Investment Performance Summary - Net of Fees

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Total Plan Composite</b>	<b>1,551,956,055</b>	<b>100.0</b>	<b>100.0</b>	<b>0.3</b>	<b>2.8</b>	<b>7.4</b>	<b>13.4</b>	<b>13.4</b>	<b>3.3</b>	<b>6.2</b>	<b>2.5</b>	<b>5.8</b>	<b>Sep-92</b>
<i>Policy Index</i>				0.5	3.1	8.2	12.7	12.7	4.9	--	--	--	Sep-92
<i>Allocation Index</i>				0.4	2.9	7.5	12.2	12.2	4.4	--	--	--	Sep-92
<b>Total Equity Composite</b>	<b>889,759,410</b>	<b>57.0</b>	<b>57.3</b>	<b>0.7</b>	<b>4.1</b>	<b>10.8</b>	<b>21.2</b>	<b>21.2</b>	<b>4.9</b>	<b>11.7</b>	<b>4.9</b>	<b>7.4</b>	<b>Sep-92</b>
<i>MSCI/ACWI</i>				0.5	4.3	11.5	18.8	18.8	4.8	10.5	3.7	7.5	Sep-92
<b>Domestic Equity Composite</b>	<b>405,919,365</b>	<b>27.0</b>	<b>26.2</b>	<b>0.8</b>	<b>1.4</b>	<b>6.1</b>	<b>16.6</b>	<b>16.6</b>	<b>6.1</b>	<b>12.3</b>	<b>6.8</b>	<b>7.7</b>	<b>Sep-92</b>
<i>Russell 3000</i>				0.9	3.0	8.9	18.5	18.5	9.1	14.6	7.3	9.7	Sep-92
<i>Mellon Stock Index Fund</i>	294,106,245		19.0	0.6	3.1	9.3	17.9	17.9	9.6	--	--	11.5	Nov-13
<i>S&amp;P 500</i>				0.6	3.1	9.3	17.9	17.9	9.6	14.6	7.2	11.5	Nov-13
<b>SMID Cap Composite</b>	<b>111,813,120</b>	<b>8.0</b>	<b>7.2</b>	<b>1.2</b>	<b>-2.7</b>	<b>-1.1</b>	<b>13.3</b>	<b>13.3</b>	<b>-2.0</b>	<b>--</b>	<b>--</b>	<b>6.2</b>	<b>Oct-12</b>
<i>Russell 2500</i>				2.5	2.1	6.0	19.8	19.8	6.9	14.0	7.4	13.5	Oct-12
<i>Energy Opportunities Fund</i>	14,977,617		1.0	-3.4	-17.9	-25.8	-16.8	-16.8	-19.9	-4.7	--	-3.2	Jul-07
<i>Olh/XLE Blended Energy Benchmark</i>				-2.3	-13.2	-19.4	-8.3	-8.3	-17.1	-2.5	--	-2.4	Jul-07
<b>SMID Cap Composite ex Energy</b>	<b>96,835,503</b>	<b>--</b>	<b>6.2</b>	<b>2.0</b>	<b>0.2</b>	<b>4.7</b>	<b>20.7</b>	<b>20.7</b>	<b>3.6</b>	<b>--</b>	<b>--</b>	<b>10.4</b>	<b>Oct-12</b>
<i>Russell 2500</i>				2.5	2.1	6.0	19.8	19.8	6.9	14.0	7.4	13.5	Oct-12
<i>Advisory Research SMID</i>	32,744,486		2.1	1.4	-3.9	-0.1	16.6	16.6	-0.4	8.5	--	12.2	Jun-09
<i>Russell 2500 Value</i>				2.7	0.3	2.0	18.4	18.4	6.2	13.7	6.5	15.6	Jun-09
<i>Rothschild U.S. SMID Core</i>	64,091,017		4.1	2.3	2.5	7.4	22.9	22.9	--	--	--	7.5	Jul-15
<i>Russell 2500</i>				2.5	2.1	6.0	19.8	19.8	6.9	14.0	7.4	7.4	Jul-15
<b>International Equity Composite</b>	<b>248,902,971</b>	<b>15.0</b>	<b>16.0</b>	<b>0.8</b>	<b>7.6</b>	<b>16.1</b>	<b>26.8</b>	<b>26.8</b>	<b>2.9</b>	<b>--</b>	<b>--</b>	<b>7.6</b>	<b>Oct-12</b>
<i>MSCI/ACWI ex USA</i>				0.3	5.8	14.1	20.5	20.5	0.8	7.2	1.1	6.0	Oct-12
<i>LSV International Equity Value</i>	124,050,521		8.0	1.3	6.3	14.2	28.3	28.3	2.5	9.4	1.0	6.3	Oct-04
<i>MSCI Custom Benchmark</i>				0.3	5.8	14.1	20.5	20.5	0.8	7.2	0.5	5.2	Oct-04
<i>Fisher All Foreign Equity</i>	124,852,450		8.0	0.4	8.8	18.1	25.3	25.3	3.3	8.4	2.9	7.2	Oct-04
<i>MSCI/ACWI ex USA</i>				0.3	5.8	14.1	20.5	20.5	0.8	7.2	1.1	6.1	Oct-04

Performance and values are preliminary and subject to change. Returns are net of manager fees.

Results for periods longer than one year are annualized.

Fiscal Year ends June 30th.

SMID Cap and 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.



NEPC, LLC

June 30, 2017

# Firefighters' Retirement System of Louisiana Investment Performance Flash Report

June 30, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Global Equity Composite</b>	<b>155,349,470</b>	<b>10.0</b>	<b>10.0</b>	<b>-0.2</b>	<b>4.7</b>	<b>11.7</b>	<b>23.8</b>	<b>23.8</b>	<b>4.9</b>	--	--	<b>11.8</b>	<b>Oct-12</b>
MSCI ACWI				0.5	4.3	11.5	18.8	18.8	4.8	10.5	3.7	9.6	Oct-12
Thornburg Global Opportunities	62,877,863		4.1	-0.7	6.0	14.3	28.1	28.1	7.6	17.4	7.7	11.6	Oct-04
MSCI ACWI				0.5	4.3	11.5	18.8	18.8	4.8	10.5	3.7	7.0	Oct-04
Boston Partners Global Equity	92,459,315		6.0	0.1	3.8	9.8	--	--	--	--	--	16.5	Nov-16
MSCI ACWI				0.5	4.3	11.5	18.8	18.8	4.8	10.5	3.7	14.8	Nov-16
<b>Emerging Markets Equity</b>	<b>79,587,604</b>	<b>5.0</b>	<b>5.1</b>	<b>1.2</b>	<b>6.0</b>	<b>19.6</b>	<b>25.9</b>	<b>25.9</b>	<b>0.5</b>	--	--	<b>2.5</b>	<b>Oct-13</b>
MSCI Emerging Markets				1.0	6.3	18.4	23.7	23.7	1.1	4.0	1.9	3.0	Oct-13
Acadian Emerging Markets Equity	55,196,941		3.6	1.2	5.6	20.1	27.9	27.9	1.4	--	--	3.0	Dec-13
MSCI Emerging Markets				1.0	6.3	18.4	23.7	23.7	1.1	4.0	1.9	2.2	Dec-13
OFI Emerging Markets	24,390,663		1.6	1.2	7.0	18.8	22.8	22.8	-0.2	--	--	1.5	Jan-14
MSCI Emerging Markets				1.0	6.3	18.4	23.7	23.7	1.1	4.0	1.9	2.7	Jan-14
<b>Total Fixed Income Composite</b>	<b>338,837,504</b>	<b>23.0</b>	<b>21.8</b>	<b>0.0</b>	<b>1.7</b>	<b>3.9</b>	<b>2.1</b>	<b>2.1</b>	<b>0.8</b>	--	--	<b>0.9</b>	<b>Oct-12</b>
Total Fixed Income Custom Benchmark				0.0	1.8	3.5	0.7	0.7	0.7	1.1	3.9	0.8	Oct-12
<b>Core Fixed Income</b>	<b>277,137,071</b>	<b>19.0</b>	<b>17.9</b>	<b>-0.1</b>	<b>1.4</b>	<b>2.6</b>	<b>1.2</b>	<b>1.2</b>	<b>2.1</b>	<b>2.3</b>	--	<b>2.7</b>	<b>Dec-10</b>
BBgBarc US Aggregate TR				-0.1	1.4	2.3	-0.3	-0.3	2.5	2.2	4.5	3.0	Dec-10
Orleans Core Fixed Income	67,166,906		4.3	-0.2	1.5	2.3	0.5	0.5	2.3	2.5	4.8	5.8	Aug-92
BBgBarc US Aggregate TR				-0.1	1.4	2.3	-0.3	-0.3	2.5	2.2	4.5	5.5	Aug-92
Blackrock US Debt	148,887,976		9.6	-0.1	1.5	2.3	-0.3	-0.3	--	--	--	2.4	Nov-14
BBgBarc US Aggregate TR				-0.1	1.4	2.3	-0.3	-0.3	2.5	2.2	4.5	2.4	Nov-14
Standish	61,062,190		3.9	-0.1	1.2	3.6	6.7	6.7	--	--	--	2.5	Oct-15
3-Month LIBOR + 4%				0.4	1.3	2.6	5.1	5.1	4.6	4.5	5.0	4.9	Oct-15
<b>Emerging Markets Debt</b>	<b>61,700,433</b>	<b>4.0</b>	<b>4.0</b>	<b>0.2</b>	<b>2.9</b>	<b>11.0</b>	<b>6.4</b>	<b>6.4</b>	<b>-4.0</b>	--	--	<b>-3.2</b>	<b>Nov-13</b>
JP Morgan GBI EM Global Diversified TR USD				0.5	3.6	10.4	6.4	6.4	-2.8	-0.7	3.9	-1.9	Nov-13
Stone Harbor	61,700,433		4.0	0.2	2.9	11.0	6.4	6.4	-4.0	--	--	-3.2	Nov-13
JP Morgan GBI EM Global Diversified TR USD				0.5	3.6	10.4	6.4	6.4	-2.8	-0.7	3.9	-1.9	Nov-13

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Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Global Equity Composite and Total Fixed Income 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 going forward.

Global Equity Composite market value includes \$12,292.47 in a terminated manager account.



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June 30, 2017

# Firefighters' Retirement System of Louisiana

## Investment Performance Flash Report

June 30, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>GAA Composite</b>	<b>148,480,317</b>	<b>10.0</b>	<b>9.6</b>	<b>-0.5</b>	<b>1.8</b>	<b>5.4</b>	<b>7.8</b>	<b>7.8</b>	<b>1.8</b>	<b>--</b>	<b>--</b>	<b>2.9</b>	<b>Apr-14</b>
60% MSCI World (Net) / 40% CITI WGBI				0.2	3.6	8.2	8.8	8.8	2.9	6.7	4.1	3.8	Apr-14
Blackrock Global Allocation	78,233,417		5.0	0.3	3.1	7.7	12.3	12.3	3.3	--	--	4.1	Apr-14
60% MSCI World (Net) / 40% CITI WGBI				0.2	3.6	8.2	8.8	8.8	2.9	6.7	4.1	3.8	Apr-14
AQR Global Risk Premium – EL	41,615,218		2.7	-1.7	-0.2	2.2	0.7	0.7	-0.3	--	--	1.1	May-14
60% MSCI World (Net) / 40% CITI WGBI				0.2	3.6	8.2	8.8	8.8	2.9	6.7	4.1	3.6	May-14
Putnam Risk Parity	28,631,682		1.8	-0.8	1.1	4.1	6.9	6.9	1.1	--	--	1.1	Jul-14
60% MSCI World (Net) / 40% CITI WGBI				0.2	3.6	8.2	8.8	8.8	2.9	6.7	4.1	2.9	Jul-14
<b>Total Alternative Composite</b>	<b>163,901,402</b>	<b>10.0</b>	<b>10.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5.5</b>	<b>5.5</b>	<b>1.6</b>	<b>-1.2</b>	<b>-0.2</b>	<b>1.5</b>	<b>Jun-05</b>
<b>Private Equity Composite</b>	<b>48,571,203</b>	<b>4.0</b>	<b>3.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5.3</b>	<b>5.3</b>	<b>-1.1</b>	<b>-4.2</b>	<b>0.6</b>	<b>-4.0</b>	<b>Jul-05</b>
Cambridge Associates US All PE				0.0	0.0	4.3	13.3	13.3	8.4	12.7	9.0	12.4	Jul-05
Murphree Venture (\$2,000,000)	1,619,694		0.1	0.0	0.0	0.0	3.4	3.4	-0.9	4.6	0.2	0.0	Sep-05
Louisiana Fund I (\$1,000,000)	1,837,967		0.1	0.0	0.0	0.0	-7.0	-7.0	-4.3	-3.0	0.5	-6.6	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	1,935,456		0.1	0.0	0.0	0.0	6.4	6.4	3.7	7.9	6.1	5.3	Feb-06
Greenspring Associates (\$9,230,000)	4,606,156		0.3	0.0	0.0	0.0	6.6	6.6	9.7	15.6	11.0	6.5	Feb-06
DCM Private Equity II (\$7,500,000)	2,509,514		0.2	0.0	0.0	0.0	2.0	2.0	-6.5	-0.7	-0.6	-1.4	Feb-06
FECF II (\$20,000,000)	379,040		0.0	0.0	0.0	0.0	-44.3	-44.3	-26.2	-4.7	--	0.9	Mar-08
FECF III (\$20,000,000)	2,769,460		0.2	0.0	0.0	0.0	1.6	1.6	3.8	21.5	--	16.9	Jul-09
GA Crossover Fund (\$25,000,000)	5,418,630		0.3	0.0	0.0	0.0	15.0	15.0	19.2	26.7	--	16.7	Jan-08
CCMP Capital Investors III (\$15,000,000)	11,623,942		0.7	0.0	0.0	0.0	3.8	3.8	--	--	--	11.1	Oct-14
Landmark Equity Partners XV (\$25,000,000)	8,668,912		0.6	0.0	0.0	0.0	6.0	6.0	--	--	--	13.3	Dec-14
Harbourvest IV (\$20,000,000)	7,202,432		0.5	0.0	0.0	0.0	--	--	--	--	--	-1.4	Nov-16

Results for periods longer than one year are annualized. Results are preliminary and subject to change.

Fiscal YTD ends June 30th.

Harbourvest IV was funded 10/01/2016.

Private Equity valuations are as of 12/31/2016 adjusted for cash flows.

# Firefighters' Retirement System of Louisiana

## Investment Performance Flash Report

June 30, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Real Estate Composite</b>	<b>115,330,199</b>	<b>6.0</b>	<b>7.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5.5</b>	<b>5.5</b>	<b>4.7</b>	<b>6.4</b>	<b>--</b>	<b>4.9</b>	<b>Dec-09</b>
<i>NCREIF Property Index</i>				<i>0.0</i>	<i>0.0</i>	<i>1.6</i>	<i>5.1</i>	<i>5.1</i>	<i>9.5</i>	<i>10.1</i>	<i>6.2</i>	<i>10.7</i>	<i>Dec-09</i>
Americus Fund II (\$13,168,000)	280,856		0.0	0.0	0.0	0.0	6.5	6.5	-19.2	-10.3	0.6	0.9	Dec-05
Sentinel Real Estate Fund (\$30,000,000)	34,717,737		2.2	0.0	0.0	0.0	4.0	4.0	8.8	13.1	5.6	6.1	Feb-06
JP Morgan India (\$8,990,000)	2,869,371		0.2	0.0	0.0	0.0	-2.3	-2.3	-2.7	-1.8	-5.6	-12.4	Apr-07
Timbervest Crossover Fund (\$16,000,000)	9,361,447		0.6	0.0	0.0	0.0	-4.2	-4.2	-3.4	-2.1	--	-0.7	Apr-08
AEW Partners VI LP (\$20,000,000)	10,077,161		0.6	0.0	0.0	0.0	15.5	15.5	16.1	17.4	--	13.9	Mar-10
AEW Core Property (\$12,000,000)	13,914,779		0.9	0.0	0.0	0.0	2.1	2.1	--	--	--	7.1	May-15
FRS-GA (Georgia)	4,762,850		0.3	0.0	0.0	0.0	0.0	0.0	0.4	-2.7	--	-7.5	Jun-08
FRS-LB I (NLTP AZ)	4,463,550		0.3	0.0	0.0	0.0	0.0	0.0	1.3	0.8	-17.8	-17.7	Jun-07
FRS-LB III (ST George UT)	9,279,979		0.6	0.0	0.0	0.0	35.9	35.9	5.8	3.4	--	3.3	Jun-08
ASB Real Estate Fund	12,481,256		0.8	0.0	0.0	0.0	2.3	2.3	--	--	--	3.2	Jan-16
Heitman America Real Estate Trust	13,121,213		0.8	0.0	0.0	0.0	5.2	5.2	--	--	--	7.4	Nov-15
<b>Total Cash (\$9 MM)</b>	<b>10,977,422</b>	<b>--</b>	<b>0.7</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.6</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>	<b>0.7</b>	<b>2.9</b>	<b>Jun-92</b>
<i>91 Day T-Bills</i>				<i>0.1</i>	<i>0.2</i>	<i>0.4</i>	<i>0.5</i>	<i>0.5</i>	<i>0.2</i>	<i>0.2</i>	<i>0.4</i>	<i>2.5</i>	<i>Jun-92</i>

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Real Estate valuations are as of 12/31/2016 adjusted for cash flows.

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

# Firefighters' Retirement System of Louisiana

## Current Monthly Breakdown of Change in Value

June 30, 2017

### Total Cash Flow Summary

Month Ending June 30, 2017

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$54,553,555	\$0	\$0	\$0	\$0	\$643,386	\$55,196,941
Advisory Research SMID	\$32,306,778	\$0	\$0	\$0	\$0	\$437,709	\$32,744,486
AEW Core Property (\$12,000,000)	\$13,914,779	\$0	\$0	\$0	\$0	\$0	\$13,914,779
AEW Partners VI LP (\$20,000,000)	\$10,077,161	\$0	\$0	\$0	\$0	\$0	\$10,077,161
Americus Fund II (\$13,168,000)	\$280,856	\$0	\$0	\$0	\$0	\$0	\$280,856
AQR Global Risk Premium – EL	\$42,340,538	\$0	\$0	\$0	-\$32,945	-\$725,320	\$41,615,218
ASB Real Estate Fund	\$12,481,256	\$0	\$0	\$0	\$0	\$0	\$12,481,256
Blackrock Global Allocation	\$78,038,280	\$0	\$0	\$0	\$0	\$195,137	\$78,233,417
Blackrock US Debt	\$149,022,686	\$0	\$0	\$0	\$0	-\$134,711	\$148,887,976
Boston Partners Global Equity	\$92,310,327	\$0	\$0	\$0	-\$50,082	\$148,988	\$92,459,315
Cash/Clearing Account	\$8,621,370	\$1,544,571	-\$3,602,727	-\$2,058,156	\$0	\$5,300	\$6,568,514
CCMP Capital Investors III (\$15,000,000)	\$11,623,942	\$0	\$0	\$0	\$0	\$0	\$11,623,942
DCM Private Equity II (\$7,500,000)	\$2,509,514	\$0	\$0	\$0	\$0	\$0	\$2,509,514
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$2,197,956	\$0	-\$262,500	-\$262,500	\$0	\$0	\$1,935,456
Energy Opportunities Fund	\$15,497,642	\$0	\$0	\$0	\$0	-\$520,025	\$14,977,617
FECP II (\$20,000,000)	\$379,040	\$0	\$0	\$0	\$0	\$0	\$379,040
FECP III (\$20,000,000)	\$2,769,460	\$0	\$0	\$0	\$0	\$0	\$2,769,460
Fisher All Foreign Equity	\$124,322,053	\$0	\$0	\$0	\$0	\$530,397	\$124,852,450
FRS-GA (Georgia)	\$4,762,850	\$0	\$0	\$0	\$0	\$0	\$4,762,850
FRS-LB I (NLTP AZ)	\$4,463,550	\$0	\$0	\$0	\$0	\$0	\$4,463,550
FRS-LB III (ST George UT)	\$9,279,979	\$0	\$0	\$0	\$0	\$0	\$9,279,979
GA Crossover Fund (\$25,000,000)	\$5,418,630	\$0	\$0	\$0	\$0	\$0	\$5,418,630
Greenspring Associates (\$9,230,000)	\$4,606,156	\$0	\$0	\$0	\$0	\$0	\$4,606,156
Harbourvest IV (\$20,000,000)	\$7,202,432	\$0	\$0	\$0	\$0	\$0	\$7,202,432
Heitman America Real Estate Trust	\$13,121,213	\$0	\$0	\$0	\$0	\$0	\$13,121,213



# Firefighters' Retirement System of Louisiana

## Current Monthly Breakdown of Change in Value

June 30, 2017

	Month Ending June 30, 2017						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
JP Morgan India (\$8,990,000)	\$2,869,371	\$0	\$0	\$0	\$0	\$0	\$2,869,371
Landmark Equity Partners XV (\$25,000,000)	\$7,871,648	\$962,727	-\$165,463	\$797,264	\$0	\$0	\$8,668,912
Liquidating - BlackRock Global Focused	\$12,260	\$0	\$0	\$0	\$0	\$32	\$12,292
Louisiana Asset Management Pool	\$4,405,375	\$0	\$0	\$0	\$0	\$3,532	\$4,408,908
Louisiana Fund I (\$1,000,000)	\$1,837,967	\$0	\$0	\$0	\$0	\$0	\$1,837,967
LSV International Equity Value	\$122,510,042	\$0	\$0	\$0	\$0	\$1,540,479	\$124,050,521
Mellon Stock Index Fund	\$292,284,977	\$0	\$0	\$0	\$0	\$1,821,267	\$294,106,245
Murphree Venture (\$2,000,000)	\$1,619,694	\$0	\$0	\$0	\$0	\$0	\$1,619,694
OFI Emerging Markets	\$24,108,096	\$0	\$0	\$0	-\$17,480	\$282,567	\$24,390,663
Orleans Core Fixed Income	\$67,305,882	\$0	\$0	\$0	\$0	-\$118,976	\$67,186,906
Putnam Risk Parity	\$28,869,180	\$0	\$0	\$0	-\$17,179	-\$237,498	\$28,631,682
Rothschild U.S. SMID Core	\$62,638,277	\$0	\$0	\$0	-\$101,889	\$1,452,740	\$64,091,017
Sentinel Real Estate Fund (\$30,000,000)	\$34,717,737	\$0	\$0	\$0	\$0	\$0	\$34,717,737
Standish	\$61,113,997	\$0	\$0	\$0	\$0	-\$51,807	\$61,062,190
Stone Harbor	\$61,559,885	\$0	\$0	\$0	-\$43,704	\$140,548	\$61,700,433
Thornburg Global Opportunities	\$63,349,886	\$0	\$0	\$0	\$0	-\$472,023	\$62,877,863
Timbervest Crossover Fund (\$16,000,000)	\$9,361,447	\$0	\$0	\$0	\$0	\$0	\$9,361,447
<b>Total</b>	<b>\$1,548,537,724</b>	<b>\$2,507,298</b>	<b>-\$4,030,690</b>	<b>-\$1,523,392</b>	<b>-\$263,280</b>	<b>\$4,941,722</b>	<b>\$1,551,956,055</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 Fiscal YTD Breakdown of Change in Value

June 30, 2017

### Total Cash Flow Summary

Fiscal YTD Ending June 30, 2017

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$34,944,517	\$20,000,000	-\$10,000,000	\$10,000,000	-\$281,147	\$10,252,424	\$55,196,941
Advisory Research SMID	\$32,306,260	\$0	-\$5,000,000	-\$5,000,000	-\$236,434	\$5,438,226	\$32,744,486
AEW Core Property (\$12,000,000)	\$13,634,845	\$0	\$0	\$0	\$0	\$279,934	\$13,914,779
AEW Partners VI LP (\$20,000,000)	\$12,151,343	\$0	-\$3,940,536	-\$3,940,536	\$0	\$1,866,354	\$10,077,161
Americus Fund II (\$13,168,000)	\$582,381	\$0	-\$336,600	-\$336,600	\$0	\$35,075	\$280,856
AQR Global Risk Premium – EL	\$41,311,508	\$0	\$0	\$0	-\$391,328	\$303,710	\$41,615,218
ASB Real Estate Fund	\$12,168,888	\$68,413	-\$34,328	\$34,085	\$0	\$278,283	\$12,481,256
Blackrock Global Allocation	\$69,213,303	\$471,673	\$0	\$471,673	-\$471,673	\$8,548,441	\$78,233,417
Blackrock US Debt	\$147,959,644	\$9,857,353	-\$8,500,000	\$1,357,353	-\$57,353	-\$429,021	\$148,887,976
Boston Partners Global Equity	--	\$80,939,406	-\$195,247	\$80,744,159	-\$313,647	\$11,715,156	\$92,459,315
Cash/Clearing Account	\$4,966,116	\$145,728,417	-\$144,166,875	\$1,561,542	\$0	\$40,856	\$6,568,514
CCMP Capital Investors III (\$15,000,000)	\$8,812,564	\$2,448,518	\$0	\$2,448,518	\$0	\$362,860	\$11,623,942
DCM Private Equity II (\$7,500,000)	\$2,933,335	-\$183,532	-\$299,244	-\$482,777	\$0	\$58,955	\$2,509,514
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$2,704,493	\$0	-\$937,500	-\$937,500	\$0	\$168,463	\$1,935,456
Energy Opportunities Fund	\$22,851,429	\$0	-\$5,000,000	-\$5,000,000	-\$236,105	-\$2,873,812	\$14,977,617
FECP II (\$20,000,000)	\$1,117,338	\$0	-\$326,273	-\$326,273	\$0	-\$412,025	\$379,040
FECP III (\$20,000,000)	\$3,122,710	-\$102,632	-\$298,461	-\$401,093	\$0	\$47,843	\$2,769,460
Fisher All Foreign Equity	\$99,751,388	\$0	-\$166,173	-\$166,173	-\$430,566	\$25,267,235	\$124,852,450
FRS-GA (Georgia)	\$4,762,850	\$0	\$0	\$0	\$0	\$0	\$4,762,850
FRS-LB I (NLTP AZ)	\$4,463,550	\$0	\$0	\$0	\$0	\$0	\$4,463,550
FRS-LB III (ST George UT)	\$4,594,816	\$2,232,883	\$0	\$2,232,883	\$0	\$2,452,280	\$9,279,979
GA Crossover Fund (\$25,000,000)	\$11,666,189	\$0	-\$7,910,991	-\$7,910,991	\$0	\$1,663,432	\$5,418,630
Greenspring Associates (\$9,230,000)	\$5,398,918	\$0	-\$1,122,290	-\$1,122,290	\$0	\$329,528	\$4,606,156
Harbourvest IV (\$20,000,000)	--	\$7,250,000	\$0	\$7,250,000	\$0	-\$47,568	\$7,202,432
Heitman America Real Estate Trust	\$12,474,049	\$0	\$0	\$0	\$0	\$647,164	\$13,121,213

# Firefighters' Retirement System of Louisiana

## Current Fiscal YTD Breakdown of Change in Value

June 30, 2017

	Fiscal YTD Ending June 30, 2017						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
JP Morgan India (\$8,990,000)	\$4,471,910	\$0	-\$1,501,350	-\$1,501,350	\$0	-\$101,189	\$2,869,371
Landmark Equity Partners XV (\$25,000,000)	\$7,246,880	\$2,988,232	-\$1,983,402	\$1,004,830	\$0	\$417,202	\$8,668,912
Liquidating - BlackRock Global Focused	\$38,504	\$926	-\$30,796	-\$29,869	\$0	\$3,658	\$12,292
Louisiana Asset Management Pool	\$4,379,144	\$0	\$0	\$0	\$0	\$29,764	\$4,408,908
Louisiana Fund I (\$1,000,000)	\$1,976,804	\$0	\$0	\$0	\$0	-\$138,837	\$1,837,967
LSV International Equity Value	\$96,703,747	\$0	\$0	\$0	-\$425,922	\$27,346,773	\$124,050,521
Mellon Stock Index Fund	\$258,331,649	\$56,434	-\$9,500,001	-\$9,443,567	-\$75,457	\$45,218,163	\$294,106,245
Murphree Venture (\$2,000,000)	\$1,566,381	\$0	\$0	\$0	\$0	\$53,313	\$1,619,694
OFI Emerging Markets	\$19,860,080	\$0	\$0	\$0	-\$189,346	\$4,530,583	\$24,390,663
Orleans Core Fixed Income	\$66,864,691	\$0	\$0	\$0	-\$94,358	\$322,215	\$67,186,906
Putnam Risk Parity	\$26,791,354	\$0	\$0	\$0	-\$167,668	\$1,840,328	\$28,631,682
Rothschild U.S. SMID Core	\$52,150,941	\$0	\$0	\$0	-\$382,158	\$11,940,075	\$64,091,017
Sentinel Real Estate Fund (\$30,000,000)	\$35,289,933	\$0	-\$1,957,669	-\$1,957,669	\$0	\$1,385,473	\$34,717,737
Standish	\$49,048,765	\$8,688,604	\$0	\$8,688,604	-\$188,604	\$3,324,821	\$61,062,190
Stone Harbor	\$51,284,146	\$7,000,000	\$0	\$7,000,000	-\$451,321	\$3,416,286	\$61,700,433
Thornburg Global Opportunities	\$61,655,743	\$0	-\$14,939,406	-\$14,939,406	-\$343,209	\$16,161,525	\$62,877,863
Timbervest Crossover Fund (\$16,000,000)	\$10,574,135	\$0	-\$784,000	-\$784,000	\$0	-\$428,688	\$9,361,447
Z Terminated Mellon Global Equity	\$63,767,414	\$5,854	-\$66,186,500	-\$66,180,646	-\$5,854	\$2,413,232	--
<b>Total</b>	<b>\$1,365,894,658</b>	<b>\$287,450,548</b>	<b>-\$285,117,641</b>	<b>\$2,332,908</b>	<b>-\$4,742,150</b>	<b>\$183,728,489</b>	<b>\$1,551,956,055</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 Breakdown of Change in Value

### Total Cash Flow Summary

	Ending June 30, 2017					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Z Terminated - Commonwealth	--	\$30,000,000	-\$9,671,012	\$20,328,988	-\$20,328,988	--
Acadian Emerging Markets Equity	--	\$60,000,000	-\$10,000,000	\$50,000,000	\$5,196,941	\$55,196,941
Advisory Research SMID	--	\$34,937,469	-\$47,800,000	-\$12,862,531	\$45,607,017	\$32,744,486
AEW Core Property (\$12,000,000)	--	\$12,000,000	\$0	\$12,000,000	\$1,914,779	\$13,914,779
AEW Partners VI LP (\$20,000,000)	--	\$18,420,450	-\$20,480,298	-\$2,059,848	\$12,137,009	\$10,077,161
Americus Fund II (\$13,168,000)	--	\$12,044,774	-\$15,990,930	-\$3,946,156	\$4,227,012	\$280,856
AQR Global Risk Premium – EL	--	\$40,100,000	\$0	\$40,100,000	\$1,515,218	\$41,615,218
ASB Real Estate Fund	--	\$12,073,746	-\$34,328	\$12,039,418	\$441,838	\$12,481,256
Blackrock Global Allocation	--	\$67,785,014	\$0	\$67,785,014	\$10,448,403	\$78,233,417
Blackrock US Debt	--	\$198,381,330	-\$58,500,000	\$139,881,330	\$9,006,645	\$148,887,976
Boston Partners Global Equity	--	\$80,939,406	-\$195,247	\$80,744,159	\$11,715,156	\$92,459,315
Cash/Clearing Account	--	\$2,021,468,330	-\$2,018,055,615	\$3,412,714	\$3,155,800	\$6,568,514
CCMP Capital Investors III (\$15,000,000)	--	\$9,798,330	-\$129,294	\$9,669,036	\$1,954,906	\$11,623,942
DCM Private Equity II (\$7,500,000)	--	\$8,156,786	-\$5,989,216	\$2,167,570	\$341,944	\$2,509,514
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	\$5,476,825	-\$7,275,000	-\$1,798,175	\$3,733,631	\$1,935,456
Energy Opportunities Fund	--	\$50,000,000	-\$33,002,876	\$16,997,124	-\$2,019,507	\$14,977,617
FECF II (\$20,000,000)	--	\$19,188,998	-\$21,826,673	-\$2,637,675	\$3,016,715	\$379,040
FECF III (\$20,000,000)	--	\$19,103,727	-\$28,554,534	-\$9,450,807	\$12,220,267	\$2,769,460
Fisher All Foreign Equity	--	\$117,000,000	-\$55,331,790	\$61,668,210	\$63,184,240	\$124,852,450
FRS-GA (Georgia)	--	\$9,416,075	\$0	\$9,416,075	-\$4,653,225	\$4,762,850
FRS-LB I (NLTP AZ)	--	\$24,900,208	\$0	\$24,900,208	-\$20,436,658	\$4,463,550
FRS-LB III (ST George UT)	--	\$6,878,923	\$0	\$6,878,923	\$2,401,056	\$9,279,979
GA Crossover Fund (\$25,000,000)	--	\$25,000,000	-\$45,664,212	-\$20,664,212	\$26,082,842	\$5,418,630
Greenspring Associates (\$9,230,000)	--	\$8,491,600	-\$11,436,727	-\$2,945,127	\$7,551,283	\$4,606,156
Harbourvest IV (\$20,000,000)	--	\$7,250,000	\$0	\$7,250,000	-\$47,568	\$7,202,432

Cash flow statistics exclude management fees and expenses.

## Firefighters' Retirement System of Louisiana

### Since Inception Breakdown of Change in Value

	Beginning Market Value	Ending June 30, 2017				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Heitman America Real Estate Trust	--	\$12,000,000	\$0	\$12,000,000	\$1,121,213	\$13,121,213
JP Morgan India (\$8,990,000)	--	\$8,307,355	-\$3,757,352	\$4,550,003	-\$1,680,632	\$2,869,371
Landmark Equity Partners XV (\$25,000,000)	--	\$12,546,561	-\$5,716,215	\$6,830,346	\$1,838,566	\$8,668,912
Liquidating - BlackRock Global Focused	--	\$46,832,890	-\$59,568,544	-\$12,735,654	\$12,747,947	\$12,292
Louisiana Asset Management Pool	--	\$943,990,965	-\$944,296,689	-\$305,724	\$4,714,632	\$4,408,908
Louisiana Fund I (\$1,000,000)	--	\$1,010,000	\$0	\$1,010,000	\$827,967	\$1,837,967
LSV International Equity Value	--	\$103,500,000	-\$17,281,912	\$86,218,088	\$37,832,432	\$124,050,521
Mellon Stock Index Fund	--	\$275,330,679	-\$89,500,001	\$185,830,678	\$108,275,567	\$294,106,245
Murphree Venture (\$2,000,000)	--	\$2,058,578	-\$848,459	\$1,210,119	\$409,575	\$1,619,694
OFI Emerging Markets	--	\$31,500,000	-\$8,500,000	\$23,000,000	\$1,390,663	\$24,390,663
Orleans Core Fixed Income	\$0	\$126,099,081	-\$91,022,995	\$35,076,086	\$32,110,820	\$67,186,906
Putnam Risk Parity	--	\$27,400,000	\$0	\$27,400,000	\$1,231,682	\$28,631,682
Rothschild U.S. SMID Core	--	\$55,500,000	\$0	\$55,500,000	\$8,591,017	\$64,091,017
Sentinel Real Estate Fund (\$30,000,000)	--	\$30,000,000	-\$14,799,086	\$15,200,914	\$19,516,824	\$34,717,737
Standish	--	\$58,809,506	\$0	\$58,809,506	\$2,252,684	\$61,062,190
Stone Harbor	--	\$70,000,000	\$0	\$70,000,000	-\$8,299,567	\$61,700,433
Thornburg Global Opportunities	--	\$47,500,000	-\$70,301,715	-\$22,801,715	\$85,679,578	\$62,877,863
Timbervest Crossover Fund (\$16,000,000)	--	\$13,600,000	-\$6,352,000	\$7,248,000	\$2,113,447	\$9,361,447

Cash flow statistics exclude management fees and expenses.

## Information Disclaimer and Reporting Methodology

### 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.
- 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.