



NEPC, LLC

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**Firefighters' Retirement System of Louisiana**

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**Investment Market Update**  
**(As of February 28, 2017)**

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## Index Performance Summary as of 02/28/2017

	2009	2010	2011	2012	2013	2014	2015	2016	Jan	Feb	YTD
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	5.5%	3.1%	8.7%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	2.0%	3.9%	6.0%
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	1.9%	4.0%	5.9%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	2.7%	2.8%	5.6%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	4.9%	0.4%	5.3%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	2.9%	1.4%	4.4%
<b>JPM GBI-EM Global Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	2.3%	1.8%	4.1%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	1.4%	2.4%	3.8%
<b>FTSE NAREIT Equity REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	0.1%	3.4%	3.5%
<b>JPM EMBI Global Diversified</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	1.4%	2.0%	3.5%
<b>Barclays US Corporate HY</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	1.5%	1.5%	2.9%
<b>Barclays US STRIPS 20+ Yr</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	0.5%	2.3%	2.8%
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	0.4%	1.9%	2.3%
<b>BC US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	0.2%	2.0%	2.3%
<b>BC US Govt/Credit Long</b>	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	6.7%	0.3%	1.8%	2.1%
<b>BC Global Agg</b>	-6.5%	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	1.1%	0.5%	1.6%
<b>BC Municipal</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	0.7%	0.7%	1.4%
<b>Barclays TIPS</b>	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	0.8%	0.5%	1.3%
<b>CS Leveraged Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	0.5%	0.6%	1.1%
<b>Barclays US Agg Bond</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	0.2%	0.7%	0.9%
<b>Barclays US Agg Interm</b>	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.0%	0.2%	0.5%	0.6%
<b>BC US Govt/Credit 1-3 Yr</b>	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.3%	0.2%	0.2%	0.4%
<b>Bloomberg Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	0.1%	0.2%	0.3%
<b>Credit Suisse Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	0.7%	-	-

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



### Market Environment

Global equities rallied in February as international stocks got a boost from positive economic data and domestic equities were bolstered by expectations of corporate tax reform and deregulation. The S&P 500 returned 4.0% as major US indices hit record highs following President Trump's address to a joint session of Congress as investors interpreted a more measured approach from the administration. The MSCI EAFE Index returned 1.4% as a depreciating euro moderated gains but European companies benefited from upward earnings revisions. The MSCI EM Index gained 3.1% last month amid broad currency appreciation and a rally in Indian equity markets as they continued to recover from a late 2016 sell-off induced by the Modi administration's demonetization program.

Despite the market pricing in an increased probability of a Fed rate hike in March, yields across the Treasury curve fell slightly in February – providing a tailwind to US fixed-income assets. The Barclays US Aggregate Bond Index returned 0.7% and the Barclays Long Treasury Index was up 1.6% on the month. Credit markets continued to rally with the Barclays High Yield Index earning 1.5% as spreads tightened. Global issues were also positive in February, supported by falling German bund yields. The JP Morgan GBI-EM Global Diversified Index gained 1.8% aided by appreciating emerging market currencies, led by the Mexican peso.

We remind investors to remain disciplined in their rebalancing approach to risky assets. While the US economy appears to be on solid ground, investors have pushed US equity valuations higher amid expectations of easing regulations and tax cuts despite uncertainty around the extent and implementation of such reforms. At NEPC, we favor an overweight to international developed and emerging market equities. In Europe, we continue to observe improving economic fundamentals and a recovery in credit growth in spite of looming political uncertainties. While the case for emerging markets varies across countries, we broadly see attractive valuations, compelling long-term economic growth and renewed asset flows. In fixed income, given compressed bond yields globally, we advocate investors shift some exposure to TIPS as prospects for higher inflation have increased. We also encourage those who have benefited from the year-long spread compression in high yield to shift their exposure to a more flexible credit mandate.



# Firefighters' Retirement System of Louisiana Investment Performance Flash Report

February 28, 2017

## Investment Performance Summary - Net of Fees

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Total Plan Composite</b>	<b>1,475,276,178</b>	<b>100.0</b>	<b>100.0</b>	<b>1.8</b>	<b>3.6</b>	<b>9.1</b>	<b>15.6</b>	<b>2.9</b>	<b>4.2</b>	<b>2.6</b>	<b>5.7</b>	<b>Sep-92</b>
<i>Policy Index</i>				2.0	4.0	8.1	16.1	5.2	--	--	--	Sep-92
<i>Allocation Index</i>				1.8	3.6	8.0	16.0	4.9	--	--	--	Sep-92
<b>Total Equity Composite</b>	<b>844,748,667</b>	<b>58.0</b>	<b>57.3</b>	<b>2.4</b>	<b>5.1</b>	<b>15.0</b>	<b>23.7</b>	<b>5.1</b>	<b>8.8</b>	<b>5.2</b>	<b>7.2</b>	<b>Sep-92</b>
<i>MSCI/ACWI</i>				2.8	5.6	12.5	22.1	4.8	8.3	4.1	7.4	Sep-92
<b>Domestic Equity Composite</b>	<b>410,998,396</b>	<b>27.0</b>	<b>27.9</b>	<b>3.2</b>	<b>4.8</b>	<b>15.2</b>	<b>26.4</b>	<b>7.8</b>	<b>10.8</b>	<b>7.2</b>	<b>7.8</b>	<b>Sep-92</b>
<i>Russell 3000</i>				3.7	5.7	15.0	26.3	9.9	13.9	7.6	9.7	Sep-92
<i>Mellon Stock Index Fund</i>	284,978,728		19.3	4.0	5.9	14.2	25.0	10.6	--	--	11.6	Nov-13
<i>S&amp;P 500</i>				4.0	5.9	14.2	25.0	10.6	14.0	7.6	11.7	Nov-13
<b>SMID Cap Composite</b>	<b>126,019,668</b>	<b>8.0</b>	<b>8.5</b>	<b>1.5</b>	<b>2.4</b>	<b>17.4</b>	<b>30.3</b>	<b>1.3</b>	--	--	<b>7.6</b>	<b>Oct-12</b>
<i>Russell 2500</i>				2.4	3.8	17.4	31.7	7.3	13.1	7.8	14.1	Oct-12
<i>Energy Opportunities Fund</i>	24,401,327		1.7	-4.8	-4.8	6.8	30.6	-9.9	-4.0	--	-0.8	Jul-07
<i>OlH/XLE Blended Energy Benchmark</i>				-2.9	-4.5	8.6	32.5	-8.3	-2.2	--	-0.7	Jul-07
<b>SMID Cap Composite ex Energy</b>	<b>101,618,341</b>	<b>--</b>	<b>6.9</b>	<b>3.2</b>	<b>4.3</b>	<b>20.3</b>	<b>30.3</b>	<b>5.1</b>	--	--	<b>11.1</b>	<b>Oct-12</b>
<i>Russell 2500</i>				2.4	3.8	17.4	31.7	7.3	13.1	7.8	14.1	Oct-12
<i>Advisory Research SMID</i>	39,206,113		2.7	3.1	4.0	21.4	32.4	3.1	8.6	--	13.3	Jun-09
<i>Russell 2500 Value</i>				1.9	2.4	18.9	35.2	8.3	13.7	7.0	16.4	Jun-09
<i>Rothschild U.S. SMID Core</i>	62,412,227		4.2	3.2	4.6	19.7	29.0	--	--	--	7.3	Jul-15
<i>Russell 2500</i>				2.4	3.8	17.4	31.7	7.3	13.1	7.8	7.7	Jul-15
<b>International Equity Composite</b>	<b>224,870,772</b>	<b>16.0</b>	<b>15.2</b>	<b>1.5</b>	<b>4.8</b>	<b>14.5</b>	<b>20.8</b>	<b>0.8</b>	--	--	<b>5.8</b>	<b>Oct-12</b>
<i>MSCI/ACWI ex USA</i>				1.6	5.2	11.1	19.3	-0.2	3.5	1.4	4.5	Oct-12
<i>LSV International Equity Value</i>	114,174,891		7.7	1.8	5.1	18.1	24.7	1.6	5.3	1.2	5.7	Oct-04
<i>MSCI Custom Benchmark</i>				1.6	5.2	11.1	19.3	-0.2	3.5	0.5	4.7	Oct-04
<i>Fisher All Foreign Equity</i>	110,695,880		7.5	1.2	4.5	11.0	17.0	0.0	3.6	2.9	6.4	Oct-04
<i>MSCI/ACWI ex USA</i>				1.6	5.2	11.1	19.3	-0.2	3.5	1.4	5.6	Oct-04

Returns are net of manager fees.  
Results for periods longer than one year are annualized. Results are preliminary and subject to change.  
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

February 28, 2017

# Firefighters' Retirement System of Louisiana Investment Performance Flash Report

February 28, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Global Equity Composite</b>	<b>145,839,097</b>	<b>10.0</b>	<b>9.9</b>	<b>1.7</b>	<b>4.8</b>	<b>16.2</b>	<b>19.2</b>	<b>4.7</b>	--	--	<b>11.2</b>	<b>Oct-12</b>
MSCI ACWI				2.8	5.6	12.5	22.1	4.8	8.3	4.1	9.0	Oct-12
Thornburg Global Opportunities	72,438,617		4.9	0.6	4.8	17.5	15.8	7.7	13.5	8.4	11.2	Oct-04
MSCI ACWI				2.8	5.6	12.5	22.1	4.8	8.3	4.1	6.8	Oct-04
Boston Partners Global Equity	73,392,312		5.0	2.7	4.8	--	--	--	--	--	11.3	Nov-16
MSCI ACWI				2.8	5.6	12.5	22.1	4.8	8.3	4.1	8.7	Nov-16
<b>Emerging Markets Equity</b>	<b>63,040,402</b>	<b>5.0</b>	<b>4.3</b>	<b>2.8</b>	<b>9.2</b>	<b>15.0</b>	<b>29.9</b>	<b>1.0</b>	--	--	<b>0.1</b>	<b>Oct-13</b>
MSCI Emerging Markets				3.1	8.7	13.6	29.5	1.4	-0.4	2.9	0.7	Oct-13
Acadian Emerging Markets Equity	41,122,200		2.8	3.4	10.6	17.7	33.8	2.5	--	--	0.7	Dec-13
MSCI Emerging Markets				3.1	8.7	13.6	29.5	1.4	-0.4	2.9	-0.3	Dec-13
OFI Emerging Markets	21,918,202		1.5	1.7	6.8	10.4	23.2	-0.6	--	--	-1.7	Jan-14
MSCI Emerging Markets				3.1	8.7	13.6	29.5	1.4	-0.4	2.9	0.2	Jan-14
<b>Total Fixed Income Composite</b>	<b>306,140,221</b>	<b>24.0</b>	<b>20.8</b>	<b>1.0</b>	<b>1.6</b>	<b>-0.2</b>	<b>4.5</b>	<b>1.0</b>	--	--	<b>0.4</b>	<b>Oct-12</b>
Total Fixed Income Custom Benchmark				0.8	1.4	-1.4	3.1	1.1	1.0	3.6	0.4	Oct-12
<b>Core Fixed Income</b>	<b>254,545,262</b>	<b>20.0</b>	<b>17.3</b>	<b>0.7</b>	<b>0.9</b>	<b>-0.4</b>	<b>2.9</b>	<b>2.2</b>	<b>2.3</b>	--	<b>2.6</b>	<b>Dec-10</b>
BBgBarc US Aggregate TR				0.7	0.9	-1.7	1.4	2.6	2.2	4.3	3.0	Dec-10
Orleans Core Fixed Income	66,281,172		4.5	0.8	0.9	-0.9	3.8	2.5	2.3	4.6	5.8	Aug-92
BBgBarc US Aggregate TR				0.7	0.9	-1.7	1.4	2.6	2.2	4.3	5.5	Aug-92
Blackrock US Debt	137,039,250		9.3	0.7	0.9	-1.7	1.4	--	--	--	2.1	Nov-14
BBgBarc US Aggregate TR				0.7	0.9	-1.7	1.4	2.6	2.2	4.3	2.1	Nov-14
Standish	51,224,840		3.5	0.7	1.1	4.2	6.2	--	--	--	1.4	Oct-15
3-Month LIBOR + 4%				0.4	0.8	3.3	4.9	4.5	4.4	5.2	4.8	Oct-15
<b>Emerging Markets Debt</b>	<b>51,594,959</b>	<b>4.0</b>	<b>3.5</b>	<b>2.2</b>	<b>4.9</b>	<b>0.6</b>	<b>13.5</b>	<b>-3.7</b>	--	--	<b>-5.1</b>	<b>Nov-13</b>
JP Morgan GBI EM Global Diversified TR USD				1.8	4.1	0.4	12.4	-2.5	-2.5	4.1	-3.8	Nov-13
Stone Harbor	51,594,959		3.5	2.2	4.9	0.6	13.5	-3.7	--	--	-5.1	Nov-13
JP Morgan GBI EM Global Diversified TR USD				1.8	4.1	0.4	12.4	-2.5	-2.5	4.1	-3.8	Nov-13

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

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 \$8,012.23 in a terminated manager account.

Mellon Global Equity was liquidated 10/28/2016. Liquidation settled on 11/01/2016.

Boston Partners Global Equity was funded 11/02/2016.



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February 28, 2017

# Firefighters' Retirement System of Louisiana

## Investment Performance Flash Report

February 28, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>GAA Composite</b>	<b>145,832,140</b>	<b>10.0</b>	<b>9.9</b>	<b>2.3</b>	<b>3.7</b>	<b>6.0</b>	<b>13.2</b>	--	--	--	<b>2.6</b>	<b>Apr-14</b>
60% MSCI World (Net) / 40% CITI WGBI				1.8	3.7	4.3	11.9	2.7	5.4	4.1	2.8	Apr-14
Blackrock Global Allocation	75,150,195		5.1	2.0	3.8	8.2	13.9	--	--	--	3.3	Apr-14
60% MSCI World (Net) / 40% CITI WGBI				1.8	3.7	4.3	11.9	2.7	5.4	4.1	2.8	Apr-14
AQR Global Risk Premium – EL	42,340,538		2.9	3.0	4.0	2.5	10.9	--	--	--	1.9	May-14
60% MSCI World (Net) / 40% CITI WGBI				1.8	3.7	4.3	11.9	2.7	5.4	4.1	2.5	May-14
Putnam Risk Parity	28,341,407		1.9	2.3	3.1	5.8	15.0	--	--	--	0.8	Jul-14
60% MSCI World (Net) / 40% CITI WGBI				1.8	3.7	4.3	11.9	2.7	5.4	4.1	1.6	Jul-14
<b>Total Alternative Composite</b>	<b>170,143,193</b>	<b>8.0</b>	<b>11.5</b>	<b>0.0</b>	<b>0.0</b>	<b>3.3</b>	<b>5.2</b>	<b>-2.9</b>	<b>-1.7</b>	<b>0.2</b>	<b>1.4</b>	<b>Jun-05</b>
<b>Private Equity Composite</b>	<b>52,142,058</b>	<b>4.0</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>1.7</b>	<b>4.5</b>	<b>-11.3</b>	<b>-4.4</b>	<b>0.1</b>	<b>-4.6</b>	<b>Jul-05</b>
Cambridge Associates US All PE				0.0	0.0	3.8	8.1	8.2	11.9	9.5	11.9	Jul-05
Murphree Venture (\$2,000,000)	776,706		0.1	0.0	0.0	8.2	-50.9	-22.3	-11.3	-6.8	-6.3	Sep-05
Louisiana Fund I (\$1,000,000)	1,973,294		0.1	0.0	0.0	-0.2	-5.5	-2.1	1.3	0.3	-6.2	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	2,538,093		0.2	0.0	0.0	4.9	1.5	4.1	9.4	6.0	5.3	Feb-06
Greenspring Associates (\$9,230,000)	4,575,635		0.3	0.0	0.0	6.0	-4.7	13.1	17.6	11.0	6.6	Feb-06
DCM Private Equity II (\$7,500,000)	2,699,470		0.2	0.0	0.0	1.7	-6.0	-5.3	0.1	-0.7	-1.5	Feb-06
FECF II (\$20,000,000)	604,912		0.0	0.0	0.0	-19.5	-37.1	-3.7	4.2	--	5.2	Mar-08
FECF III (\$20,000,000)	2,843,485		0.2	0.0	0.0	0.6	7.8	11.4	24.3	--	17.6	Jul-09
GA Crossover Fund (\$25,000,000)	10,983,733		0.7	0.0	0.0	0.1	18.2	17.8	24.6	--	15.6	Jan-08
CCMP Capital Investors III (\$15,000,000)	9,918,396		0.7	0.0	0.0	2.2	19.7	--	--	--	12.1	Oct-14
Landmark Equity Partners XV (\$25,000,000)	7,978,334		0.5	0.0	0.0	2.5	5.1	--	--	--	13.7	Dec-14
Harbourvest IV (\$20,000,000)	7,250,000		0.5	0.0	0.0	--	--	--	--	--	0.0	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 09/30/2016 adjusted for cash flows.

# Firefighters' Retirement System of Louisiana

## Investment Performance Flash Report

February 28, 2017

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Real Estate Composite</b>	<b>118,001,134</b>	<b>4.0</b>	<b>8.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.9</b>	<b>5.5</b>	<b>5.3</b>	<b>5.5</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>3.5</i>	<i>8.0</i>	<i>11.0</i>	<i>10.9</i>	<i>6.9</i>	<i>10.9</i>	<i>Dec-09</i>
Americus Fund II (\$13,168,000)	261,766		0.0	0.0	0.0	2.9	-22.9	-21.0	-9.6	-0.2	0.6	Dec-05
Sentinel Real Estate Fund (\$30,000,000)	34,677,503		2.4	0.0	0.0	1.7	5.5	10.0	14.8	5.8	6.1	Feb-06
JP Morgan India (\$8,990,000)	4,579,459		0.3	0.0	0.0	2.4	-0.7	1.0	-0.9	--	-12.3	Apr-07
Timbervest Crossover Fund (\$16,000,000)	10,097,564		0.7	0.0	0.0	-0.9	-0.5	-2.3	-0.7	--	-0.4	Apr-08
AEW Partners VI LP (\$20,000,000)	10,953,932		0.7	0.0	0.0	7.1	9.0	16.6	16.5	--	13.3	Mar-10
AEW Core Property (\$12,000,000)	13,825,609		0.9	0.0	0.0	1.4	5.5	--	--	--	8.0	May-15
FRS-GA (Georgia)	4,762,850		0.3	0.0	0.0	0.0	0.2	-4.4	-2.7	--	-7.8	Jun-08
FRS-LB I (NLTP AZ)	4,463,550		0.3	0.0	0.0	0.0	-0.4	1.3	-26.8	--	-18.2	Jun-07
FRS-LB III (ST George UT)	9,279,979		0.6	0.0	0.0	35.9	18.3	5.8	2.3	--	3.4	Jun-08
ASB Real Estate Fund	12,384,066		0.8	0.0	0.0	1.5	4.0	--	--	--	3.4	Jan-16
Heitman America Real Estate Trust	12,714,856		0.9	0.0	0.0	1.9	5.4	--	--	--	6.8	Nov-15
<b>Total Cash (\$9 MM)</b>	<b>8,411,957</b>	<b>--</b>	<b>0.6</b>	<b>0.0</b>	<b>0.1</b>	<b>0.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>0.8</b>	<b>2.9</b>	<b>Jun-92</b>
<i>91 Day T-Bills</i>				<i>0.0</i>	<i>0.1</i>	<i>0.3</i>	<i>0.3</i>	<i>0.1</i>	<i>0.1</i>	<i>0.6</i>	<i>2.5</i>	<i>Jun-92</i>

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

Fiscal YTD ends June 30th.

Real Estate valuations are as of 09/30/2016 adjusted for cash flows.

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



NEPC, LLC

February 28, 2017

# Firefighters' Retirement System of Louisiana

## Current Monthly Breakdown of Change in Value

February 28, 2017

### Total Cash Flow Summary

Month Ending February 28, 2017

	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$39,784,238	\$0	\$0	\$0	-\$70,712	\$1,337,962	\$41,122,200
Advisory Research SMID	\$38,020,253	\$0	\$0	\$0	-\$62,221	\$1,185,860	\$39,206,113
AEW Core Property (\$12,000,000)	\$13,825,609	\$0	\$0	\$0	\$0	\$0	\$13,825,609
AEW Partners VI LP (\$20,000,000)	\$10,953,932	\$0	\$0	\$0	\$0	\$0	\$10,953,932
Americus Fund II (\$13,168,000)	\$558,766	-\$297,000	\$0	-\$297,000	\$0	\$0	\$261,766
AQR Global Risk Premium – EL	\$41,116,561	\$0	\$0	\$0	-\$33,520	\$1,223,977	\$42,340,538
ASB Real Estate Fund	\$12,384,066	-\$34,328	\$34,328	\$0	\$0	\$0	\$12,384,066
Blackrock Global Allocation	\$73,674,327	\$0	\$0	\$0	\$0	\$1,475,868	\$75,150,195
Blackrock US Debt	\$136,115,594	\$0	\$0	\$0	\$0	\$923,656	\$137,039,250
Boston Partners Global Equity	\$71,524,814	-\$73,608	\$0	-\$73,608	-\$39,754	\$1,941,107	\$73,392,312
Cash/Clearing Account	\$5,990,591	-\$2,834,875	\$858,206	-\$1,976,669	\$0	\$2,054	\$4,015,976
CCMP Capital Investors III (\$15,000,000)	\$9,856,926	\$0	\$61,470	\$61,470	\$0	\$0	\$9,918,396
DCM Private Equity II (\$7,500,000)	\$2,699,470	\$0	\$0	\$0	\$0	\$0	\$2,699,470
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$2,538,093	\$0	\$0	\$0	\$0	\$0	\$2,538,093
Energy Opportunities Fund	\$25,638,891	\$0	\$0	\$0	-\$64,085	-\$1,237,563	\$24,401,327
FECP II (\$20,000,000)	\$604,912	\$0	\$0	\$0	\$0	\$0	\$604,912
FECP III (\$20,000,000)	\$3,017,708	-\$174,223	\$0	-\$174,223	\$0	\$0	\$2,843,485
Fisher All Foreign Equity	\$109,333,004	\$0	\$0	\$0	\$0	\$1,362,876	\$110,695,880
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)	\$10,983,733	\$0	\$0	\$0	\$0	\$0	\$10,983,733
Greenspring Associates (\$9,230,000)	\$4,753,568	-\$177,933	\$0	-\$177,933	\$0	\$0	\$4,575,635
Harbourvest IV (\$20,000,000)	\$7,250,000	\$0	\$0	\$0	\$0	\$0	\$7,250,000
Heitman America Real Estate Trust	\$12,714,856	\$0	\$0	\$0	\$0	\$0	\$12,714,856



# Firefighters' Retirement System of Louisiana

## Current Monthly Breakdown of Change in Value

February 28, 2017

	Month Ending February 28, 2017						
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
JP Morgan India (\$8,990,000)	\$4,579,459	\$0	\$0	\$0	\$0	\$0	\$4,579,459
Landmark Equity Partners XV (\$25,000,000)	\$7,980,932	-\$209,050	\$206,452	-\$2,598	\$0	\$0	\$7,978,334
Liquidating - BlackRock Global Focused	\$8,229	\$0	\$0	\$0	\$0	-\$61	\$8,167
Louisiana Asset Management Pool	\$4,393,497	\$0	\$0	\$0	\$0	\$2,484	\$4,395,981
Louisiana Fund I (\$1,000,000)	\$1,973,294	\$0	\$0	\$0	\$0	\$0	\$1,973,294
LSV International Equity Value	\$112,200,506	\$0	\$0	\$0	\$0	\$1,974,385	\$114,174,891
Mellon Stock Index Fund	\$274,096,312	\$0	\$18,918	\$18,918	-\$18,918	\$10,863,498	\$284,978,728
Murphree Venture (\$2,000,000)	\$776,706	\$0	\$0	\$0	\$0	\$0	\$776,706
OFI Emerging Markets	\$21,545,728	\$0	\$0	\$0	-\$15,708	\$372,475	\$21,918,202
Orleans Core Fixed Income	\$65,763,826	\$0	\$0	\$0	\$0	\$517,346	\$66,281,172
Putnam Risk Parity	\$27,708,079	\$0	\$0	\$0	-\$17,005	\$633,328	\$28,341,407
Rothschild U.S. SMID Core	\$60,476,975	\$0	\$0	\$0	\$0	\$1,935,252	\$62,412,227
Sentinel Real Estate Fund (\$30,000,000)	\$34,677,503	\$0	\$0	\$0	\$0	\$0	\$34,677,503
Standish	\$50,843,573	\$0	\$0	\$0	\$0	\$381,267	\$51,224,840
Stone Harbor	\$50,476,032	\$0	\$0	\$0	-\$36,546	\$1,118,927	\$51,594,959
Thornburg Global Opportunities	\$71,971,912	\$0	\$0	\$0	\$0	\$466,705	\$72,438,617
Timbervest Crossover Fund (\$16,000,000)	\$10,097,564	\$0	\$0	\$0	\$0	\$0	\$10,097,564
<b>Total</b>	<b>\$1,451,416,420</b>	<b>-\$3,801,017</b>	<b>\$1,179,374</b>	<b>-\$2,621,643</b>	<b>-\$358,470</b>	<b>\$26,481,402</b>	<b>\$1,475,276,178</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

February 28, 2017

### Total Cash Flow Summary

Fiscal YTD Ending February 28, 2017

	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$34,944,517	\$0	\$0	\$0	-\$204,539	\$6,177,683	\$41,122,200
Advisory Research SMID	\$32,306,260	\$0	\$0	\$0	-\$172,783	\$6,899,853	\$39,206,113
AEW Core Property (\$12,000,000)	\$13,634,845	\$0	\$0	\$0	\$0	\$190,764	\$13,825,609
AEW Partners VI LP (\$20,000,000)	\$12,151,343	-\$2,059,312	\$0	-\$2,059,312	\$0	\$861,901	\$10,953,932
Americus Fund II (\$13,168,000)	\$582,381	-\$336,600	\$0	-\$336,600	\$0	\$15,985	\$261,766
AQR Global Risk Premium – EL	\$41,311,508	\$0	\$0	\$0	-\$258,578	\$1,029,029	\$42,340,538
ASB Real Estate Fund	\$12,168,888	-\$34,328	\$68,413	\$34,085	\$0	\$181,093	\$12,384,066
Blackrock Global Allocation	\$69,213,303	\$0	\$231,737	\$231,737	-\$231,737	\$5,705,155	\$75,150,195
Blackrock US Debt	\$147,959,644	-\$8,500,000	\$29,248	-\$8,470,752	-\$29,248	-\$2,449,641	\$137,039,250
Boston Partners Global Equity	--	-\$73,608	\$66,000,000	\$65,926,392	-\$116,415	\$7,465,921	\$73,392,312
Cash/Clearing Account	\$4,966,116	-\$95,830,366	\$94,865,743	-\$964,623	\$0	\$14,483	\$4,015,976
CCMP Capital Investors III (\$15,000,000)	\$8,812,564	\$0	\$891,339	\$891,339	\$0	\$214,493	\$9,918,396
DCM Private Equity II (\$7,500,000)	\$2,933,335	-\$283,832	\$0	-\$283,832	\$0	\$49,967	\$2,699,470
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$2,704,493	-\$300,000	\$0	-\$300,000	\$0	\$133,600	\$2,538,093
Energy Opportunities Fund	\$22,851,429	\$0	\$0	\$0	-\$180,676	\$1,549,898	\$24,401,327
FECP II (\$20,000,000)	\$1,117,338	-\$301,523	\$0	-\$301,523	\$0	-\$210,903	\$604,912
FECP III (\$20,000,000)	\$3,122,710	-\$298,461	\$0	-\$298,461	\$0	\$19,236	\$2,843,485
Fisher All Foreign Equity	\$99,751,388	\$0	\$0	\$0	-\$430,566	\$10,944,492	\$110,695,880
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	\$0	\$2,232,883	\$2,232,883	\$0	\$2,452,280	\$9,279,979
GA Crossover Fund (\$25,000,000)	\$11,666,189	-\$698,257	\$0	-\$698,257	\$0	\$15,801	\$10,983,733
Greenspring Associates (\$9,230,000)	\$5,398,918	-\$1,122,290	\$0	-\$1,122,290	\$0	\$299,007	\$4,575,635
Harbourvest IV (\$20,000,000)	--	\$0	\$7,250,000	\$7,250,000	\$0	\$0	\$7,250,000
Heitman America Real Estate Trust	\$12,474,049	\$0	\$0	\$0	\$0	\$240,807	\$12,714,856

# Firefighters' Retirement System of Louisiana

## Current Fiscal YTD Breakdown of Change in Value

February 28, 2017

	Fiscal YTD Ending February 28, 2017						
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
JP Morgan India (\$8,990,000)	\$4,471,910	\$0	\$0	\$0	\$0	\$107,549	\$4,579,459
Landmark Equity Partners XV (\$25,000,000)	\$7,246,880	-\$1,306,317	\$1,866,798	\$560,481	\$0	\$170,973	\$7,978,334
Liquidating - BlackRock Global Focused	\$38,504	-\$30,796	\$926	-\$29,869	\$0	-\$467	\$8,167
Louisiana Asset Management Pool	\$4,379,144	\$0	\$0	\$0	\$0	\$16,837	\$4,395,981
Louisiana Fund I (\$1,000,000)	\$1,976,804	\$0	\$0	\$0	\$0	-\$3,510	\$1,973,294
LSV International Equity Value	\$96,703,747	\$0	\$0	\$0	-\$230,125	\$17,471,144	\$114,174,891
Mellon Stock Index Fund	\$258,331,649	-\$9,500,001	\$37,432	-\$9,462,568	-\$56,456	\$36,109,647	\$284,978,728
Murphree Venture (\$2,000,000)	\$717,528	\$0	\$0	\$0	\$0	\$59,178	\$776,706
OFI Emerging Markets	\$19,860,080	\$0	\$0	\$0	-\$121,451	\$2,058,122	\$21,918,202
Orleans Core Fixed Income	\$66,864,691	\$0	\$0	\$0	-\$70,758	-\$583,519	\$66,281,172
Putnam Risk Parity	\$26,791,354	\$0	\$0	\$0	-\$82,493	\$1,550,053	\$28,341,407
Rothschild U.S. SMID Core	\$52,150,941	\$0	\$0	\$0	-\$182,001	\$10,261,286	\$62,412,227
Sentinel Real Estate Fund (\$30,000,000)	\$35,289,933	-\$1,209,410	\$0	-\$1,209,410	\$0	\$596,980	\$34,677,503
Standish	\$49,048,765	\$0	\$124,734	\$124,734	-\$124,734	\$2,051,340	\$51,224,840
Stone Harbor	\$51,284,146	\$0	\$0	\$0	-\$288,453	\$310,813	\$51,594,959
Thornburg Global Opportunities	\$61,655,743	\$0	\$0	\$0	-\$263,710	\$10,782,874	\$72,438,617
Timbervest Crossover Fund (\$16,000,000)	\$10,574,135	-\$384,000	\$0	-\$384,000	\$0	-\$92,571	\$10,097,564
Z Terminated Mellon Global Equity	\$63,767,414	-\$66,186,500	\$5,854	-\$66,180,646	-\$5,854	\$2,413,232	--
<b>Total</b>	<b>\$1,365,045,805</b>	<b>-\$188,455,600</b>	<b>\$173,605,108</b>	<b>-\$14,850,492</b>	<b>-\$3,050,577</b>	<b>\$125,080,865</b>	<b>\$1,475,276,178</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 February 28, 2017					
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	Ending Market Value
Z Terminated - Commonwealth	--	-\$9,671,012	\$30,000,000	\$20,328,988	-\$20,328,988	--
Acadian Emerging Markets Equity	--	\$0	\$40,000,000	\$40,000,000	\$1,122,200	\$41,122,200
Advisory Research SMID	--	-\$42,800,000	\$34,937,469	-\$7,862,531	\$47,068,644	\$39,206,113
AEW Core Property (\$12,000,000)	--	\$0	\$12,000,000	\$12,000,000	\$1,825,609	\$13,825,609
AEW Partners VI LP (\$20,000,000)	--	-\$18,599,074	\$18,420,450	-\$178,624	\$11,132,556	\$10,953,932
Americus Fund II (\$13,168,000)	--	-\$15,990,930	\$12,044,774	-\$3,946,156	\$4,207,922	\$261,766
AQR Global Risk Premium – EL	--	\$0	\$40,100,000	\$40,100,000	\$2,240,538	\$42,340,538
ASB Real Estate Fund	--	-\$34,328	\$12,073,746	\$12,039,418	\$344,648	\$12,384,066
Blackrock Global Allocation	--	\$0	\$67,545,078	\$67,545,078	\$7,605,117	\$75,150,195
Blackrock US Debt	--	-\$58,500,000	\$188,553,225	\$130,053,225	\$6,986,025	\$137,039,250
Boston Partners Global Equity	--	-\$73,608	\$66,000,000	\$65,926,392	\$7,465,921	\$73,392,312
Cash/Clearing Account	--	-\$1,969,719,106	\$1,970,605,655	\$886,549	\$3,129,427	\$4,015,976
CCMP Capital Investors III (\$15,000,000)	--	-\$129,294	\$8,241,151	\$8,111,857	\$1,806,539	\$9,918,396
DCM Private Equity II (\$7,500,000)	--	-\$5,973,803	\$8,340,318	\$2,366,515	\$332,956	\$2,699,470
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	-\$6,637,500	\$5,476,825	-\$1,160,675	\$3,698,768	\$2,538,093
Energy Opportunities Fund	--	-\$28,002,876	\$50,000,000	\$21,997,124	\$2,404,203	\$24,401,327
FECF II (\$20,000,000)	--	-\$21,801,923	\$19,188,998	-\$2,612,925	\$3,217,837	\$604,912
FECF III (\$20,000,000)	--	-\$28,554,534	\$19,206,359	-\$9,348,175	\$12,191,660	\$2,843,485
Fisher All Foreign Equity	--	-\$55,165,618	\$117,000,000	\$61,834,383	\$48,861,498	\$110,695,880
FRS-GA (Georgia)	--	\$0	\$9,416,075	\$9,416,075	-\$4,653,225	\$4,762,850
FRS-LB I (NLTP AZ)	--	\$0	\$24,900,208	\$24,900,208	-\$20,436,658	\$4,463,550
FRS-LB III (ST George UT)	--	\$0	\$6,878,923	\$6,878,923	\$2,401,056	\$9,279,979
GA Crossover Fund (\$25,000,000)	--	-\$38,451,478	\$25,000,000	-\$13,451,478	\$24,435,211	\$10,983,733
Greenspring Associates (\$9,230,000)	--	-\$11,436,727	\$8,491,600	-\$2,945,127	\$7,520,762	\$4,575,635
Harbourvest IV (\$20,000,000)	--	\$0	\$7,250,000	\$7,250,000	\$0	\$7,250,000

Cash flow statistics exclude management fees and expenses.

## Firefighters' Retirement System of Louisiana

### Since Inception Breakdown of Change in Value

	Beginning Market Value	Ending February 28, 2017			Net Investment Change	Ending Market Value
		Withdrawals	Contributions	Net Cash Flow		
Heitman America Real Estate Trust	--	\$0	\$12,000,000	\$12,000,000	\$714,856	\$12,714,856
JP Morgan India (\$8,990,000)	--	-\$2,256,002	\$8,307,355	\$6,051,353	-\$1,471,894	\$4,579,459
Landmark Equity Partners XV (\$25,000,000)	--	-\$5,039,130	\$11,425,127	\$6,385,997	\$1,592,337	\$7,978,334
Liquidating - BlackRock Global Focused	--	-\$59,568,544	\$46,832,890	-\$12,735,654	\$12,743,822	\$8,167
Louisiana Asset Management Pool	--	-\$944,296,689	\$943,990,965	-\$305,724	\$4,701,705	\$4,395,981
Louisiana Fund I (\$1,000,000)	--	\$0	\$1,010,000	\$1,010,000	\$963,294	\$1,973,294
LSV International Equity Value	--	-\$17,281,912	\$103,500,000	\$86,218,088	\$27,956,803	\$114,174,891
Mellon Stock Index Fund	--	-\$89,500,001	\$275,311,678	\$185,811,677	\$99,167,051	\$284,978,728
Murphree Venture (\$2,000,000)	--	-\$848,459	\$2,058,578	\$1,210,119	-\$433,413	\$776,706
OFI Emerging Markets	--	-\$8,500,000	\$31,500,000	\$23,000,000	-\$1,081,798	\$21,918,202
Orleans Core Fixed Income	\$0	-\$91,022,995	\$126,099,081	\$35,076,086	\$31,205,086	\$66,281,172
Putnam Risk Parity	--	\$0	\$27,400,000	\$27,400,000	\$941,407	\$28,341,407
Rothschild U.S. SMID Core	--	\$0	\$55,500,000	\$55,500,000	\$6,912,227	\$62,412,227
Sentinel Real Estate Fund (\$30,000,000)	--	-\$14,050,827	\$30,000,000	\$15,949,173	\$18,728,330	\$34,677,503
Standish	--	\$0	\$50,245,637	\$50,245,637	\$979,203	\$51,224,840
Stone Harbor	--	\$0	\$63,000,000	\$63,000,000	-\$11,405,041	\$51,594,959
The Clinton Group Magnolia	--	-\$70,657,406	\$25,000,000	-\$45,657,406	\$45,657,406	--
Thornburg Global Opportunities	--	-\$55,362,310	\$47,500,000	-\$7,862,310	\$80,300,927	\$72,438,617
Timbervest Crossover Fund (\$16,000,000)	--	-\$5,952,000	\$13,600,000	\$7,648,000	\$2,449,564	\$10,097,564

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.
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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.

