

INVESTMENT MARKET UPDATE

(AS OF DECEMBER 31, 2018)



Firefighters' Retirement System of Louisiana

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

CALENDAR YEAR INDEX PERFORMANCE

	2009	2010	2011	2012	2013	2014	2015	2016	2017	Q1	Q2	Q3	Oct	Nov	Dec	Q4	YTD
S&P 500	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-0.8%	3.4%	7.7%	-6.8%	2.0%	-9.0%	-13.5%	-4.4%
Russell 1000	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-0.7%	3.6%	7.4%	-7.1%	2.0%	-9.1%	-13.8%	-4.8%
Russell 2000	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-0.1%	7.8%	3.6%	-10.9%	1.6%	-11.9%	-20.2%	-11.0%
Russell 2500	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-0.2%	5.7%	4.7%	-10.2%	1.9%	-11.0%	-18.5%	-10.0%
MSCI EAFE	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-1.5%	-1.2%	1.4%	-8.0%	-0.1%	-4.9%	-12.5%	-13.8%
MSCI EM	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	1.4%	-8.0%	-1.1%	-8.7%	4.1%	-2.7%	-7.5%	-14.6%
MSCI ACWI	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-1.0%	0.5%	4.3%	-7.5%	1.5%	-7.0%	-12.8%	-9.4%
Private Equity*	13.7%	19.7%	7.9%	12.5%	20.6%	12.7%	9.6%	8.3%	19.9%	3.3%	4.8%	-	-	-	-	-	8.2%
BC TIPS	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-0.8%	0.8%	-0.8%	-1.4%	0.5%	0.5%	-0.4%	-1.3%
BC Municipal Bond	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	-1.1%	0.9%	-0.2%	-0.6%	1.1%	1.2%	1.7%	1.3%
BC Muni High Yield	32.7%	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	0.6%	3.1%	0.8%	-1.3%	0.7%	0.9%	0.3%	4.8%
BC US Corp High Yield	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-0.9%	1.0%	2.4%	-1.6%	-0.9%	-2.1%	-4.5%	-2.1%
BC US Aggregate	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	-1.5%	-0.2%	0.0%	-0.8%	0.6%	1.8%	1.6%	0.0%
BC Global Aggregate	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	1.6%	7.5%	1.4%	-2.8%	-0.9%	-1.1%	0.3%	2.0%	1.2%	-1.2%
BC Long Treasuries	-12.9%	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-3.3%	0.3%	-2.9%	-3.0%	1.9%	5.5%	4.2%	-1.8%
BC US Long Credit	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-3.8%	-2.7%	1.3%	-3.6%	-0.4%	2.5%	-1.6%	-6.8%
BC US STRIPS 20+ Yr	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.6%	0.9%	-4.7%	-5.3%	2.4%	7.8%	4.6%	-4.1%
JPM GBI-EM Glob Div	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	4.4%	-10.4%	-1.8%	-2.0%	2.8%	1.3%	2.1%	-6.2%
JPM EMBI Glob Div	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.1%	-1.7%	-3.5%	2.3%	-2.2%	-0.4%	1.4%	-1.3%	-4.3%
CS Leveraged Loan	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	4.2%	1.6%	0.8%	1.9%	0.0%	-0.8%	-2.3%	-3.1%	1.1%
CS Hedge Fund	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	0.5%	0.1%	0.6%	-2.6%	-0.6%	-	-	-2.0%
BBG Commodity	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-0.4%	0.4%	-2.0%	-2.2%	-0.6%	-6.9%	-9.4%	-11.2%
Alerian MLP	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-11.1%	11.8%	6.6%	-8.0%	-0.8%	-9.4%	-17.3%	-12.4%
FTSE NAREIT Eq REITs	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-8.2%	10.0%	0.8%	-3.0%	4.7%	-8.2%	-6.7%	-4.6%

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



MARKET COMMENTARY – DECEMBER 2018

Market Environment

Global equities went out with a whimper in a year marked by volatility as ongoing trade tensions, a rising rate environment, and weaker economic data weighed on all major global equity indices. The S&P 500 Index fell 9.0% in December – logging its heftiest monthly decline since February 2001. While international and emerging markets were in the red as well, they were more insulated from the broad sell-off, with the MSCI EAFE and MSCI Emerging Markets indices down 4.9% and 2.7%, respectively.

In a widely anticipated move, the Federal Reserve raised rates last month for the fourth time in 2018. As a result, short-term rates moved modestly higher, while intermediate- and long-term rates declined, underscoring a wave of risk aversion. International yields also declined with 10-year German and 10-year Japanese bond yields falling to 0.24% and 0.00%, respectively. Within credit, spreads continued to widen, weighing on total returns. The Barclays US High Yield Index declined 2.1% as spreads increased 108 basis points to 526 basis points in December.

In real assets, spot WTI crude oil lost 10.8%, ending the month at \$45.41 per barrel, amid concerns around oversupply and potentially weakening demand fueled by a less favorable global economic outlook. Additionally, the midstream energy space continued to decline as rising rates and distribution cuts weighed on sentiment. In response, the Alerian MLP Index fell 9.4% in December.

With markets whipsawing as we enter 2019, we anticipate the drivers of recent volatility to continue in the near term. To this end, we remind investors to remain vigilant and to maintain a diversified, risk-balanced portfolio to weather potential market sell-offs. While we still advocate adding safe-haven fixed-income assets, we believe the magnitude of the recent sell-off offers an opportunity to rebalance equity exposure back to targets.



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

Investment Performance Summary - Net of Fees

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Plan Composite	1,550,567,144	100.0	100.0	-3.8	-8.3	-6.3	-6.9	5.2	2.7	6.0	5.5	Sep-92
<i>Policy Index</i>				-4.1	-7.9	-5.3	-5.3	6.5	4.7	--	--	Sep-92
<i>Allocation Index</i>				-3.6	-7.6	-5.1	-5.3	6.3	4.4	--	--	Sep-92
Total Equity Composite	778,397,151	57.0	50.2	-7.5	-14.3	-11.0	-12.4	5.7	3.6	10.3	6.8	Sep-92
<i>MSCI ACWI</i>				-7.0	-12.8	-9.0	-9.4	6.6	4.3	9.5	7.1	Sep-92
Domestic Equity Composite	330,560,046	27.0	21.3	-10.0	-15.9	-10.2	-8.1	7.3	5.5	12.4	7.4	Sep-92
<i>Russell 3000</i>				-9.3	-14.3	-8.2	-5.2	9.0	7.9	13.2	9.3	Sep-92
Mellon Stock Index Fund	245,182,754		15.8	-9.0	-13.5	-6.9	-4.4	9.2	8.5	--	9.3	Nov-13
<i>S&P 500</i>				-9.0	-13.5	-6.9	-4.4	9.3	8.5	13.1	9.4	Nov-13
SMID Cap Composite	85,377,292	8.0	5.5	-12.7	-22.3	-19.3	-18.0	1.9	-1.9	--	3.0	Oct-12
<i>Russell 2500</i>				-11.0	-18.5	-14.7	-10.0	7.3	5.1	13.2	10.0	Oct-12
Energy Opportunities Fund	9,969,884		0.6	-20.7	-40.5	-40.1	-39.8	-14.6	-17.6	-0.8	-6.2	Jul-07
<i>OIH/XLE Blended Energy Benchmark</i>				-16.6	-33.8	-35.1	-32.6	-8.3	-13.4	0.0	-4.5	Jul-07
<i>Russell 2500</i>				-11.0	-18.5	-14.7	-10.0	7.3	5.1	13.2	6.9	Jul-07
SMID Cap Composite ex Energy	75,407,408	--	4.9	-11.5	-19.1	-15.4	-13.9	5.0	2.0	--	6.8	Oct-12
<i>Russell 2500</i>				-11.0	-18.5	-14.7	-10.0	7.3	5.1	13.2	10.0	Oct-12
Rothschild U.S. SMID Core	39,497,626		2.5	-11.7	-18.9	-14.3	-11.1	6.8	--	--	3.4	Jul-15
<i>Russell 2500</i>				-11.0	-18.5	-14.7	-10.0	7.3	5.1	13.2	4.0	Jul-15
QMA SMID	35,909,781		2.3	-11.2	-19.3	-16.6	--	--	--	--	-18.3	Jun-18
<i>Russell 2500</i>				-11.0	-18.5	-14.7	-10.0	7.3	5.1	13.2	-14.0	Jun-18

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.



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Equity Composite	230,429,774	15.0	14.9	-4.7	-13.0	-11.3	-15.8	4.0	1.1	--	4.4	Oct-12
<i>MSCI ACWI ex USA</i>				-4.5	-11.5	-10.8	-14.2	4.5	0.7	6.6	3.8	Oct-12
LSV International Equity Value	115,741,716		7.5	-4.9	-12.8	-10.5	-15.8	5.1	1.3	7.5	5.1	Oct-04
<i>MSCI Custom Benchmark</i>				-4.5	-11.5	-10.8	-14.2	4.5	0.7	5.8	4.3	Oct-04
Fisher All Foreign Equity	114,688,058		7.4	-4.6	-13.2	-12.1	-15.8	3.0	0.8	8.2	5.8	Oct-04
<i>MSCI ACWI ex USA</i>				-4.5	-11.5	-10.8	-14.2	4.5	0.7	6.6	5.2	Oct-04
Global Equity Composite	141,637,362	10.0	9.1	-7.8	-15.5	-13.5	-16.5	2.6	2.8	--	7.3	Oct-12
<i>MSCI ACWI</i>				-7.0	-12.8	-9.0	-9.4	6.6	4.3	9.5	7.3	Oct-12
Thornburg Global Opportunities	52,665,111		3.4	-7.5	-16.9	-17.6	-22.2	-0.4	3.8	10.6	9.0	Oct-04
<i>MSCI ACWI</i>				-7.0	-12.8	-9.0	-9.4	6.6	4.3	9.5	6.3	Oct-04
Boston Partners Global Equity	88,959,737		5.7	-8.0	-14.7	-10.9	-12.7	--	--	--	5.4	Nov-16
<i>MSCI ACWI</i>				-7.0	-12.8	-9.0	-9.4	6.6	4.3	9.5	6.9	Nov-16
Emerging Markets Equity	75,769,968	5.0	4.9	-3.3	-8.9	-10.7	-16.8	8.1	0.7	--	0.9	Oct-13
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-8.5	-14.6	9.2	1.6	8.0	1.9	Oct-13
Acadian Emerging Markets Equity	51,270,169		3.3	-3.4	-9.4	-10.6	-19.0	8.0	1.0	--	0.6	Dec-13
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-8.5	-14.6	9.2	1.6	8.0	1.3	Dec-13
OFI Emerging Markets	24,499,799		1.6	-3.1	-7.8	-10.8	-11.8	8.6	1.1	--	1.1	Jan-14
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-8.5	-14.6	9.2	1.6	8.0	1.6	Jan-14

Performance and values are preliminary and subject to change.
 Results for periods longer than one year are annualized.
 Fiscal YTD ends June 30th.
 Global Equity Composite start date is 10/1/2012.



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

	Market Value (\$)	Policy %	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fixed Income Composite	431,585,906	23.0	27.8	1.4	1.3	0.7	0.5	3.4	1.5	--	1.0	Oct-12
<i>Total Fixed Income Custom Benchmark</i>				1.8	1.7	1.5	-0.9	2.7	1.5	2.9	0.8	Oct-12
Core Fixed Income	308,245,603	19.0	19.9	1.8	1.5	1.6	3.4	3.5	2.6	--	2.8	Dec-10
<i>BBgBarc US Aggregate TR</i>				1.8	1.6	1.7	0.0	2.1	2.5	3.5	2.6	Dec-10
Orleans Core Fixed Income	67,855,230		4.4	1.6	0.9	1.4	-0.7	2.5	2.4	4.1	5.5	Aug-92
<i>BBgBarc US Aggregate TR</i>				1.8	1.6	1.7	0.0	2.1	2.5	3.5	5.3	Aug-92
Blackrock US Debt	240,390,372		15.5	1.8	1.7	1.6	0.0	2.0	--	--	1.8	Nov-14
<i>BBgBarc US Aggregate TR</i>				1.8	1.6	1.7	0.0	2.1	2.5	3.5	1.8	Nov-14
US TIPS Composite	50,397,492	--	3.3	0.5	-0.4	--	--	--	--	--	-0.4	Oct-18
Blackrock US TIPS Index	50,397,492		3.3	0.5	-0.4	--	--	--	--	--	-0.4	Oct-18
<i>BBgBarc US TIPS TR</i>				0.5	-0.4	-1.2	-1.3	2.1	1.7	3.6	-0.4	Oct-18
Emerging Markets Debt	72,942,811	4.0	4.7	0.4	1.4	-1.9	-9.8	4.3	-2.5	--	-3.5	Nov-13
<i>JP Morgan GBI - EM Global Diversified Index</i>				1.3	2.1	0.2	-6.2	5.9	-1.0	3.5	-1.7	Nov-13
Stone Harbor	72,942,811		4.7	0.4	1.4	-1.9	-9.8	4.3	-2.5	--	-3.5	Nov-13
<i>JP Morgan GBI - EM Global Diversified Index</i>				1.3	2.1	0.2	-6.2	5.9	-1.0	3.5	-1.7	Nov-13
GAA Composite	148,441,284	10.0	9.6	-3.4	-8.0	-7.1	-7.4	4.0	--	--	1.9	Apr-14
<i>60% MSCI World (Net) / 40% FTSE WGBI</i>				-3.6	-7.5	-5.3	-5.4	5.0	3.2	6.6	3.0	Apr-14
Blackrock Global Allocation	77,534,269		5.0	-4.0	-7.3	-6.0	-7.2	3.6	--	--	2.4	Apr-14
<i>60% MSCI World (Net) / 40% FTSE WGBI</i>				-3.6	-7.5	-5.3	-5.4	5.0	3.2	6.6	3.0	Apr-14
AQR Global Risk Premium – EL	42,895,507		2.8	-1.7	-6.6	-6.4	-6.2	4.9	--	--	1.4	May-14
<i>60% MSCI World (Net) / 40% FTSE WGBI</i>				-3.6	-7.5	-5.3	-5.4	5.0	3.2	6.6	2.8	May-14
Putnam Risk Parity	28,011,508		1.8	-4.5	-12.0	-10.7	-9.9	3.6	--	--	0.2	Jul-14
<i>60% MSCI World (Net) / 40% FTSE WGBI</i>				-3.6	-7.5	-5.3	-5.4	5.0	3.2	6.6	2.3	Jul-14

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

Fiscal YTD ends June 30th.

Total Fixed Income Custom Benchmark is comprised of the Barclays Aggregate from 10/1/2012 to 10/31/2013; 75% Barclays Aggregate/25% JPM GBI EM Diversified from 11/1/2013 to 2/29/2016; 85% Barclays Aggregate/15% JPM GBI EM Diversified 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 (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Alternative Composite	176,627,958	10.0	11.4	0.0	0.0	0.0	3.9	5.9	0.6	4.3	2.1	Jun-05
Private Equity Composite	59,126,120	4.0	3.8	0.0	0.0	0.0	6.3	7.9	-3.4	2.7	-2.6	Jul-05
<i>Cambridge Associates US All PE</i>				<i>0.0</i>	<i>0.0</i>	<i>4.1</i>	<i>13.1</i>	<i>14.6</i>	<i>12.0</i>	<i>14.0</i>	<i>13.0</i>	<i>Jul-05</i>
Murphree Venture (\$2,000,000)	697,980		0.0	0.0	0.0	0.0	-9.5	-23.9	-15.9	-7.5	-6.2	Sep-05
Louisiana Fund I (\$1,000,000)	1,734,135		0.1	0.0	0.0	0.0	-4.1	-6.0	-3.8	-1.1	-6.3	Jul-05
DTC Private Equity II-Q, L.P. (\$7,500,000)	1,451,710		0.1	0.0	0.0	0.0	6.6	7.9	6.9	8.8	6.3	Feb-06
Greenspring Associates III (\$9,230,000)	3,800,470		0.2	0.0	0.0	0.0	2.5	0.9	9.3	12.7	6.3	Feb-06
DCM Private Equity II (\$7,500,000)	1,449,621		0.1	0.0	0.0	0.0	-3.2	-1.8	-3.1	2.3	-1.2	Feb-06
FECP II (\$20,000,000)	300,146		0.0	0.0	0.0	0.0	29.6	7.0	11.7	11.6	11.0	Mar-08
GA Crossover Fund (\$25,000,000)	4,373,664		0.3	0.0	0.0	0.0	3.9	10.6	13.4	18.6	14.2	Jan-08
CCMP Capital Investors III (\$15,000,000)	14,291,309		0.9	0.0	0.0	0.0	9.5	13.1	--	--	11.5	Oct-14
Landmark Equity Partners XV (\$25,000,000)	9,853,035		0.6	0.0	0.0	0.0	11.1	13.0	--	--	16.0	Dec-14
Harbourvest IV (\$20,000,000)	15,470,429		1.0	0.0	0.0	0.0	4.7	--	--	--	9.7	Nov-16
Mesirow (\$35,000,000)												
Real Estate Composite	117,501,838	6.0	7.6	0.0	0.0	0.0	2.8	5.1	5.1	--	5.0	Dec-09
<i>NCREIF Property Index</i>				<i>0.0</i>	<i>0.0</i>	<i>1.7</i>	<i>5.3</i>	<i>6.7</i>	<i>9.0</i>	<i>7.3</i>	<i>10.1</i>	<i>Dec-09</i>
Sentinel Real Estate Fund (\$30,000,000)	36,492,847		2.4	0.0	0.0	0.0	4.2	6.6	8.8	8.6	6.3	Feb-06
JP Morgan India (\$8,990,000)	2,089,471		0.1	0.0	0.0	0.0	-19.3	-11.7	-6.5	-3.9	-13.3	Apr-07
Timbervest Crossover Fund (\$16,000,000)	7,308,376		0.5	0.0	0.0	0.0	5.5	-4.0	-3.6	-1.1	-1.4	Apr-08
AEW Partners VI LP (\$20,000,000)	7,842,601		0.5	0.0	0.0	0.0	3.6	10.5	14.4	--	13.1	Mar-10
AEW Core Property (\$12,000,000)	15,558,497		1.0	0.0	0.0	0.0	3.5	5.9	--	--	7.3	May-15
FRS-GA (Georgia)	3,463,900		0.2	0.0	0.0	0.0	-0.8	-10.0	-8.7	-9.8	-9.2	Jun-08
FRS-LB I (NLTP AZ)	7,380,981		0.5	0.0	0.0	0.0	-0.3	18.1	11.5	-13.6	-11.8	Jun-07
FRS-LB III (ST George UT)	9,288,030		0.6	0.0	0.0	0.0	0.0	5.8	3.5	3.0	2.8	Jun-08
ASB Real Estate Fund	13,660,471		0.9	0.0	0.0	0.0	4.0	4.7	--	--	4.7	Jan-16
Heitman America Real Estate Trust	14,416,665		0.9	0.0	0.0	0.0	3.8	6.1	--	--	7.0	Nov-15
Total Cash (\$9 MM)	15,514,846	--	1.0	0.2	0.5	1.0	1.8	1.0	0.6	0.4	2.8	Jun-92
<i>91 Day T-Bills</i>				<i>0.2</i>	<i>0.5</i>	<i>1.0</i>	<i>1.9</i>	<i>1.0</i>	<i>0.6</i>	<i>0.4</i>	<i>2.4</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 06/30/2018 and adjusted for cash flows.

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

Harbourvest IV was funded 10/01/2016.

Private Equity valuations are as of 06/30/2018 and adjusted for cash flows.



Firefighters' Retirement System of Louisiana

CURRENT MONTH CHANGE IN VALUE

Total Cash Flow Summary

Month Ending December 31, 2018

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$53,056,683	\$0	\$0	\$0	\$0	-\$1,786,514	\$51,270,169
AEW Core Property (\$12,000,000)	\$15,558,497	\$0	\$0	\$0	\$0	\$0	\$15,558,497
AEW Partners VI LP (\$20,000,000)	\$7,842,601	\$0	\$0	\$0	\$0	\$0	\$7,842,601
AQR Global Risk Premium – EL	\$43,616,401	\$0	\$0	\$0	\$0	-\$720,894	\$42,895,507
ASB Real Estate Fund	\$13,660,471	\$0	\$0	\$0	\$0	\$0	\$13,660,471
Blackrock Global Allocation	\$80,745,998	\$0	\$0	\$0	\$0	-\$3,211,728	\$77,534,269
Blackrock US Debt	\$236,063,631	\$0	\$0	\$0	\$0	\$4,326,742	\$240,390,372
Blackrock US TIPS Index	\$50,131,149	\$0	\$0	\$0	\$0	\$266,342	\$50,397,492
Boston Partners Global Equity	\$96,657,589	\$0	\$0	\$0	-\$40,192	-\$7,697,851	\$88,959,737
Cash/Clearing Account	\$16,211,581	\$2,606,409	-\$7,843,747	-\$5,237,338	\$0	\$21,620	\$10,995,863
CCMP Capital Investors III (\$15,000,000)	\$14,291,309	\$0	\$0	\$0	\$0	\$0	\$14,291,309
DCM Private Equity II (\$7,500,000)	\$1,449,621	\$0	\$0	\$0	\$0	\$0	\$1,449,621
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,451,710	\$0	\$0	\$0	\$0	\$0	\$1,451,710
Energy Opportunities Fund	\$12,568,712	\$0	\$0	\$0	\$0	-\$2,598,827	\$9,969,884
FECP II (\$20,000,000)	\$300,146	\$0	\$0	\$0	\$0	\$0	\$300,146
Fisher All Foreign Equity	\$120,214,926	\$0	\$0	\$0	-\$2,545	-\$5,526,868	\$114,688,058
FRS-GA (Georgia)	\$3,463,900	\$0	\$0	\$0	\$0	\$0	\$3,463,900
FRS-LB I (NLTP AZ)	\$7,380,981	\$0	\$0	\$0	\$0	\$0	\$7,380,981
FRS-LB III (ST George UT)	\$9,288,030	\$0	\$0	\$0	\$0	\$0	\$9,288,030
GA Crossover Fund (\$25,000,000)	\$4,373,664	\$0	\$0	\$0	\$0	\$0	\$4,373,664
Greenspring Associates III (\$9,230,000)	\$3,800,470	\$0	\$0	\$0	\$0	\$0	\$3,800,470
Harbourvest IV (\$20,000,000)	\$15,779,871	\$848,327	-\$1,157,769	-\$309,442	\$0	\$0	\$15,470,429
Heitman America Real Estate Trust	\$14,416,665	\$0	\$0	\$0	\$0	\$0	\$14,416,665



Firefighters' Retirement System of Louisiana

CURRENT MONTH CHANGE IN VALUE

	Month Ending December 31, 2018							Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change		
JP Morgan India (\$8,990,000)	\$2,089,471	\$0	\$0	\$0	\$0	\$0	\$2,089,471	
Landmark Equity Partners XV (\$25,000,000)	\$9,853,035	\$0	\$0	\$0	\$0	\$0	\$9,853,035	
Liquidating - BlackRock Global Focused	\$12,357	\$0	\$0	\$0	\$0	\$157	\$12,514	
Louisiana Asset Management Pool	\$4,509,964	\$0	\$0	\$0	\$0	\$9,018	\$4,518,982	
Louisiana Fund I (\$1,000,000)	\$1,734,135	\$0	\$0	\$0	\$0	\$0	\$1,734,135	
LSV International Equity Value	\$121,677,527	\$0	\$0	\$0	\$0	-\$5,935,811	\$115,741,716	
Mellon Stock Index Fund	\$269,507,825	\$22,933	\$0	\$22,933	-\$22,933	-\$24,348,004	\$245,182,754	
Mesirov (\$35,000,000)	\$0	\$5,703,620	\$0	\$5,703,620	\$0	\$0	\$5,703,620	
Murphree Venture (\$2,000,000)	\$697,980	\$0	\$0	\$0	\$0	\$0	\$697,980	
OFI Emerging Markets	\$25,278,498	\$0	\$0	\$0	-\$17,558	-\$778,699	\$24,499,799	
Orleans Core Fixed Income	\$66,806,934	\$0	\$0	\$0	\$0	\$1,048,296	\$67,855,230	
Putnam Risk Parity	\$29,345,155	\$579,825	-\$579,825	\$0	-\$16,807	-\$1,333,647	\$28,011,508	
QMA SMID	\$40,444,613	\$0	\$0	\$0	\$0	-\$4,534,832	\$35,909,781	
Rothschild U.S. SMID Core	\$44,732,476	\$0	\$0	\$0	\$0	-\$5,234,850	\$39,497,626	
Sentinel Real Estate Fund (\$30,000,000)	\$36,492,847	\$0	\$0	\$0	\$0	\$0	\$36,492,847	
Stone Harbor	\$72,662,850	\$0	\$0	\$0	-\$51,668	\$279,961	\$72,942,811	
Thornburg Global Opportunities	\$56,904,574	\$0	\$0	\$0	\$0	-\$4,239,463	\$52,665,111	
Timbervest Crossover Fund (\$16,000,000)	\$7,308,376	\$0	\$0	\$0	\$0	\$0	\$7,308,376	
Total	\$1,612,383,222	\$9,761,115	-\$9,581,342	\$179,773	-\$151,703	-\$61,995,851	\$1,550,567,144	

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 December 31, 2018

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$57,333,700	\$0	\$0	\$0	-\$222,857	-\$6,063,531	\$51,270,169
AEW Core Property (\$12,000,000)	\$15,558,497	\$0	\$0	\$0	\$0	\$0	\$15,558,497
AEW Partners VI LP (\$20,000,000)	\$8,213,548	\$0	-\$370,947	-\$370,947	\$0	\$0	\$7,842,601
AQR Global Risk Premium – EL	\$45,839,208	\$0	\$0	\$0	-\$178,123	-\$2,943,701	\$42,895,507
ASB Real Estate Fund	\$13,622,620	\$37,851	\$0	\$37,851	\$0	\$0	\$13,660,471
Blackrock Global Allocation	\$82,124,034	\$403,544	\$0	\$403,544	-\$403,544	-\$4,993,309	\$77,534,269
Blackrock US Debt	\$206,535,451	\$30,057,915	\$0	\$30,057,915	-\$57,915	\$3,797,007	\$240,390,372
Blackrock US TIPS Index	--	\$50,000,000	\$0	\$50,000,000	\$0	\$397,492	\$50,397,492
Boston Partners Global Equity	\$100,016,730	\$0	-\$475,574	-\$475,574	-\$266,143	-\$10,581,419	\$88,959,737
Cash/Clearing Account	\$35,957,739	\$78,776,707	-\$103,839,281	-\$25,062,574	\$0	\$100,698	\$10,995,863
CCMP Capital Investors III (\$15,000,000)	\$14,180,095	\$111,214	\$0	\$111,214	\$0	\$0	\$14,291,309
DCM Private Equity II (\$7,500,000)	\$1,727,569	\$0	-\$277,948	-\$277,948	\$0	\$0	\$1,449,621
DTC Private Equity II-Q, L.P. (\$7,500,000)	\$1,729,658	\$0	-\$277,948	-\$277,948	\$0	\$0	\$1,451,710
Energy Opportunities Fund	\$16,635,881	\$0	\$0	\$0	-\$83,480	-\$6,665,996	\$9,969,884
FCEP II (\$20,000,000)	\$388,146	\$0	-\$88,000	-\$88,000	\$0	\$0	\$300,146
Fisher All Foreign Equity	\$130,665,252	\$0	-\$137,915	-\$137,915	-\$379,606	-\$15,839,279	\$114,688,058
FRS-GA (Georgia)	\$3,463,900	\$0	\$0	\$0	\$0	\$0	\$3,463,900
FRS-LB I (NLTP AZ)	\$7,380,981	\$0	\$0	\$0	\$0	\$0	\$7,380,981
FRS-LB III (ST George UT)	\$9,288,030	\$0	\$0	\$0	\$0	\$0	\$9,288,030
GA Crossover Fund (\$25,000,000)	\$4,373,664	\$0	\$0	\$0	\$0	\$0	\$4,373,664
Greenspring Associates III (\$9,230,000)	\$4,105,060	\$0	-\$304,590	-\$304,590	\$0	\$0	\$3,800,470
Harbourvest IV (\$20,000,000)	\$15,779,871	\$848,327	-\$1,157,769	-\$309,442	\$0	\$0	\$15,470,429
Heitman America Real Estate Trust	\$14,416,665	\$0	\$0	\$0	\$0	\$0	\$14,416,665



Firefighters' Retirement System of Louisiana

CURRENT FYTD CHANGE IN VALUE

	Fiscal YTD Ending December 31, 2018						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
JP Morgan India (\$8,990,000)	\$2,089,471	\$0	\$0	\$0	\$0	\$0	\$2,089,471
Landmark Equity Partners XV (\$25,000,000)	\$11,931,304	\$236,430	-\$2,314,699	-\$2,078,269	\$0	\$0	\$9,853,035
Liquidating - BlackRock Global Focused	\$12,561	\$0	\$0	\$0	\$0	-\$47	\$12,514
Louisiana Asset Management Pool	\$4,470,256	\$0	\$0	\$0	\$0	\$48,726	\$4,518,982
Louisiana Fund I (\$1,000,000)	\$1,734,135	\$0	\$0	\$0	\$0	\$0	\$1,734,135
LSV International Equity Value	\$129,346,061	\$0	-\$30,096	-\$30,096	-\$443,327	-\$13,574,249	\$115,741,716
Mellon Stock Index Fund	\$331,287,394	\$44,439	-\$70,000,000	-\$69,955,561	-\$44,439	-\$16,149,078	\$245,182,754
Mesirow (\$35,000,000)	--	\$5,703,620	\$0	\$5,703,620	\$0	\$0	\$5,703,620
Murphree Venture (\$2,000,000)	\$697,980	\$0	\$0	\$0	\$0	\$0	\$697,980
OFI Emerging Markets	\$27,471,846	\$0	\$0	\$0	-\$111,024	-\$2,972,047	\$24,499,799
Orleans Core Fixed Income	\$66,932,337	\$0	\$0	\$0	-\$47,746	\$922,894	\$67,855,230
Putnam Risk Parity	\$31,359,572	\$579,825	-\$579,825	\$0	-\$109,334	-\$3,348,064	\$28,011,508
QMA SMID	\$43,078,804	\$469	\$0	\$469	-\$58,964	-\$7,169,492	\$35,909,781
Rothschild U.S. SMID Core	\$46,082,566	\$0	\$0	\$0	-\$196,060	-\$6,584,939	\$39,497,626
Sentinel Real Estate Fund (\$30,000,000)	\$37,256,961	\$0	-\$764,114	-\$764,114	\$0	\$0	\$36,492,847
Stone Harbor	\$74,365,185	\$0	\$0	\$0	-\$307,556	-\$1,422,374	\$72,942,811
Thornburg Global Opportunities	\$63,913,049	\$0	\$0	\$0	-\$191,579	-\$11,247,938	\$52,665,111
Timbervert Crossover Fund (\$16,000,000)	\$7,948,376	\$0	-\$640,000	-\$640,000	\$0	\$0	\$7,308,376
Z-Terminated Advisory Research SMID	\$2,776	\$0	-\$2,776	-\$2,776	\$0	\$0	--
Total	\$1,669,316,932	\$166,800,340	-\$181,261,482	-\$14,461,142	-\$3,101,696	-\$104,288,646	\$1,550,567,144

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

	Ending December 31, 2018					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Acadian Emerging Markets Equity	--	\$60,000,000	-\$10,000,000	\$50,000,000	\$1,270,169	\$51,270,169
AEW Core Property (\$12,000,000)	--	\$12,000,000	\$0	\$12,000,000	\$3,558,497	\$15,558,497
AEW Partners VI LP (\$20,000,000)	--	\$18,420,450	-\$24,051,444	-\$5,630,994	\$13,473,595	\$7,842,601
AQR Global Risk Premium – EL	--	\$40,100,000	\$0	\$40,100,000	\$2,795,507	\$42,895,507
ASB Real Estate Fund	--	\$12,254,130	-\$141,910	\$12,112,220	\$1,548,251	\$13,660,471
Blackrock Global Allocation	--	\$68,445,535	\$0	\$68,445,535	\$9,088,734	\$77,534,269
Blackrock US Debt	--	\$287,470,382	-\$58,500,000	\$228,970,382	\$11,419,990	\$240,390,372
Blackrock US TIPS Index	--	\$50,000,000	\$0	\$50,000,000	\$397,492	\$50,397,492
Boston Partners Global Equity	--	\$80,939,406	-\$1,073,632	\$79,865,773	\$9,093,964	\$88,959,737
Cash/Clearing Account	--	\$2,251,584,738	-\$2,244,047,322	\$7,537,416	\$3,458,448	\$10,995,863
CCMP Capital Investors III (\$15,000,000)	--	\$11,753,614	-\$1,607,574	\$10,146,040	\$4,145,269	\$14,291,309
DCM Private Equity II (\$7,500,000)	--	\$8,230,128	-\$7,125,048	\$1,105,080	\$344,542	\$1,449,621
DTC Private Equity II-Q, L.P. (\$7,500,000)	--	\$5,480,845	-\$8,190,448	-\$2,709,603	\$4,161,313	\$1,451,710
Energy Opportunities Fund	--	\$50,034,322	-\$33,002,876	\$17,031,446	-\$7,061,562	\$9,969,884
FCEP II (\$20,000,000)	--	\$19,188,998	-\$22,224,262	-\$3,035,264	\$3,335,410	\$300,146
Fisher All Foreign Equity	--	\$117,180,807	-\$55,303,533	\$61,877,274	\$52,810,784	\$114,688,058
FRS-GA (Georgia)	--	\$9,416,075	\$0	\$9,416,075	-\$5,952,175	\$3,463,900
FRS-LB I (NLTP AZ)	--	\$24,900,208	\$0	\$24,900,208	-\$17,519,227	\$7,380,981
FRS-LB III (ST George UT)	--	\$6,878,923	\$0	\$6,878,923	\$2,409,107	\$9,288,030
GA Crossover Fund (\$25,000,000)	--	\$25,000,000	-\$46,276,687	-\$21,276,687	\$25,650,351	\$4,373,664
Greenspring Associates III (\$9,230,000)	--	\$8,491,600	-\$12,557,968	-\$4,066,368	\$7,866,838	\$3,800,470
Harbourvest IV (\$20,000,000)	--	\$16,571,234	-\$2,907,769	\$13,663,465	\$1,806,964	\$15,470,429

Cash flow statistics exclude management fees and expenses.



Firefighters' Retirement System of Louisiana

SINCE INCEPTION CHANGE IN VALUE

	Beginning Market Value	Ending December 31, 2018				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Heitman America Real Estate Trust	--	\$12,000,000	\$0	\$12,000,000	\$2,416,665	\$14,416,665
JP Morgan India (\$8,990,000)	--	\$8,307,355	-\$3,814,303	\$4,493,052	-\$2,403,581	\$2,089,471
Landmark Equity Partners XV (\$25,000,000)	--	\$17,163,798	-\$11,883,276	\$5,280,522	\$4,572,513	\$9,853,035
Liquidating - BlackRock Global Focused	--	\$46,832,890	-\$59,568,544	-\$12,735,654	\$12,748,168	\$12,514
Louisiana Asset Management Pool	--	\$943,990,965	-\$944,296,689	-\$305,724	\$4,824,707	\$4,518,982
Louisiana Fund I (\$1,000,000)	--	\$1,010,000	\$0	\$1,010,000	\$724,135	\$1,734,135
LSV International Equity Value	--	\$103,818,122	-\$17,313,413	\$86,504,709	\$29,237,008	\$115,741,716
Mellon Stock Index Fund	--	\$275,457,556	-\$164,500,001	\$110,957,555	\$134,225,200	\$245,182,754
Mesirow (\$35,000,000)	--	\$5,703,620	\$0	\$5,703,620	\$0	\$5,703,620
Murphree Venture (\$2,000,000)	--	\$2,058,578	-\$848,459	\$1,210,119	-\$512,139	\$697,980
OFI Emerging Markets	--	\$31,500,000	-\$8,500,000	\$23,000,000	\$1,499,799	\$24,499,799
Orleans Core Fixed Income	\$0	\$126,099,081	-\$91,022,995	\$35,076,086	\$32,779,144	\$67,855,230
Putnam Risk Parity	--	\$27,979,825	-\$579,825	\$27,400,000	\$611,508	\$28,011,508
QMA SMID	--	\$43,715,738	\$0	\$43,715,738	-\$7,805,957	\$35,909,781
Rothschild U.S. SMID Core	--	\$55,500,000	-\$27,500,000	\$28,000,000	\$11,497,626	\$39,497,626
Sentinel Real Estate Fund (\$30,000,000)	--	\$30,000,000	-\$17,184,935	\$12,815,065	\$23,677,782	\$36,492,847
Stone Harbor	--	\$86,000,000	\$0	\$86,000,000	-\$13,057,189	\$72,942,811
Thornburg Global Opportunities	--	\$47,500,000	-\$70,306,258	-\$22,806,258	\$75,471,370	\$52,665,111
Timbervest Crossover Fund (\$16,000,000)	--	\$13,600,000	-\$7,688,000	\$5,912,000	\$1,396,376	\$7,308,376

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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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.

