

INVESTMENT MARKET UPDATE

(AS OF NOVEMBER 30, 2019)



Firefighters' Retirement System of Louisiana

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

CALENDAR YEAR INDEX PERFORMANCE

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Nov | YTD |
|---------------------------------|-------|--------|-------|--------|--------|--------|-------|-------|--------|-------|-------|
| S&P 500 | 15.1% | 2.1% | 16.0% | 32.4% | 13.7% | 1.4% | 12.0% | 21.8% | -4.4% | 3.6% | 27.6% |
| Russell 1000 | 16.1% | 1.5% | 16.4% | 33.1% | 13.2% | 0.9% | 12.1% | 21.7% | -4.8% | 3.8% | 27.7% |
| Russell 2000 | 26.9% | -4.2% | 16.3% | 38.8% | 4.9% | -4.4% | 21.3% | 14.6% | -11.0% | 4.1% | 22.0% |
| Russell 2500 | 26.7% | -2.5% | 17.9% | 36.8% | 7.1% | -2.9% | 17.6% | 16.8% | -10.0% | 4.3% | 25.1% |
| MSCI EAFE | 7.8% | -12.1% | 17.3% | 22.8% | -4.9% | -0.8% | 1.0% | 25.0% | -13.8% | 1.1% | 18.2% |
| MSCI EM | 18.9% | -18.4% | 18.2% | -2.6% | -2.2% | -14.9% | 11.2% | 37.3% | -14.6% | -0.1% | 10.2% |
| MSCI ACWI | 12.7% | -7.3% | 16.1% | 22.8% | 4.2% | -2.4% | 7.9% | 24.0% | -9.4% | 2.4% | 22.3% |
| Private Equity | 19.8% | 9.5% | 12.6% | 22.3% | 14.6% | 10.4% | 10.3% | 21.0% | 13.1% | - | 9.9% |
| BC TIPS | 6.3% | 13.6% | 7.0% | -8.6% | 3.6% | -1.4% | 4.7% | 3.0% | -1.3% | 0.2% | 8.0% |
| BC Municipal | 2.4% | 10.7% | 6.8% | -2.6% | 9.1% | 3.3% | 0.2% | 5.4% | 1.3% | 0.3% | 7.2% |
| BC Muni High Yield | 7.8% | 9.2% | 18.1% | -5.5% | 13.8% | 1.8% | 3.0% | 9.7% | 4.8% | 0.4% | 10.3% |
| BC US Corporate HY | 15.1% | 5.0% | 15.8% | 7.4% | 2.5% | -4.5% | 17.1% | 7.5% | -2.1% | 0.3% | 12.1% |
| BC US Agg Bond | 6.5% | 7.8% | 4.2% | -2.0% | 6.0% | 0.5% | 2.6% | 3.5% | 0.0% | -0.1% | 8.8% |
| BC Global Agg | 5.5% | 5.6% | 4.3% | -2.6% | 0.6% | -3.2% | 2.1% | 7.4% | -1.2% | -0.8% | 6.2% |
| BC Long Treasuries | 9.4% | 29.9% | 3.6% | -12.7% | 25.1% | -1.2% | 1.3% | 8.5% | -1.8% | -0.5% | 18.1% |
| BC US Long Credit | 10.7% | 17.1% | 12.7% | -6.6% | 16.4% | -4.6% | 10.2% | 12.2% | -6.8% | 0.5% | 23.2% |
| BC US STRIPS 20+ Yr | 10.9% | 58.5% | 3.0% | -21.0% | 46.4% | -3.7% | 1.4% | 13.7% | -4.1% | -0.3% | 26.2% |
| JPM GBI-EM Global Div | 15.7% | -1.8% | 16.8% | -9.0% | -5.7% | -14.9% | 9.9% | 15.2% | -6.2% | -1.8% | 9.0% |
| JPM EMBI Glob Div | 12.2% | 7.3% | 17.4% | -5.3% | 7.4% | 1.2% | 10.2% | 10.3% | -4.3% | -0.5% | 12.8% |
| CS Hedge Fund | 10.9% | -2.5% | 7.7% | 9.7% | 4.1% | -0.7% | 1.2% | 7.1% | -3.2% | - | 7.1% |
| BBG Commodity | 16.8% | -13.3% | -1.1% | -9.5% | -17.0% | -24.7% | 11.8% | 1.7% | -11.2% | -2.6% | 2.5% |
| Alerian MLP | 35.9% | 13.9% | 4.8% | 27.6% | 4.8% | -32.6% | 18.3% | -6.5% | -12.4% | -5.8% | -1.8% |
| FTSE NAREIT Equity REITs | 28.0% | 8.3% | 18.1% | 2.5% | 30.1% | 3.2% | 8.5% | 5.2% | -4.6% | -1.5% | 26.8% |

Source: FactSet, Barclays, Thomson One

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



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

Investment Performance Summary - Net of Fees

| | Market Value (\$) | Policy % | % of Portfolio | 1 Mo (%) | Fiscal YTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---------------------------------------|----------------------|--------------|----------------|------------|----------------|-------------|-------------|-------------|------------|-------------|---------------|----------------|
| Total Plan Composite | 1,796,358,751 | 100.0 | 100.0 | 1.4 | 3.8 | 15.1 | 10.6 | 8.2 | 5.2 | 5.8 | 5.8 | Sep-92 |
| <i>Policy Index</i> | | | | 1.2 | 3.4 | 16.1 | 11.4 | 9.5 | 6.6 | -- | -- | Sep-92 |
| Total Equity Composite | 898,001,596 | 49.0 | 50.0 | 2.6 | 5.2 | 21.0 | 12.0 | 10.0 | 6.3 | 9.3 | 7.3 | Sep-92 |
| <i>MSCI ACWI</i> | | | | 2.4 | 5.2 | 22.3 | 13.7 | 11.9 | 7.2 | 8.6 | 7.7 | Sep-92 |
| Domestic Equity Composite | 408,458,427 | 21.5 | 22.7 | 3.9 | 7.2 | 26.4 | 13.7 | 11.8 | 8.8 | 11.9 | 8.0 | Sep-92 |
| <i>Russell 3000</i> | | | | 3.8 | 7.3 | 27.3 | 15.5 | 14.2 | 10.6 | 13.4 | 9.9 | Sep-92 |
| Mellon Stock Index Fund | 312,958,393 | | 17.4 | 3.6 | 7.7 | 27.6 | 16.1 | 14.9 | 10.9 | -- | 12.3 | Nov-13 |
| <i>S&P 500</i> | | | | 3.6 | 7.7 | 27.6 | 16.1 | 14.9 | 11.0 | 13.4 | 12.3 | Nov-13 |
| SMID Cap Composite | 95,497,411 | 5.5 | 5.3 | 4.7 | 5.7 | 22.3 | 8.3 | 7.5 | 5.9 | -- | 9.0 | Oct-12 |
| <i>Russell 2500</i> | | | | 4.3 | 4.9 | 25.1 | 11.4 | 10.3 | 8.8 | 13.1 | 12.1 | Oct-12 |
| Rothschild U.S. SMID Core | 47,959,831 | | 2.7 | 4.1 | 4.8 | 21.4 | 7.2 | 9.3 | -- | -- | 7.3 | Jul-15 |
| <i>Russell 2500</i> | | | | 4.3 | 4.9 | 25.1 | 11.4 | 10.3 | 8.8 | 13.1 | 8.5 | Jul-15 |
| QMA SMID | 47,537,580 | | 2.6 | 5.2 | 6.6 | 23.3 | 9.5 | -- | -- | -- | 1.9 | Jul-18 |
| <i>Russell 2500</i> | | | | 4.3 | 4.9 | 25.1 | 11.4 | 10.3 | 8.8 | 13.1 | 4.7 | Jul-18 |
| International Equity Composite | 218,856,852 | 12.0 | 12.2 | 1.6 | 3.6 | 17.9 | 12.3 | 9.4 | 4.5 | -- | 6.3 | Oct-12 |
| <i>MSCI ACWI ex USA</i> | | | | 0.9 | 2.5 | 16.5 | 11.2 | 9.2 | 3.8 | 4.7 | 5.5 | Oct-12 |
| LSV International Equity Value | 106,998,316 | | 6.0 | 0.5 | 3.7 | 14.8 | 9.2 | 8.3 | 4.2 | 5.8 | 5.7 | Oct-04 |
| <i>MSCI Custom Benchmark</i> | | | | 0.9 | 2.5 | 16.5 | 11.2 | 9.2 | 3.8 | 4.7 | 5.1 | Oct-04 |
| Fisher All Foreign Equity | 111,858,536 | | 6.2 | 2.6 | 3.5 | 21.1 | 15.5 | 10.6 | 4.8 | 6.2 | 6.8 | Oct-04 |
| <i>MSCI ACWI ex USA</i> | | | | 0.9 | 2.5 | 16.5 | 11.2 | 9.2 | 3.8 | 4.7 | 5.9 | Oct-04 |

Rothschild U.S. SMID Core and QMA SMID are preliminary as of 11/30/2019, and subject to change when finalized.

Returns are net of manager fees.

Results for periods longer than one year are annualized.

Fiscal Year ends June 30th.

SMID Cap Composite start date is 10/1/2012.

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 (%) | Fiscal YTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|--------------------|-------------|----------------|------------|----------------|-------------|-------------|------------|------------|------------|---------------|----------------|
| Global Equity Composite | 178,189,829 | 10.0 | 9.9 | 2.3 | 5.7 | 18.8 | 9.5 | 7.2 | 4.2 | -- | 8.9 | Oct-12 |
| <i>MSCI ACWI</i> | | | | 2.4 | 5.2 | 22.3 | 13.7 | 11.9 | 7.2 | 8.6 | 9.4 | Oct-12 |
| Thornburg Global Opportunities | 37,053,071 | | 2.1 | 4.3 | 8.1 | 23.6 | 14.4 | 6.5 | 4.2 | 9.7 | 10.0 | Oct-04 |
| <i>MSCI ACWI</i> | | | | 2.4 | 5.2 | 22.3 | 13.7 | 11.9 | 7.2 | 8.6 | 7.3 | Oct-04 |
| Boston Partners Global Equity | 102,918,445 | | 5.7 | 1.5 | 4.1 | 15.7 | 6.5 | 7.5 | -- | -- | 8.8 | Nov-16 |
| <i>MSCI ACWI</i> | | | | 2.4 | 5.2 | 22.3 | 13.7 | 11.9 | 7.2 | 8.6 | 11.9 | Nov-16 |
| State Street ACWI Index Fund | 38,210,388 | | 2.1 | 2.5 | -- | -- | -- | -- | -- | -- | 7.5 | Sep-19 |
| <i>MSCI ACWI</i> | | | | 2.4 | 5.2 | 22.3 | 13.7 | 11.9 | 7.2 | 8.6 | 7.5 | Sep-19 |
| Emerging Markets Equity | 92,496,489 | 5.5 | 5.1 | 0.6 | -0.1 | 11.3 | 7.7 | 8.4 | 2.1 | -- | 2.5 | Oct-13 |
| <i>MSCI Emerging Markets</i> | | | | -0.1 | -0.3 | 10.2 | 7.3 | 9.0 | 3.1 | 3.3 | 3.2 | Oct-13 |
| Acadian Emerging Markets Equity | 60,437,742 | | 3.4 | 0.2 | -1.1 | 8.2 | 4.5 | 6.8 | 1.4 | -- | 1.9 | Dec-13 |
| <i>MSCI Emerging Markets</i> | | | | -0.1 | -0.3 | 10.2 | 7.3 | 9.0 | 3.1 | 3.3 | 2.8 | Dec-13 |
| OFI Emerging Markets | 32,058,746 | | 1.8 | 1.2 | 1.9 | 17.8 | 14.2 | 11.9 | 4.0 | -- | 3.8 | Jan-14 |
| <i>MSCI Emerging Markets</i> | | | | -0.1 | -0.3 | 10.2 | 7.3 | 9.0 | 3.1 | 3.3 | 3.1 | Jan-14 |
| Total Fixed Income Composite | 535,775,249 | 31.0 | 29.8 | 0.0 | 2.8 | 9.6 | 11.2 | 5.5 | 3.1 | -- | 2.2 | Oct-12 |
| <i>Total Fixed Income Custom Benchmark</i> | | | | -0.4 | 2.0 | 8.8 | 10.7 | 4.5 | 2.3 | 3.0 | 1.9 | Oct-12 |
| Core Fixed Income | 481,339,835 | 23.0 | 26.8 | 0.0 | 2.6 | 9.0 | 11.0 | 5.6 | 3.9 | -- | 3.5 | Dec-10 |
| <i>BBgBarc US Aggregate TR</i> | | | | -0.1 | 2.5 | 8.8 | 10.8 | 4.1 | 3.1 | 3.6 | 3.3 | Dec-10 |
| Orleans Core Fixed Income | 95,580,328 | | 5.3 | 0.1 | 2.6 | 9.7 | 11.4 | 4.4 | 3.3 | 3.9 | 5.7 | Aug-92 |
| <i>BBgBarc US Aggregate TR</i> | | | | -0.1 | 2.5 | 8.8 | 10.8 | 4.1 | 3.1 | 3.6 | 5.4 | Aug-92 |
| Blackrock US Debt | 385,759,507 | | 21.5 | 0.0 | 2.6 | 8.9 | 10.8 | 4.1 | 3.1 | -- | 3.2 | Nov-14 |
| <i>BBgBarc US Aggregate TR</i> | | | | -0.1 | 2.5 | 8.8 | 10.8 | 4.1 | 3.1 | 3.6 | 3.2 | Nov-14 |
| US TIPS Composite | 54,435,415 | 3.0 | 3.0 | 0.2 | 1.7 | 8.0 | 8.6 | -- | -- | -- | 6.5 | Oct-18 |
| Blackrock US TIPS Index | 54,435,415 | | 3.0 | 0.2 | 1.7 | 8.0 | 8.6 | -- | -- | -- | 6.5 | Oct-18 |
| <i>BBgBarc US TIPS TR</i> | | | | 0.2 | 1.8 | 8.0 | 8.6 | 3.2 | 2.3 | 3.1 | 6.4 | Oct-18 |

Boston Partners Global Equity, Orleans Core Fixed Income, and State Street ACWI Index Fund are preliminary as of 11/30/2019, and subject to change when finalized.

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

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

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

Returns are net of manager fees.

SMID Cap Composite start date is 10/1/2012.

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



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

| | Market Value (\$) | Policy % | % of Portfolio | 1 Mo (%) | Fiscal YTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|--------------------|-------------|----------------|------------|----------------|-------------|-------------|------------|------------|------------|---------------|----------------|
| GAA Composite | 174,040,570 | 10.0 | 9.7 | 0.7 | 3.6 | 17.1 | 13.1 | 7.7 | 4.3 | -- | 4.4 | Apr-14 |
| 60% MSCI World (Net) / 40% FTSE WGBI | | | | 1.2 | 3.7 | 16.5 | 12.3 | 9.0 | 5.6 | 6.3 | 5.3 | Apr-14 |
| Blackrock Global Allocation | 89,979,213 | | 5.0 | 1.4 | 4.4 | 15.7 | 11.1 | 7.5 | 4.6 | -- | 4.7 | Apr-14 |
| 60% MSCI World (Net) / 40% FTSE WGBI | | | | 1.2 | 3.7 | 16.5 | 12.3 | 9.0 | 5.6 | 6.3 | 5.3 | Apr-14 |
| AQR Global Risk Premium – EL | 84,061,357 | | 4.7 | -0.1 | 2.8 | 18.1 | 16.2 | 8.1 | 4.0 | -- | 4.3 | May-14 |
| 60% MSCI World (Net) / 40% FTSE WGBI | | | | 1.2 | 3.7 | 16.5 | 12.3 | 9.0 | 5.6 | 6.3 | 5.2 | May-14 |
| Total Alternative Composite | 177,027,167 | 10.0 | 9.9 | 0.0 | 0.0 | 2.3 | 1.9 | 5.5 | 4.9 | 1.8 | 2.3 | Jun-05 |
| Private Equity Composite | 65,861,807 | 4.0 | 3.7 | 0.0 | 0.0 | 3.5 | 0.5 | 7.4 | 6.6 | 3.1 | -2.2 | Jul-05 |
| Cambridge Associates US All PE | | | | 0.0 | 0.0 | 8.5 | 6.7 | 13.8 | 11.2 | 13.9 | 12.5 | Jul-05 |
| Murphree Venture (\$2,000,000) | 613,531 | | 0.0 | 0.0 | 0.0 | -4.6 | -5.1 | -25.9 | -16.6 | -6.3 | -6.1 | Sep-05 |
| Louisiana Fund I (\$1,000,000) | 1,433,550 | | 0.1 | 0.0 | 0.0 | -17.3 | -17.3 | -10.1 | -7.3 | -2.9 | -7.2 | Jul-05 |
| DTC Private Equity II-Q, L.P. (\$7,500,000) | 1,182,604 | | 0.1 | 0.0 | 0.0 | 4.1 | -2.9 | 6.9 | 5.0 | 9.6 | 5.7 | Feb-06 |
| Greenspring Associates III (\$9,230,000) | 3,360,919 | | 0.2 | 0.0 | 0.0 | 19.4 | 6.4 | 5.5 | 9.1 | 13.8 | 6.5 | Feb-06 |
| DCM Private Equity II (\$7,500,000) | 1,091,265 | | 0.1 | 0.0 | 0.0 | -5.4 | -6.6 | -2.3 | -4.8 | 1.2 | -1.7 | Feb-06 |
| FCEP II (\$20,000,000) | -97,310 | | 0.0 | 0.0 | 0.0 | 61.9 | 40.5 | 40.3 | 9.3 | 14.0 | 13.4 | Mar-08 |
| GA Crossover Fund (\$25,000,000) | 3,921,114 | | 0.2 | 0.0 | 0.0 | -11.1 | -17.2 | 0.9 | 8.6 | 15.6 | 12.0 | Jan-08 |
| CCMP Capital Investors III (\$15,000,000) | 13,005,177 | | 0.7 | 0.0 | 0.0 | 4.6 | -2.1 | 7.0 | 10.1 | -- | 9.7 | Oct-14 |
| Landmark Equity Partners XV (\$25,000,000) | 9,732,703 | | 0.5 | 0.0 | 0.0 | -4.2 | -3.7 | 11.6 | 13.2 | -- | 13.2 | Dec-14 |
| Harbourvest IV (\$20,000,000) | 17,953,639 | | 1.0 | 0.0 | 0.0 | 12.2 | 14.1 | 13.8 | -- | -- | 13.4 | Nov-16 |
| Mesirov (\$35,000,000) | 11,410,614 | | 0.6 | 0.0 | 0.0 | -0.5 | -5.8 | -- | -- | -- | -5.8 | Dec-18 |
| HarbourVest Partners XI Buyout (\$35,000,000) | 2,254,001 | | 0.1 | 0.0 | 0.0 | 0.0 | -- | -- | -- | -- | 0.0 | Jan-19 |

Results for periods longer than one year are annualized.

Fiscal YTD ends June 30th.

Total Fixed Income Custom Benchmark is comprised of the Barclays Aggregate from 10/1/2012 to 10/31/2013; 75% Barclays Aggregate/25% JPM GBI EM Diversified from 11/1/2013 to 2/29/2016; 85% Barclays Aggregate/15% JPM GBI EM Diversified from 3/1/2016 to 12/31/2018; 70% Barclays Aggregate/20% JPM GBI EM Diversified/ 10% Barclays US TIPS going forward.

Total Fixed Income Composite start date is 10/1/2012.

Private Equity valuations are as of 06/30/2019 and cash adjusted to date.



Firefighters' Retirement System of Louisiana

INVESTMENT PERFORMANCE FLASH REPORT

| | Market Value (\$) | Policy % | % of Portfolio | 1 Mo (%) | Fiscal YTD (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|--------------------|------------|----------------|------------|----------------|------------|------------|------------|------------|------------|---------------|----------------|
| Real Estate Composite | 111,165,360 | 6.0 | 6.2 | 0.0 | 0.0 | 1.6 | 2.5 | 4.7 | 4.9 | 5.0 | 5.0 | Dec-09 |
| Sentinel Real Estate Fund (\$30,000,000) | 37,378,313 | | 2.1 | 0.0 | 0.0 | 3.5 | 4.9 | 7.0 | 8.5 | 12.6 | 6.4 | Feb-06 |
| JP Morgan India (\$8,990,000) | 1,305,554 | | 0.1 | 0.0 | 0.0 | -33.5 | -33.5 | -24.3 | -16.0 | -7.0 | -15.6 | Apr-07 |
| Timbervest Crossover Fund (\$16,000,000) | 6,883,712 | | 0.4 | 0.0 | 0.0 | 4.4 | 3.9 | -3.0 | -3.2 | -0.7 | -1.1 | Apr-08 |
| AEW Partners VI LP (\$20,000,000) | -395,899 | | 0.0 | 0.0 | 0.0 | 0.8 | 1.6 | 11.8 | 13.6 | -- | 13.2 | Mar-10 |
| AEW Core Property (\$12,000,000) | 16,482,514 | | 0.9 | 0.0 | 0.0 | 2.8 | 4.4 | 6.0 | -- | -- | 7.2 | May-15 |
| FRS-GA (Georgia) | 3,463,043 | | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -10.1 | -6.0 | -9.8 | -8.5 | Jun-08 |
| FRS-LB I (NLTP AZ) | 7,315,110 | | 0.4 | 0.0 | 0.0 | -0.9 | -0.9 | 17.9 | 11.3 | -10.3 | -11.1 | Jun-07 |
| FRS-LB III (ST George UT) | 9,281,546 | | 0.5 | 0.0 | 0.0 | -0.1 | -0.1 | 0.0 | 3.4 | 1.2 | 2.6 | Jun-08 |
| ASB Real Estate Fund | 14,576,244 | | 0.8 | 0.0 | 0.0 | 3.4 | 4.7 | 5.6 | -- | -- | 5.3 | Jan-16 |
| Heitman America Real Estate Trust | 14,875,223 | | 0.8 | 0.0 | 0.0 | 0.7 | 1.2 | 5.4 | -- | -- | 6.2 | Nov-15 |
| Total Cash (\$9 MM) | 11,514,168 | -- | 0.6 | 0.1 | 0.9 | 2.1 | 2.3 | 1.6 | 1.0 | 0.6 | 2.8 | Jun-92 |
| <i>91 Day T-Bills</i> | | | | <i>0.1</i> | <i>0.8</i> | <i>1.9</i> | <i>2.1</i> | <i>1.6</i> | <i>1.0</i> | <i>0.5</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 06/30/2019 and cash adjusted to date.

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

Harbourvest IV was funded 10/01/2016.



Firefighters' Retirement System of Louisiana

CURRENT MONTH CHANGE IN VALUE

Total Cash Flow Summary

Month Ending November 30, 2019

| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Fees | Net Investment Change | Ending Market Value |
|---|---------------------------|---------------|--------------|---------------|-----------|--------------------------|------------------------|
| Acadian Emerging Markets Equity | \$60,301,097 | \$0 | \$0 | \$0 | \$0 | \$136,645 | \$60,437,742 |
| AEW Core Property (\$12,000,000) | \$16,482,514 | \$0 | \$0 | \$0 | \$0 | \$0 | \$16,482,514 |
| AEW Partners VI LP (\$20,000,000) | -\$395,899 | \$0 | \$0 | \$0 | \$0 | \$0 | -\$395,899 |
| AQR Global Risk Premium – EL | \$84,145,334 | \$0 | \$0 | \$0 | -\$66,549 | -\$83,977 | \$84,061,357 |
| ASB Real Estate Fund | \$14,576,244 | \$0 | \$0 | \$0 | \$0 | \$0 | \$14,576,244 |
| Blackrock Global Allocation | \$88,744,718 | \$0 | \$0 | \$0 | \$0 | \$1,234,496 | \$89,979,213 |
| Blackrock US Debt | \$385,934,227 | \$0 | \$0 | \$0 | \$0 | -\$174,720 | \$385,759,507 |
| Blackrock US TIPS Index | \$54,350,529 | \$0 | \$0 | \$0 | \$0 | \$84,885 | \$54,435,415 |
| Boston Partners Global Equity | \$101,509,959 | \$0 | -\$131,535 | -\$131,535 | -\$46,008 | \$1,540,021 | \$102,918,445 |
| Cash/Clearing Account | \$12,401,430 | \$572,081 | -\$6,085,021 | -\$5,512,941 | \$0 | \$10,927 | \$6,899,416 |
| CCMP Capital Investors III (\$15,000,000) | \$13,005,177 | \$0 | \$0 | \$0 | \$0 | \$0 | \$13,005,177 |
| DCM Private Equity II (\$7,500,000) | \$1,091,265 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,091,265 |
| DTC Private Equity II-Q, L.P. (\$7,500,000) | \$1,182,604 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,182,604 |
| Energy Opportunities Fund | \$2,619 | \$0 | \$0 | \$0 | \$0 | \$3 | \$2,623 |
| FECP II (\$20,000,000) | -\$97,310 | \$0 | \$0 | \$0 | \$0 | \$0 | -\$97,310 |
| Fisher All Foreign Equity | \$109,067,160 | \$0 | \$0 | \$0 | \$0 | \$2,791,376 | \$111,858,536 |
| FRS-GA (Georgia) | \$3,463,043 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,463,043 |
| FRS-LB I (NLTP AZ) | \$7,315,110 | \$0 | \$0 | \$0 | \$0 | \$0 | \$7,315,110 |
| FRS-LB III (ST George UT) | \$9,281,546 | \$0 | \$0 | \$0 | \$0 | \$0 | \$9,281,546 |
| GA Crossover Fund (\$25,000,000) | \$3,921,114 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,921,114 |
| Greenspring Associates III (\$9,230,000) | \$3,360,919 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,360,919 |
| Harbourvest IV (\$20,000,000) | \$17,953,639 | \$0 | \$0 | \$0 | \$0 | \$0 | \$17,953,639 |
| HarbourVest Partners XI Buyout (\$35,000,000) | \$1,554,001 | \$700,000 | \$0 | \$700,000 | \$0 | \$0 | \$2,254,001 |



Firefighters' Retirement System of Louisiana

CURRENT MONTH CHANGE IN VALUE

| | Month Ending November 30, 2019 | | | | | | | Ending Market Value |
|--|--------------------------------|--------------------|---------------------|---------------------|-------------------|-----------------------|------------------------|---------------------|
| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Fees | Net Investment Change | | |
| Heitman America Real Estate Trust | \$14,875,223 | \$0 | \$0 | \$0 | \$0 | \$0 | \$14,875,223 | |
| JP Morgan India (\$8,990,000) | \$1,305,554 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,305,554 | |
| Landmark Equity Partners XV (\$25,000,000) | \$9,775,876 | \$0 | -\$43,173 | -\$43,173 | \$0 | \$0 | \$9,732,703 | |
| Liquidating - BlackRock Global Focused | \$8,024 | \$0 | \$0 | \$0 | \$0 | -\$98 | \$7,925 | |
| Louisiana Asset Management Pool | \$4,608,004 | \$0 | \$0 | \$0 | \$0 | \$6,749 | \$4,614,753 | |
| Louisiana Fund I (\$1,000,000) | \$1,433,550 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,433,550 | |
| LSV International Equity Value | \$106,444,544 | \$0 | \$0 | \$0 | \$0 | \$553,772 | \$106,998,316 | |
| Mellon Stock Index Fund | \$301,998,794 | \$0 | \$0 | \$0 | \$0 | \$10,959,599 | \$312,958,393 | |
| Mesirow (\$35,000,000) | \$11,410,614 | \$0 | \$0 | \$0 | \$0 | \$0 | \$11,410,614 | |
| Murphree Venture (\$2,000,000) | \$613,531 | \$0 | \$0 | \$0 | \$0 | \$0 | \$613,531 | |
| OFI Emerging Markets | \$31,675,026 | \$0 | \$0 | \$0 | -\$22,975 | \$383,720 | \$32,058,746 | |
| Orleans Core Fixed Income | \$95,477,703 | \$0 | \$0 | \$0 | \$0 | \$102,625 | \$95,580,328 | |
| QMA SMID | \$45,177,216 | \$0 | \$0 | \$0 | \$0 | \$2,360,364 | \$47,537,580 | |
| Rothschild U.S. SMID Core | \$46,065,129 | \$0 | \$0 | \$0 | \$0 | \$1,894,702 | \$47,959,831 | |
| Sentinel Real Estate Fund (\$30,000,000) | \$37,378,313 | \$0 | \$0 | \$0 | \$0 | \$0 | \$37,378,313 | |
| State Street ACWI Index Fund | \$37,284,765 | \$0 | \$0 | \$0 | -\$1,911 | \$925,623 | \$38,210,388 | |
| Thornburg Global Opportunities | \$35,517,379 | \$0 | \$0 | \$0 | \$0 | \$1,535,692 | \$37,053,071 | |
| Timbervest Crossover Fund (\$16,000,000) | \$6,883,712 | \$0 | \$0 | \$0 | \$0 | \$0 | \$6,883,712 | |
| Total | \$1,777,083,997 | \$1,272,081 | -\$6,259,729 | -\$4,987,649 | -\$137,442 | \$24,262,402 | \$1,796,358,751 | |

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 November 30, 2019

| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Fees | Net Investment Change | Ending Market Value |
|---|---------------------------|---------------|----------------|---------------|------------|--------------------------|------------------------|
| Acadian Emerging Markets Equity | \$61,087,956 | \$0 | \$0 | \$0 | -\$222,569 | -\$650,214 | \$60,437,742 |
| AEW Core Property (\$12,000,000) | \$16,482,514 | \$0 | \$0 | \$0 | \$0 | \$0 | \$16,482,514 |
| AEW Partners VI LP (\$20,000,000) | \$8,884,982 | \$0 | -\$9,280,881 | -\$9,280,881 | \$0 | \$0 | -\$395,899 |
| AQR Global Risk Premium – EL | \$81,793,968 | \$0 | \$0 | \$0 | -\$330,948 | \$2,267,389 | \$84,061,357 |
| ASB Real Estate Fund | \$14,576,244 | \$0 | \$0 | \$0 | \$0 | \$0 | \$14,576,244 |
| Blackrock Global Allocation | \$86,219,909 | \$0 | \$0 | \$0 | \$0 | \$3,759,304 | \$89,979,213 |
| Blackrock US Debt | \$296,301,894 | \$80,000,000 | \$0 | \$80,000,000 | \$0 | \$9,457,613 | \$385,759,507 |
| Blackrock US TIPS Index | \$53,502,426 | \$0 | \$0 | \$0 | \$0 | \$932,989 | \$54,435,415 |
| Boston Partners Global Equity | \$98,946,150 | \$0 | -\$262,405 | -\$262,405 | -\$223,309 | \$4,234,700 | \$102,918,445 |
| Cash/Clearing Account | \$10,592,120 | \$128,912,028 | -\$132,764,673 | -\$3,852,645 | \$0 | \$159,940 | \$6,899,416 |
| CCMP Capital Investors III (\$15,000,000) | \$16,139,690 | \$0 | -\$3,134,513 | -\$3,134,513 | \$0 | \$0 | \$13,005,177 |
| DCM Private Equity II (\$7,500,000) | \$1,164,748 | \$0 | -\$73,483 | -\$73,483 | \$0 | \$0 | \$1,091,265 |
| DTC Private Equity II-Q, L.P. (\$7,500,000) | \$1,332,604 | \$0 | -\$150,000 | -\$150,000 | \$0 | \$0 | \$1,182,604 |
| Energy Opportunities Fund | \$33 | \$0 | \$0 | \$0 | \$0 | \$2,589 | \$2,623 |
| FECF II (\$20,000,000) | \$303,334 | \$0 | -\$294,412 | -\$294,412 | \$0 | -\$106,232 | -\$97,310 |
| Fisher All Foreign Equity | \$108,054,069 | \$0 | -\$630 | -\$630 | -\$309,188 | \$3,805,097 | \$111,858,536 |
| FRS-GA (Georgia) | \$3,463,043 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,463,043 |
| FRS-LB I (NLTP AZ) | \$7,315,110 | \$0 | \$0 | \$0 | \$0 | \$0 | \$7,315,110 |
| FRS-LB III (ST George UT) | \$9,281,546 | \$0 | \$0 | \$0 | \$0 | \$0 | \$9,281,546 |
| GA Crossover Fund (\$25,000,000) | \$3,921,114 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,921,114 |
| Greenspring Associates III (\$9,230,000) | \$3,527,059 | \$0 | -\$166,140 | -\$166,140 | \$0 | \$0 | \$3,360,919 |
| Harbourvest IV (\$20,000,000) | \$19,493,639 | \$0 | -\$1,540,000 | -\$1,540,000 | \$0 | \$0 | \$17,953,639 |
| HarbourVest Partners XI Buyout (\$35,000,000) | \$154,001 | \$2,100,000 | \$0 | \$2,100,000 | \$0 | \$0 | \$2,254,001 |



Firefighters' Retirement System of Louisiana

CURRENT FYTD CHANGE IN VALUE

| | Fiscal YTD Ending November 30, 2019 | | | | | | |
|--|-------------------------------------|----------------------|-----------------------|---------------------|---------------------|-----------------------|------------------------|
| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Fees | Net Investment Change | Ending Market Value |
| Heitman America Real Estate Trust | \$14,875,223 | \$0 | \$0 | \$0 | \$0 | \$0 | \$14,875,223 |
| JP Morgan India (\$8,990,000) | \$1,305,554 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,305,554 |
| Landmark Equity Partners XV (\$25,000,000) | \$9,592,911 | \$587,176 | -\$447,384 | \$139,792 | \$0 | \$0 | \$9,732,703 |
| Liquidating - BlackRock Global Focused | \$8,142 | \$0 | \$0 | \$0 | \$0 | -\$217 | \$7,925 |
| Louisiana Asset Management Pool | \$4,574,500 | \$0 | \$0 | \$0 | \$0 | \$40,252 | \$4,614,753 |
| Louisiana Fund I (\$1,000,000) | \$1,433,550 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,433,550 |
| LSV International Equity Value | \$103,194,258 | \$0 | -\$1,161 | -\$1,161 | -\$352,581 | \$3,805,218 | \$106,998,316 |
| Mellon Stock Index Fund | \$290,644,592 | \$38,152 | \$0 | \$38,152 | -\$38,152 | \$22,275,648 | \$312,958,393 |
| Mesirow (\$35,000,000) | \$8,435,614 | \$2,975,000 | \$0 | \$2,975,000 | \$0 | \$0 | \$11,410,614 |
| Murphree Venture (\$2,000,000) | \$662,306 | \$0 | -\$48,775 | -\$48,775 | \$0 | \$0 | \$613,531 |
| OFI Emerging Markets | \$31,465,066 | \$0 | \$0 | \$0 | -\$111,152 | \$593,680 | \$32,058,746 |
| Orleans Core Fixed Income | \$93,124,492 | \$0 | \$0 | \$0 | -\$29,523 | \$2,455,836 | \$95,580,328 |
| QMA SMID | \$44,604,801 | \$0 | \$0 | \$0 | -\$58,083 | \$2,932,779 | \$47,537,580 |
| Rothschild U.S. SMID Core | \$45,743,366 | \$0 | \$0 | \$0 | -\$79,368 | \$2,216,464 | \$47,959,831 |
| Sentinel Real Estate Fund (\$30,000,000) | \$38,149,072 | \$0 | -\$770,759 | -\$770,759 | \$0 | \$0 | \$37,378,313 |
| State Street ACWI Index Fund | -- | \$35,000,000 | \$0 | \$35,000,000 | -\$5,589 | \$3,210,388 | \$38,210,388 |
| Stone Harbor | \$79,483,138 | \$0 | -\$81,027,382 | -\$81,027,382 | \$0 | \$1,544,244 | -- |
| Thornburg Global Opportunities | \$60,232,986 | \$0 | -\$25,001,073 | -\$25,001,073 | -\$91,378 | \$1,821,158 | \$37,053,071 |
| Timbervest Crossover Fund (\$16,000,000) | \$6,883,712 | \$0 | \$0 | \$0 | \$0 | \$0 | \$6,883,712 |
| Total | \$1,736,951,437 | \$249,612,357 | -\$254,963,670 | -\$5,351,314 | -\$1,851,840 | \$64,758,627 | \$1,796,358,751 |

Beginning Market Value may not match the Ending Market Value of the previous Flash report due to delayed reporting of private investments (private equity and real estate).



Firefighters' Retirement System of Louisiana

SINCE INCEPTION CHANGE IN VALUE

Total Cash Flow Summary

| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Net Investment Change | Ending Market Value |
|---|------------------------|-----------------|------------------|---------------|-----------------------|---------------------|
| Acadian Emerging Markets Equity | -- | \$65,000,000 | -\$10,000,000 | \$55,000,000 | \$5,437,742 | \$60,437,742 |
| AEW Core Property (\$12,000,000) | -- | \$12,000,000 | \$0 | \$12,000,000 | \$4,482,514 | \$16,482,514 |
| AEW Partners VI LP (\$20,000,000) | -- | \$18,420,450 | -\$33,332,325 | -\$14,911,875 | \$14,515,976 | -\$395,899 |
| AQR Global Risk Premium – EL | -- | \$101,500,000 | -\$30,700,000 | \$70,800,000 | \$13,261,357 | \$84,061,357 |
| ASB Real Estate Fund | -- | \$12,254,130 | -\$141,910 | \$12,112,220 | \$2,464,024 | \$14,576,244 |
| Blackrock Global Allocation | -- | \$68,682,390 | \$0 | \$68,682,390 | \$21,296,823 | \$89,979,213 |
| Blackrock US Debt | -- | \$407,536,521 | -\$58,500,000 | \$349,036,521 | \$36,722,986 | \$385,759,507 |
| Blackrock US TIPS Index | -- | \$50,016,034 | -\$4,805 | \$50,011,229 | \$4,424,186 | \$54,435,415 |
| Boston Partners Global Equity | -- | \$80,939,406 | -\$1,592,554 | \$79,346,852 | \$23,571,593 | \$102,918,445 |
| Cash/Clearing Account | -- | \$2,538,311,979 | -\$2,535,227,605 | \$3,084,374 | \$3,815,042 | \$6,899,416 |
| CCMP Capital Investors III (\$15,000,000) | -- | \$13,375,862 | -\$4,742,087 | \$8,633,775 | \$4,371,402 | \$13,005,177 |
| DCM Private Equity II (\$7,500,000) | -- | \$8,232,280 | -\$7,381,601 | \$850,679 | \$240,585 | \$1,091,265 |
| DTC Private Equity II-Q, L.P. (\$7,500,000) | -- | \$5,480,845 | -\$8,437,500 | -\$2,956,655 | \$4,139,259 | \$1,182,604 |
| Energy Opportunities Fund | -- | \$50,039,277 | -\$44,450,083 | \$5,589,194 | -\$5,586,572 | \$2,623 |
| FCEP II (\$20,000,000) | -- | \$19,188,998 | -\$22,596,774 | -\$3,407,776 | \$3,310,466 | -\$97,310 |
| Fisher All Foreign Equity | -- | \$117,180,807 | -\$80,308,187 | \$36,872,620 | \$74,985,916 | \$111,858,536 |
| FRS-GA (Georgia) | -- | \$9,416,075 | \$0 | \$9,416,075 | -\$5,953,032 | \$3,463,043 |
| FRS-LB I (NLTP AZ) | -- | \$24,900,208 | \$0 | \$24,900,208 | -\$17,585,098 | \$7,315,110 |
| FRS-LB III (ST George UT) | -- | \$6,878,923 | \$0 | \$6,878,923 | \$2,402,623 | \$9,281,546 |
| GA Crossover Fund (\$25,000,000) | -- | \$25,000,000 | -\$46,276,687 | -\$21,276,687 | \$25,197,801 | \$3,921,114 |
| Greenspring Associates III (\$9,230,000) | -- | \$8,491,600 | -\$13,277,908 | -\$4,786,308 | \$8,147,227 | \$3,360,919 |
| Harbourvest IV (\$20,000,000) | -- | \$17,325,303 | -\$4,447,769 | \$12,877,534 | \$5,076,105 | \$17,953,639 |

Cash flow statistics exclude management fees and expenses.



Firefighters' Retirement System of Louisiana

SINCE INCEPTION CHANGE IN VALUE

| | Beginning Market Value | Ending November 30, 2019 | | | | Ending Market Value |
|---|------------------------|--------------------------|----------------|---------------|-----------------------|---------------------|
| | | Contributions | Withdrawals | Net Cash Flow | Net Investment Change | |
| HarbourVest Partners XI Buyout (\$35,000,000) | -- | \$2,100,000 | \$0 | \$2,100,000 | \$154,001 | \$2,254,001 |
| Heitman America Real Estate Trust | -- | \$12,000,000 | \$0 | \$12,000,000 | \$2,875,223 | \$14,875,223 |
| JP Morgan India (\$8,990,000) | -- | \$8,307,355 | -\$3,814,303 | \$4,493,052 | -\$3,187,498 | \$1,305,554 |
| Landmark Equity Partners XV (\$25,000,000) | -- | \$18,384,351 | -\$13,438,457 | \$4,945,894 | \$4,786,809 | \$9,732,703 |
| Liquidating - BlackRock Global Focused | -- | \$46,832,890 | -\$59,572,953 | -\$12,740,063 | \$12,747,989 | \$7,925 |
| Louisiana Asset Management Pool | -- | \$943,990,965 | -\$944,296,689 | -\$305,724 | \$4,920,477 | \$4,614,753 |
| Louisiana Fund I (\$1,000,000) | -- | \$1,010,000 | \$0 | \$1,010,000 | \$423,550 | \$1,433,550 |
| LSV International Equity Value | -- | \$103,818,122 | -\$42,314,574 | \$61,503,548 | \$45,494,768 | \$106,998,316 |
| Mellon Stock Index Fund | -- | \$275,513,975 | -\$164,500,001 | \$111,013,974 | \$201,944,419 | \$312,958,393 |
| Mesirow (\$35,000,000) | -- | \$11,653,620 | \$0 | \$11,653,620 | -\$243,006 | \$11,410,614 |
| Murphree Venture (\$2,000,000) | -- | \$2,058,578 | -\$897,234 | \$1,161,344 | -\$547,813 | \$613,531 |
| OFI Emerging Markets | -- | \$37,500,000 | -\$11,500,000 | \$26,000,000 | \$6,058,746 | \$32,058,746 |
| Orleans Core Fixed Income | \$0 | \$146,099,081 | -\$91,022,995 | \$55,076,086 | \$40,504,242 | \$95,580,328 |
| QMA SMID | -- | \$46,715,738 | \$0 | \$46,715,738 | \$821,842 | \$47,537,580 |
| Rothschild U.S. SMID Core | -- | \$55,500,000 | -\$27,500,000 | \$28,000,000 | \$19,959,831 | \$47,959,831 |
| Sentinel Real Estate Fund (\$30,000,000) | -- | \$30,000,000 | -\$18,739,200 | \$11,260,800 | \$26,117,513 | \$37,378,313 |
| State Street ACWI Index Fund | -- | \$35,000,000 | \$0 | \$35,000,000 | \$3,210,388 | \$38,210,388 |
| Stone Harbor | -- | \$86,000,000 | -\$81,027,382 | \$4,972,618 | -\$4,972,618 | -- |
| Thornburg Global Opportunities | -- | \$47,500,000 | -\$95,307,331 | -\$47,807,331 | \$84,860,402 | \$37,053,071 |

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.
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- 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.

