

INVESTMENT MARKET UPDATE

(AS OF SEPTEMBER 30, 2019)

LOUISIANA MUNICIPAL POLICE EMPLOYEES' RETIREMENT SYSTEM

David Barnes, CFA, CAIA, Senior Consultant

Rhett Humphreys, CFA, Partner



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

CALENDAR YEAR INDEX PERFORMANCE

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Sep | YTD |
|---------------------------------|-------|--------|-------|--------|--------|--------|-------|-------|--------|-------|-------|
| S&P 500 | 15.1% | 2.1% | 16.0% | 32.4% | 13.7% | 1.4% | 12.0% | 21.8% | -4.4% | 1.9% | 20.6% |
| Russell 1000 | 16.1% | 1.5% | 16.4% | 33.1% | 13.2% | 0.9% | 12.1% | 21.7% | -4.8% | 1.7% | 20.5% |
| Russell 2000 | 26.9% | -4.2% | 16.3% | 38.8% | 4.9% | -4.4% | 21.3% | 14.6% | -11.0% | 2.1% | 14.2% |
| Russell 2500 | 26.7% | -2.5% | 17.9% | 36.8% | 7.1% | -2.9% | 17.6% | 16.8% | -10.0% | 1.8% | 17.7% |
| MSCI EAFE | 7.8% | -12.1% | 17.3% | 22.8% | -4.9% | -0.8% | 1.0% | 25.0% | -13.8% | 2.9% | 12.8% |
| MSCI EM | 18.9% | -18.4% | 18.2% | -2.6% | -2.2% | -14.9% | 11.2% | 37.3% | -14.6% | 1.9% | 5.9% |
| MSCI ACWI | 12.7% | -7.3% | 16.1% | 22.8% | 4.2% | -2.4% | 7.9% | 24.0% | -9.4% | 2.1% | 16.2% |
| Private Equity | 19.8% | 9.5% | 12.6% | 22.3% | 14.6% | 10.4% | 10.3% | 21.0% | 13.1% | - | 4.9% |
| BC TIPS | 6.3% | 13.6% | 7.0% | -8.6% | 3.6% | -1.4% | 4.7% | 3.0% | -1.3% | -1.4% | 7.6% |
| BC Municipal | 2.4% | 10.7% | 6.8% | -2.6% | 9.1% | 3.3% | 0.2% | 5.4% | 1.3% | -0.8% | 6.7% |
| BC Muni High Yield | 7.8% | 9.2% | 18.1% | -5.5% | 13.8% | 1.8% | 3.0% | 9.7% | 4.8% | -0.2% | 9.7% |
| BC US Corporate HY | 15.1% | 5.0% | 15.8% | 7.4% | 2.5% | -4.5% | 17.1% | 7.5% | -2.1% | 0.4% | 11.4% |
| BC US Agg Bond | 6.5% | 7.8% | 4.2% | -2.0% | 6.0% | 0.5% | 2.6% | 3.5% | 0.0% | -0.5% | 8.5% |
| BC Global Agg | 5.5% | 5.6% | 4.3% | -2.6% | 0.6% | -3.2% | 2.1% | 7.4% | -1.2% | -1.0% | 6.3% |
| BC Long Treasuries | 9.4% | 29.9% | 3.6% | -12.7% | 25.1% | -1.2% | 1.3% | 8.5% | -1.8% | -2.5% | 19.8% |
| BC US Long Credit | 10.7% | 17.1% | 12.7% | -6.6% | 16.4% | -4.6% | 10.2% | 12.2% | -6.8% | -1.5% | 21.9% |
| BC US STRIPS 20+ Yr | 10.9% | 58.5% | 3.0% | -21.0% | 46.4% | -3.7% | 1.4% | 13.7% | -4.1% | -3.6% | 28.4% |
| JPM GBI-EM Global Div | 15.7% | -1.8% | 16.8% | -9.0% | -5.7% | -14.9% | 9.9% | 15.2% | -6.2% | 1.0% | 7.9% |
| JPM EMBI Glob Div | 12.2% | 7.3% | 17.4% | -5.3% | 7.4% | 1.2% | 10.2% | 10.3% | -4.3% | -0.5% | 13.0% |
| 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% | 1.2% | 3.1% |
| Alerian MLP | 35.9% | 13.9% | 4.8% | 27.6% | 4.8% | -32.6% | 18.3% | -6.5% | -12.4% | 0.7% | 11.1% |
| FTSE NAREIT Equity REITs | 28.0% | 8.3% | 18.1% | 2.5% | 30.1% | 3.2% | 8.5% | 5.2% | -4.6% | 2.9% | 27.0% |

Source: FactSet, Barclays, Thomson One

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



MARKET COMMENTARY – SEPTEMBER 2019

Market Environment

Risk assets were in the black in September following a challenging summer marked by an escalating trade war between the United States and China, and sluggish economic growth. Global equities rallied as central banks in the US and Europe eased monetary policy to offset concerns around an economic slowdown. The MSCI EAFE Index led the way, increasing 2.9% last month, on the back of a massive, open-ended stimulus plan from the European Central Bank. The S&P 500 Index and the MSCI EM Index gained 1.9% each in September.

Following a rate cut last month by the Federal Reserve, the short-end of the Treasury yield curve moved modestly lower. However, the curve steepened at the 10- and 30-year points by 18 and 16 basis points, respectively. As a result, the Barclays US Treasury Index and Long Treasury Index declined 0.8% and 2.5%, respectively, in September. Global rates also moved higher with the German bund increasing 13 basis points and the 10-year Japanese bond yield moving six basis points higher – reflecting investors' increased appetite for risk following the ECB's stimulus package. In credit, spreads posted a moderate decline across domestic investment-grade indexes. The Barclays US High Yield Index eked out a 0.4% monthly return as spreads on lower-quality indexes fell.

Within real assets, spot WTI crude oil declined 1.7% during the month, with losses of 7.0% for the quarter; that said, year-to-date gains total 19.9% so far this year.

As we move into the fourth quarter, we remain cautious about risk assets in the face of slowing global growth and the US economy in the late stage of the market cycle. To this end, we encourage reducing return-seeking credit and recommend shorter-duration safe-haven fixed income.



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

| Investment Performance Summary | | | | | | | | | | | |
|-----------------------------------------|----------------------|-------------------|--------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| | Market Value (\$) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | YTD (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| Total Fund Composite | 2,154,735,769 | 100.0 | 100.0 | 1.1 | 0.0 | 11.5 | 6.7 | 5.0 | 7.6 | 5.1 | Mar-98 |
| <i>Total Fund Policy Index</i> | | | | <u>1.3</u> | <u>0.5</u> | <u>11.5</u> | <u>7.7</u> | <u>6.1</u> | <u>7.7</u> | -- | <i>Mar-98</i> |
| Over/Under | | | | -0.2 | -0.5 | 0.0 | -1.0 | -1.1 | -0.1 | | |
| <i>Total Fund Allocation Index</i> | | | | <u>1.1</u> | <u>0.3</u> | <u>11.6</u> | <u>7.2</u> | <u>5.6</u> | -- | -- | <i>Mar-98</i> |
| Total Equity Composite | 1,081,399,741 | 50.2 | 48.5 | 2.0 | -1.2 | 14.5 | 8.4 | 5.9 | 8.8 | 5.0 | Mar-98 |
| <i>MSCI ACWI</i> | | | | <u>2.1</u> | <u>0.0</u> | <u>16.2</u> | <u>9.7</u> | <u>6.7</u> | <u>8.3</u> | <u>5.5</u> | <i>Mar-98</i> |
| Over/Under | | | | -0.1 | -1.2 | -1.7 | -1.3 | -0.8 | 0.5 | -0.5 | |
| Total Domestic Equity Composite | 546,919,590 | 25.4 | 24.0 | 1.7 | 0.1 | 19.0 | 11.6 | 9.5 | 12.3 | 6.4 | Mar-98 |
| <i>Russell 3000</i> | | | | <u>1.8</u> | <u>1.2</u> | <u>20.1</u> | <u>12.8</u> | <u>10.4</u> | <u>13.1</u> | <u>7.1</u> | <i>Mar-98</i> |
| Over/Under | | | | -0.1 | -1.1 | -1.1 | -1.2 | -0.9 | -0.8 | -0.7 | |
| Total Large Cap Equity Composite | 387,033,853 | 18.0 | 17.0 | 0.6 | 0.2 | 19.8 | 13.3 | 10.6 | 12.9 | 6.6 | Apr-98 |
| <i>Russell 1000</i> | | | | <u>1.7</u> | <u>1.4</u> | <u>20.5</u> | <u>13.2</u> | <u>10.6</u> | <u>13.2</u> | <u>6.9</u> | <i>Apr-98</i> |
| Over/Under | | | | -1.1 | -1.2 | -0.7 | 0.1 | 0.0 | -0.3 | -0.3 | |
| AllianceBernstein S&P 500 Index Fund | 112,889,236 | 5.2 | | 1.9 | 1.7 | 20.5 | 13.3 | 10.8 | 13.1 | 6.9 | Mar-98 |
| <i>S&P 500</i> | | | | <u>1.9</u> | <u>1.7</u> | <u>20.6</u> | <u>13.4</u> | <u>10.8</u> | <u>13.2</u> | <u>7.0</u> | <i>Mar-98</i> |
| Over/Under | | | | 0.0 | 0.0 | -0.1 | -0.1 | 0.0 | -0.1 | -0.1 | |
| BMO Asset Management | 127,230,402 | 5.9 | | 3.5 | -0.4 | 12.7 | 9.3 | 6.9 | 11.3 | 8.0 | Sep-08 |
| <i>Russell 1000 Value</i> | | | | <u>3.6</u> | <u>1.4</u> | <u>17.8</u> | <u>9.4</u> | <u>7.8</u> | <u>11.5</u> | <u>8.4</u> | <i>Sep-08</i> |
| Over/Under | | | | -0.1 | -1.8 | -5.1 | -0.1 | -0.9 | -0.2 | -0.4 | |
| INTECH | 146,914,215 | 6.8 | | -2.7 | -0.3 | 26.0 | 17.2 | 14.1 | 15.2 | 6.6 | Nov-00 |
| <i>Russell 1000 Growth</i> | | | | <u>0.0</u> | <u>1.5</u> | <u>23.3</u> | <u>16.9</u> | <u>13.4</u> | <u>14.9</u> | <u>5.3</u> | <i>Nov-00</i> |
| Over/Under | | | | -2.7 | -1.8 | 2.7 | 0.3 | 0.7 | 0.3 | 1.3 | |



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

| | Market Value (\$) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | YTD (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---------------------------------------------|----------------------|-------------------|-------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Total Small-Mid Cap Equity Composite | 159,885,737 | 7.4 | 7.0 | 4.5 | -0.1 | 17.0 | 7.8 | 7.2 | 11.3 | 2.2 | Apr-98 |
| <i>Russell 2500</i> | | | | <u>1.8</u> | <u>-1.3</u> | <u>17.7</u> | <u>9.5</u> | <u>8.6</u> | <u>12.2</u> | <u>8.3</u> | <i>Apr-98</i> |
| Over/Under | | | | 2.7 | 1.2 | -0.7 | -1.7 | -1.4 | -0.9 | -6.1 | |
| LSV | 78,280,673 | 3.6 | | 6.5 | -0.4 | 12.5 | 4.2 | 6.6 | 11.2 | 9.5 | Sep-01 |
| <i>Russell 2000 Value</i> | | | | <u>5.1</u> | <u>-0.6</u> | <u>12.8</u> | <u>6.5</u> | <u>7.2</u> | <u>10.1</u> | <u>8.2</u> | <i>Sep-01</i> |
| Over/Under | | | | 1.4 | 0.2 | -0.3 | -2.3 | -0.6 | 1.1 | 1.3 | |
| Pinnacle Associates | 81,605,064 | 3.8 | | 2.6 | 0.2 | 21.2 | 11.3 | 8.1 | 12.8 | 9.1 | Mar-06 |
| <i>Russell 2500 Growth</i> | | | | <u>-1.9</u> | <u>-3.2</u> | <u>20.0</u> | <u>12.3</u> | <u>10.2</u> | <u>13.5</u> | <u>8.9</u> | <i>Mar-06</i> |
| Over/Under | | | | 4.5 | 3.4 | 1.2 | -1.0 | -2.1 | -0.7 | 0.2 | |
| Total International Equity Composite | 377,107,665 | 17.5 | 17.0 | 2.1 | -1.2 | 14.3 | 6.1 | 3.3 | 5.4 | 3.9 | Mar-98 |
| <i>MSCI EAFE</i> | | | | <u>2.9</u> | <u>-1.1</u> | <u>12.8</u> | <u>6.5</u> | <u>3.3</u> | <u>4.9</u> | <u>4.2</u> | <i>Mar-98</i> |
| Over/Under | | | | -0.8 | -0.1 | 1.5 | -0.4 | 0.0 | 0.5 | -0.3 | |
| KBI | 90,692,495 | 4.2 | | 3.8 | -1.0 | 7.6 | 3.2 | 0.8 | 3.8 | 0.6 | Sep-07 |
| <i>MSCI EAFE Value</i> | | | | <u>4.8</u> | <u>-1.7</u> | <u>7.7</u> | <u>5.1</u> | <u>1.0</u> | <u>3.2</u> | <u>0.3</u> | <i>Sep-07</i> |
| Over/Under | | | | -1.0 | 0.7 | -0.1 | -1.9 | -0.2 | 0.6 | 0.3 | |
| William Blair | 180,226,207 | 8.4 | | 0.8 | -1.4 | 18.5 | 7.3 | 4.4 | 7.4 | 8.6 | Aug-03 |
| <i>MSCI ACWI ex USA Growth</i> | | | | <u>1.2</u> | <u>-0.8</u> | <u>16.2</u> | <u>7.4</u> | <u>4.9</u> | <u>5.8</u> | <u>7.3</u> | <i>Aug-03</i> |
| Over/Under | | | | -0.4 | -0.6 | 2.3 | -0.1 | -0.5 | 1.6 | 1.3 | |
| Mellon MSCI EAFE Index Fund | 106,074,313 | 4.9 | | 2.9 | -1.1 | 13.1 | 6.9 | 3.6 | -- | 3.7 | Feb-14 |
| <i>MSCI EAFE</i> | | | | <u>2.9</u> | <u>-1.1</u> | <u>12.8</u> | <u>6.5</u> | <u>3.3</u> | <u>4.9</u> | <u>3.4</u> | <i>Feb-14</i> |
| Over/Under | | | | 0.0 | 0.0 | 0.3 | 0.4 | 0.3 | | 0.3 | |



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

| | Market Value (\$) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | YTD (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|------------------------------------------------------------|----------------------|-------------------|-------------|-------------|-------------|-------------|--------------|--------------|---------------|------------------|-------------------|
| Total Emerging Markets Equities | 157,372,487 | 7.3 | 7.5 | 3.0 | -5.4 | 2.8 | 4.7 | 1.2 | -- | 1.7 | Apr-14 |
| <i>MSCI Emerging Markets</i> | | | | <u>1.9</u> | <u>-4.2</u> | <u>5.9</u> | <u>6.0</u> | <u>2.3</u> | <u>3.4</u> | <u>2.6</u> | <i>Apr-14</i> |
| Over/Under | | | | 1.1 | -1.2 | -3.1 | -1.3 | -1.1 | | -0.9 | |
| Dimensional Fund Advisors | 60,608,428 | 2.8 | | 2.6 | -7.0 | 0.0 | 5.3 | 1.4 | -- | 1.8 | Apr-14 |
| <i>MSCI Emerging Markets</i> | | | | <u>1.9</u> | <u>-4.2</u> | <u>5.9</u> | <u>6.0</u> | <u>2.3</u> | <u>3.4</u> | <u>2.6</u> | <i>Apr-14</i> |
| Over/Under | | | | 0.7 | -2.8 | -5.9 | -0.7 | -0.9 | | -0.8 | |
| Acadian Emerging Markets | 96,764,058 | 4.5 | | 3.3 | -4.3 | 4.7 | 4.3 | 1.0 | -- | 1.6 | May-14 |
| <i>MSCI Emerging Markets</i> | | | | <u>1.9</u> | <u>-4.2</u> | <u>5.9</u> | <u>6.0</u> | <u>2.3</u> | <u>3.4</u> | <u>2.6</u> | <i>May-14</i> |
| Over/Under | | | | 1.4 | -0.1 | -1.2 | -1.7 | -1.3 | | -1.0 | |
| Total Fixed Income Composite | 722,820,543 | 33.5 | 33.5 | -0.1 | 1.3 | 8.5 | 4.0 | 3.5 | 5.4 | 5.7 | Mar-98 |
| <i>Total Fixed Income Policy Index</i> | | | | <u>-0.2</u> | <u>1.7</u> | <u>8.9</u> | <u>3.8</u> | <u>3.5</u> | <u>4.3</u> | <u>5.2</u> | <i>Mar-98</i> |
| Over/Under | | | | 0.1 | -0.4 | -0.4 | 0.2 | 0.0 | 1.1 | 0.5 | |
| Loomis Sayles | 132,403,873 | 6.1 | | -0.2 | 1.6 | 8.7 | 4.4 | 4.2 | 6.4 | 7.2 | Oct-07 |
| <i>BBgBarc US Aggregate TR</i> | | | | <u>-0.5</u> | <u>2.3</u> | <u>8.5</u> | <u>2.9</u> | <u>3.4</u> | <u>3.7</u> | <u>4.3</u> | <i>Oct-07</i> |
| Over/Under | | | | 0.3 | -0.7 | 0.2 | 1.5 | 0.8 | 2.7 | 2.9 | |
| SSgA Bond Index Fund | 350,813,452 | 16.3 | | -0.5 | 2.2 | 8.4 | 2.8 | 3.3 | 3.7 | 4.9 | Mar-98 |
| <i>BBgBarc US Aggregate TR</i> | | | | <u>-0.5</u> | <u>2.3</u> | <u>8.5</u> | <u>2.9</u> | <u>3.4</u> | <u>3.7</u> | <u>5.0</u> | <i>Mar-98</i> |
| Over/Under | | | | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 | |
| Investec EMD LC Dynamic | 106,585,916 | 4.9 | | 1.1 | -1.4 | 7.6 | 2.7 | -0.3 | -- | -0.3 | Oct-14 |
| <i>JP Morgan GBI EM Global Diversified TR USD</i> | | | | <u>1.0</u> | <u>-0.8</u> | <u>7.9</u> | <u>3.1</u> | <u>0.6</u> | <u>2.4</u> | <u>0.6</u> | <i>Oct-14</i> |
| Over/Under | | | | 0.1 | -0.6 | -0.3 | -0.4 | -0.9 | | -0.9 | |
| Pacific | 40,522,599 | 1.9 | | 0.5 | 1.4 | 7.1 | 5.0 | -- | -- | 4.7 | Mar-15 |
| <i>Credit Suisse Leveraged Loans</i> | | | | <u>0.4</u> | <u>0.9</u> | <u>6.4</u> | <u>4.7</u> | <u>4.1</u> | <u>5.4</u> | <u>4.2</u> | <i>Mar-15</i> |
| Over/Under | | | | 0.1 | 0.5 | 0.7 | 0.3 | | | 0.5 | |
| Hotchkis & Wiley High Yield SMA | 42,574,253 | 2.0 | | 0.2 | 0.1 | 9.3 | -- | -- | -- | 7.1 | Dec-18 |
| <i>BBgBarc US High Yield TR</i> | | | | <u>0.4</u> | <u>1.3</u> | <u>11.4</u> | <u>6.1</u> | <u>5.4</u> | <u>7.9</u> | <u>9.0</u> | <i>Dec-18</i> |
| Over/Under | | | | -0.2 | -1.2 | -2.1 | | | | -1.9 | |
| Orleans Capital Intermediate Investment Grade Fixed Income | 49,920,451 | 2.3 | | -0.2 | -- | -- | -- | -- | -- | -0.2 | Sep-19 |
| <i>BBgBarc US Govt/Credit Int TR</i> | | | | <u>-0.4</u> | <u>1.4</u> | <u>6.4</u> | <u>2.4</u> | <u>2.7</u> | <u>3.0</u> | <u>-0.4</u> | <i>Sep-19</i> |
| Over/Under | | | | 0.2 | | | | | | 0.2 | |



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

| | Market Value (\$) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | YTD (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|-------------------------------------------|----------------------|-------------------|------------|-------------|-------------|------------|--------------|--------------|---------------|------------------|-------------------|
| Total Hedge Funds Composite | 85,413,205 | 4.0 | 5.0 | 0.0 | -1.7 | 5.9 | 1.5 | -0.4 | 2.8 | 1.9 | Jun-07 |
| <i>HFRI Fund of Funds Composite Index</i> | | | | <u>-0.6</u> | <u>-1.1</u> | <u>5.0</u> | <u>3.1</u> | <u>1.9</u> | <u>2.7</u> | <u>1.2</u> | <i>Jun-07</i> |
| Over/Under | | | | 0.6 | -0.6 | 0.9 | -1.6 | -2.3 | 0.1 | 0.7 | |
| EnTrustPermal | 85,400,641 | 4.0 | | 0.0 | -1.7 | 5.9 | -- | -- | -- | 0.9 | Apr-18 |
| <i>HFRI FOF COMP</i> | | | | <u>-0.6</u> | <u>-1.1</u> | <u>5.0</u> | <u>3.1</u> | <u>1.9</u> | <u>2.7</u> | <u>0.3</u> | <i>Apr-18</i> |
| Over/Under | | | | 0.6 | -0.6 | 0.9 | | | | 0.6 | |
| Och-Ziff | 6,435 | 0.0 | | 0.0 | -37.2 | -55.8 | -38.4 | -29.9 | -21.5 | -17.5 | Apr-07 |
| Stark | 6,128 | 0.0 | | 0.0 | -2.1 | -7.2 | -25.0 | -32.4 | -22.5 | -21.6 | Apr-07 |
| Total Real Estate Composite | 179,150,271 | 8.3 | 8.0 | 0.4 | 1.6 | 5.4 | 8.2 | 9.9 | 10.3 | 8.3 | Aug-00 |
| <i>NCREIF ODCE Net</i> | | | | <u>1.1</u> | <u>1.1</u> | <u>3.1</u> | <u>6.3</u> | <u>8.4</u> | <u>9.8</u> | <u>7.1</u> | <i>Aug-00</i> |
| Over/Under | | | | -0.7 | 0.5 | 2.3 | 1.9 | 1.5 | 0.5 | 1.2 | |
| Principal Global Advisors | 158,233,800 | 7.3 | | 0.3 | 1.7 | 4.8 | 8.0 | 9.7 | 10.8 | 7.4 | Jan-04 |
| <i>NCREIF ODCE Net</i> | | | | <u>1.1</u> | <u>1.1</u> | <u>3.1</u> | <u>6.3</u> | <u>8.4</u> | <u>9.8</u> | <u>7.1</u> | <i>Jan-04</i> |
| Over/Under | | | | -0.8 | 0.6 | 1.7 | 1.7 | 1.3 | 1.0 | 0.3 | |
| Siguler Guff DREOF II (\$25.0 MM) | 20,916,471 | 1.0 | | 1.0 | 1.0 | 9.3 | 9.1 | -- | -- | 8.6 | May-16 |
| <i>NCREIF Property Index</i> | | | | <u>0.0</u> | <u>0.0</u> | <u>3.3</u> | <u>6.3</u> | <u>8.3</u> | <u>9.6</u> | <u>6.7</u> | <i>May-16</i> |
| Over/Under | | | | 1.0 | 1.0 | 6.0 | 2.8 | | | 1.9 | |



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

| | Market Value (\$) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | YTD (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--------------------------------------------------------|----------------------|-------------------|------------|-------------|-------------|------------|--------------|--------------|---------------|------------------|-------------------|
| Total Private Equity Composite | 67,155,963 | 3.1 | 5.0 | 3.9 | 3.9 | 7.5 | 11.4 | 10.0 | -- | 10.5 | Oct-12 |
| <i>Cambridge Associates US All PE (1 Qtr Lag)</i> | | | | <u>4.6</u> | <u>4.6</u> | <u>7.8</u> | <u>15.6</u> | <u>11.7</u> | <u>14.7</u> | <u>13.9</u> | <i>Oct-12</i> |
| Over/Under | | | | -0.7 | -0.7 | -0.3 | -4.2 | -1.7 | | -3.4 | |
| Summit Partners Credit Fund (\$41.4 MM) | 4,402,583 | 0.2 | | 3.1 | 3.1 | -8.5 | 4.7 | 6.1 | -- | 7.7 | Oct-12 |
| Coller International Partners VII (\$15.0 MM) | 12,638,864 | 0.6 | | 4.7 | 4.7 | 2.6 | 19.1 | -- | -- | 24.7 | Feb-16 |
| Warburg Pincus (\$12.9 MM) | 13,772,837 | 0.6 | | 4.0 | 4.0 | 5.7 | 9.0 | -- | -- | -1.3 | Jan-16 |
| HarbourVest Partners Co-Investment IV (\$12.5 MM) | 11,191,667 | 0.5 | | 9.8 | 9.8 | 14.9 | -- | -- | -- | 13.7 | Jan-17 |
| J.F. Lehman Equity Investors IV, L.P. (\$12.5 MM) | 11,395,828 | 0.5 | | 1.6 | 1.6 | 26.8 | -- | -- | -- | 27.2 | Jan-17 |
| GoldPoint Partners Co-Investment VI, L.P. (\$15.0 MM) | 6,441,049 | 0.3 | | 6.1 | 6.1 | 5.1 | -- | -- | -- | -0.3 | Jan-18 |
| Levine Leichtman Capital Partners VI, L.P. (\$12.5 MM) | 5,536,977 | 0.3 | | 3.2 | 3.2 | 2.3 | -- | -- | -- | 1.6 | Mar-18 |
| HarbourVest Partners Co-Investment V | 1,686,223 | 0.1 | | -15.7 | -15.7 | -- | -- | -- | -- | -15.7 | Jun-19 |
| Warburg Pincus Global Growth Fund | 89,935 | 0.0 | | -48.8 | -48.8 | -- | -- | -- | -- | -62.5 | Apr-19 |
| Cash Account | 18,791,232 | 0.9 | 0.0 | 0.2 | 0.6 | 2.2 | 2.1 | 1.9 | 3.6 | 3.9 | Mar-98 |
| Cash Account | 18,791,232 | 0.9 | | 0.2 | 0.6 | 2.2 | 2.1 | 1.9 | 3.6 | 3.9 | Mar-98 |
| 91 Day T-Bills | | | | <u>0.2</u> | <u>0.5</u> | <u>1.7</u> | <u>1.5</u> | <u>1.0</u> | <u>0.5</u> | <u>1.9</u> | <i>Mar-98</i> |
| Over/Under | | | | 0.0 | 0.1 | 0.5 | 0.6 | 0.9 | 3.1 | 2.0 | |



Louisiana Municipal Police Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL

- Performance is reported net of fees.
- Fiscal year ends June 30.
- Allocation Index is not available prior to February 2013.
- Policy index does not have history prior to 9/30/2000.
- MSCI ACWI ex U.S. Net Index is not available prior to 1/31/1999.
- Total Fund Policy Index is 17% R1000, 7% R2500, 17% MSCI EAFE, 7.5% MSCI EM, 25% BC Agg, 1.5% BC HY, 1.5% CS Leverage Loan, 5.5% JPM GBI EM Diversified, 5% HFRI FOF Composite, 8% NCREIF, 5% Cambridge PE as of 6/1/2019.
- Total Fund Policy Index was 16% R1000, 8% R2500, 20% MSCI EAFE, 8% MSCI EM, 14% BC Agg, 2% BC HY, 2% CS Leverage Loan, 4% JPM GBI EM Diversified, 5% HFRI FOF Composite, 8% NCREIF, 2% CPI + 3%, 5% Cambridge PE, 6% Custom Global Equity/Global Bond Index (60% MSCI ACWI/40% Citi WGBI) from 3/1/2018 through 5/31/2019.
- Total Fund Policy Index was 30% R3000, 3% BC High Yield, 17% BC Agg, 10% NCREIF ODCE, 35% MSCI ACWI ex US, and 5% 91Day TBill + 400BPS from 2/1/2013 through 12/31/2013.
- Real Estate, Private Equity, and corresponding benchmarks are valued on a quarterly basis and updated as received.
- Summit Partners Credit Fund market value is based on reported 6/30/2019 value +/- capital calls and distributions.
- Siguler Guff was funded on 4/13/2016. Market values are based on reported 6/30/2019 value +/- capital calls and distributions.
- Cash account holds equity securities and is therefore not tied to the 91 Day T-Bill.
- International Equity composite market value includes \$114,649.31 from liquidating Alliance Bernstein Int'l Value.



Louisiana Municipal Police Employees' Retirement System

MONTHLY BREAKDOWN OF CHANGE IN VALUE

| | Cash Flow Summary | | | |
|-------------------------------------------------------|------------------------|---------------------------------|-----------------------|---------------------|
| | Beginning Market Value | Month Ending September 30, 2019 | | Ending Market Value |
| | | Net Cash Flow | Net Investment Change | |
| Acadian Emerging Markets | \$93,678,212 | \$0 | \$3,085,846 | \$96,764,058 |
| AllianceBernstein Int'l Value | \$115,617 | \$0 | -\$968 | \$114,649 |
| AllianceBernstein S&P 500 Index Fund | \$110,832,745 | \$0 | \$2,056,491 | \$112,889,236 |
| BMO Asset Management | \$122,920,053 | \$0 | \$4,310,349 | \$127,230,402 |
| Cash Account | \$22,037,482 | -\$3,281,415 | \$35,164 | \$18,791,232 |
| Coller International Partners VII (\$15.0 MM) | \$11,761,271 | \$324,615 | \$552,978 | \$12,638,864 |
| Dimensional Fund Advisors | \$59,094,862 | \$0 | \$1,513,567 | \$60,608,428 |
| Energy Opportunities Capital | \$0 | \$0 | \$4,814 | \$4,814 |
| EnTrustPermal | \$85,400,641 | \$0 | \$0 | \$85,400,641 |
| GoldPoint Partners Co-Investment VI, L.P. (\$15.0 MM) | \$5,127,341 | \$976,914 | \$336,794 | \$6,441,049 |
| HarbourVest Partners Co-Investment IV (\$12.5 MM) | \$10,197,280 | \$0 | \$994,387 | \$11,191,667 |
| HarbourVest Partners Co-Investment V | \$2,000,000 | \$0 | -\$313,777 | \$1,686,223 |
| Hotchkis & Wiley High Yield SMA | \$42,486,140 | \$0 | \$88,113 | \$42,574,253 |
| INTECH | \$150,937,131 | \$0 | -\$4,022,915 | \$146,914,215 |
| Investec EMD LC Dynamic | \$105,432,991 | \$0 | \$1,152,924 | \$106,585,916 |
| J.F. Lehman Equity Investors IV, L.P. (\$12.5 MM) | \$11,214,058 | \$0 | \$181,770 | \$11,395,828 |



Louisiana Municipal Police Employees' Retirement System

MONTHLY BREAKDOWN OF CHANGE IN VALUE

| | Month Ending September 30, 2019 | | | |
|------------------------------------------------------------|---------------------------------|---------------------|-----------------------|------------------------|
| | Beginning Market Value | Net Cash Flow | Net Investment Change | Ending Market Value |
| KBI | \$87,355,596 | \$0 | \$3,336,899 | \$90,692,495 |
| Levine Leichtman Capital Partners VI, L.P. (\$12.5 MM) | \$5,365,974 | \$0 | \$171,003 | \$5,536,977 |
| Loomis Sayles | \$132,653,817 | \$0 | -\$249,944 | \$132,403,873 |
| LSV | \$73,527,152 | \$0 | \$4,753,521 | \$78,280,673 |
| Mellon MSCI EAFE Index Fund | \$103,105,710 | \$0 | \$2,968,603 | \$106,074,313 |
| Och-Ziff | \$6,435 | \$0 | \$0 | \$6,435 |
| Orleans Capital Intermediate Investment Grade Fixed Income | \$50,000,903 | \$0 | -\$80,452 | \$49,920,451 |
| Pacific | \$40,305,966 | \$0 | \$216,633 | \$40,522,599 |
| Pinnacle Associates | \$79,511,000 | \$0 | \$2,094,063 | \$81,605,064 |
| Principal Global Advisors | \$157,724,444 | \$0 | \$509,356 | \$158,233,800 |
| Siguler Guff DREOF II (\$25.0 MM) | \$20,715,889 | \$0 | \$200,582 | \$20,916,471 |
| SSgA Bond Index Fund | \$352,688,794 | \$0 | -\$1,875,342 | \$350,813,452 |
| Stark | \$6,128 | \$0 | \$0 | \$6,128 |
| Summit Partners Credit Fund (\$41.4 MM) | \$5,427,209 | -\$1,186,425 | \$161,799 | \$4,402,583 |
| Warburg Pincus (\$12.9 MM) | \$13,440,268 | -\$210,270 | \$542,839 | \$13,772,837 |
| Warburg Pincus Global Growth Fund | \$175,664 | \$0 | -\$85,729 | \$89,935 |
| William Blair | \$178,734,814 | \$0 | \$1,491,393 | \$180,226,207 |
| Total | \$2,133,981,589 | -\$3,376,581 | \$24,130,760 | \$2,154,735,769 |



Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

