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Kentucky Retirement Systems

Investment Performance Analysis

Period Ended: January 31, 2017

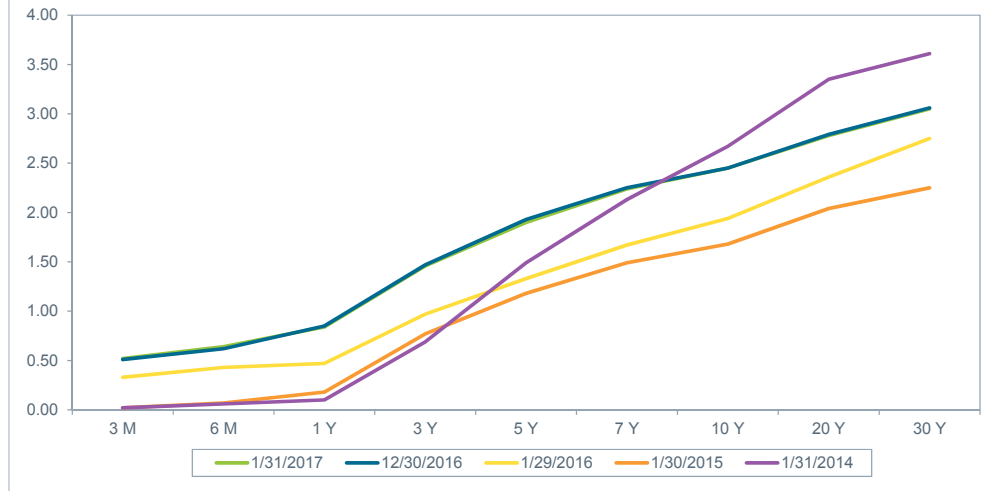


General Market Commentary

- The US added 227,000 non-farm jobs in January, outpacing economists' projections of 175,000. However, the unemployment rate increased from 4.7% to 4.8% as the US workforce expanded.
- 2016 quarter-end US GDP data released in January showed a slowdown in US economic growth, with the US economy growing 1.9% during the 4th quarter of 2016 relative to 3.5% during the prior quarter.
- While domestic markets continued the post-election rally with modest returns during the month, international markets outperformed partly due to a drop in the relative value of the US dollar. The US Dollar Weighted Index ended the month at \$93.17, down from \$95.76 in December.
- Equity markets posted positive returns in January as the S&P 500 (Cap Wtd) Index returned 1.90% and the MSCI EAFE (Net) Index returned 2.90%. Emerging markets returned 5.47% as measured by the MSCI EM (Net) Index.
- The Bloomberg US Aggregate Bond Index returned 0.20% in January, performing in line with the 0.20% return by the Bloomberg US Treasury Intermediate Term Index. International fixed income markets returned 1.43%, as measured by the Citi Non-US World Gov't Bond Index.
- Public real estate, as measured by the Wilshire US REIT Index, returned -0.69% in January and 10.48% over the trailing five-year period.
- The Cambridge US Private Equity Index returned 8.66% for the trailing one-year period and 13.14% for the trailing five-year period ending September 2016.
- Absolute return strategies, as measured by the HFRI FOF Comp Index, returned 1.01% for the month and 4.34% over the trailing one-year period.
- Crude oil's price fell by 1.69% during the month, but has increased by 57.08% YoY.

| Economic Indicators | Jan-17 | Dec-16 | Jan-16 | 10 Yr | 20 Yr |
|---|----------|--------|--------|-------|-------|
| Federal Funds Rate (%) | 0.56 ▲ | 0.55 | 0.29 | 0.79 | 2.33 |
| Breakeven Inflation - 1 Year (%) | 2.17 ▲ | 1.27 | 0.84 | 0.88 | N/A |
| Breakeven Inflation - 5 Year (%) | 2.03 ▲ | 1.86 | 1.20 | 1.69 | N/A |
| Breakeven Inflation - 10 Year (%) | 2.06 ▲ | 1.97 | 1.40 | 2.01 | N/A |
| Breakeven Inflation - 30 Year (%) | 2.15 ▲ | 2.10 | 1.61 | 2.23 | N/A |
| Bloomberg US Agg Bond Index - Yield (%) | 2.61 — | 2.61 | 2.34 | 3.05 | 4.31 |
| Bloomberg US Agg Bond Index - OAS (%) | 0.44 ▲ | 0.43 | 0.63 | 0.73 | 0.67 |
| Bloomberg US Agg Credit Index - OAS (%) | 1.16 ▼ | 1.18 | 1.81 | 1.72 | 1.52 |
| Bloomberg US Corp: HY Index - OAS (%) | 3.88 ▼ | 4.09 | 7.34 | 6.07 | 5.76 |
| Capacity Utilization (%) | 75.35 ▼ | 75.63 | 75.72 | 76.04 | 77.78 |
| Unemployment Rate (%) | 4.8 ▲ | 4.7 | 4.9 | 7.0 | 6.0 |
| PMI - Manufacturing (%) | 56.0 ▲ | 54.5 | 48.6 | 52.0 | 52.2 |
| Baltic Dry Index - Shipping | 961 ▼ | 1,204 | 475 | 2,474 | 2,297 |
| Consumer Conf (Conf Board) | 111.60 ▼ | 113.30 | 97.80 | 74.71 | 93.11 |
| CPI YoY (Headline) (%) | 2.5 ▲ | 2.1 | 1.4 | 1.8 | 2.2 |
| CPI YoY (Core) (%) | 2.3 ▲ | 2.2 | 2.2 | 1.9 | 2.0 |
| PPI YoY (%) | 3.0 ▲ | 1.9 | -1.2 | 1.9 | 2.0 |
| M2 YoY (%) | 6.6 ▼ | 7.1 | 6.2 | 6.5 | 6.4 |
| US Dollar Total Weighted Index | 93.17 ▼ | 95.76 | 95.38 | 78.75 | 86.88 |
| WTI Crude Oil per Barrel (\$) | 53 ▼ | 54 | 34 | 79 | 56 |
| Gold Spot per Oz (\$) | 1,211 ▲ | 1,152 | 1,118 | 1,214 | 788 |

Treasury Yield Curve (%)



| Treasury Yield Curve (%) | Jan-17 | Dec-16 | Jan-16 | Jan-15 | Jan-14 |
|--------------------------|--------|--------|--------|--------|--------|
| 3 Month | 0.52 | 0.51 | 0.33 | 0.02 | 0.02 |
| 6 Month | 0.64 | 0.62 | 0.43 | 0.07 | 0.06 |
| 1 Year | 0.84 | 0.85 | 0.47 | 0.18 | 0.10 |
| 3 Year | 1.46 | 1.47 | 0.97 | 0.77 | 0.69 |
| 5 Year | 1.90 | 1.93 | 1.33 | 1.18 | 1.49 |
| 7 Year | 2.24 | 2.25 | 1.67 | 1.49 | 2.13 |
| 10 Year | 2.45 | 2.45 | 1.94 | 1.68 | 2.67 |
| 20 Year | 2.78 | 2.79 | 2.36 | 2.04 | 3.35 |
| 30 Year | 3.05 | 3.06 | 2.75 | 2.25 | 3.61 |

| Market Performance (%) | MTD | QTD | CYTD | 1 Yr | 3 Yr | 5 Yr | 7 Yr | 10 Yr |
|----------------------------|-------|-------|-------|-------|--------|-------|-------|-------|
| S&P 500 (Cap Wtd) | 1.90 | 1.90 | 1.90 | 20.04 | 10.85 | 14.09 | 13.73 | 6.99 |
| Russell 2000 | 0.39 | 0.39 | 0.39 | 33.53 | 7.89 | 13.00 | 13.91 | 6.93 |
| MSCI EAFE (Net) | 2.90 | 2.90 | 2.90 | 12.03 | 0.71 | 6.04 | 4.91 | 0.97 |
| MSCI EAFE SC (Net) | 3.53 | 3.53 | 3.53 | 14.82 | 3.82 | 9.57 | 8.51 | 3.09 |
| MSCI EM (Net) | 5.47 | 5.47 | 5.47 | 25.41 | 1.44 | 0.19 | 2.07 | 2.49 |
| Bloomberg US Agg Bond | 0.20 | 0.20 | 0.20 | 1.45 | 2.59 | 2.09 | 3.43 | 4.37 |
| BofA ML 3 Mo US T-Bill | 0.04 | 0.04 | 0.04 | 0.37 | 0.15 | 0.13 | 0.12 | 0.76 |
| NCREIF ODCE (Gross) | N/A | N/A | N/A | 8.77 | 12.07 | 12.21 | 13.33 | 5.82 |
| Wilshire US REIT | -0.69 | -0.69 | -0.69 | 10.88 | 12.09 | 10.48 | 14.68 | 3.83 |
| HFRI FOF Comp Index | 1.01 | 1.01 | 1.01 | 4.34 | 1.68 | 3.27 | 2.59 | 1.29 |
| Bloomberg Cmdty Index (TR) | 0.14 | 0.14 | 0.14 | 13.81 | -11.31 | -9.38 | -5.28 | -5.58 |

NCREIF performance is reported quarterly; MTD and QTD returns are shown as "N/A" on interim-quarter months and until available. Data shown is as of most recent quarter-end. Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as "N/A."



Kentucky Retirement Systems - Pension Plan
Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|-------------------|
| U.S. Equity Composite | 1.71 | 1.71 | 1.71 | 11.36 | 22.52 | 9.57 | 13.34 | 14.10 | -0.95 | 10.78 | 11.23 | 04/01/1984 |
| Russell 3000 Index (P)* | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 13.97 | 12.74 | 0.48 | 12.56 | 11.21 | |
| Difference | -0.17 | -0.17 | -0.17 | 0.52 | 0.79 | -0.71 | -0.63 | 1.36 | -1.43 | -1.78 | 0.02 | |
| River Road Asset Management (SA) | 1.11 | 1.11 | 1.11 | 11.77 | 25.14 | 10.38 | 12.93 | 20.99 | -3.83 | 9.82 | 12.00 | 07/01/2011 |
| Russell 3000 Val Index | 0.60 | 0.60 | 0.60 | 12.06 | 25.76 | 10.10 | 14.05 | 18.40 | -4.13 | 12.70 | 12.14 | |
| Difference | 0.51 | 0.51 | 0.51 | -0.29 | -0.62 | 0.28 | -1.12 | 2.59 | 0.30 | -2.88 | -0.14 | |
| River Road FAV (SA) | 2.11 | 2.11 | 2.11 | 20.97 | N/A | N/A | N/A | N/A | N/A | N/A | 20.97 | 07/01/2016 |
| Russell 3000 Val Index | 0.60 | 0.60 | 0.60 | 12.06 | 25.76 | 10.10 | 14.05 | 18.40 | -4.13 | 12.70 | 12.06 | |
| Difference | 1.51 | 1.51 | 1.51 | 8.91 | N/A | N/A | N/A | N/A | N/A | N/A | 8.91 | |
| Westfield Capital (SA) | 4.20 | 4.20 | 4.20 | 10.62 | 14.59 | 6.13 | 12.78 | 1.17 | -1.37 | 12.34 | 10.76 | 07/01/2011 |
| Russell 3000 Grth Index | 3.23 | 3.23 | 3.23 | 9.62 | 17.91 | 10.45 | 13.81 | 7.39 | 5.09 | 12.44 | 12.55 | |
| Difference | 0.97 | 0.97 | 0.97 | 1.00 | -3.32 | -4.32 | -1.03 | -6.22 | -6.46 | -0.10 | -1.79 | |
| Scientific Beta (SA) | 2.00 | 2.00 | 2.00 | 7.44 | N/A | N/A | N/A | N/A | N/A | N/A | 7.44 | 07/01/2016 |
| S&P 500 Index (Cap Wtd) | 1.90 | 1.90 | 1.90 | 9.87 | 20.04 | 10.85 | 14.09 | 11.96 | 1.38 | 13.69 | 9.87 | |
| Difference | 0.10 | 0.10 | 0.10 | -2.43 | N/A | N/A | N/A | N/A | N/A | N/A | -2.43 | |
| Internal S&P 500 Index (SA) | 1.89 | 1.89 | 1.89 | 9.79 | 19.87 | 10.73 | 13.97 | 11.71 | 1.37 | 13.61 | 6.60 | 07/01/2001 |
| S&P 500 Index (Cap Wtd)* | 1.90 | 1.90 | 1.90 | 9.87 | 20.04 | 10.85 | 14.09 | 11.96 | 1.38 | 13.69 | 6.57 | |
| Difference | -0.01 | -0.01 | -0.01 | -0.08 | -0.17 | -0.12 | -0.12 | -0.25 | -0.01 | -0.08 | 0.03 | |
| Internal US Mid Cap (SA) | 1.75 | 1.75 | 1.75 | 13.71 | 30.15 | N/A | N/A | 20.60 | -2.37 | N/A | 10.28 | 08/01/2014 |
| S&P Mid Cap 400 Index (Cap Wtd) | 1.68 | 1.68 | 1.68 | 13.74 | 30.17 | 10.43 | 14.24 | 20.74 | -2.18 | 9.77 | 10.41 | |
| Difference | 0.07 | 0.07 | 0.07 | -0.03 | -0.02 | N/A | N/A | -0.14 | -0.19 | N/A | -0.13 | |
| Systematic Financial Management (SA) | 0.61 | 0.61 | 0.61 | 17.58 | 30.92 | 7.40 | N/A | 20.12 | -5.24 | 5.34 | 13.27 | 07/01/2012 |
| Russell Mid Cap Val Index | 1.68 | 1.68 | 1.68 | 12.07 | 29.15 | 10.69 | 14.98 | 20.00 | -4.78 | 14.75 | 15.77 | |
| Difference | -1.07 | -1.07 | -1.07 | 5.51 | 1.77 | -3.29 | N/A | 0.12 | -0.46 | -9.41 | -2.50 | |
| NT Structured Small Cap (SA) | 0.23 | 0.23 | 0.23 | 17.12 | 31.39 | 8.82 | 14.09 | 21.09 | -3.18 | 6.55 | 10.12 | 10/01/1999 |
| Russell 2000 Index | 0.39 | 0.39 | 0.39 | 19.15 | 33.53 | 7.89 | 13.00 | 21.31 | -4.41 | 4.89 | 8.34 | |
| Difference | -0.16 | -0.16 | -0.16 | -2.03 | -2.14 | 0.93 | 1.09 | -0.22 | 1.23 | 1.66 | 1.78 | |

Performance shown is net of fees. All data reported for Kentucky Retirement Systems, including manager performance, is provided by BNY Mellon. Fiscal year ends June 30th. An index marked with an asterisk (*) represents the current benchmark. Manager inception dates shown represent the first full month following initial funding.

**Kentucky Retirement Systems - Pension Plan
Manager Comparative Performance**

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Non-U.S. Equity Composite | 3.36 | 3.36 | 3.36 | 8.29 | 14.13 | 1.40 | 5.10 | 3.93 | -3.34 | -4.12 | 2.26 | 07/01/2000 |
| MSCI ACW Ex US Investable Mkt Index (Gross) (P)* | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.82 | 4.91 | -5.25 | -3.44 | 2.75 | |
| Difference | -0.23 | -0.23 | -0.23 | -1.01 | -2.61 | 0.04 | 0.28 | -0.98 | 1.91 | -0.68 | -0.49 | |
| Lazard Int'l Strategic Equity (SA) | 2.45 | 2.45 | 2.45 | 3.24 | 8.96 | N/A | N/A | 0.36 | -0.62 | N/A | -1.79 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | -1.10 | -1.10 | -1.10 | -6.23 | -7.71 | N/A | N/A | -4.65 | 4.63 | N/A | 0.59 | |
| LSV Int'l Concentrated Value Equity (SA) | 3.16 | 3.16 | 3.16 | 14.63 | 19.87 | N/A | N/A | 7.07 | -5.96 | N/A | -1.69 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | -0.39 | -0.39 | -0.39 | 5.16 | 3.20 | N/A | N/A | 2.06 | -0.71 | N/A | 0.69 | |
| BTC ACWI Ex US Fund (CF) | 3.56 | 3.56 | 3.56 | 9.39 | 16.46 | 1.13 | 4.58 | 4.83 | -5.42 | -3.85 | 6.37 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | 3.54 | 3.54 | 3.54 | 9.31 | 16.09 | 0.92 | 4.36 | 4.50 | -5.66 | -3.87 | 6.16 | |
| Difference | 0.02 | 0.02 | 0.02 | 0.08 | 0.37 | 0.21 | 0.22 | 0.33 | 0.24 | 0.02 | 0.21 | |
| American Century Non-US Growth Equity (SA) | 3.87 | 3.87 | 3.87 | 5.66 | 6.50 | N/A | N/A | -4.26 | -0.88 | N/A | -2.94 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | 0.32 | 0.32 | 0.32 | -3.81 | -10.17 | N/A | N/A | -9.27 | 4.37 | N/A | -0.56 | |
| Franklin Templeton Non-US Equity (SA) | 3.58 | 3.58 | 3.58 | 6.73 | 14.33 | N/A | N/A | 1.31 | 1.00 | N/A | -0.70 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | 0.03 | 0.03 | 0.03 | -2.74 | -2.34 | N/A | N/A | -3.70 | 6.25 | N/A | 1.68 | |
| NT Int'l Sm Cap Eq Index (SA) | 3.82 | 3.82 | 3.82 | 8.23 | 17.11 | 2.99 | 7.06 | 4.13 | 2.87 | -3.76 | 12.53 | 12/01/2008 |
| MSCI ACW Ex US Sm Cap Index (USD) (Net) | 3.83 | 3.83 | 3.83 | 8.10 | 16.85 | 2.70 | 6.74 | 3.91 | 2.60 | -4.03 | 12.94 | |
| Difference | -0.01 | -0.01 | -0.01 | 0.13 | 0.26 | 0.29 | 0.32 | 0.22 | 0.27 | 0.27 | -0.41 | |

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Manager Comparative Performance**

As of January 31, 2017

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|--|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|-----------------|-------------------|
| Fixed Income Composite | 0.76 | 0.76 | 0.76 | 3.94 | 8.42 | 4.65 | 4.50 | 8.45 | 0.48 | 5.42 | 7.71 | 04/01/1984 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index (P)* | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 3.99 | 10.38 | 0.43 | 5.56 | 7.52 | |
| Difference | -0.14 | -0.14 | -0.14 | 0.23 | -3.24 | -0.58 | 0.51 | -1.93 | 0.05 | -0.14 | 0.19 | |
| Bloomberg Gbl Agg Bond Index | 1.13 | 1.13 | 1.13 | -5.25 | 2.35 | -0.16 | 0.10 | 2.09 | -3.15 | 0.59 | N/A | |
| Difference | -0.37 | -0.37 | -0.37 | 9.19 | 6.07 | 4.81 | 4.40 | 6.36 | 3.63 | 4.83 | N/A | |
| NISA Core Agg Fixed Income (SA) | 0.18 | 0.18 | 0.18 | -2.27 | 1.55 | 2.92 | 2.30 | 3.08 | 0.87 | 6.27 | 4.26 | 02/01/2009 |
| Bloomberg US Agg Bond Index | 0.20 | 0.20 | 0.20 | -2.34 | 1.45 | 2.59 | 2.09 | 2.65 | 0.55 | 5.97 | 4.05 | |
| Difference | -0.02 | -0.02 | -0.02 | 0.07 | 0.10 | 0.33 | 0.21 | 0.43 | 0.32 | 0.30 | 0.21 | |
| Cerberus KRS Levered Loan Opps, L.P. | 0.17 | 0.17 | 0.17 | 4.04 | 8.01 | N/A | N/A | 8.63 | 9.29 | N/A | 7.95 | 09/01/2014 |
| S&P-LSTA Lvg'd Loan Index | 0.56 | 0.56 | 0.56 | 6.00 | 11.50 | 3.55 | 4.78 | 10.16 | -0.69 | 1.60 | 3.55 | |
| Difference | -0.39 | -0.39 | -0.39 | -1.96 | -3.49 | N/A | N/A | -1.53 | 9.98 | N/A | 4.40 | |
| Columbia HY Fixed Income (SA) | 1.00 | 1.00 | 1.00 | 6.59 | 13.44 | 5.23 | 7.03 | 11.65 | -0.25 | 4.38 | 7.52 | 11/01/2011 |
| Bloomberg US Corp: Hi Yld Index | 1.45 | 1.45 | 1.45 | 8.96 | 20.77 | 4.92 | 7.03 | 17.13 | -4.47 | 2.45 | 7.39 | |
| Difference | -0.45 | -0.45 | -0.45 | -2.37 | -7.33 | 0.31 | 0.00 | -5.48 | 4.22 | 1.93 | 0.13 | |
| Marathon Bluegrass Credit Fund | 1.68 | 1.68 | 1.68 | 13.65 | 18.33 | N/A | N/A | 16.38 | N/A | N/A | 16.81 | 01/01/2016 |
| Bloomberg US Corp: Hi Yld Index | 1.45 | 1.45 | 1.45 | 8.96 | 20.77 | 4.92 | 7.03 | 17.13 | -4.47 | 2.45 | 17.26 | |
| Difference | 0.23 | 0.23 | 0.23 | 4.69 | -2.44 | N/A | N/A | -0.75 | N/A | N/A | -0.45 | |
| Shenkman Capital (SA) | 0.51 | 0.51 | 0.51 | 5.60 | 10.19 | 3.21 | 4.63 | 8.95 | -0.61 | 1.64 | 5.01 | 10/01/2010 |
| Shenkman Blended Index | 0.56 | 0.56 | 0.56 | 6.00 | 11.50 | 4.02 | 5.81 | 10.16 | -0.69 | 2.98 | 6.04 | |
| Difference | -0.05 | -0.05 | -0.05 | -0.40 | -1.31 | -0.81 | -1.18 | -1.21 | 0.08 | -1.34 | -1.03 | |
| Waterfall (SA) | 1.52 | 1.52 | 1.52 | 9.96 | 12.54 | 7.68 | 10.15 | 9.84 | 3.17 | 10.71 | 11.99 | 02/01/2010 |
| Opportunistic FI Blended Index | 1.13 | 1.13 | 1.13 | 6.69 | 13.52 | 3.61 | 4.84 | 11.22 | -2.73 | 2.16 | 5.47 | |
| Difference | 0.39 | 0.39 | 0.39 | 3.27 | -0.98 | 4.07 | 5.31 | -1.38 | 5.90 | 8.55 | 6.52 | |
| Manulife Asset Mgmt (SA) | 0.47 | 0.47 | 0.47 | 0.23 | 4.43 | 2.97 | 3.86 | 4.46 | 0.59 | 3.95 | 4.41 | 12/01/2011 |
| Bloomberg US Unv Bond Index* | 0.35 | 0.35 | 0.35 | -1.33 | 3.14 | 0.11 | 0.42 | 3.91 | -3.29 | 0.48 | 0.88 | |
| Difference | 0.12 | 0.12 | 0.12 | 1.56 | 1.29 | 2.86 | 3.44 | 0.55 | 3.88 | 3.47 | 3.53 | |

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| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|---------------|--------------|--------------|---------------|---------------|--------------|-----------------|-------------------|
| Real Return Composite | 2.27 | 2.27 | 2.27 | 4.14 | 15.22 | 2.53 | 2.14 | 10.46 | -5.96 | 3.20 | 3.71 | 07/01/2011 |
| Real Return Actual Allocation Index (P)* | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 2.89 | 7.22 | -4.07 | 2.95 | 2.88 | |
| Difference | 0.68 | 0.68 | 0.68 | 1.93 | 4.89 | 0.61 | -0.75 | 3.24 | -1.89 | 0.25 | 0.83 | |
| Internal TIPS (SA) | 0.76 | 0.76 | 0.76 | 0.29 | 3.92 | 2.18 | 0.88 | 4.56 | 0.22 | 3.03 | 5.25 | 05/01/2002 |
| Internal US TIPS Blend | 0.74 | 0.74 | 0.74 | -0.17 | 3.45 | 1.61 | 0.45 | 4.01 | -0.52 | 2.63 | 5.10 | |
| Difference | 0.02 | 0.02 | 0.02 | 0.46 | 0.47 | 0.57 | 0.43 | 0.55 | 0.74 | 0.40 | 0.15 | |
| Nuveen Real Asset Income (SA) | 2.06 | 2.06 | 2.06 | 1.90 | 15.18 | N/A | N/A | 10.19 | N/A | N/A | 3.54 | 02/01/2015 |
| Nuveen Real Asset Custom Index | 1.68 | 1.68 | 1.68 | 0.30 | 11.77 | N/A | N/A | 8.74 | N/A | N/A | 3.23 | |
| Difference | 0.38 | 0.38 | 0.38 | 1.60 | 3.41 | N/A | N/A | 1.45 | N/A | N/A | 0.31 | |
| PIMCO:All Asset;Inst (PAAIX) | 2.43 | 2.43 | 2.43 | 3.58 | 14.96 | 1.88 | 3.05 | 12.87 | -7.87 | 0.52 | 3.94 | 12/01/2011 |
| Bloomberg US Trsy Infl Notes: 1-10 Yr Index | 0.74 | 0.74 | 0.74 | -0.17 | 3.45 | 1.26 | 0.49 | 4.01 | -0.52 | 0.91 | 0.79 | |
| Difference | 1.69 | 1.69 | 1.69 | 3.75 | 11.51 | 0.62 | 2.56 | 8.86 | -7.35 | -0.39 | 3.15 | |
| Tortoise Capital (CF) | 4.57 | 4.57 | 4.57 | 10.20 | 39.25 | 0.03 | 8.16 | 16.10 | -27.04 | 15.54 | 14.91 | 08/01/2009 |
| Alerian MLP Index | 4.89 | 4.89 | 4.89 | 8.18 | 39.60 | -4.48 | 2.83 | 18.31 | -32.59 | 4.80 | 10.71 | |
| Difference | -0.32 | -0.32 | -0.32 | 2.02 | -0.35 | 4.51 | 5.33 | -2.21 | 5.55 | 10.74 | 4.20 | |
| Amerra Ag Fund II (CF) | 0.00 | 0.00 | 0.00 | 1.41 | 3.50 | 8.73 | N/A | 3.50 | 14.34 | 8.63 | 6.23 | 12/01/2012 |
| Amerra-AGRI Holding (CF) | 0.00 | 0.00 | 0.00 | -0.19 | 0.72 | N/A | N/A | 0.72 | N/A | N/A | 0.25 | 08/01/2015 |
| BTG Pactual Brazil Timberland Fund I, L.P. | 0.00 | 0.00 | 0.00 | 9.81 | 9.84 | N/A | N/A | -16.19 | -17.41 | N/A | -15.62 | 12/01/2014 |
| Magnetar MTP Energy Fund, L.P. | 4.57 | 4.57 | 4.57 | 13.49 | 29.08 | 0.45 | N/A | 13.68 | -15.63 | 2.98 | 1.76 | 07/01/2013 |
| Magnetar MTP EOF II, L.P. | 0.00 | 0.00 | 0.00 | 15.19 | 9.41 | N/A | N/A | -3.75 | N/A | N/A | -2.51 | 08/01/2015 |
| Oberland Capital Healthcare, L.P. | 0.00 | 0.00 | 0.00 | -9.16 | 53.70 | N/A | N/A | 53.70 | -27.53 | N/A | 3.28 | 10/01/2014 |
| Taurus Mining Finance Fund | 0.00 | 0.00 | 0.00 | 13.19 | 31.15 | N/A | N/A | 31.15 | N/A | N/A | 16.26 | 04/01/2015 |
| Tenaska Power Fund II (CF) | 0.00 | 0.00 | 0.00 | 13.12 | -23.28 | -3.86 | -5.00 | -23.28 | 16.85 | -0.88 | -4.52 | 10/01/2008 |

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Kentucky Retirement Systems - Pension Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Real Estate Composite | 0.15 | 0.15 | 0.15 | 4.51 | 9.52 | 9.09 | 9.22 | 9.44 | 8.89 | 8.85 | 5.87 | 07/01/1984 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 11.34 | 9.08 | 13.86 | 11.36 | 6.41 | |
| Difference | 0.15 | 0.15 | 0.15 | 0.74 | 0.44 | -2.33 | -2.12 | 0.36 | -4.97 | -2.51 | -0.54 | |
| H/2 Credit Partners (CF) | 0.00 | 0.00 | 0.00 | 7.32 | 9.29 | 5.95 | 6.70 | 9.29 | 2.11 | 6.57 | 6.13 | 07/01/2011 |
| Harrison Street Core (CF) | 0.00 | 0.00 | 0.00 | 4.09 | 10.44 | 9.94 | N/A | 10.18 | 9.53 | 10.12 | 8.37 | 05/01/2012 |
| Mesa West Core Lending, L.P. | 0.00 | 0.00 | 0.00 | 4.72 | 8.22 | 6.86 | N/A | 8.22 | 7.56 | 4.84 | 6.23 | 05/01/2013 |
| Prologis Targeted U.S. Logistics Fund (CF) | 1.10 | 1.10 | 1.10 | 6.29 | 13.47 | N/A | N/A | 13.39 | 14.74 | N/A | 12.46 | 10/01/2014 |
| Stockbridge SmtMkts, L.P. | 0.00 | 0.00 | 0.00 | 4.33 | 9.82 | N/A | N/A | 9.82 | 12.00 | N/A | 9.62 | 05/01/2014 |
| DivcoWest Fund IV, L.P. | 0.00 | 0.00 | 0.00 | 19.27 | 38.32 | N/A | N/A | 38.32 | 28.79 | N/A | 23.28 | 03/01/2014 |
| Greenfield Acquisition Partners VI, L.P. | 0.00 | 0.00 | 0.00 | -3.46 | 0.93 | 11.81 | N/A | 0.93 | 18.77 | 16.59 | 11.20 | 12/01/2012 |
| Greenfield Acquisition Partners VII, L.P. | 0.00 | 0.00 | 0.00 | 4.44 | 12.78 | N/A | N/A | 12.78 | 15.29 | N/A | 9.75 | 07/01/2014 |
| Lubert Adler Real Estate Fund VII, L.P. | 0.00 | 0.00 | 0.00 | 3.86 | 4.19 | N/A | N/A | 4.19 | -0.33 | N/A | -8.47 | 07/01/2014 |
| Patron Capital V, L.P. | 2.62 | 2.62 | 2.62 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -28.51 | 08/01/2016 |
| Rubenstein Properties Fund II, L.P. | 0.00 | 0.00 | 0.00 | 1.23 | 1.34 | 17.59 | N/A | 1.34 | 11.17 | 44.51 | 13.44 | 07/01/2013 |
| Walton Street Real Estate Fund VI, L.P. | 0.00 | 0.00 | 0.00 | -6.27 | -3.80 | 8.16 | 9.50 | -3.80 | 12.99 | 16.41 | -22.30 | 05/01/2009 |
| Walton Street Real Estate Fund VII, L.P. | 0.00 | 0.00 | 0.00 | 5.82 | 12.32 | 14.73 | N/A | 12.32 | 16.78 | 15.13 | 13.94 | 07/01/2013 |

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Kentucky Retirement Systems - Pension Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Absolute Return Composite | 0.74 | 0.74 | 0.74 | 4.13 | 0.76 | 1.94 | 5.06 | -0.25 | 1.70 | 4.84 | 4.02 | 04/01/2010 |
| HFRI FOF: Dv'd Index (1 Mo Lag) | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | 3.46 | -1.34 | 0.79 | 4.72 | 2.55 | |
| Difference | -0.41 | -0.41 | -0.41 | 1.60 | 0.28 | 0.71 | 1.60 | 1.09 | 0.91 | 0.12 | 1.47 | |
| BAAM (SA) | 0.50 | 0.50 | 0.50 | 4.28 | 1.06 | 4.75 | 6.89 | 0.71 | 6.10 | 7.97 | 6.39 | 09/01/2011 |
| Davidson-Kemper, L.P. | 0.79 | 0.79 | 0.79 | 4.94 | 7.82 | N/A | N/A | N/A | N/A | N/A | 7.82 | 02/01/2016 |
| PAAMCO (SA) | 0.00 | 0.00 | 0.00 | -0.01 | -1.63 | -0.52 | 3.70 | -1.85 | -2.01 | 3.83 | 3.58 | 09/01/2011 |
| Prisma Capital Partners (SA) | 0.34 | 0.34 | 0.34 | 3.89 | -0.04 | 1.38 | 4.57 | -0.87 | 2.52 | 3.30 | 3.60 | 09/01/2011 |
| Senator Investment Group, L.P. | 2.19 | 2.19 | 2.19 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 2.67 | 09/01/2016 |
| Tourbillon Global Master Fund, Ltd | -1.31 | -1.31 | -1.31 | 5.88 | -10.14 | N/A | N/A | -9.76 | N/A | N/A | -8.34 | 11/01/2015 |
| Anchorage Capital | 2.52 | 2.52 | 2.52 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.56 | 08/01/2016 |
| Blackrock GAO Fund, Ltd (CF) | 1.81 | 1.81 | 1.81 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -3.92 | 08/01/2016 |
| Coatue Qualified Partners, L.P. | 4.17 | 4.17 | 4.17 | 8.35 | 5.81 | N/A | N/A | 4.26 | N/A | N/A | 9.21 | 07/01/2015 |
| DSAM Fund, L.P. | 2.97 | 2.97 | 2.97 | 1.19 | N/A | N/A | N/A | N/A | N/A | N/A | 1.08 | 05/01/2016 |
| Finisterre Global Op | 1.99 | 1.99 | 1.99 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.45 | 08/01/2016 |
| Glenview Capital (CF) | 5.17 | 5.17 | 5.17 | 15.02 | 3.07 | N/A | N/A | -3.28 | N/A | N/A | -1.37 | 11/01/2015 |
| HBK II (CF) | 0.87 | 0.87 | 0.87 | 4.77 | 8.18 | 2.80 | N/A | 5.39 | -1.46 | 3.93 | 3.03 | 12/01/2013 |
| Knighthood Capital (CF) | 1.19 | 1.19 | 1.19 | 11.42 | 10.49 | 0.53 | N/A | 8.51 | -10.22 | 5.59 | 1.31 | 01/01/2014 |
| LibreMax Capital (CF) | 1.79 | 1.79 | 1.79 | 6.71 | 4.75 | N/A | N/A | 2.53 | -0.16 | N/A | 2.91 | 08/01/2014 |
| Liquidalts H2O Force (CF) | -3.95 | -3.95 | -3.95 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.85 | 08/01/2016 |
| Luxor Capital (CF) | 7.56 | 7.56 | 7.56 | 26.23 | 16.43 | N/A | N/A | 0.85 | -16.70 | N/A | -5.53 | 04/01/2014 |

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Kentucky Retirement Systems - Pension Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|-----------------------------------|-------|-------|-------|-------|-----------|------------|------------|--------|------|------|-----------------|-------------------|
| Myriad Opportunities | -1.03 | -1.03 | -1.03 | 2.73 | N/A | N/A | N/A | N/A | N/A | N/A | 4.25 | 05/01/2016 |
| Pine River (CF) | -0.30 | -0.30 | -0.30 | 4.47 | 0.35 | N/A | N/A | 0.63 | 0.09 | N/A | 0.34 | 05/01/2014 |
| QMS Diversified Global Macro (CF) | 2.11 | 2.11 | 2.11 | -9.38 | -7.81 | N/A | N/A | -10.36 | N/A | N/A | -6.25 | 11/01/2015 |
| Scopia PX, LLC | 1.51 | 1.51 | 1.51 | 7.75 | -1.51 | N/A | N/A | -4.46 | 0.92 | N/A | 0.96 | 11/01/2014 |

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**Kentucky Retirement Systems - Pension Plan
Manager Comparative Performance**

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|-----------------|-------------------|
| Private Equity Composite | -0.01 | -0.01 | -0.01 | 3.95 | 5.91 | 10.88 | 12.37 | 5.74 | 11.15 | 16.20 | 10.66 | 07/01/2002 |
| Private Equity Benchmark (P) [Short Term] | -0.01 | -0.01 | -0.01 | 3.95 | 5.91 | 10.88 | 12.37 | 5.74 | 11.15 | 16.20 | 10.66 | |
| Difference | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Russell 3000 Index+3% (Qtr Lag) (P)* [Long Term] | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.55 | 17.96 | 3.51 | 21.76 | 10.48 | |
| Difference | 0.00 | 0.00 | 0.00 | -4.97 | -4.21 | -1.55 | -5.18 | -12.22 | 7.64 | -5.56 | 0.18 | |
| Cash Equivalents (SA) | 0.07 | 0.07 | 0.07 | 0.65 | 0.98 | 0.45 | 0.46 | 0.94 | 0.21 | 0.17 | 3.69 | 01/01/1988 |
| Citi 3 Mo T-Bill Index | 0.04 | 0.04 | 0.04 | 0.19 | 0.30 | 0.12 | 0.10 | 0.27 | 0.03 | 0.02 | 3.24 | |
| Difference | 0.03 | 0.03 | 0.03 | 0.46 | 0.68 | 0.33 | 0.36 | 0.67 | 0.18 | 0.15 | 0.45 | |

Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (AWA) (Net) is lagged by one quarter and available quarterly; interim months assume a 0.00% return.

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Kentucky Retirement Systems - Insurance Plan
Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|-------------------|
| U.S. Equity Composite | 1.72 | 1.72 | 1.72 | 11.39 | 22.65 | 9.89 | 13.49 | 14.66 | -0.48 | 10.58 | 9.47 | 07/01/1992 |
| Russell 3000 Index (I)* | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 13.97 | 12.74 | 0.48 | 12.56 | N/A | |
| Difference | -0.16 | -0.16 | -0.16 | 0.55 | 0.92 | -0.39 | -0.48 | 1.92 | -0.96 | -1.98 | N/A | |
| River Road Asset Management (SA) | 1.11 | 1.11 | 1.11 | 11.75 | 24.94 | 10.30 | 12.92 | 20.81 | -3.97 | 9.86 | 11.98 | 07/01/2011 |
| Russell 3000 Val Index | 0.60 | 0.60 | 0.60 | 12.06 | 25.76 | 10.10 | 14.05 | 18.40 | -4.13 | 12.70 | 12.14 | |
| Difference | 0.51 | 0.51 | 0.51 | -0.31 | -0.82 | 0.20 | -1.13 | 2.41 | 0.16 | -2.84 | -0.16 | |
| River Road FAV (SA) | 2.12 | 2.12 | 2.12 | 20.93 | N/A | N/A | N/A | N/A | N/A | N/A | 20.93 | 07/01/2016 |
| Russell 3000 Val Index | 0.60 | 0.60 | 0.60 | 12.06 | 25.76 | 10.10 | 14.05 | 18.40 | -4.13 | 12.70 | 12.06 | |
| Difference | 1.52 | 1.52 | 1.52 | 8.87 | N/A | N/A | N/A | N/A | N/A | N/A | 8.87 | |
| Westfield Capital (SA) | 4.19 | 4.19 | 4.19 | 10.70 | 14.66 | 6.28 | 12.93 | 1.23 | -1.42 | 12.82 | 10.89 | 07/01/2011 |
| Russell 3000 Grth Index | 3.23 | 3.23 | 3.23 | 9.62 | 17.91 | 10.45 | 13.81 | 7.39 | 5.09 | 12.44 | 12.55 | |
| Difference | 0.96 | 0.96 | 0.96 | 1.08 | -3.25 | -4.17 | -0.88 | -6.16 | -6.51 | 0.38 | -1.66 | |
| Scientific Beta (SA) | 2.00 | 2.00 | 2.00 | 5.94 | N/A | N/A | N/A | N/A | N/A | N/A | 5.94 | 07/01/2016 |
| S&P 500 Index (Cap Wtd) | 1.90 | 1.90 | 1.90 | 9.87 | 20.04 | 10.85 | 14.09 | 11.96 | 1.38 | 13.69 | 9.87 | |
| Difference | 0.10 | 0.10 | 0.10 | -3.93 | N/A | N/A | N/A | N/A | N/A | N/A | -3.93 | |
| Internal S&P 500 Index (SA) | 1.89 | 1.89 | 1.89 | 9.74 | 19.80 | 10.76 | 14.00 | 11.65 | 1.46 | 13.63 | 6.65 | 07/01/2001 |
| S&P 500 Index (Cap Wtd)* | 1.90 | 1.90 | 1.90 | 9.87 | 20.04 | 10.85 | 14.09 | 11.96 | 1.38 | 13.69 | 6.57 | |
| Difference | -0.01 | -0.01 | -0.01 | -0.13 | -0.24 | -0.09 | -0.09 | -0.31 | 0.08 | -0.06 | 0.08 | |
| Internal US Mid Cap (SA) | 1.85 | 1.85 | 1.85 | 13.69 | 30.69 | N/A | N/A | 21.10 | -2.39 | N/A | 10.51 | 08/01/2014 |
| S&P Mid Cap 400 Index (Cap Wtd) | 1.68 | 1.68 | 1.68 | 13.74 | 30.17 | 10.43 | 14.24 | 20.74 | -2.18 | 9.77 | 10.41 | |
| Difference | 0.17 | 0.17 | 0.17 | -0.05 | 0.52 | N/A | N/A | 0.36 | -0.21 | N/A | 0.10 | |
| Systematic Financial Management (SA) | 0.58 | 0.58 | 0.58 | 17.58 | 30.92 | 7.35 | N/A | 20.13 | -5.14 | 5.09 | 13.23 | 07/01/2012 |
| Russell Mid Cap Val Index | 1.68 | 1.68 | 1.68 | 12.07 | 29.15 | 10.69 | 14.98 | 20.00 | -4.78 | 14.75 | 15.77 | |
| Difference | -1.10 | -1.10 | -1.10 | 5.51 | 1.77 | -3.34 | N/A | 0.13 | -0.36 | -9.66 | -2.54 | |
| NT Structured Small Cap (SA) | 0.26 | 0.26 | 0.26 | 17.10 | 31.13 | 8.61 | 13.92 | 21.10 | -3.27 | 5.80 | 11.89 | 07/01/2011 |
| Russell 2000 Index | 0.39 | 0.39 | 0.39 | 19.15 | 33.53 | 7.89 | 13.00 | 21.31 | -4.41 | 4.89 | 10.87 | |
| Difference | -0.13 | -0.13 | -0.13 | -2.05 | -2.40 | 0.72 | 0.92 | -0.21 | 1.14 | 0.91 | 1.02 | |

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**Kentucky Retirement Systems - Insurance Plan
Manager Comparative Performance**

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Non-U.S. Equity Composite | 3.37 | 3.37 | 3.37 | 8.54 | 14.11 | 1.32 | 4.95 | 3.97 | -3.46 | -4.28 | 2.28 | 04/01/2000 |
| MSCI ACW Ex US Investable Mkt Index (Gross) (I)* | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.82 | 4.91 | -5.25 | -3.44 | 1.84 | |
| Difference | -0.22 | -0.22 | -0.22 | -0.76 | -2.63 | -0.04 | 0.13 | -0.94 | 1.79 | -0.84 | 0.44 | |
| Lazard Int'l Strategic Equity (SA) | 2.45 | 2.45 | 2.45 | 3.22 | 8.88 | N/A | N/A | 0.20 | -0.61 | N/A | -1.88 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | -1.10 | -1.10 | -1.10 | -6.25 | -7.79 | N/A | N/A | -4.81 | 4.64 | N/A | 0.50 | |
| LSV Int'l Concentrated Value Equity (SA) | 3.10 | 3.10 | 3.10 | 14.90 | 19.67 | N/A | N/A | 6.77 | -5.97 | N/A | -1.97 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | -0.45 | -0.45 | -0.45 | 5.43 | 3.00 | N/A | N/A | 1.76 | -0.72 | N/A | 0.41 | |
| BTC ACWI Ex US Fund (CF) | 3.56 | 3.56 | 3.56 | 9.28 | 16.08 | 1.24 | N/A | 5.44 | -5.62 | -3.88 | 6.94 | 06/01/2012 |
| MSCI ACW Ex US Index (USD) (Net) | 3.54 | 3.54 | 3.54 | 9.31 | 16.09 | 0.92 | 4.36 | 4.50 | -5.66 | -3.87 | 6.84 | |
| Difference | 0.02 | 0.02 | 0.02 | -0.03 | -0.01 | 0.32 | N/A | 0.94 | 0.04 | -0.01 | 0.10 | |
| American Century Non-US Growth Equity (SA) | 3.88 | 3.88 | 3.88 | 5.67 | 6.35 | N/A | N/A | -4.42 | -0.89 | N/A | -3.01 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | 0.33 | 0.33 | 0.33 | -3.80 | -10.32 | N/A | N/A | -9.43 | 4.36 | N/A | -0.63 | |
| Franklin Templeton Non-US Equity (SA) | 3.60 | 3.60 | 3.60 | 6.81 | 14.28 | N/A | N/A | 1.12 | 0.60 | N/A | -0.87 | 07/01/2014 |
| MSCI ACW Ex US Index (USD) (Gross) | 3.55 | 3.55 | 3.55 | 9.47 | 16.67 | 1.38 | 4.83 | 5.01 | -5.25 | -3.44 | -2.38 | |
| Difference | 0.05 | 0.05 | 0.05 | -2.66 | -2.39 | N/A | N/A | -3.89 | 5.85 | N/A | 1.51 | |
| BTC ACWI Ex US Small Cap Fund (CF) | 3.89 | 3.89 | 3.89 | 8.23 | 17.04 | 2.81 | N/A | 3.75 | 2.85 | -3.90 | 7.14 | 07/01/2013 |
| MSCI ACW Ex US Sm Cap Index (USD) (Net) | 3.83 | 3.83 | 3.83 | 8.10 | 16.85 | 2.70 | 6.74 | 3.91 | 2.60 | -4.03 | 6.40 | |
| Difference | 0.06 | 0.06 | 0.06 | 0.13 | 0.19 | 0.11 | N/A | -0.16 | 0.25 | 0.13 | 0.74 | |

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Kentucky Retirement Systems - Insurance Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|--|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Fixed Income Composite | 0.80 | 0.80 | 0.80 | 3.51 | 8.19 | 4.07 | 4.06 | 8.22 | 0.53 | 3.79 | 6.54 | 07/01/1992 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index (I)* | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 3.99 | 10.38 | 0.43 | 5.56 | 6.50 | |
| Difference | -0.10 | -0.10 | -0.10 | -0.20 | -3.47 | -1.16 | 0.07 | -2.16 | 0.10 | -1.77 | 0.04 | |
| Bloomberg Gbl Agg Bond Index | 1.13 | 1.13 | 1.13 | -5.25 | 2.35 | -0.16 | 0.10 | 2.09 | -3.15 | 0.59 | 5.13 | |
| Difference | -0.33 | -0.33 | -0.33 | 8.76 | 5.84 | 4.23 | 3.96 | 6.13 | 3.68 | 3.20 | 1.41 | |
| NISA Core Agg Fixed Income (SA) | 0.19 | 0.19 | 0.19 | -2.39 | 1.43 | 2.81 | 2.23 | 2.96 | 0.77 | 6.16 | 3.08 | 07/01/2011 |
| Bloomberg US Agg Bond Index | 0.20 | 0.20 | 0.20 | -2.34 | 1.45 | 2.59 | 2.09 | 2.65 | 0.55 | 5.97 | 2.93 | |
| Difference | -0.01 | -0.01 | -0.01 | -0.05 | -0.02 | 0.22 | 0.14 | 0.31 | 0.22 | 0.19 | 0.15 | |
| Cerberus KRS Levered Loan Opps, L.P. | 0.17 | 0.17 | 0.17 | 4.04 | 8.01 | N/A | N/A | 8.63 | 9.29 | N/A | 7.95 | 09/01/2014 |
| S&P-LSTA Lvg'd Loan Index | 0.56 | 0.56 | 0.56 | 6.00 | 11.50 | 3.55 | 4.78 | 10.16 | -0.69 | 1.60 | 3.55 | |
| Difference | -0.39 | -0.39 | -0.39 | -1.96 | -3.49 | N/A | N/A | -1.53 | 9.98 | N/A | 4.40 | |
| Columbia HY Fixed Income (SA) | 1.01 | 1.01 | 1.01 | 6.51 | 13.99 | 5.48 | 7.07 | 12.19 | -0.17 | 4.45 | 7.56 | 11/01/2011 |
| Bloomberg US Corp: Hi Yld Index | 1.45 | 1.45 | 1.45 | 8.96 | 20.77 | 4.92 | 7.03 | 17.13 | -4.47 | 2.45 | 7.39 | |
| Difference | -0.44 | -0.44 | -0.44 | -2.45 | -6.78 | 0.56 | 0.04 | -4.94 | 4.30 | 2.00 | 0.17 | |
| Marathon Bluegrass Credit Fund | 1.68 | 1.68 | 1.68 | 13.75 | 18.84 | N/A | N/A | 16.88 | N/A | N/A | 17.28 | 01/01/2016 |
| Bloomberg US Corp: Hi Yld Index | 1.45 | 1.45 | 1.45 | 8.96 | 20.77 | 4.92 | 7.03 | 17.13 | -4.47 | 2.45 | 17.26 | |
| Difference | 0.23 | 0.23 | 0.23 | 4.79 | -1.93 | N/A | N/A | -0.25 | N/A | N/A | 0.02 | |
| Shenkman Capital (SA) | 0.48 | 0.48 | 0.48 | 5.24 | 9.61 | 2.19 | 4.00 | 8.46 | -0.38 | -1.32 | 4.13 | 07/01/2011 |
| Shenkman Blended Index | 0.56 | 0.56 | 0.56 | 6.00 | 11.50 | 4.02 | 5.81 | 10.16 | -0.69 | 2.98 | 5.56 | |
| Difference | -0.08 | -0.08 | -0.08 | -0.76 | -1.89 | -1.83 | -1.81 | -1.70 | 0.31 | -4.30 | -1.43 | |
| Waterfall (SA) | 2.05 | 2.05 | 2.05 | 5.65 | 10.83 | 6.55 | 9.78 | 7.52 | 2.82 | 8.91 | 10.09 | 07/01/2011 |
| Opportunistic FI Blended Index | 1.13 | 1.13 | 1.13 | 6.69 | 13.52 | 3.61 | 4.84 | 11.22 | -2.73 | 2.16 | 4.65 | |
| Difference | 0.92 | 0.92 | 0.92 | -1.04 | -2.69 | 2.94 | 4.94 | -3.70 | 5.55 | 6.75 | 5.44 | |
| Manulife Asset Mgmt (SA) | 0.47 | 0.47 | 0.47 | 0.19 | 4.56 | 2.80 | 3.86 | 4.38 | 0.47 | 3.19 | 4.38 | 12/01/2011 |
| Bloomberg US Unv Bond Index* | 0.35 | 0.35 | 0.35 | -1.33 | 3.14 | 0.11 | 0.42 | 3.91 | -3.29 | 0.48 | 0.88 | |
| Difference | 0.12 | 0.12 | 0.12 | 1.52 | 1.42 | 2.69 | 3.44 | 0.47 | 3.76 | 2.71 | 3.50 | |

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Kentucky Retirement Systems - Insurance Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|--------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|---------------|--------------|-----------------|-------------------|
| Real Return Composite | 1.68 | 1.68 | 1.68 | 3.12 | 13.54 | 2.23 | 1.78 | 9.69 | -6.13 | 3.78 | 3.34 | 07/01/2011 |
| Real Return Actual Allocation Index (I)* | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 2.87 | 6.87 | -3.56 | 3.15 | 2.86 | |
| Difference | 0.58 | 0.58 | 0.58 | 1.65 | 4.30 | 0.35 | -1.09 | 2.82 | -2.57 | 0.63 | 0.48 | |
| Internal TIPS (SA) | 0.80 | 0.80 | 0.80 | 0.02 | 3.57 | 2.07 | 0.93 | 4.14 | 0.26 | 3.02 | 4.61 | 10/01/2003 |
| Internal US TIPS Blend | 0.74 | 0.74 | 0.74 | -0.17 | 3.45 | 1.61 | 0.45 | 4.01 | -0.52 | 2.63 | 4.27 | |
| Difference | 0.06 | 0.06 | 0.06 | 0.19 | 0.12 | 0.46 | 0.48 | 0.13 | 0.78 | 0.39 | 0.34 | |
| Nuveen Real Asset Income (SA) | 2.02 | 2.02 | 2.02 | 1.76 | 15.09 | N/A | N/A | 10.16 | N/A | N/A | 3.51 | 02/01/2015 |
| Nuveen Real Asset Custom Index | 1.68 | 1.68 | 1.68 | 0.30 | 11.77 | N/A | N/A | 8.74 | N/A | N/A | 3.23 | |
| Difference | 0.34 | 0.34 | 0.34 | 1.46 | 3.32 | N/A | N/A | 1.42 | N/A | N/A | 0.28 | |
| PIMCO:All Asset;Inst (PAAIX) | 2.43 | 2.43 | 2.43 | 3.58 | 14.96 | 1.86 | 3.04 | 12.87 | -10.43 | 3.34 | 3.93 | 12/01/2011 |
| Bloomberg US Trsy Infl Notes: 1-10 Yr Index | 0.74 | 0.74 | 0.74 | -0.17 | 3.45 | 1.26 | 0.49 | 4.01 | -0.52 | 0.91 | 0.79 | |
| Difference | 1.69 | 1.69 | 1.69 | 3.75 | 11.51 | 0.60 | 2.55 | 8.86 | -9.91 | 2.43 | 3.14 | |
| Tortoise Capital (CF) | 4.57 | 4.57 | 4.57 | 10.18 | 40.11 | -0.13 | 8.43 | 15.95 | -26.95 | 14.90 | 15.10 | 08/01/2009 |
| Alerian MLP Index | 4.89 | 4.89 | 4.89 | 8.18 | 39.60 | -4.48 | 2.83 | 18.31 | -32.59 | 4.80 | 10.71 | |
| Difference | -0.32 | -0.32 | -0.32 | 2.00 | 0.51 | 4.35 | 5.60 | -2.36 | 5.64 | 10.10 | 4.39 | |
| Amerra Ag Fund II (CF) | 0.00 | 0.00 | 0.00 | 1.41 | 3.50 | 8.73 | N/A | 3.50 | 14.34 | 8.63 | 6.23 | 12/01/2012 |
| Amerra-AGRI Holding (CF) | 0.00 | 0.00 | 0.00 | -0.19 | 0.72 | N/A | N/A | 0.72 | N/A | N/A | 0.25 | 08/01/2015 |
| BTG Pactual Brazil Timberland Fund I, L.P. | 0.00 | 0.00 | 0.00 | 9.81 | 9.84 | N/A | N/A | -16.19 | -17.41 | N/A | -15.62 | 12/01/2014 |
| Magnetar MTP Energy Fund, L.P. | -0.06 | -0.06 | -0.06 | 8.47 | 23.36 | -1.05 | N/A | 13.68 | -15.63 | 2.98 | 0.48 | 07/01/2013 |
| Magnetar MTP EOF II, L.P. | 0.00 | 0.00 | 0.00 | 15.19 | 9.41 | N/A | N/A | -3.75 | N/A | N/A | -2.51 | 08/01/2015 |
| Oberland Capital Healthcare, L.P. | 0.00 | 0.00 | 0.00 | -9.16 | 53.70 | N/A | N/A | 53.70 | -27.53 | N/A | 3.28 | 10/01/2014 |
| Taurus Mining Finance Fund | 0.00 | 0.00 | 0.00 | 13.19 | 31.15 | N/A | N/A | 31.15 | N/A | N/A | 16.26 | 04/01/2015 |
| Tenaska Power Fund II (CF) | 0.00 | 0.00 | 0.00 | 13.12 | -23.28 | -3.86 | -5.00 | -23.28 | 16.85 | -0.88 | -4.52 | 10/01/2008 |

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Kentucky Retirement Systems - Insurance Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Real Estate Composite | 0.14 | 0.14 | 0.14 | 4.91 | 9.93 | 8.75 | 8.92 | 9.76 | 8.99 | 7.46 | 8.77 | 05/01/2009 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 11.34 | 9.08 | 13.86 | 11.36 | 5.69 | |
| Difference | 0.14 | 0.14 | 0.14 | 1.14 | 0.85 | -2.67 | -2.42 | 0.68 | -4.87 | -3.90 | 3.08 | |
| H/2 Credit Partners (CF) | 0.00 | 0.00 | 0.00 | 7.32 | 9.16 | 5.91 | 6.65 | 9.16 | 2.11 | 6.57 | 6.08 | 07/01/2011 |
| Harrison Street Core (CF) | 0.00 | 0.00 | 0.00 | 4.11 | 10.34 | 9.69 | N/A | 10.09 | 7.00 | 12.03 | 7.60 | 05/01/2012 |
| Mesa West Core Lending, L.P. | 0.00 | 0.00 | 0.00 | 4.53 | 7.91 | 6.62 | N/A | 7.91 | 7.29 | 4.68 | 6.03 | 05/01/2013 |
| Prologis Targeted U.S. Logistics Fund (CF) | 1.11 | 1.11 | 1.11 | 7.45 | 14.59 | N/A | N/A | 13.34 | 13.54 | N/A | 11.94 | 10/01/2014 |
| Stockbridge SmtMkts, L.P. | 0.00 | 0.00 | 0.00 | 4.29 | 9.73 | N/A | N/A | 9.73 | 11.30 | N/A | 9.61 | 05/01/2014 |
| DivcoWest Fund IV, L.P. | 0.00 | 0.00 | 0.00 | 19.27 | 38.32 | N/A | N/A | 38.32 | 28.79 | N/A | 23.27 | 03/01/2014 |
| Greenfield Acquisition Partners VI, L.P. | 0.00 | 0.00 | 0.00 | -3.46 | 0.93 | 11.81 | N/A | 0.93 | 18.77 | 16.59 | 11.20 | 12/01/2012 |
| Greenfield Acquisition Partners VII, L.P. | 0.00 | 0.00 | 0.00 | 4.44 | 12.78 | N/A | N/A | 12.78 | 15.29 | N/A | 9.75 | 07/01/2014 |
| Lubert Adler Real Estate Fund VII, L.P. | 0.00 | 0.00 | 0.00 | 3.86 | 4.19 | N/A | N/A | 4.19 | -0.33 | N/A | -8.47 | 07/01/2014 |
| Patron Capital V, L.P. | 2.62 | 2.62 | 2.62 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -28.83 | 08/01/2016 |
| Rubenstein Properties Fund II, L.P. | 0.00 | 0.00 | 0.00 | 1.23 | 1.34 | 17.59 | N/A | 1.34 | 11.17 | 44.51 | 13.44 | 07/01/2013 |
| Walton Street Real Estate Fund VI, L.P. | 0.00 | 0.00 | 0.00 | -6.27 | -3.80 | 8.16 | 9.50 | -3.80 | 12.99 | 16.41 | -22.31 | 05/01/2009 |
| Walton Street Real Estate Fund VII, L.P. | 0.00 | 0.00 | 0.00 | 5.82 | 12.32 | 14.73 | N/A | 12.32 | 16.78 | 15.13 | 13.94 | 07/01/2013 |

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Kentucky Retirement Systems - Insurance Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Absolute Return Composite | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.94 | 5.06 | -0.26 | 1.80 | 4.80 | 3.94 | 04/01/2010 |
| HFRI FOF: Dv'd Index (1 Mo Lag) | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | 3.46 | -1.34 | 0.79 | 4.72 | 2.55 | |
| Difference | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.71 | 1.60 | 1.08 | 1.01 | 0.08 | 1.39 | |
| BAAM (SA) | 0.50 | 0.50 | 0.50 | 4.28 | 1.06 | 4.73 | 6.90 | 0.72 | 6.11 | 7.91 | 6.40 | 09/01/2011 |
| Davidson-Kemper, L.P. | 0.78 | 0.78 | 0.78 | 5.01 | 7.89 | N/A | N/A | N/A | N/A | N/A | 7.89 | 02/01/2016 |
| PAAMCO (SA) | 0.00 | 0.00 | 0.00 | -0.01 | -1.62 | -0.53 | 3.70 | -1.84 | -2.05 | 3.81 | 3.58 | 09/01/2011 |
| Prisma Capital Partners (SA) | 0.34 | 0.34 | 0.34 | 3.94 | 0.01 | 1.37 | 4.60 | -0.82 | 2.54 | 3.18 | 3.62 | 09/01/2011 |
| Senator Investment Group, L.P. | 2.19 | 2.19 | 2.19 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 2.67 | 09/01/2016 |
| Tourbillon Global Master Fund, Ltd | -1.31 | -1.31 | -1.31 | 5.88 | -10.13 | N/A | N/A | -9.75 | N/A | N/A | -8.33 | 11/01/2015 |
| Anchorage Capital | 2.52 | 2.52 | 2.52 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.70 | 08/01/2016 |
| Blackrock GAO Fund, Ltd (CF) | 1.81 | 1.81 | 1.81 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -3.97 | 08/01/2016 |
| Coatue Qualified Partners, L.P. | 4.17 | 4.17 | 4.17 | 8.35 | 5.81 | N/A | N/A | 4.18 | N/A | N/A | 9.21 | 07/01/2015 |
| DSAM Fund, L.P. | 2.97 | 2.97 | 2.97 | 1.19 | N/A | N/A | N/A | N/A | N/A | N/A | 1.08 | 05/01/2016 |
| Finisterre Global Op | 1.99 | 1.99 | 1.99 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.45 | 08/01/2016 |
| Glenview Capital (CF) | 5.17 | 5.17 | 5.17 | 15.02 | 3.06 | N/A | N/A | -3.28 | N/A | N/A | -1.37 | 11/01/2015 |
| HBK II (CF) | 0.87 | 0.87 | 0.87 | 4.73 | 8.14 | 2.79 | N/A | 5.35 | -1.46 | 3.93 | 3.02 | 12/01/2013 |
| Knighthood Capital (CF) | 1.19 | 1.19 | 1.19 | 11.42 | 10.49 | 0.53 | N/A | 8.51 | -10.22 | 5.59 | 1.31 | 01/01/2014 |
| Liquidalts H2O Force (CF) | -3.95 | -3.95 | -3.95 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 4.90 | 08/01/2016 |
| LibreMax Capital (CF) | 1.79 | 1.79 | 1.79 | 6.74 | 4.78 | N/A | N/A | 2.56 | -0.16 | N/A | 2.92 | 08/01/2014 |
| Luxor Capital (CF) | 7.56 | 7.56 | 7.56 | 26.23 | 16.43 | N/A | N/A | 0.85 | -16.70 | N/A | -5.53 | 04/01/2014 |

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Kentucky Retirement Systems - Insurance Plan
 Manager Comparative Performance

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|-----------------------------------|-------|-------|-------|-------|-----------|------------|------------|--------|------|------|-----------------|-------------------|
| Myriad Opportunities | -0.82 | -0.82 | -0.82 | 2.73 | N/A | N/A | N/A | N/A | N/A | N/A | 4.25 | 05/01/2016 |
| Pine River (CF) | -0.30 | -0.30 | -0.30 | 4.47 | 0.35 | N/A | N/A | 0.63 | 0.09 | N/A | 0.34 | 05/01/2014 |
| QMS Diversified Global Macro (CF) | 2.11 | 2.11 | 2.11 | -9.71 | -8.14 | N/A | N/A | -10.69 | N/A | N/A | -6.53 | 11/01/2015 |
| Scopia PX, LLC | 1.35 | 1.35 | 1.35 | 7.53 | -1.70 | N/A | N/A | -4.56 | 0.92 | N/A | 0.85 | 11/01/2014 |

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**Kentucky Retirement Systems - Insurance Plan
Manager Comparative Performance**

As of January 31, 2017

| | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 2016 | 2015 | 2014 | Since Incep. | Inception Date |
|--|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|-----------------|-------------------|
| Private Equity Composite | 0.05 | 0.05 | 0.05 | 3.64 | 8.97 | 13.96 | 14.16 | 8.73 | 15.93 | 17.50 | 9.40 | 07/01/2002 |
| Private Equity Benchmark (I) [Short Term] | 0.05 | 0.05 | 0.05 | 3.64 | 8.97 | 13.96 | 14.16 | 8.73 | 15.93 | 17.50 | 9.40 | |
| Difference | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Russell 3000 Index+3% (Qtr Lag) (I)* [Long Term] | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.55 | 17.96 | 3.51 | 21.76 | 9.85 | |
| Difference | 0.06 | 0.06 | 0.06 | -5.28 | -1.15 | 1.53 | -3.39 | -9.23 | 12.42 | -4.26 | -0.45 | |
| Cash Equivalents (SA) | 0.07 | 0.07 | 0.07 | 0.29 | 0.49 | 0.30 | 0.32 | 0.44 | 0.21 | 0.19 | 2.72 | 07/01/1992 |
| Citi 3 Mo T-Bill Index | 0.04 | 0.04 | 0.04 | 0.19 | 0.30 | 0.12 | 0.10 | 0.27 | 0.03 | 0.02 | 2.59 | |
| Difference | 0.03 | 0.03 | 0.03 | 0.10 | 0.19 | 0.18 | 0.22 | 0.17 | 0.18 | 0.17 | 0.13 | |

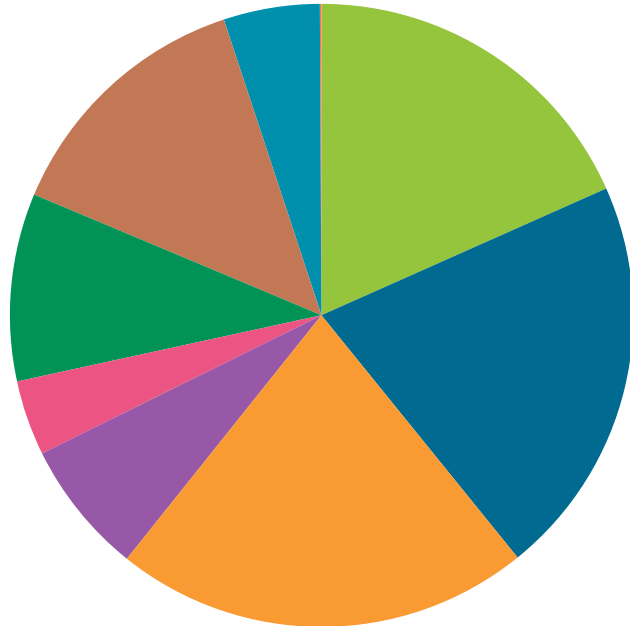
Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (AWA) (Net) is lagged by one quarter and available quarterly; interim months assume a 0.00% return.

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Asset Allocation by Asset Class - Pension

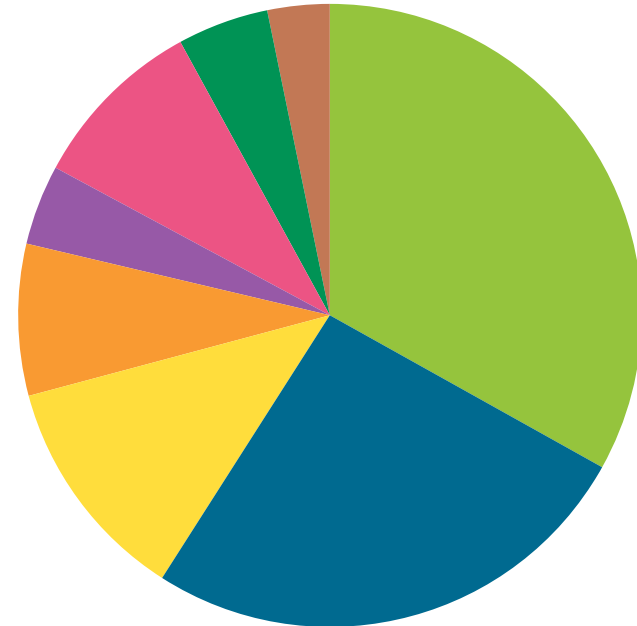
January 31, 2017 : \$1,946,506,092



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 356,747,300 | 18.33 |
| Non-U.S. Equity Composite | 405,919,863 | 20.85 |
| Fixed Income Composite | 419,544,243 | 21.55 |
| Real Return Composite | 135,518,543 | 6.96 |
| Real Estate Composite | 75,800,911 | 3.89 |
| Absolute Return Composite | 189,689,285 | 9.75 |
| Private Equity Composite | 264,630,128 | 13.60 |
| Cash Equivalents Composite | 96,841,621 | 4.98 |
| Other Composite | 1,814,197 | 0.09 |

Asset Allocation by Asset Class - Insurance

January 31, 2017 : \$709,490,988



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 234,903,337 | 33.11 |
| Non-U.S. Equity Composite | 184,104,709 | 25.95 |
| Fixed Income Composite | 83,640,660 | 11.79 |
| Real Return Composite | 55,756,448 | 7.86 |
| Real Estate Composite | 29,569,478 | 4.17 |
| Absolute Return Composite | 65,133,526 | 9.18 |
| Private Equity Composite | 33,484,232 | 4.72 |
| Cash Equivalents Composite | 22,936,341 | 3.23 |
| Other Composite | -37,744 | -0.01 |

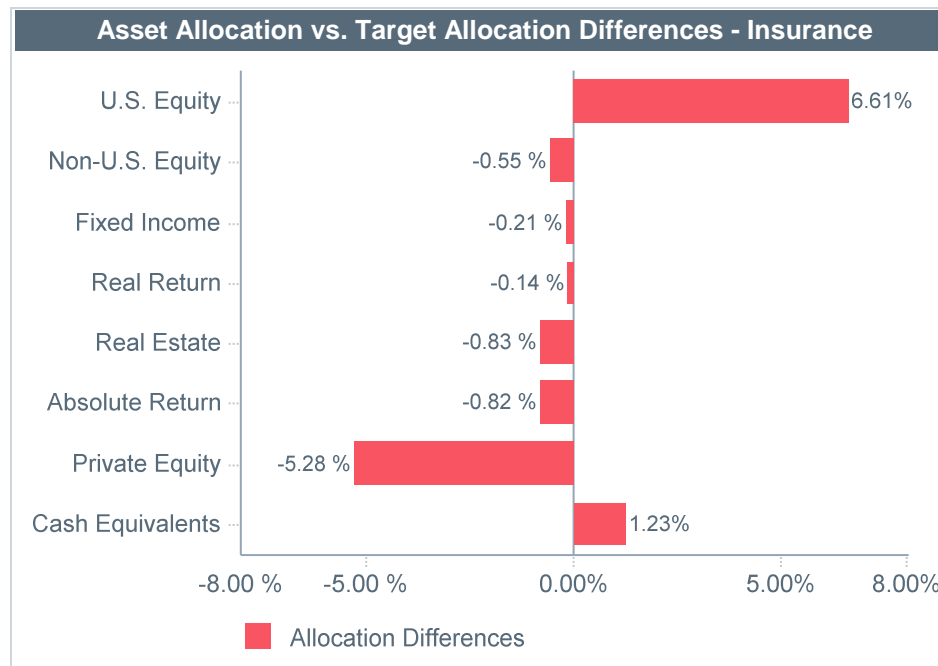
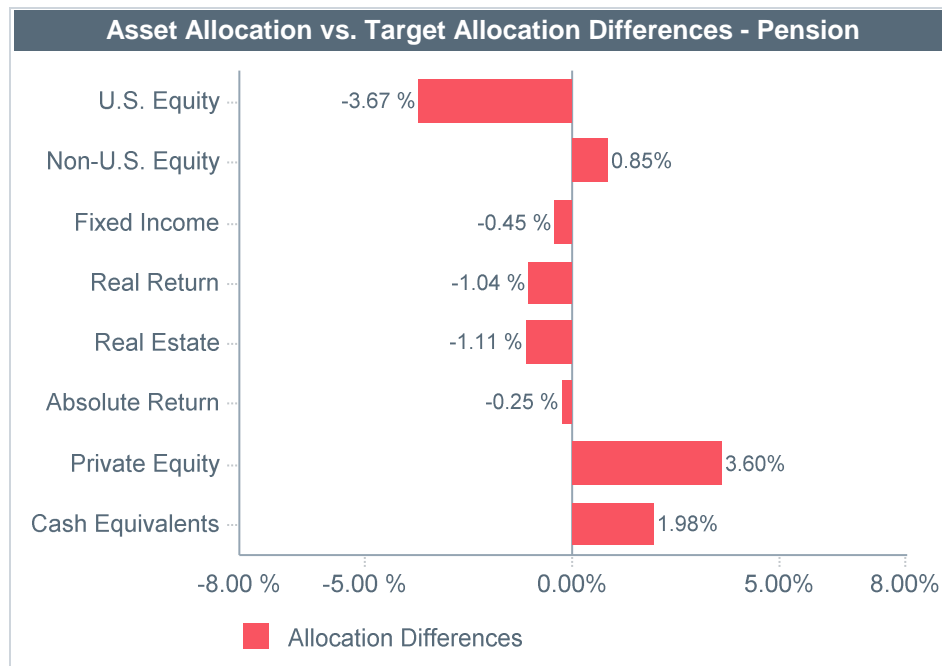
Allocations shown may not sum up to 100% exactly due to rounding.

KERS

Asset Allocation vs. Target Allocation

| Asset Allocation vs. Target Allocation - Pension | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| KERS (P) | 1,946,506,092 | 100.00 | - | - | 100.00 |
| U.S. Equity | 356,747,300 | 18.33 | 17.00 | 27.00 | 22.00 |
| Non-U.S. Equity | 405,919,863 | 20.85 | 15.00 | 25.00 | 20.00 |
| Fixed Income | 419,544,243 | 21.55 | 18.00 | 26.00 | 22.00 |
| Real Return | 135,518,543 | 6.96 | 6.00 | 10.00 | 8.00 |
| Real Estate | 75,800,911 | 3.89 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 189,689,285 | 9.75 | 8.00 | 12.00 | 10.00 |
| Private Equity | 264,630,128 | 13.60 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 96,841,621 | 4.98 | 1.00 | 5.00 | 3.00 |

| Asset Allocation vs. Target Allocation - Insurance | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| KERS (I) | 709,490,988 | 100.00 | - | - | 100.00 |
| U.S. Equity | 234,903,337 | 33.11 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 184,104,709 | 25.95 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 83,640,660 | 11.79 | 8.00 | 16.00 | 12.00 |
| Real Return | 55,756,448 | 7.86 | 6.00 | 10.00 | 8.00 |
| Real Estate | 29,569,478 | 4.17 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 65,133,526 | 9.18 | 8.00 | 12.00 | 10.00 |
| Private Equity | 33,484,232 | 4.72 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 22,936,341 | 3.23 | 0.00 | 4.00 | 2.00 |



Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page.
 KERS (P) Private Equity Composite is over the maximum allocation. KERS (I) Private Equity Composite is under the minimum allocation. This is an illiquid asset class and may take additional time to bring back into target range.
 KERS (I) U.S. Equity Composite is over the maximum allocation.



Kentucky Retirement Systems
Asset Allocation & Performance
KERS - Pension

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|----------------------|---------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| KERS (P) | 1,946,506,092 | 100.00 | 1.43 | 1.43 | 1.43 | 6.21 | 10.92 | 5.14 | 6.49 | 0.61 | 9.06 | 04/01/1984 |
| Target Allocation Index (KERS P) | | | 1.58 | 1.58 | 1.58 | 6.40 | 13.16 | 5.64 | 8.18 | 0.58 | 9.23 | |
| Difference | | | -0.15 | -0.15 | -0.15 | -0.19 | -2.24 | -0.50 | -1.69 | 0.03 | -0.17 | |
| U.S. Equity Composite | 356,747,300 | 18.33 | 1.70 | 1.70 | 1.70 | 11.63 | 22.41 | 10.49 | 13.74 | 0.25 | 12.81 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.18 | -0.18 | -0.18 | 0.79 | 0.68 | 0.21 | 1.00 | -0.23 | 0.39 | |
| Non-U.S. Equity Composite | 405,919,863 | 20.85 | 3.38 | 3.38 | 3.38 | 8.30 | 14.23 | 1.06 | 2.79 | -3.35 | 3.67 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.21 | -0.21 | -0.21 | -1.00 | -2.51 | -0.30 | -2.12 | 1.90 | -0.26 | |
| Fixed Income Composite | 419,544,243 | 21.55 | 0.77 | 0.77 | 0.77 | 4.08 | 8.54 | 4.31 | 8.66 | 0.47 | 4.46 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.13 | -0.13 | -0.13 | 0.37 | -3.12 | -0.92 | -1.72 | 0.04 | -0.57 | |
| Real Return Composite | 135,518,543 | 6.96 | 2.60 | 2.60 | 2.60 | 4.56 | 16.19 | 2.27 | 10.63 | -6.80 | 2.51 | 07/01/2013 |
| Real Return Actual Allocation Index (P)* | | | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 7.22 | -4.07 | 1.96 | |
| Difference | | | 1.01 | 1.01 | 1.01 | 2.35 | 5.86 | 0.35 | 3.41 | -2.73 | 0.55 | |
| Real Estate Composite | 75,800,911 | 3.89 | 0.16 | 0.16 | 0.16 | 4.66 | 9.10 | 7.79 | 9.04 | 6.35 | 7.18 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.16 | 0.16 | 0.16 | 0.89 | 0.02 | -3.63 | -0.04 | -7.51 | -4.40 | |
| Absolute Return Composite | 189,689,285 | 9.75 | 0.74 | 0.74 | 0.74 | 4.13 | 0.77 | 1.90 | -0.24 | 1.71 | 3.07 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.41 | -0.41 | -0.41 | 1.60 | 0.29 | 0.67 | 1.10 | 0.92 | 0.92 | |
| Private Equity Composite | 264,630,128 | 13.60 | -0.09 | -0.09 | -0.09 | 3.94 | 4.18 | 9.71 | 4.09 | 9.62 | 10.46 | 07/01/2013 |
| Private Equity Benchmark (KERS P) [Short Term] | | | -0.09 | -0.09 | -0.09 | 3.94 | 4.18 | 9.71 | 4.09 | 9.62 | 10.46 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (P)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | -0.08 | -0.08 | -0.08 | -4.98 | -5.94 | -2.72 | -13.87 | 6.11 | -4.49 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Pension Fund's Cash Equivalents can be found in the manager performance section of this report.

Kentucky Retirement Systems
Asset Allocation & Performance
KERS - Insurance

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|--------------------|---------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| KERS (I) | 709,490,988 | 100.00 | 1.74 | 1.74 | 1.74 | 7.38 | 13.70 | 5.05 | 8.41 | -0.68 | 7.27 | 04/01/1987 |
| Target Allocation Index (KERS I) | | | 1.77 | 1.77 | 1.77 | 6.84 | 14.07 | 5.93 | 8.15 | 0.96 | 7.72 | |
| Difference | | | -0.03 | -0.03 | -0.03 | 0.54 | -0.37 | -0.88 | 0.26 | -1.64 | -0.45 | |
| U.S. Equity Composite | 234,903,337 | 33.11 | 1.72 | 1.72 | 1.72 | 11.57 | 23.09 | 9.95 | 14.69 | -0.43 | 12.17 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.16 | -0.16 | -0.16 | 0.73 | 1.36 | -0.33 | 1.95 | -0.91 | -0.25 | |
| Non-U.S. Equity Composite | 184,104,709 | 25.95 | 3.37 | 3.37 | 3.37 | 8.55 | 14.14 | 1.17 | 3.69 | -3.48 | 3.83 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.22 | -0.22 | -0.22 | -0.75 | -2.60 | -0.19 | -1.22 | 1.77 | -0.10 | |
| Fixed Income Composite | 83,640,660 | 11.79 | 0.80 | 0.80 | 0.80 | 3.51 | 8.15 | 4.03 | 8.18 | 0.51 | 4.24 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.10 | -0.10 | -0.10 | -0.20 | -3.51 | -1.20 | -2.20 | 0.08 | -0.79 | |
| Real Return Composite | 55,756,448 | 7.86 | 1.76 | 1.76 | 1.76 | 2.95 | 13.37 | 2.15 | 9.43 | -6.25 | 2.43 | 07/01/2013 |
| Real Return Actual Allocation Index (KERS I)* | | | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 6.87 | -3.56 | 1.89 | |
| Difference | | | 0.66 | 0.66 | 0.66 | 1.48 | 4.13 | 0.27 | 2.56 | -2.69 | 0.54 | |
| Real Estate Composite | 29,569,478 | 4.17 | 0.14 | 0.14 | 0.14 | 4.85 | 9.88 | 8.71 | 9.72 | 8.88 | 8.19 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.14 | 0.14 | 0.14 | 1.08 | 0.80 | -2.71 | 0.64 | -4.98 | -3.39 | |
| Absolute Return Composite | 65,133,526 | 9.18 | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.95 | -0.26 | 1.79 | 3.14 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.72 | 1.08 | 1.00 | 0.99 | |
| Private Equity Composite | 33,484,232 | 4.72 | -0.03 | -0.03 | -0.03 | 4.29 | 6.55 | 11.21 | 6.35 | 10.54 | 12.07 | 07/01/2013 |
| Private Equity Benchmark (KERS I) [Short Term] | | | -0.03 | -0.03 | -0.03 | 4.29 | 6.55 | 10.28 | 6.35 | 10.54 | 11.28 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.93 | 0.00 | 0.00 | 0.79 | |
| R 3000 Index+3% (Qtr Lag) (I)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | -0.02 | -0.02 | -0.02 | -4.63 | -3.57 | -1.22 | -11.61 | 7.03 | -2.88 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Insurance Fund's Cash Equivalents can be found in the manager performance section of this report.

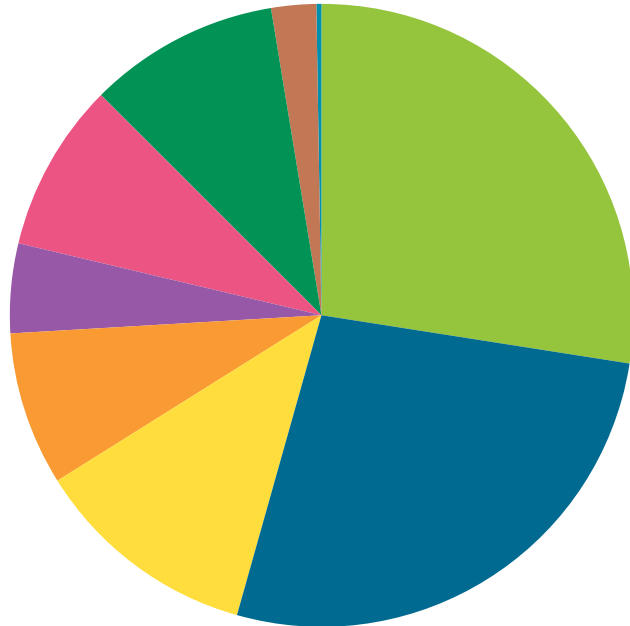


| Pension | |
|--|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Pension Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) NT Int'l Sm Cap Eq Index (SA)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. Walton Street Real Estate Fund VI, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Perimeter Park (SA) Custody Fee Accrual (SA)</p> |

| Insurance | |
|---|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Insurance Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) BTC ACWI Ex US Small Cap Fund (CF)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Custody Fee Accrual (SA)</p> |

Asset Allocation by Asset Class - Pension

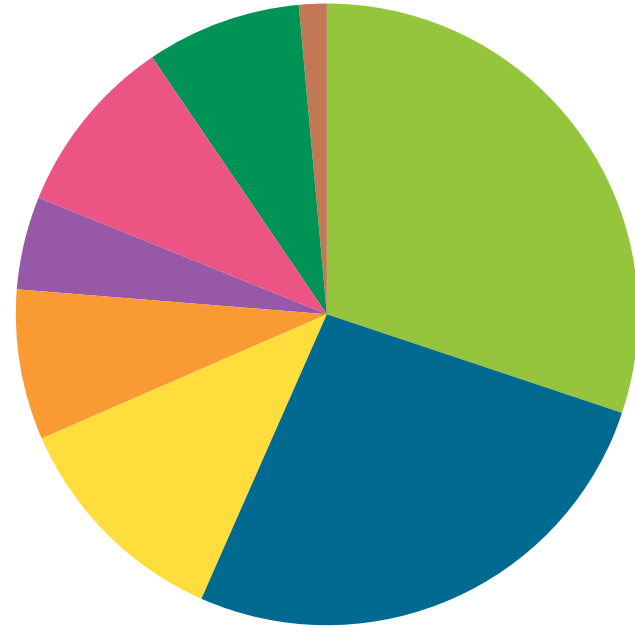
January 31, 2017 : \$565,872,270



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 155,478,710 | 27.48 |
| Non-U.S. Equity Composite | 152,208,735 | 26.90 |
| Fixed Income Composite | 66,383,555 | 11.73 |
| Real Return Composite | 45,080,360 | 7.97 |
| Real Estate Composite | 26,325,064 | 4.65 |
| Absolute Return Composite | 49,602,416 | 8.77 |
| Private Equity Composite | 56,084,510 | 9.91 |
| Cash Equivalents Composite | 13,187,177 | 2.33 |
| Other Composite | 1,521,744 | 0.27 |

Asset Allocation by Asset Class - Insurance

January 31, 2017 : \$460,577,568



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 138,816,592 | 30.14 |
| Non-U.S. Equity Composite | 121,994,954 | 26.49 |
| Fixed Income Composite | 54,508,604 | 11.83 |
| Real Return Composite | 36,031,820 | 7.82 |
| Real Estate Composite | 22,293,190 | 4.84 |
| Absolute Return Composite | 43,222,666 | 9.38 |
| Private Equity Composite | 37,064,117 | 8.05 |
| Cash Equivalents Composite | 6,670,261 | 1.45 |
| Other Composite | -24,636 | -0.01 |

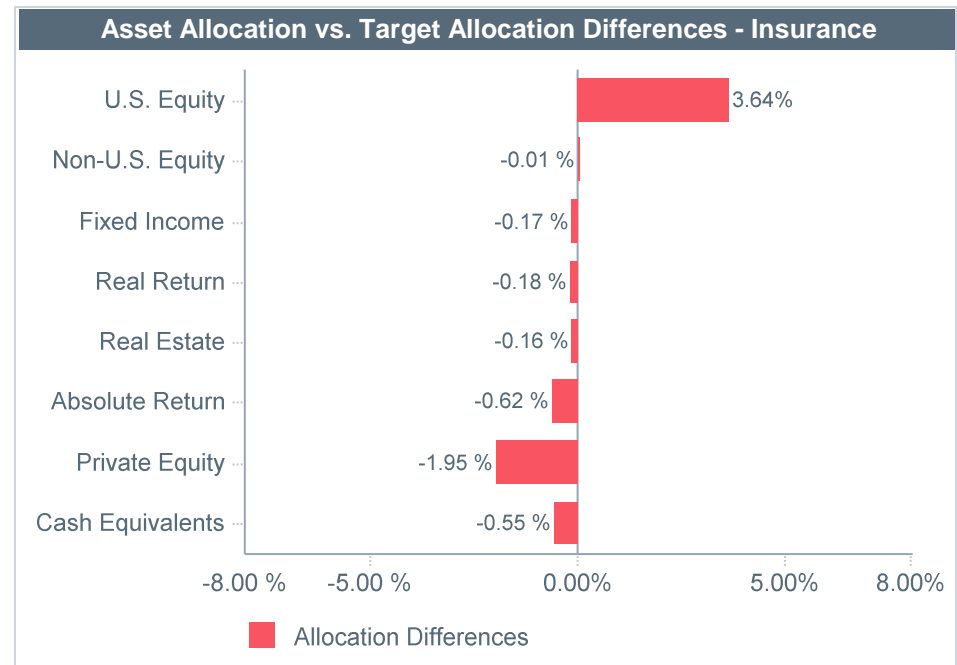
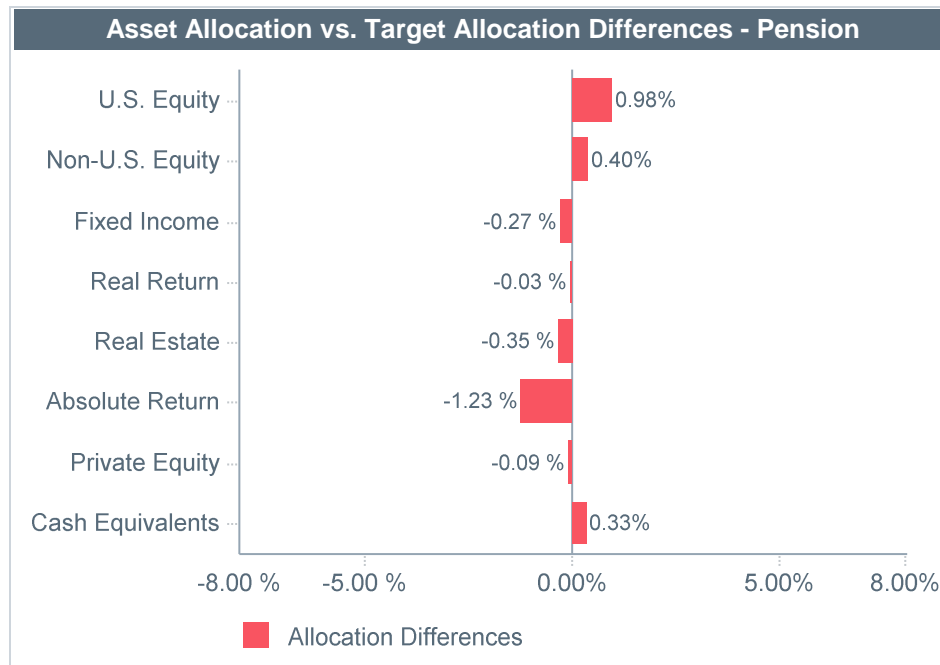
Allocations shown may not sum up to 100% exactly due to rounding.

KERS Haz

Asset Allocation vs. Target Allocation

| Asset Allocation vs. Target Allocation - Pension | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| KERS Haz (P) | 565,872,270 | 100.00 | - | - | 100.00 |
| U.S. Equity | 155,478,710 | 27.48 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 152,208,735 | 26.90 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 66,383,555 | 11.73 | 8.00 | 16.00 | 12.00 |
| Real Return | 45,080,360 | 7.97 | 6.00 | 10.00 | 8.00 |
| Real Estate | 26,325,064 | 4.65 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 49,602,416 | 8.77 | 8.00 | 12.00 | 10.00 |
| Private Equity | 56,084,510 | 9.91 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 13,187,177 | 2.33 | 0.00 | 4.00 | 2.00 |

| Asset Allocation vs. Target Allocation - Insurance | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| KERS Haz (I) | 460,577,568 | 100.00 | - | - | 100.00 |
| U.S. Equity | 138,816,592 | 30.14 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 121,994,954 | 26.49 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 54,508,604 | 11.83 | 8.00 | 16.00 | 12.00 |
| Real Return | 36,031,820 | 7.82 | 6.00 | 10.00 | 8.00 |
| Real Estate | 22,293,190 | 4.84 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 43,222,666 | 9.38 | 8.00 | 12.00 | 10.00 |
| Private Equity | 37,064,117 | 8.05 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 6,670,261 | 1.45 | 0.00 | 4.00 | 2.00 |



Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page.

Kentucky Retirement Systems
 Asset Allocation & Performance
 KERS Haz - Pension

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|--------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| KERS Haz (P) | 565,872,270 | 100.00 | 1.66 | 1.66 | 1.66 | 6.80 | 12.64 | 5.34 | 8.01 | 0.03 | 9.09 | 04/01/1984 |
| Target Allocation Index (KERS Haz P) | | | 1.80 | 1.80 | 1.80 | 7.02 | 13.89 | 5.54 | 7.92 | 0.22 | 9.22 | |
| Difference | | | -0.14 | -0.14 | -0.14 | -0.22 | -1.25 | -0.20 | 0.09 | -0.19 | -0.13 | |
| U.S. Equity Composite | 155,478,710 | 27.48 | 1.71 | 1.71 | 1.71 | 10.62 | 21.74 | 9.38 | 13.84 | -1.08 | 11.69 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.17 | -0.17 | -0.17 | -0.22 | 0.01 | -0.90 | 1.10 | -1.56 | -0.73 | |
| Non-U.S. Equity Composite | 152,208,735 | 26.90 | 3.32 | 3.32 | 3.32 | 8.26 | 14.10 | 1.51 | 4.32 | -3.33 | 4.15 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.27 | -0.27 | -0.27 | -1.04 | -2.64 | 0.15 | -0.59 | 1.92 | 0.22 | |
| Fixed Income Composite | 66,383,555 | 11.73 | 0.78 | 0.78 | 0.78 | 3.99 | 8.43 | 4.27 | 8.42 | 0.52 | 4.46 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.12 | -0.12 | -0.12 | 0.28 | -3.23 | -0.96 | -1.96 | 0.09 | -0.57 | |
| Real Return Composite | 45,080,360 | 7.97 | 2.20 | 2.20 | 2.20 | 4.07 | 15.01 | 2.57 | 10.30 | -5.71 | 2.97 | 07/01/2013 |
| Real Return Actual Allocation Index (P)* | | | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 7.22 | -4.07 | 1.96 | |
| Difference | | | 0.61 | 0.61 | 0.61 | 1.86 | 4.68 | 0.65 | 3.08 | -1.64 | 1.01 | |
| Real Estate Composite | 26,325,064 | 4.65 | 0.13 | 0.13 | 0.13 | 4.75 | 9.84 | 9.49 | 9.79 | 9.45 | 8.55 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.13 | 0.13 | 0.13 | 0.98 | 0.76 | -1.93 | 0.71 | -4.41 | -3.03 | |
| Absolute Return Composite | 49,602,416 | 8.77 | 0.74 | 0.74 | 0.74 | 4.13 | 0.76 | 1.94 | -0.25 | 1.68 | 3.13 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.41 | -0.41 | -0.41 | 1.60 | 0.28 | 0.71 | 1.09 | 0.89 | 0.98 | |
| Private Equity Composite | 56,084,510 | 9.91 | 0.03 | 0.03 | 0.03 | 4.01 | 6.11 | 10.93 | 5.90 | 11.17 | 11.51 | 07/01/2013 |
| Private Equity Benchmark (KERS Haz P) [Short Term] | | | 0.03 | 0.03 | 0.03 | 4.01 | 6.11 | 10.93 | 5.90 | 11.17 | 11.51 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (P)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.04 | 0.04 | 0.04 | -4.91 | -4.01 | -1.50 | -12.06 | 7.66 | -3.44 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Pension Fund's Cash Equivalents can be found in the manager performance section of this report.



Kentucky Retirement Systems
Asset Allocation & Performance
KERS Haz - Insurance

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|--------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| KERS Haz (I) | 460,577,568 | 100.00 | 1.70 | 1.70 | 1.70 | 7.14 | 13.40 | 5.26 | 8.31 | -0.24 | 7.31 | 04/01/1987 |
| Target Allocation Index (KERS Haz I) | | | 1.77 | 1.77 | 1.77 | 6.84 | 14.07 | 5.93 | 8.15 | 0.96 | 7.72 | |
| Difference | | | -0.07 | -0.07 | -0.07 | 0.30 | -0.67 | -0.67 | 0.16 | -1.20 | -0.41 | |
| U.S. Equity Composite | 138,816,592 | 30.14 | 1.72 | 1.72 | 1.72 | 11.35 | 22.40 | 9.80 | 14.15 | -0.46 | 12.02 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.16 | -0.16 | -0.16 | 0.51 | 0.67 | -0.48 | 1.41 | -0.94 | -0.40 | |
| Non-U.S. Equity Composite | 121,994,954 | 26.49 | 3.37 | 3.37 | 3.37 | 8.55 | 14.13 | 1.33 | 3.96 | -3.42 | 3.99 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.22 | -0.22 | -0.22 | -0.75 | -2.61 | -0.03 | -0.95 | 1.83 | 0.06 | |
| Fixed Income Composite | 54,508,604 | 11.83 | 0.79 | 0.79 | 0.79 | 3.49 | 8.17 | 4.04 | 8.19 | 0.53 | 4.25 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.11 | -0.11 | -0.11 | -0.22 | -3.49 | -1.19 | -2.19 | 0.10 | -0.78 | |
| Real Return Composite | 36,031,820 | 7.82 | 1.66 | 1.66 | 1.66 | 3.07 | 13.42 | 2.14 | 9.55 | -6.20 | 2.42 | 07/01/2013 |
| Real Return Actual Allocation Index (I)* | | | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 6.87 | -3.56 | 1.93 | |
| Difference | | | 0.56 | 0.56 | 0.56 | 1.60 | 4.18 | 0.26 | 2.68 | -2.64 | 0.49 | |
| Real Estate Composite | 22,293,190 | 4.84 | 0.12 | 0.12 | 0.12 | 5.22 | 10.25 | 8.84 | 10.09 | 8.96 | 8.34 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.45 | 1.17 | -2.58 | 1.01 | -4.90 | -3.24 | |
| Absolute Return Composite | 43,222,666 | 9.38 | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.94 | -0.26 | 1.79 | 3.13 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.71 | 1.08 | 1.00 | 0.98 | |
| Private Equity Composite | 37,064,117 | 8.05 | 0.08 | 0.08 | 0.08 | 4.00 | 9.24 | 13.90 | 8.96 | 15.38 | 14.09 | 07/01/2013 |
| Private Equity Benchmark (KERS Haz I) [Short Term] | | | 0.08 | 0.08 | 0.08 | 4.00 | 9.24 | 13.90 | 8.96 | 15.38 | 14.09 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (I)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.09 | 0.09 | 0.09 | -4.92 | -0.88 | 1.47 | -9.00 | 11.87 | -0.86 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Insurance Fund's Cash Equivalents can be found in the manager performance section of this report.

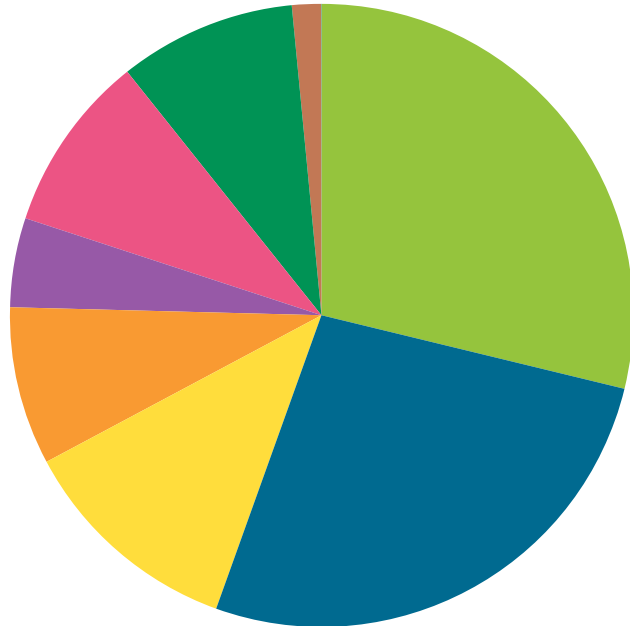


| Pension | |
|---|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Pension Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) NT Int'l Sm Cap Eq Index (SA)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Perimeter Park (SA) Custody Fee Accrual (SA)</p> |

| Insurance | |
|--|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) BTC ACWI Ex US Small Cap Fund (CF)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Patron Capital V, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Custody Fee Accrual (SA)</p> |

Asset Allocation by Asset Class - Pension

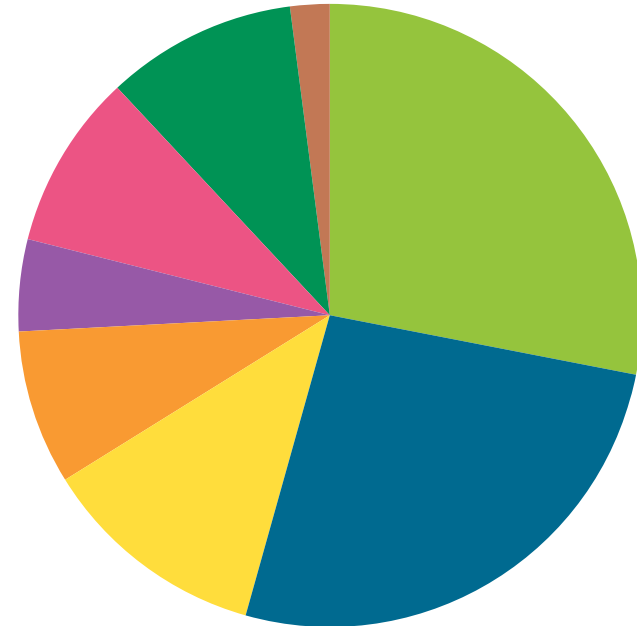
January 31, 2017 : \$6,396,298,446



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 1,841,183,946 | 28.79 |
| Non-U.S. Equity Composite | 1,707,750,542 | 26.70 |
| Fixed Income Composite | 750,354,547 | 11.73 |
| Real Return Composite | 524,893,655 | 8.21 |
| Real Estate Composite | 296,076,255 | 4.63 |
| Absolute Return Composite | 591,209,430 | 9.24 |
| Private Equity Composite | 586,739,654 | 9.17 |
| Cash Equivalents Composite | 96,624,047 | 1.51 |
| Other Composite | 1,466,369 | 0.02 |

Asset Allocation by Asset Class - Insurance

January 31, 2017 : \$2,027,596,674



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 568,841,636 | 28.05 |
| Non-U.S. Equity Composite | 533,340,521 | 26.30 |
| Fixed Income Composite | 239,278,325 | 11.80 |
| Real Return Composite | 162,445,248 | 8.01 |
| Real Estate Composite | 96,685,615 | 4.77 |
| Absolute Return Composite | 184,870,342 | 9.12 |
| Private Equity Composite | 200,621,807 | 9.89 |
| Cash Equivalents Composite | 41,621,392 | 2.05 |
| Other Composite | -108,212 | -0.01 |

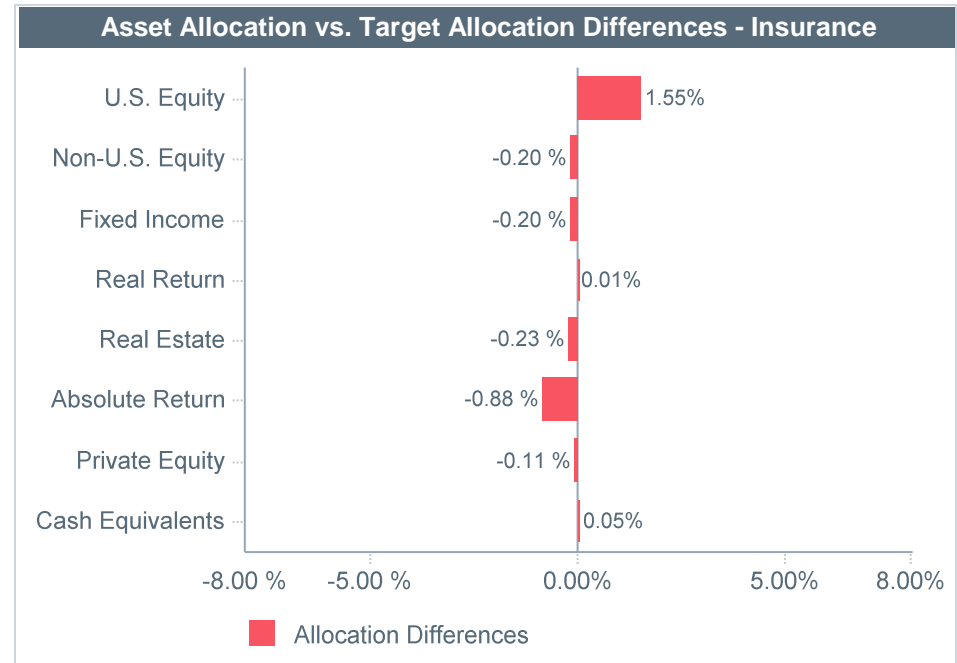
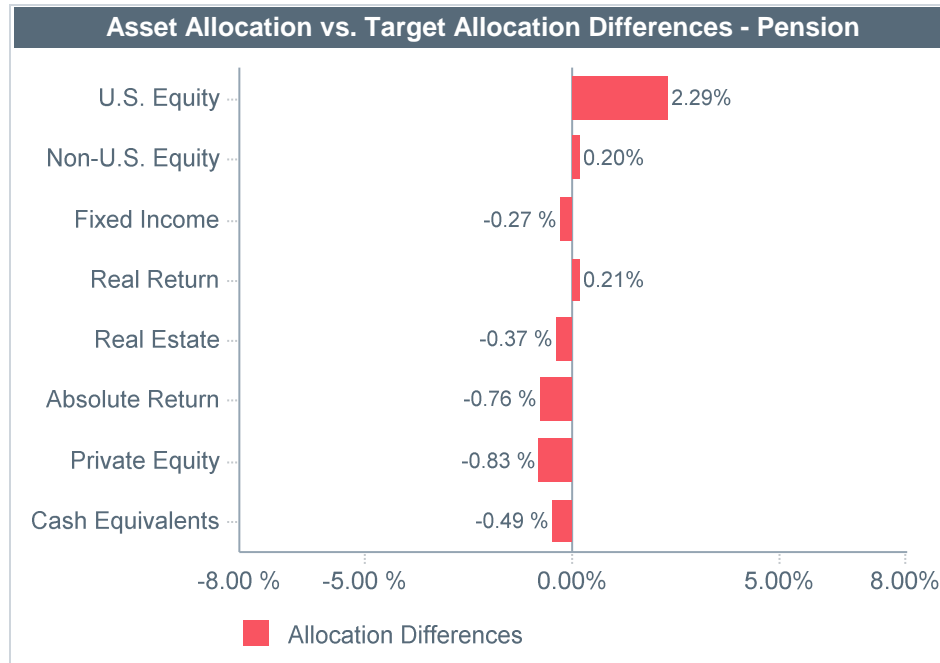
Allocations shown may not sum up to 100% exactly due to rounding.

CERS

Asset Allocation vs. Target Allocation

| Asset Allocation vs. Target Allocation - Pension | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| CERS (P) | 6,396,298,446 | 100.00 | - | - | 100.00 |
| U.S. Equity | 1,841,183,946 | 28.79 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 1,707,750,542 | 26.70 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 750,354,547 | 11.73 | 8.00 | 16.00 | 12.00 |
| Real Return | 524,893,655 | 8.21 | 6.00 | 10.00 | 8.00 |
| Real Estate | 296,076,255 | 4.63 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 591,209,430 | 9.24 | 8.00 | 12.00 | 10.00 |
| Private Equity | 586,739,654 | 9.17 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 96,624,047 | 1.51 | 0.00 | 4.00 | 2.00 |

| Asset Allocation vs. Target Allocation - Insurance | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| CERS (I) | 2,027,596,674 | 100.00 | - | - | 100.00 |
| U.S. Equity | 568,841,636 | 28.05 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 533,340,521 | 26.30 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 239,278,325 | 11.80 | 8.00 | 16.00 | 12.00 |
| Real Return | 162,445,248 | 8.01 | 6.00 | 10.00 | 8.00 |
| Real Estate | 96,685,615 | 4.77 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 184,870,342 | 9.12 | 8.00 | 12.00 | 10.00 |
| Private Equity | 200,621,807 | 9.89 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 41,621,392 | 2.05 | 0.00 | 4.00 | 2.00 |



Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page.

Kentucky Retirement Systems
Asset Allocation & Performance
CERS - Pension

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|----------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| CERS (P) | 6,396,298,446 | 100.00 | 1.72 | 1.72 | 1.72 | 7.14 | 13.10 | 5.35 | 8.16 | -0.20 | 9.08 | 04/01/1984 |
| Target Allocation Index (CERS P) | | | 1.80 | 1.80 | 1.80 | 7.02 | 13.89 | 5.54 | 7.92 | 0.22 | 9.22 | |
| Difference | | | -0.08 | -0.08 | -0.08 | 0.12 | -0.79 | -0.19 | 0.24 | -0.42 | -0.14 | |
| U.S. Equity Composite | 1,841,183,946 | 28.79 | 1.71 | 1.71 | 1.71 | 11.36 | 22.55 | 9.38 | 14.15 | -1.18 | 11.69 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.17 | -0.17 | -0.17 | 0.52 | 0.82 | -0.90 | 1.41 | -1.66 | -0.73 | |
| Non-U.S. Equity Composite | 1,707,750,542 | 26.70 | 3.36 | 3.36 | 3.36 | 8.30 | 14.14 | 1.50 | 4.24 | -3.32 | 4.14 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.23 | -0.23 | -0.23 | -1.00 | -2.60 | 0.14 | -0.67 | 1.93 | 0.21 | |
| Fixed Income Composite | 750,354,547 | 11.73 | 0.76 | 0.76 | 0.76 | 3.90 | 8.36 | 4.26 | 8.37 | 0.51 | 4.47 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.14 | -0.14 | -0.14 | 0.19 | -3.30 | -0.97 | -2.01 | 0.08 | -0.56 | |
| Real Return Composite | 524,893,655 | 8.21 | 2.21 | 2.21 | 2.21 | 4.04 | 14.95 | 2.54 | 10.36 | -5.79 | 2.74 | 07/01/2013 |
| Real Return Actual Allocation Index (P)* | | | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 7.22 | -4.07 | 1.96 | |
| Difference | | | 0.62 | 0.62 | 0.62 | 1.83 | 4.62 | 0.62 | 3.14 | -1.72 | 0.78 | |
| Real Estate Composite | 296,076,255 | 4.63 | 0.12 | 0.12 | 0.12 | 4.89 | 10.03 | 9.51 | 9.98 | 9.42 | 8.63 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.12 | 0.95 | -1.91 | 0.90 | -4.44 | -2.95 | |
| Absolute Return Composite | 591,209,430 | 9.24 | 0.74 | 0.74 | 0.74 | 4.13 | 0.76 | 1.95 | -0.25 | 1.69 | 3.15 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.41 | -0.41 | -0.41 | 1.60 | 0.28 | 0.72 | 1.09 | 0.90 | 1.00 | |
| Private Equity Composite | 586,739,654 | 9.17 | 0.04 | 0.04 | 0.04 | 4.09 | 6.65 | 11.26 | 6.43 | 11.58 | 11.74 | 07/01/2013 |
| Private Equity Benchmark (CERS P) [Short Term] | | | 0.04 | 0.04 | 0.04 | 4.09 | 6.65 | 11.26 | 6.43 | 11.58 | 11.74 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (P)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.05 | 0.05 | 0.05 | -4.83 | -3.47 | -1.17 | -11.53 | 8.07 | -3.21 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Pension Fund's Cash Equivalents can be found in the manager performance section of this report.

Kentucky Retirement Systems
Asset Allocation & Performance
CERS - Insurance

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|----------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| CERS (I) | 2,027,596,674 | 100.00 | 1.66 | 1.66 | 1.66 | 6.99 | 13.19 | 5.32 | 8.31 | -0.01 | 7.31 | 04/01/1987 |
| Target Allocation Index (CERS I) | | | 1.77 | 1.77 | 1.77 | 6.84 | 14.07 | 5.93 | 8.15 | 0.96 | 7.72 | |
| Difference | | | -0.11 | -0.11 | -0.11 | 0.15 | -0.88 | -0.61 | 0.16 | -0.97 | -0.41 | |
| U.S. Equity Composite | 568,841,636 | 28.05 | 1.72 | 1.72 | 1.72 | 11.34 | 22.55 | 9.87 | 14.65 | -0.48 | 12.13 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.16 | -0.16 | -0.16 | 0.50 | 0.82 | -0.41 | 1.91 | -0.96 | -0.29 | |
| Non-U.S. Equity Composite | 533,340,521 | 26.30 | 3.37 | 3.37 | 3.37 | 8.55 | 14.13 | 1.36 | 4.02 | -3.43 | 4.02 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.22 | -0.22 | -0.22 | -0.75 | -2.61 | 0.00 | -0.89 | 1.82 | 0.09 | |
| Fixed Income Composite | 239,278,325 | 11.80 | 0.80 | 0.80 | 0.80 | 3.50 | 8.17 | 4.07 | 8.20 | 0.54 | 4.28 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.10 | -0.10 | -0.10 | -0.21 | -3.49 | -1.16 | -2.18 | 0.11 | -0.75 | |
| Real Return Composite | 162,445,248 | 8.01 | 1.67 | 1.67 | 1.67 | 3.14 | 13.51 | 2.19 | 9.69 | -6.18 | 2.46 | 07/01/2013 |
| Real Return Actual Allocation Index (I)* | | | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 6.87 | -3.56 | 1.93 | |
| Difference | | | 0.57 | 0.57 | 0.57 | 1.67 | 4.27 | 0.31 | 2.82 | -2.62 | 0.53 | |
| Real Estate Composite | 96,685,615 | 4.77 | 0.12 | 0.12 | 0.12 | 5.23 | 10.28 | 8.87 | 10.12 | 9.02 | 8.37 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.46 | 1.20 | -2.55 | 1.04 | -4.84 | -3.21 | |
| Absolute Return Composite | 184,870,342 | 9.12 | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.95 | -0.26 | 1.80 | 3.13 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.72 | 1.08 | 1.01 | 0.98 | |
| Private Equity Composite | 200,621,807 | 9.89 | 0.12 | 0.12 | 0.12 | 3.89 | 9.54 | 14.29 | 9.23 | 16.43 | 14.27 | 07/01/2013 |
| Private Equity Benchmark (CERS I) [Short Term] | | | 0.12 | 0.12 | 0.12 | 3.89 | 9.54 | 13.13 | 9.23 | 16.43 | 13.29 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.16 | 0.00 | 0.00 | 0.98 | |
| R 3000 Index+3% (Qtr Lag) (I)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.13 | 0.13 | 0.13 | -5.03 | -0.58 | 1.86 | -8.73 | 12.92 | -0.68 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Insurance Fund's Cash Equivalents can be found in the manager performance section of this report.

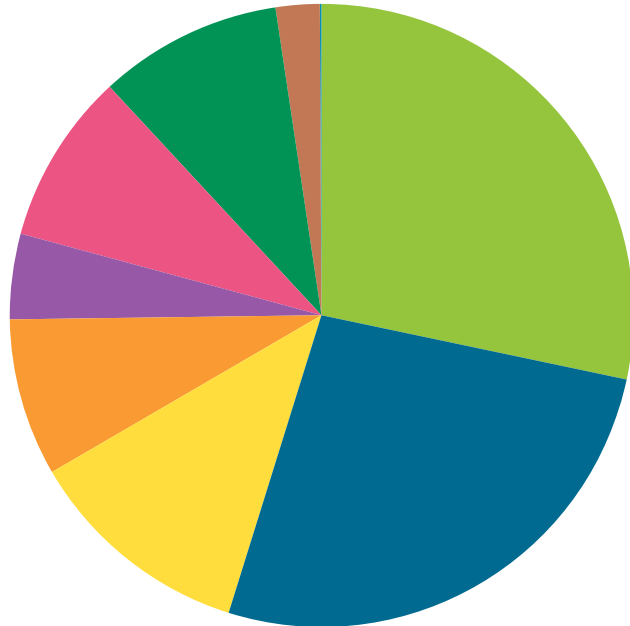


| Pension | |
|---|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Pension Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) NT Int'l Sm Cap Eq Index (SA)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Perimeter Park (SA) Custody Fee Accrual (SA)</p> |

| Insurance | |
|--|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) BTC ACWI Ex US Small Cap Fund (CF)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Patron Capital V, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Custody Fee Accrual (SA)</p> |

Asset Allocation by Asset Class - Pension

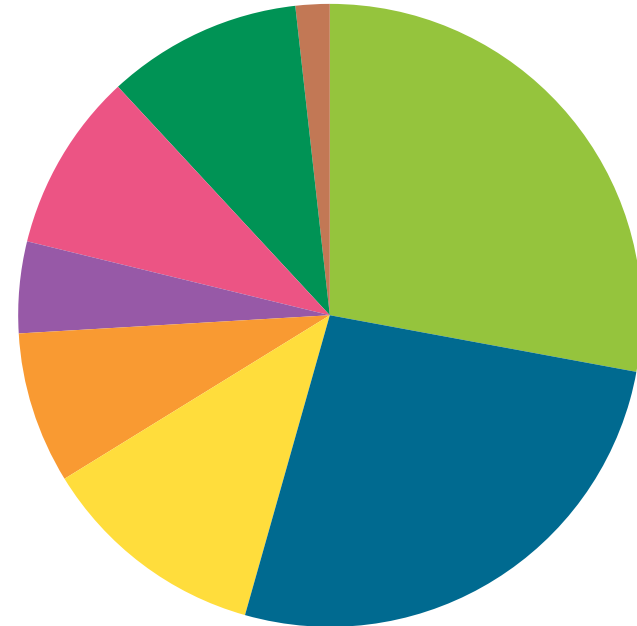
January 31, 2017 : \$2,108,587,228



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 596,957,040 | 28.31 |
| Non-U.S. Equity Composite | 558,847,178 | 26.50 |
| Fixed Income Composite | 248,785,192 | 11.80 |
| Real Return Composite | 172,460,261 | 8.18 |
| Real Estate Composite | 93,350,768 | 4.43 |
| Absolute Return Composite | 187,342,828 | 8.88 |
| Private Equity Composite | 200,770,465 | 9.52 |
| Cash Equivalents Composite | 48,312,965 | 2.29 |
| Other Composite | 1,760,530 | 0.08 |

Asset Allocation by Asset Class - Insurance

January 31, 2017 : \$1,115,402,329



| | Market Value (\$) | Allocation (%) |
|----------------------------|-------------------|----------------|
| U.S. Equity Composite | 311,358,480 | 27.91 |
| Non-U.S. Equity Composite | 295,359,204 | 26.48 |
| Fixed Income Composite | 131,890,436 | 11.82 |
| Real Return Composite | 87,665,409 | 7.86 |
| Real Estate Composite | 52,996,154 | 4.75 |
| Absolute Return Composite | 103,548,813 | 9.28 |
| Private Equity Composite | 112,910,732 | 10.12 |
| Cash Equivalents Composite | 19,732,706 | 1.77 |
| Other Composite | -59,606 | -0.01 |

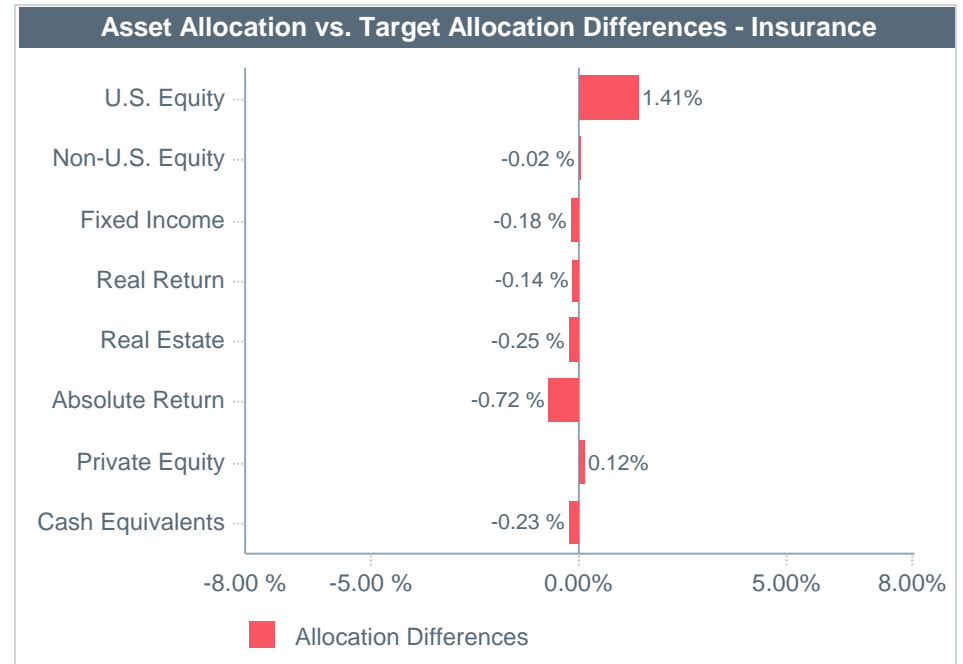
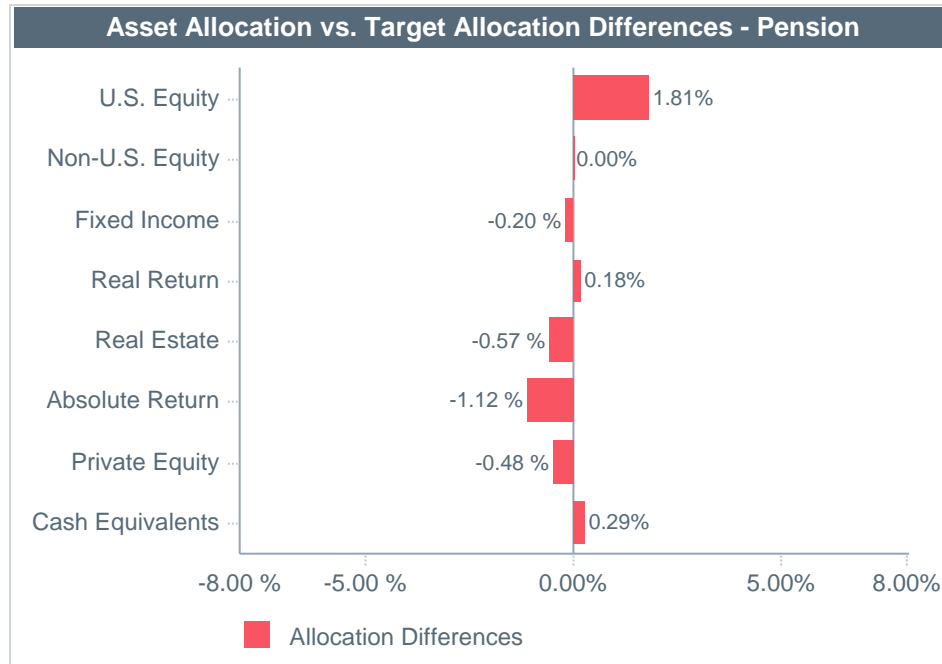
Allocations shown may not sum up to 100% exactly due to rounding.

Kentucky Retirement Systems
 CERS Haz
 Asset Allocation vs. Target Allocation

As of January 31, 2017

| Asset Allocation vs. Target Allocation - Pension | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| CERS Haz (P) | 2,108,587,228 | 100.00 | - | - | 100.00 |
| U.S. Equity | 596,957,040 | 28.31 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 558,847,178 | 26.50 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 248,785,192 | 11.80 | 8.00 | 16.00 | 12.00 |
| Real Return | 172,460,261 | 8.18 | 6.00 | 10.00 | 8.00 |
| Real Estate | 93,350,768 | 4.43 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 187,342,828 | 8.88 | 8.00 | 12.00 | 10.00 |
| Private Equity | 200,770,465 | 9.52 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 48,312,965 | 2.29 | 0.00 | 4.00 | 2.00 |

| Asset Allocation vs. Target Allocation - Insurance | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| CERS Haz (I) | 1,115,402,329 | 100.00 | - | - | 100.00 |
| U.S. Equity | 311,358,480 | 27.91 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 295,359,204 | 26.48 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 131,890,436 | 11.82 | 8.00 | 16.00 | 12.00 |
| Real Return | 87,665,409 | 7.86 | 6.00 | 10.00 | 8.00 |
| Real Estate | 52,996,154 | 4.75 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 103,548,813 | 9.28 | 8.00 | 12.00 | 10.00 |
| Private Equity | 112,910,732 | 10.12 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 19,732,706 | 1.77 | 0.00 | 4.00 | 2.00 |



Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page.



Kentucky Retirement Systems
 Asset Allocation & Performance
 CERS Haz - Pension

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|----------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| CERS Haz (P) | 2,108,587,228 | 100.00 | 1.71 | 1.71 | 1.71 | 7.08 | 13.08 | 5.39 | 8.19 | -0.10 | 9.09 | 04/01/1984 |
| Target Allocation Index (CERS Haz P) | | | 1.80 | 1.80 | 1.80 | 7.02 | 13.89 | 5.54 | 7.92 | 0.22 | 9.22 | |
| Difference | | | -0.09 | -0.09 | -0.09 | 0.06 | -0.81 | -0.15 | 0.27 | -0.32 | -0.13 | |
| U.S. Equity Composite | 596,957,040 | 28.31 | 1.71 | 1.71 | 1.71 | 11.40 | 22.61 | 9.42 | 14.29 | -1.19 | 11.73 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.17 | -0.17 | -0.17 | 0.56 | 0.88 | -0.86 | 1.55 | -1.67 | -0.69 | |
| Non-U.S. Equity Composite | 558,847,178 | 26.50 | 3.36 | 3.36 | 3.36 | 8.29 | 14.12 | 1.51 | 4.23 | -3.32 | 4.15 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.23 | -0.23 | -0.23 | -1.01 | -2.62 | 0.15 | -0.68 | 1.93 | 0.22 | |
| Fixed Income Composite | 248,785,192 | 11.80 | 0.76 | 0.76 | 0.76 | 3.86 | 8.30 | 4.25 | 8.30 | 0.47 | 4.45 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.14 | -0.14 | -0.14 | 0.15 | -3.36 | -0.98 | -2.08 | 0.04 | -0.58 | |
| Real Return Composite | 172,460,261 | 8.18 | 2.21 | 2.21 | 2.21 | 4.02 | 14.98 | 2.57 | 10.38 | -5.77 | 2.86 | 07/01/2013 |
| Real Return Actual Allocation Index (P)* | | | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 7.22 | -4.07 | 1.96 | |
| Difference | | | 0.62 | 0.62 | 0.62 | 1.81 | 4.65 | 0.65 | 3.16 | -1.70 | 0.90 | |
| Real Estate Composite | 93,350,768 | 4.43 | 0.12 | 0.12 | 0.12 | 4.85 | 9.97 | 9.51 | 9.92 | 9.41 | 8.61 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.08 | 0.89 | -1.91 | 0.84 | -4.45 | -2.97 | |
| Absolute Return Composite | 187,342,828 | 8.88 | 0.74 | 0.74 | 0.74 | 4.13 | 0.76 | 1.95 | -0.25 | 1.69 | 3.15 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.41 | -0.41 | -0.41 | 1.60 | 0.28 | 0.72 | 1.09 | 0.90 | 1.00 | |
| Private Equity Composite | 200,770,465 | 9.52 | 0.04 | 0.04 | 0.04 | 4.01 | 7.03 | 11.80 | 6.80 | 12.46 | 12.24 | 07/01/2013 |
| Private Equity Benchmark (CERS Haz P) [Short Term] | | | 0.04 | 0.04 | 0.04 | 4.01 | 7.03 | 11.80 | 6.80 | 12.46 | 12.24 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (P)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.05 | 0.05 | 0.05 | -4.91 | -3.09 | -0.63 | -11.16 | 8.95 | -2.71 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Pension Fund's Cash Equivalents can be found in the manager performance section of this report.



Kentucky Retirement Systems
Asset Allocation & Performance
CERS Haz - Insurance

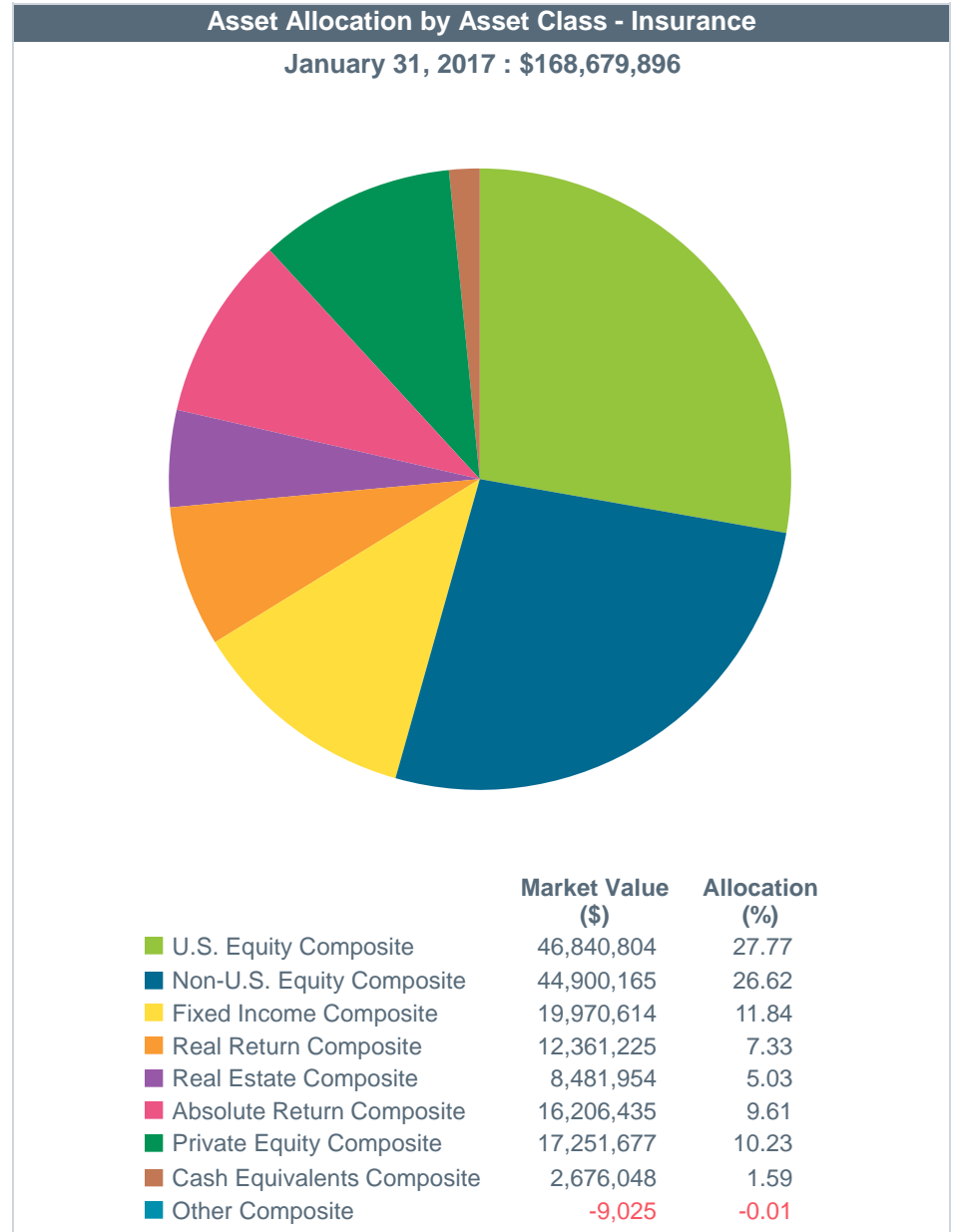
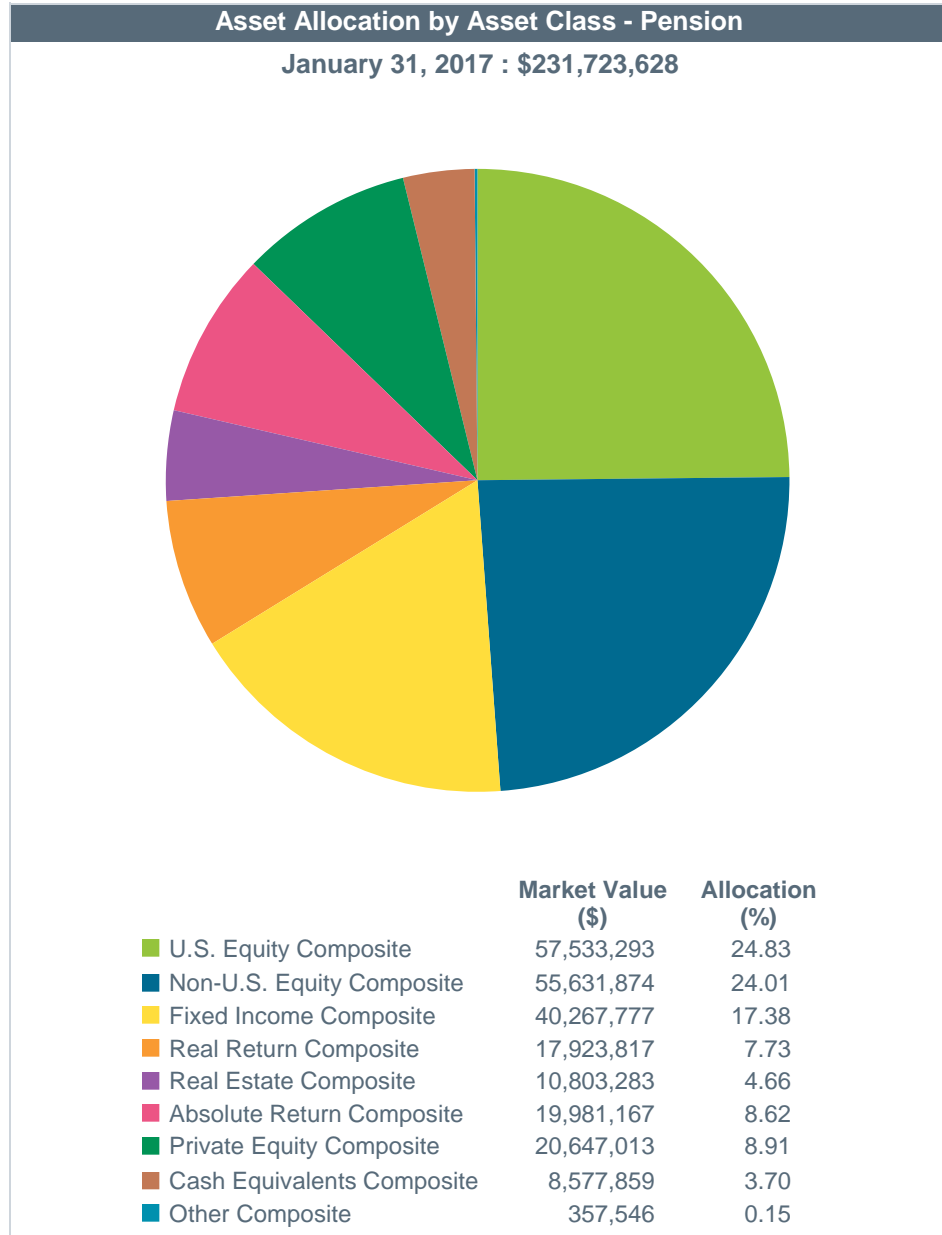
As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|----------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| CERS Haz (I) | 1,115,402,329 | 100.00 | 1.66 | 1.66 | 1.66 | 6.98 | 13.18 | 5.36 | 8.38 | 0.06 | 7.32 | 04/01/1987 |
| Target Allocation Index (CERS Haz I) | | | 1.77 | 1.77 | 1.77 | 6.84 | 14.07 | 5.93 | 8.15 | 0.96 | 7.72 | |
| Difference | | | -0.11 | -0.11 | -0.11 | 0.14 | -0.89 | -0.57 | 0.23 | -0.90 | -0.40 | |
| U.S. Equity Composite | 311,358,480 | 27.91 | 1.72 | 1.72 | 1.72 | 11.33 | 22.52 | 9.90 | 14.73 | -0.47 | 12.15 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.16 | -0.16 | -0.16 | 0.49 | 0.79 | -0.38 | 1.99 | -0.95 | -0.27 | |
| Non-U.S. Equity Composite | 295,359,204 | 26.48 | 3.37 | 3.37 | 3.37 | 8.55 | 14.14 | 1.39 | 4.13 | -3.44 | 4.04 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.22 | -0.22 | -0.22 | -0.75 | -2.60 | 0.03 | -0.78 | 1.81 | 0.11 | |
| Fixed Income Composite | 131,890,436 | 11.82 | 0.79 | 0.79 | 0.79 | 3.49 | 8.16 | 4.06 | 8.18 | 0.51 | 4.26 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.11 | -0.11 | -0.11 | -0.22 | -3.50 | -1.17 | -2.20 | 0.08 | -0.77 | |
| Real Return Composite | 87,665,409 | 7.86 | 1.66 | 1.66 | 1.66 | 3.12 | 13.49 | 2.18 | 9.65 | -6.15 | 2.46 | 07/01/2013 |
| Real Return Actual Allocation Index (I)* | | | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 6.87 | -3.56 | 1.93 | |
| Difference | | | 0.56 | 0.56 | 0.56 | 1.65 | 4.25 | 0.30 | 2.78 | -2.59 | 0.53 | |
| Real Estate Composite | 52,996,154 | 4.75 | 0.12 | 0.12 | 0.12 | 5.24 | 10.28 | 8.86 | 10.12 | 9.01 | 8.36 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.47 | 1.20 | -2.56 | 1.04 | -4.85 | -3.22 | |
| Absolute Return Composite | 103,548,813 | 9.28 | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.94 | -0.26 | 1.79 | 3.13 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.71 | 1.08 | 1.00 | 0.98 | |
| Private Equity Composite | 112,910,732 | 10.12 | 0.11 | 0.11 | 0.11 | 3.87 | 9.69 | 14.58 | 9.39 | 16.94 | 14.49 | 07/01/2013 |
| Private Equity Benchmark (CERS Haz I) [Short Term] | | | 0.11 | 0.11 | 0.11 | 3.87 | 9.69 | 14.58 | 9.39 | 16.94 | 14.49 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (I)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.12 | 0.12 | 0.12 | -5.05 | -0.43 | 2.15 | -8.57 | 13.43 | -0.46 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Insurance Fund's Cash Equivalents can be found in the manager performance section of this report.

| Pension | |
|---|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Pension Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) NT Int'l Sm Cap Eq Index (SA)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Perimeter Park (SA) Custody Fee Accrual (SA)</p> |

| Insurance | |
|--|--|
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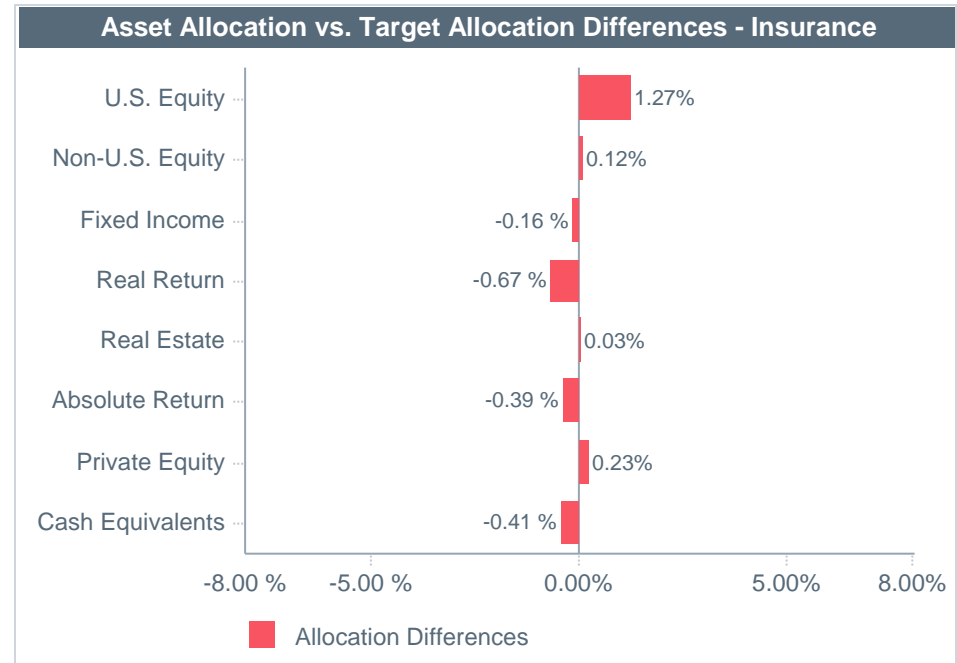
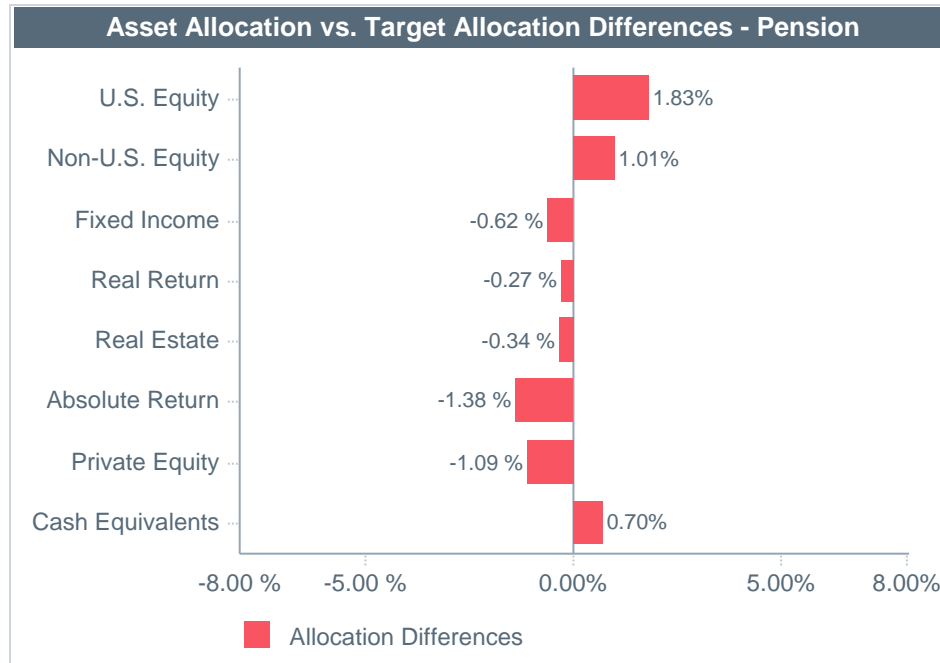


Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation

| Asset Allocation vs. Target Allocation - Pension | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| SPRS (P) | 231,723,628 | 100.00 | - | - | 100.00 |
| U.S. Equity | 57,533,293 | 24.83 | 18.00 | 28.00 | 23.00 |
| Non-U.S. Equity | 55,631,874 | 24.01 | 18.00 | 28.00 | 23.00 |
| Fixed Income | 40,267,777 | 17.38 | 14.00 | 22.00 | 18.00 |
| Real Return | 17,923,817 | 7.73 | 6.00 | 10.00 | 8.00 |
| Real Estate | 10,803,283 | 4.66 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 19,981,167 | 8.62 | 8.00 | 12.00 | 10.00 |
| Private Equity | 20,647,013 | 8.91 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 8,577,859 | 3.70 | 1.00 | 5.00 | 3.00 |

| Asset Allocation vs. Target Allocation - Insurance | | | | | |
|--|-----------------------|----------------------|------------------------|------------------------|-----------------------|
| | Asset Allocation (\$) | Asset Allocation (%) | Minimum Allocation (%) | Maximum Allocation (%) | Target Allocation (%) |
| SPRS (I) | 168,679,896 | 100.00 | - | - | 100.00 |
| U.S. Equity | 46,840,804 | 27.77 | 21.50 | 31.50 | 26.50 |
| Non-U.S. Equity | 44,900,165 | 26.62 | 21.50 | 31.50 | 26.50 |
| Fixed Income | 19,970,614 | 11.84 | 8.00 | 16.00 | 12.00 |
| Real Return | 12,361,225 | 7.33 | 6.00 | 10.00 | 8.00 |
| Real Estate | 8,481,954 | 5.03 | 3.00 | 7.00 | 5.00 |
| Absolute Return | 16,206,435 | 9.61 | 8.00 | 12.00 | 10.00 |
| Private Equity | 17,251,677 | 10.23 | 7.00 | 13.00 | 10.00 |
| Cash Equivalents | 2,676,048 | 1.59 | 0.00 | 4.00 | 2.00 |



Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page.

Kentucky Retirement Systems
Asset Allocation & Performance
SPRS - Pension

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|--------------------|---------------|-----------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| SPRS (P) | 231,723,628 | 100.00 | 1.55 | 1.55 | 1.55 | 6.42 | 11.80 | 4.75 | 6.75 | -0.41 | 9.03 | 04/01/1984 |
| Target Allocation Index (SPRS P) | | | 1.66 | 1.66 | 1.66 | 6.53 | 13.24 | 5.47 | 7.92 | 0.21 | 9.21 | |
| Difference | | | -0.11 | -0.11 | -0.11 | -0.11 | -1.44 | -0.72 | -1.17 | -0.62 | -0.18 | |
| U.S. Equity Composite | 57,533,293 | 24.83 | 1.71 | 1.71 | 1.71 | 10.30 | 21.56 | 8.94 | 12.44 | -1.20 | 11.36 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.17 | -0.17 | -0.17 | -0.54 | -0.17 | -1.34 | -0.30 | -1.68 | -1.06 | |
| Non-U.S. Equity Composite | 55,631,874 | 24.01 | 3.31 | 3.31 | 3.31 | 8.33 | 14.24 | 1.04 | 2.97 | -3.33 | 3.75 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.28 | -0.28 | -0.28 | -0.97 | -2.50 | -0.32 | -1.94 | 1.92 | -0.18 | |
| Fixed Income Composite | 40,267,777 | 17.38 | 0.73 | 0.73 | 0.73 | 3.70 | 8.20 | 4.22 | 8.23 | 0.48 | 4.43 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.17 | -0.17 | -0.17 | -0.01 | -3.46 | -1.01 | -2.15 | 0.05 | -0.60 | |
| Real Return Composite | 17,923,817 | 7.73 | 2.18 | 2.18 | 2.18 | 4.19 | 14.92 | 2.48 | 10.16 | -5.77 | 2.81 | 07/01/2013 |
| Real Return Actual Allocation Index (P)* | | | 1.59 | 1.59 | 1.59 | 2.21 | 10.33 | 1.92 | 7.22 | -4.07 | 1.96 | |
| Difference | | | 0.59 | 0.59 | 0.59 | 1.98 | 4.59 | 0.56 | 2.94 | -1.70 | 0.85 | |
| Real Estate Composite | 10,803,283 | 4.66 | 0.13 | 0.13 | 0.13 | 4.90 | 9.97 | 9.18 | 9.91 | 8.75 | 8.55 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.13 | 0.13 | 0.13 | 1.13 | 0.89 | -2.24 | 0.83 | -5.11 | -3.03 | |
| Absolute Return Composite | 19,981,167 | 8.62 | 0.74 | 0.74 | 0.74 | 4.13 | 0.77 | 1.93 | -0.24 | 1.64 | 3.09 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.41 | -0.41 | -0.41 | 1.60 | 0.29 | 0.70 | 1.10 | 0.85 | 0.94 | |
| Private Equity Composite | 20,647,013 | 8.91 | -0.01 | -0.01 | -0.01 | 3.91 | 4.45 | 9.57 | 4.26 | 9.28 | 10.46 | 07/01/2013 |
| Private Equity Benchmark (SPRS P) [Short Term] | | | -0.01 | -0.01 | -0.01 | 3.91 | 4.45 | 9.57 | 4.26 | 9.28 | 10.46 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (P)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.00 | 0.00 | 0.00 | -5.01 | -5.67 | -2.86 | -13.70 | 5.77 | -4.49 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Pension Fund's Cash Equivalents can be found in the manager performance section of this report.

Kentucky Retirement Systems
Asset Allocation & Performance
SPRS - Insurance

As of January 31, 2017

| | Allocation | | Performance (%) | | | | | | | | | |
|--|--------------------|---------------|-----------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | Market Value (\$) | % | MTD | QTD | CYTD | FYTD | 1 Year | 3 Years | 2016 | 2015 | Since Incep. | Inception Date |
| SPRS (I) | 168,679,896 | 100.00 | 1.66 | 1.66 | 1.66 | 6.98 | 13.08 | 5.32 | 8.30 | 0.02 | 7.31 | 04/01/1987 |
| Target Allocation Index (SPRS I) | | | 1.77 | 1.77 | 1.77 | 6.84 | 14.07 | 5.93 | 8.15 | 0.96 | 7.72 | |
| Difference | | | -0.11 | -0.11 | -0.11 | 0.14 | -0.99 | -0.61 | 0.15 | -0.94 | -0.41 | |
| U.S. Equity Composite | 46,840,804 | 27.77 | 1.72 | 1.72 | 1.72 | 11.31 | 22.49 | 9.86 | 14.69 | -0.50 | 12.13 | 07/01/2013 |
| Russell 3000 Index | | | 1.88 | 1.88 | 1.88 | 10.84 | 21.73 | 10.28 | 12.74 | 0.48 | 12.42 | |
| Difference | | | -0.16 | -0.16 | -0.16 | 0.47 | 0.76 | -0.42 | 1.95 | -0.98 | -0.29 | |
| Non-U.S. Equity Composite | 44,900,165 | 26.62 | 3.37 | 3.37 | 3.37 | 8.55 | 14.18 | 1.41 | 4.20 | -3.42 | 4.06 | 07/01/2013 |
| MSCI ACW Ex US Investable Mkt Index (Gross)* | | | 3.59 | 3.59 | 3.59 | 9.30 | 16.74 | 1.36 | 4.91 | -5.25 | 3.93 | |
| Difference | | | -0.22 | -0.22 | -0.22 | -0.75 | -2.56 | 0.05 | -0.71 | 1.83 | 0.13 | |
| Fixed Income Composite | 19,970,614 | 11.84 | 0.80 | 0.80 | 0.80 | 3.56 | 8.23 | 4.12 | 8.26 | 0.54 | 4.32 | 07/01/2013 |
| 50/50 Bloomberg US Unv Bond/US Corp: Hi Yld Index* | | | 0.90 | 0.90 | 0.90 | 3.71 | 11.66 | 5.23 | 10.38 | 0.43 | 5.03 | |
| Difference | | | -0.10 | -0.10 | -0.10 | -0.15 | -3.43 | -1.11 | -2.12 | 0.11 | -0.71 | |
| Real Return Composite | 12,361,225 | 7.33 | 1.61 | 1.61 | 1.61 | 3.12 | 13.52 | 2.19 | 9.66 | -6.13 | 2.46 | 07/01/2013 |
| Real Return Actual Allocation Index (I)* | | | 1.10 | 1.10 | 1.10 | 1.47 | 9.24 | 1.88 | 6.87 | -3.56 | 1.93 | |
| Difference | | | 0.51 | 0.51 | 0.51 | 1.65 | 4.28 | 0.31 | 2.79 | -2.57 | 0.53 | |
| Real Estate Composite | 8,481,954 | 5.03 | 0.12 | 0.12 | 0.12 | 5.21 | 10.24 | 8.83 | 10.08 | 8.94 | 8.32 | 07/01/2013 |
| NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) | | | 0.00 | 0.00 | 0.00 | 3.77 | 9.08 | 11.42 | 9.08 | 13.86 | 11.58 | |
| Difference | | | 0.12 | 0.12 | 0.12 | 1.44 | 1.16 | -2.59 | 1.00 | -4.92 | -3.26 | |
| Absolute Return Composite | 16,206,435 | 9.61 | 0.71 | 0.71 | 0.71 | 4.06 | 0.72 | 1.94 | -0.26 | 1.78 | 3.13 | 07/01/2013 |
| HFRI FOF: Dvf'd Index (1 Mo Lag) | | | 1.15 | 1.15 | 1.15 | 2.53 | 0.48 | 1.23 | -1.34 | 0.79 | 2.15 | |
| Difference | | | -0.44 | -0.44 | -0.44 | 1.53 | 0.24 | 0.71 | 1.08 | 0.99 | 0.98 | |
| Private Equity Composite | 17,251,677 | 10.23 | 0.11 | 0.11 | 0.11 | 3.86 | 8.56 | 13.36 | 8.24 | 14.80 | 13.60 | 07/01/2013 |
| Private Equity Benchmark (SPRS I) [Short Term] | | | 0.11 | 0.11 | 0.11 | 3.86 | 8.56 | 13.36 | 8.24 | 14.80 | 13.60 | |
| Difference | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| R 3000 Index+3% (Qtr Lag) (I)* [Long Term] | | | -0.01 | -0.01 | -0.01 | 8.92 | 10.12 | 12.43 | 17.96 | 3.51 | 14.95 | |
| Difference | | | 0.12 | 0.12 | 0.12 | -5.06 | -1.56 | 0.93 | -9.72 | 11.29 | -1.35 | |

Performance shown is net of fees. An index marked with an asterisk (*) represents the current benchmark. Fiscal year ends June 30th. Allocations shown may not sum up to 100% due to the exclusion of Cash Equivalents and Other from this page; returns for Kentucky Retirement Systems Insurance Fund's Cash Equivalents can be found in the manager performance section of this report.

| Pension | |
|---|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA) Pension Transition (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) NT Int'l Sm Cap Eq Index (SA)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Patron Capital V, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Perimeter Park (SA) Custody Fee Accrual (SA)</p> |

| Insurance | |
|--|--|
| <p>U.S. Equity Composite River Road Asset Management (SA) River Road FAV (SA) Westfield Capital (SA) Scientific Beta (SA) Internal S&P 500 Index (SA) Internal US Mid Cap (SA) Systematic Financial Management (SA) NT Structured Small Cap (SA)</p> <p>Non-U.S. Equity Composite Lazard Int'l Strategic Equity (SA) LSV Int'l Concentrated Value Equity (SA) BTC ACWI Ex US Fund (CF) American Century Non-US Growth Equity (SA) Franklin Templeton Non-US Equity (SA) BTC ACWI Ex US Small Cap Fund (CF)</p> <p>Fixed Income Composite <i>Core Fixed Income Composite</i> NISA Core Agg Fixed Income (SA) <i>High Yield Fixed Income Composite</i> Cerberus KRS Levered Loan Opps, L.P. Columbia HY Fixed Income (SA) Marathon Bluegrass Credit Fund Shenkman Capital (SA) Waterfall (SA) <i>Global Fixed Income Composite</i> Manulife Asset Mgmt (SA)</p> <p>Real Return Composite Internal TIPS (SA) Nuveen Real Asset Income (SA) PIMCO:All Asset;Inst (PAAIX) Tortoise Capital (CF) Amerra Ag Fund II (CF) Amerra-AGRI Holding (CF) BTG Pactual Brazil Timberland Fund I, L.P. Magnetar MTP Energy Fund, L.P. Magnetar MTP EOF II, L.P. Oberland Capital Healthcare, L.P. Taurus Mining Finance Fund Tenaska Power Fund II (CF)</p> | <p>Real Estate Composite H/2 Credit Partners (CF) Harrison Street Core (CF) Mesa West Core Lending, L.P. Prologis Targeted U.S. Logistics Fund (CF) Stockbridge SmtMkts, L.P. DivCoWest Fund IV, L.P. Greenfield Acquisition Partners VI, L.P. Greenfield Acquisition Partners VII, L.P. Patron Capital V, L.P. Lubert Adler Real Estate Fund VII, L.P. Rubenstein Properties Fund II, L.P. Walton Street Real Estate Fund VI, L.P. Walton Street Real Estate Fund VII, L.P.</p> <p>Absolute Return Composite BAAM (SA) Davidson-Kemper, L.P. PAAMCO (SA) Prisma Capital Partners (SA) Senator LP Tourbillon Global Master Fund, Ltd Anchorage Capital Blackrock GAO Fund, Ltd (CF) Coatue Qualified Partners, L.P. DSAM Fund, L.P. Finisterre Global Op Glenview Capital (CF) HBK II (CF) Knighthead Capital (CF) LibreMax Capital (CF) Liquidalts H2O Force (CF) Luxor Capital (CF) Myriad Opportunities Pine River (CF) QMS Diversified Global Macro (CF) Scopia PX, LLC</p> <p>Private Equity Composite</p> <p>Cash Equivalents Composite Cash Equivalents (SA)</p> <p>Other Composite Custody Fee Accrual (SA)</p> |

Performance Related Comments

- Performance shown is net of fees and is annualized for periods greater than one year.
- Indices show N/A for Since Inception returns when the fund contains more history than the corresponding benchmark.
- All data reported for Kentucky Retirement Systems, including manager and composite market values and performance, is provided by BNY Mellon. Performance for managers assumes an interim return of 0.00% when current valuation is unavailable.
- An index marked with an asterisk (*) represents the current benchmark.

Asset Allocation Comments

- Fixed Income target allocations represent merged sub-asset class targets (Core Fixed Income, High Yield Bonds, Global Bonds).
- Fixed Income target ranges are calculated using a weighted average of sub-asset class (Core Fixed Income, High Yield Bonds, Global Bonds) allowable ranges.

Benchmark Comments

Manager Performance

- Waterfall (SA) - The blended index is calculated monthly and consists of 60.00% Bloomberg US Corp: High Yield Index, 40.00% Bloomberg US ABS Floating Rate Index.
- Shenkman Capital (SA) - The blended index is calculated monthly and consists of 50.00% Bloomberg US Corp: High Yield Index, 50.00% Bloomberg US High Yield Loans Index through 6/30/2014 and 100.00% S&P/LSTA Leveraged Loan Index thereafter.
- Nuveen Real Asset Income (SA) - The blended index is calculated monthly and consists of 33.00% S&P Global Infrastructure Index, 20.00% Bloomberg US Corp: High Yield Index, 20.00% BofA Merrill Lynch REIT Preferred Index, 15.00% MSCI US REIT Index, and 12.00% BofA Merrill Lynch Preferred Stock, Fixed Rate Index .

Plan Performance

- Target Allocation Indices - These passive custom indices are calculated monthly and consist of target allocation weights applied to each corresponding primary benchmark return for each plan.
- Real Return Actual Allocation Index (P) - The custom index is calculated monthly and consists of 100.00% Consumer Price Index+3% through 10/31/2013 and beginning of month investment weights applied to each corresponding primary benchmark return for liquid managers and each corresponding manager return for illiquid managers.
- Real Return Actual Allocation Index (I) - The custom index is calculated monthly and consists of 100.00% Consumer Price Index+3% through 10/31/2013 and beginning of month investment weights applied to each corresponding primary benchmark return for liquid managers and each corresponding manager return for illiquid managers.
- Real Return Actual Allocation Index (KERS I) - The custom index is calculated monthly and consists of 100.00% Consumer Price Index+2.5% through 10/31/2013 and beginning of month investment weights applied to each corresponding primary benchmark return for liquid managers and each corresponding manager return for illiquid managers.
- Performance for the Private Equity Composite should be evaluated using the short-term benchmark for trailing periods less than five years and using the long-term benchmark for trailing periods five years or greater.
- Private Equity Benchmark (P) [Short Term] - The custom index is calculated monthly and consists of 100.00% of the respective Pension Private Equity Composite.
- Private Equity Benchmark (I) [Short Term] - The custom index is calculated monthly and consists of 100.00% of the respective Insurance Private Equity Composite.
- Russell 3000 Index+3% (Qtr Lag) (P*) [Long Term] - The custom index is calculated monthly and consists of 60.00% S&P 1500 Composite Index, 40.00% Bloomberg US Corp: High Yield Index through 6/30/2011, 100.00% Russell 3000 Index+4% (Quarter Lag) through 12/31/2015, and 100.00% Russell 3000 Index+3% (Quarter Lag) thereafter.
- Russell 3000 Index+3% (Qtr Lag) (I*) [Long Term] - The custom index is calculated monthly and consists of 80.00% S&P 1500 Composite Index, 20.00% Bloomberg US Corp: High Yield Index through 6/30/2011, 100.00% Russell 3000 Index+4% (Quarter Lag) through 12/31/2015, and 100.00% Russell 3000 Index+3% (Quarter Lag) thereafter.

PORTLAND

CHICAGO

NEW YORK

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