# Oklahoma State <br> Pension Commission 

I nvestment Summary
Quarter Ending June 30, 2012

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Oklahoma State Pension Commission

## Asset Allocation Summary

| Key Policy Items | Teachers^ | PERS* | Firefighters | Police ** | Law | J udges | Wildlife |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL EQUITY Target | 55.0\% | 64.0\% | 62.5\% | 60.0\% | 55.0\% | 64.0\% | 50.0\% |
| Actual | 58.0\% | 63.8\% | 66.6\% | 51.5\% | 57.2\% | 63.7\% | 48.3\% |
| Range | 50-60 | 59-69 | 57-68 | 50-70 | 55-65 | 59-69 | 40-55 |
| Large Cap Target | 17.5\% | 35.0\% | 22.5\% | 15.0\% | 20.0\% | 35.0\% | 35.0\% |
| Actual | 21.8\% | 35.2\% | 34.5\% | 16.1\% | 27.4\% | 34.8\% | 34.1\% |
| Range | 16-19 | 32-38 | 17-28 | 10-20 | 15-25 | 32-38 | 30-40 |
| MidCap Target | 12.5\% | - | - | - | - | - | - |
| Actual | 12.9\% |  |  |  |  |  |  |
| Range | 11-14 | - | - | - | - | - | - |
| Small Cap Target | 10.0\% | 5.0\% | 10.0\% | 5.0\% | 10.0\% | 5.0\% | 10.0\% |
| Actual | 9.1\% | 5.4\% | 13.0\% | 9.8\% | 7.9\% | 5.7\% | 8.2\% |
| Range | 9-11 | 2-8 | 5-15 | 0-10 | 5-15 | 2-8 | 5-15 |
| International I Equity Target | 15.0\% | 24.0\% | 10.0\% | 15.0\% | 15.0\% | 24.0\% | 10.0\% |
| Actual | 14.2\% | 23.2\% | 11.3\% | 11.8\% | 12.1\% | 23.2\% | 6.0\% |
| Range | 13-17 | 21-27 | 5-15 | 5-25 | 5-15 | 21-27 | 5-15 |
| Long/ Short Equity Target | - | - | 10.0\% | 15.0\% | 10.0\% | - | - |
| Actual |  |  | 7.8\% | 13.8\% | 9.8\% |  |  |
| Range | - | - | 6-14 | 10-20 | 5-15 | - | - |
| TOTAL FIXED INCOME Target | 30.0\% | 36.0\% | 27.5\% | 25.0\% | 30.0\% | 36.0\% | 40.0\% |
| Actual | 29.1\% | 35.9\% | 19.8\% | 21.0\% | 31.6\% | 36.1\% | 45.3\% |
| Range | 27-33 | 32-40 | 22-33 | 15-35 | 25-35 | 32-40 | 35-55 |
| Dom. Fixed Incom e/ High Yield Target | 30.0\% | 36.0\% | 15.0\% | - | 20.0\% | 36.0\% | 40.0\% |
| Actual | 29.1\% | 35.9\% | 10.5\% | 15.8\% | 18.9\% | 36.1\% | 45.3\% |
| Range | 27-33 | 32-40 | 8-27.5 | - | 15-25 | 32-40 | 35-55 |
| Int'l \& Global Fixed Income Target | - | - | 5.0\% | 15.0\% | 10.0\% | - | - |
| Actual |  |  | 9.3\% | 5.2\% | 12.7\% |  |  |
| Range | - | - | 0-10 | 10-20 | 5-15 | - | - |
| TOTAL ALTERNATIVES Target | 15.0\% | - | 10.0\% | 35.0\% | 15.0\% | - | 5.0\% |
| Actual | 12.8\% |  | 13.5\% | 26.2\% | 6.2\% |  | 4.3\% |
| Range | 14-17 | - | 5-15 | 22.5-32.5 | 5-15 | - | 0-5 |
| Low Volatility Hedge Funds Target | - | - | 7.5\% | 10.0\% | - | - | - |
| Actual |  |  | 7.3\% | 8.8\% |  |  |  |
| Range | - | - | 2-10 | 5-15 | - | - | - |
| Private Equity/MLP's Target | 10.0\% | - | 10.0\% | 10.0\% | 5.0\% | - | - |
| Actual | 8.1\% |  |  | 13.0\% | 3.5\% |  |  |
| Range | 9-11 | - | 0-15 | 5-15 | 0-5 | - | - |
| Real Estate/ Real Assets Target | 5.0\% | - | 10.0\% | 15.0\% | 10.0\% | - | - |
| Actual | 4.7\% |  | 6.2\% | 4.4\% | 2.7\% |  |  |
| Range | 4-6 | - | 0-18 | 10-20 | 2-12 | - | - |
| CASH Actual | 0.1\% | 0.3\% | 0.0\% | 1.3\% | 5.1\% | 0.2\% | 2.1\% |
|  |  |  |  |  |  |  |  |
| Actuarial Assumed Rates | 8.0\% | 7.5\% | 7.5\% | 7.5\% | 7.5\% | 7.5\% | 7.0\% |

^Master Limited Partnerships included in Private Equity allocation.
*The Russell 3000 index was broken down into Large Cap \& Small Cap allocations for the PERS retirement plan
**Real Assets are included in Real Estate
Please note that allocations may not add to $100 \%$ due to rounding

Oklahoma State Pension Commission

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*Cash allocations not broken out for individual managers.

Oklahoma State Pension Commission

## Performance Attribution



OKLAHOMA STATE PENSION COMMISSION
Asset Growth Summary

Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Net Cash Flow | Net Investment Change | Ending Market Value |
| Firefighters | \$1,744,811,778 | -\$7,001,492 | -\$41,981,844 | \$1,695,828,443 |
| Judges | \$250,764,877 | -\$2,806,544 | -\$4,642,803 | \$243,315,530 |
| Law | \$720,657,141 | -\$4,545,211 | -\$14,052,397 | \$702,059,533 |
| PERS | \$6,930,701,472 | \$18,327,756 | -\$144,005,556 | \$6,805,023,672 |
| Police | \$1,807,136,109 | -\$31,347,565 | -\$23,605,446 | \$1,752,183,097 |
| Teachers | \$10,357,165,824 | -\$8,109,367 | -\$251,812,890 | \$10,097,243,568 |
| Wildlife | \$77,201,813 | \$46,937 | -\$950,393 | \$76,298,358 |
| Total | \$21,888,439,014 | -\$35,435,485 | -\$481,051,329 | \$21,371,952,201 |

OKLAHOMA STATE PENSION COMMISSION

## Total Fund Performance Detail

|  | Market Value |  | $3 \mathrm{Mo}$ (\%) | Rank | YTD <br> (\%) | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Oklahoma State Pension Commission | 21,371,954,945 | 100.0 | -2.1 | 65 | 6.2 | 19 | 1.9 | 35 | 12.4 | 24 | 2.4 | 37 | 5.4 | 35 |
| S\&P 500 |  |  | -2.8 | 88 | 9.5 | 1 | 5.4 | 1 | 16.4 | 1 | 0.2 | 95 | 4.1 | 93 |
| Barclays Aggregate |  |  | 2.1 | 1 | 2.4 | 99 | 7.5 | 1 | 6.9 | 99 | 6.8 | 2 | 5.6 | 26 |
| 60\% S\&P 500 / 40\% BC Agg |  |  | -0.8 | 7 | 6.7 | 6 | 6.7 | 1 | 12.9 | 13 | 3.3 | 15 | 5.0 | 55 |
| MSCI EAFE |  |  | -7.1 | 99 | 3.0 | 99 | -13.8 | 99 | 6.0 | 99 | -6.1 | 99 | 2.3 | 99 |
| Firefighters | 1,695,828,443 | 7.9 | -2.4 | 79 | 6.1 | 28 | 0.8 | 67 | 10.3 | 79 | 1.3 | 73 | 4.6 | 73 |
| FIREFIGHTERS Allocation Index |  |  | -2.5 | 84 | 6.0 | 33 | 1.5 | 44 | 11.7 | 45 | 1.5 | 70 | 4.7 | 72 |
| FIREFIGHTERS Policy Index |  |  | -1.7 | 44 | 6.4 | 12 | 3.6 | 5 | 12.6 | 23 | 2.4 | 37 | 5.0 | 57 |
| Judges | 243,315,530 | 1.1 | -1.8 | 52 | 5.8 | 46 | 1.9 | 34 | 12.2 | 28 | 2.8 | 25 | 5.0 | 57 |
| JUDGES Allocation Index |  |  | -2.0 | 60 | 5.4 | 62 | 1.9 | 34 | 11.0 | 60 | 2.4 | 35 | 4.7 | 72 |
| JUDGES Policy Index |  |  | -1.8 | 50 | 5.7 | 50 | 2.1 | 32 | 11.7 | 44 | 2.4 | 37 | 4.7 | 71 |
| Law | 702,059,533 | 3.3 | -1.9 | 56 | 5.5 | 60 | 1.9 | 35 | 12.1 | 29 | 1.7 | 61 | 4.5 | 74 |
| LAW Allocation Index |  |  | -1.8 | 51 | 6.1 | 24 | 3.5 | 7 | 12.0 | 33 | 2.4 | 37 | 5.2 | 47 |
| LAW Policy Index |  |  | -1.3 | 25 | 5.7 | 48 | 2.8 | 20 | 11.3 | 56 | 2.3 | 42 | 5.1 | 48 |
| PERS | 6,805,023,672 | 31.8 | -2.0 | 64 | 5.9 | 44 | 2.4 | 25 | 12.2 | 29 | 2.7 | 27 | 5.3 | 37 |
| PERS Allocation Index |  |  | -2.1 | 68 | 5.4 | 62 | 1.0 | 61 | 11.2 | 58 | 2.7 | 29 | 5.1 | 55 |
| PERS Policy Index |  |  | -1.8 | 50 | 5.7 | 50 | 2.6 | 21 | 11.9 | 35 | 2.6 | 29 | 5.4 | 35 |
| Police | 1,752,185,842 | 8.2 | -1.2 | 22 | 5.4 | 62 | 0.8 | 64 | 9.9 | 84 | 1.6 | 69 | 5.1 | 53 |
| POLICE Allocation Index |  |  | -2.2 | 76 | 7.1 | 1 | 2.2 | 31 | 13.0 | 12 | 1.9 | 54 | 5.1 | 48 |
| POLICE Policy Index |  |  | -1.7 | 42 | 6.7 | 7 | 3.8 | 4 | 12.8 | 17 | 2.0 | 48 | 4.7 | 72 |
| Teachers | 10,097,243,568 | 47.2 | -2.4 | 81 | 6.4 | 11 | 1.8 | 38 | 13.6 | 5 | 2.8 | 24 | 5.9 | 12 |
| TEACHERS Allocation Index |  |  | -2.0 | 60 | 5.6 | 54 | 1.5 | 44 | 12.3 | 28 | 2.3 | 42 | 5.2 | 45 |
| TEACHERS Policy Index |  |  | -2.3 | 76 | 6.1 | 28 | 1.2 | 49 | 12.8 | 18 | 1.8 | 58 | 5.0 | 58 |
| Wildlife | 76,298,358 | 0.4 | -1.3 | 25 | 4.7 | 92 | 2.9 | 15 | 10.0 | 82 | 1.7 | 62 | 4.2 | 91 |
| WILDLIFE Allocation Index |  |  | -1.1 | 16 | 5.1 | 78 | 3.5 | 6 | 10.3 | 79 | 2.8 | 24 | 4.7 | 70 |
| WILDLIFE Policy Index |  |  | -0.4 | 5 | 6.0 | 32 | 6.7 | 1 | 11.8 | 40 | 3.7 | 13 | 5.1 | 52 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |

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OKLAHOMA STATE PENSION COMMISSION

## Total Fund Performance Detail

|  | Market Value (\$) |  | $\begin{array}{r} 2011 \\ (\%) \end{array}$ | Rank | $\begin{array}{r} 2010 \\ (\%) \end{array}$ | Rank | $\begin{array}{r} 2009 \\ (\%) \end{array}$ | Rank | $\begin{array}{r} 2008 \\ (\%) \end{array}$ | Rank | $\begin{array}{r} 2007 \\ (\%) \end{array}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Oklahoma State Pension Commission | 21,371,954,945 | 100.0 | 1.1 | 52 | 13.8 | 35 | 22.0 | 27 | -24.7 | 46 | 7.2 | 66 |
| S\&P 500 |  |  | 2.1 | 31 | 15.1 | 10 | 26.5 | 10 | -37.0 | 99 | 5.5 | 91 |
| Barclays Aggregate |  |  | 7.8 | 1 | 6.5 | 99 | 5.9 | 99 | 5.2 | 1 | 7.0 | 71 |
| 60\% S\&P 500 / 40\% BC Agg |  |  | 4.7 | 3 | 12.1 | 74 | 18.4 | 58 | -22.1 | 23 | 6.2 | 85 |
| MSCI EAFE |  |  | -12.1 | 99 | 7.8 | 99 | 31.8 | 1 | -43.4 | 99 | 11.2 | 4 |
| Firefighters | 1,695,828,443 | 7.9 | -0.2 | 83 | 12.6 | 62 | 15.4 | 78 | -24.3 | 44 | 9.8 | 21 |
| FIREFIGHTERS Allocation Index |  |  | 0.7 | 67 | 13.7 | 35 | 18.5 | 58 | -25.8 | 58 | 7.2 | 65 |
| FIREFIGHTERS Policy Index |  |  | 2.4 | 20 | 13.2 | 47 | 20.6 | 42 | -24.3 | 45 | 5.4 | 93 |
| Judges | 243,315,530 | 1.1 | 0.9 | 59 | 13.2 | 49 | 20.6 | 42 | -23.3 | 30 | 7.6 | 57 |
| JUDGES Allocation Index |  |  | 1.1 | 52 | 11.3 | 84 | 18.7 | 55 | -21.7 | 23 | 7.5 | 59 |
| JUDGES Policy Index |  |  | 1.1 | 50 | 12.9 | 57 | 19.4 | 50 | -23.8 | 37 | 7.5 | 59 |
| Law | 702,059,533 | 3.3 | 1.9 | 37 | 15.1 | 10 | 16.7 | 68 | -23.8 | 37 | 5.7 | 90 |
| LAW Allocation Index |  |  | 2.2 | 26 | 13.1 | 51 | 18.4 | 59 | -23.3 | 30 | 6.8 | 74 |
| LAW Policy Index |  |  | 1.9 | 37 | 13.0 | 52 | 16.2 | 72 | -21.4 | 22 | 6.2 | 85 |
| PERS | 6,805,023,672 | 31.8 | 1.8 | 38 | 12.5 | 65 | 20.7 | 41 | -23.5 | 35 | 8.2 | 50 |
| PERS Allocation Index |  |  | 0.1 | 78 | 12.3 | 70 | 20.8 | 40 | -21.9 | 23 | 7.4 | 61 |
| PERS Policy Index |  |  | 1.6 | 41 | 12.9 | 55 | 21.0 | 38 | -24.5 | 46 | 8.5 | 45 |
| Police | 1,752,185,842 | 8.2 | 0.0 | 78 | 11.2 | 86 | 17.3 | 63 | -23.1 | 28 | 9.9 | 18 |
| POLICE Allocation Index |  |  | 0.1 | 78 | 13.8 | 34 | 26.8 | 7 | -29.5 | 90 | 7.9 | 53 |
| POLICE Policy Index |  |  | 2.5 | 16 | 13.5 | 41 | 19.6 | 48 | -26.2 | 62 | 6.3 | 84 |
| Teachers | 10,097,243,568 | 47.2 | 0.9 | 58 | 15.9 | 5 | 25.6 | 12 | -26.0 | 60 | 6.9 | 72 |
| TEACHERS Allocation Index |  |  | 0.9 | 59 | 14.0 | 29 | 23.6 | 19 | -25.2 | 53 | 5.9 | 89 |
| TEACHERS Policy Index |  |  | 0.4 | 72 | 14.4 | 23 | 23.5 | 19 | -27.5 | 76 | 6.3 | 83 |
| Wildlife | 76,298,358 | 0.4 | 2.5 | 18 | 10.4 | 94 | 16.1 | 73 | -22.0 | 23 | 6.9 | 71 |
| WILDLIFE Allocation Index |  |  | 2.7 | 14 | 10.8 | 90 | 15.3 | 78 | -18.1 | 14 | 6.4 | 81 |
| WILDLIFE Policy Index |  |  | 5.0 | 3 | 11.1 | 87 | 16.2 | 71 | -18.2 | 14 | 6.3 | 83 |
| ICC Public DB Median |  |  | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |

NEPC, LLC

OKLAHOMA STATE PENSION COMMISSION

## Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


|  | 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|  | Oklahoma State Pension Commission | 12.43\% | 24 | 10.84\% | 74 |
|  | Firefighters | 10.30\% | 79 | 10.61\% | 70 |
|  | Judges | 12.24\% | 28 | 10.97\% | 77 |
|  | Law | 12.12\% | 29 | 9.80\% | 51 |
|  | PERS | 12.22\% | 29 | 10.79\% | 74 |
|  | Police | 9.91\% | 84 | 8.51\% | 22 |
| $\infty$ | Teachers | 13.60\% | 5 | 11.60\% | 89 |
| $\bigcirc$ | Wildlife | 10.02\% | 82 | 8.35\% | 21 |
|  | 3 Years Ending June 30, 2012 |  |  |  |  |
|  |  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
|  | Oklahoma State Pension Commission | 1.14 | 56 | 1.93 | 44 |
|  | Firefighters | 0.96 | 96 | 1.54 | 95 |
|  | Judges | 1.11 | 68 | 2.00 | 35 |
|  | Law | 1.23 | 28 | 2.17 | 18 |
|  | PERS | 1.12 | 63 | 2.01 | 34 |
|  | Police | 1.15 | 51 | 1.91 | 60 |
|  | Teachers | 1.17 | 45 | 1.96 | 50 |
|  | Wildlife | 1.19 | 41 | 2.01 | 43 |

- Firefighters ■ Police
- Judges
- Law
- Teacher
- Wildlife
- S\&P 500
- Barclays Aggregate
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

OKLAHOMA STATE PENSION COMMISSION

## Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


NEPC, LLC

OKLAHOMA STATE PENSION COMMISSION

## Total Fund Asset Growth Summary



|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$21,888,439,014 | \$20,353,207,899 | \$21,533,700,328 |
| - Withdrawals | -\$2,050,995,387 | -\$3,153,814,340 | -\$5,851,074,614 |
| + Contributions | \$2,014,507,616 | \$2,932,458,313 | \$5,306,215,947 |
| = Net Cash Flow | -\$36,487,771 | -\$221,356,027 | -\$544,858,667 |
| + Net Investment Change | -\$479,999,043 | \$1,240,100,329 | \$383,110,539 |
| = Ending Market Value | \$21,371,952,201 | \$21,371,952,201 | \$21,371,952,201 |

NEPC, LLC

OKLAHOMA STATE PENSION COMMISSION

## Total Fund Return Summary vs. Peer Universe

Oklahoma State Pension Commission vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - Oklahoma State Pension Commission | -2.1 | (65) | 6.2 | (19) | 1.9 | (35) | 11.4 | (36) | 12.4 | (24) | 2.4 | (37) | 5.4 | (35) |
| - S\&P 500 | -2.8 | (88) | 9.5 | (1) | 5.4 | (1) | 17.4 | (1) | 16.4 | (1) | 0.2 | (95) | 4.1 | (93) |

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OKLAHOMA STATE PENSION COMMISSION

## Total Fund Return Summary vs. Peer Universe

Oklahoma State Pension Commission vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - Oklahoma State Pension Commission | 1.1 | (52) | 13.8 | (35) | 22.0 | (27) | -24.7 | (46) | 7.2 | (66) |
| - S\&P 500 | 2.1 | (31) | 15.1 | (10) | 26.5 | (10) | -37.0 | (99) | 5.5 | (91) |



## OKLAHOMA TEACHERS

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK TEACHERS | \$10,097,243,568 | -2.4\% | 81 | 6.4\% | 11 | 1.8\% | 38 | 13.6\% | 5 | 2.8\% | 24 | 5.9\% | 12 |
| TEACHERS Allocation Index |  | -2.0\% | 60 | 5.6\% | 54 | 1.5\% | 44 | 12.3\% | 28 | 2.3\% | 42 | 5.2\% | 45 |
| TEACHERS Policy Index |  | -2.3\% | 76 | 6.1\% | 28 | 1.2\% | 49 | 12.8\% | 18 | 1.8\% | 58 | 5.0\% | 58 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance



NEPC, LLC

OKLAHOMA TEACHERS
Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


| 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK TEACHERS | 13.60\% | 5 | 11.60\% | 89 |
| TEACHERS Allocation Index | 12.28\% | 28 | 11.44\% | 87 |
| TEACHERS Policy Index | 12.76\% | 18 | 12.36\% | 94 |
| 3 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK TEACHERS | 1.17 | 45 | 1.96 | 50 |
| TEACHERS Allocation Index | 1.07 | 76 | 1.86 | 68 |
| TEACHERS Policy Index | 1.03 | 87 | 1.84 | 70 |

- OK TEACHERS
- TEACHERS Allocation Index
- TEACHERS Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB

OKLAHOMA TEACHERS
Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK TEACHERS | 2.84\% | 24 | 14.20\% | 90 |
| TEACHERS Allocation Index | 2.28\% | 42 | 13.61\% | 79 |
| TEACHERS Policy Index | 1.79\% | 58 | 15.09\% | 98 |
| 5 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK TEACHERS | 0.15 | 30 | 0.20 | 29 |
| TEACHERS Allocation Index | 0.11 | 44 | 0.16 | 40 |
| TEACHERS Policy Index | 0.07 | 64 | 0.10 | 63 |

- OK TEACHERS
- TEACHERS Allocation Index
- TEACHERS Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB

OKLAHOMA TEACHERS

## Total Fund Asset Allocation vs. Policy Targets



OKLAHOMA TEACHERS

## Total Fund Asset Allocation History

Asset Allocation History


NEPC, LLC

OKLAHOMA TEACHERS

## Total Fund Asset Growth Summary

3 Years Ending June 30, 2012


|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$10,357,165,824 | \$9,541,285,121 | \$10,147,903,285 |
| - Withdrawals | -\$1,470,354,579 | -\$1,925,604,740 | -\$4,153,717,173 |
| + Contributions | \$1,462,245,213 | \$1,864,761,708 | \$3,923,532,745 |
| = Net Cash Flow | -\$8,109,366 | -\$60,843,032 | -\$230,184,428 |
| + Net Investment Change | -\$251,812,890 | \$616,801,479 | \$179,524,711 |
| = Ending Market Value | \$10,097,243,568 | \$10,097,243,568 | \$10,097,243,568 |

nepc, LLC

OKLAHOMA TEACHERS
Total Fund Asset Growth Summary by Manager

|  | r Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Advisory Research | \$401,084,204 | -\$78,940,505 | \$0 | -\$78,940,505 | -\$9,609,244 | \$312,534,455 |
| Advisory Research Int'I Small Cap | \$69,506,944 | \$0 | \$17,797,053 | \$17,797,053 | -\$2,494,780 | \$84,809,216 |
| AEW Real Estate | \$155,840,225 | \$0 | \$0 | \$0 | \$2,318,003 | \$158,158,228 |
| Aldus PE | \$63,907,353 | \$0 | \$0 | \$0 | \$3,927,135 | \$67,834,488 |
| Aronson Mid Cap | \$339,088,491 | -\$44 | \$0 | -\$44 | -\$15,779,760 | \$323,308,687 |
| Brandes - Value | \$377,364,427 | -\$2,705,808 | \$2,705,808 | \$0 | -\$31,920,857 | \$345,443,570 |
| Capital Guardian | \$1,567,991 | -\$1,046,826 | \$0 | -\$1,046,826 | -\$78,427 | \$442,738 |
| Cash Account | \$8,843,556 | -\$291,330,726 | \$312,310,494 | \$20,979,768 | -\$23,785,733 | \$6,037,591 |
| Causeway - Value | \$394,161,824 | \$0 | \$15,541,314 | \$15,541,314 | -\$27,662,300 | \$382,040,838 |
| Chicksaw Capital Management | \$150,657,142 | \$0 | \$0 | \$0 | -\$5,889,019 | \$144,768,123 |
| Epoch | \$468,086,261 | -\$141,897,701 | \$0 | -\$141,897,701 | -\$17,757,034 | \$308,431,526 |
| EPOCH Int'I Small Cap | \$71,066,146 | \$0 | \$17,216,091 | \$17,216,091 | -\$5,294,407 | \$82,987,830 |
| Fiduciary Asset Management | \$269,715,095 | \$0 | \$0 | \$0 | -\$7,225,668 | \$262,489,427 |
| Frontier | \$354,001,977 | \$0 | \$0 | \$0 | -\$9,689,187 | \$344,312,791 |
| Goldman Sachs | \$526,807,720 | -\$521,426,458 | \$0 | -\$521,426,458 | -\$5,381,230 | \$32 |
| Heitman Real Estate | \$156,309,732 | \$0 | \$0 | \$0 | \$4,849,567 | \$161,159,299 |
| Hoisington Long Bonds | \$261,303,148 | \$0 | \$0 | \$0 | \$36,343,265 | \$297,646,413 |
| Hotchkis \& Wiley Large Cap Value | \$419,787,979 | -\$53,322,336 | \$0 | -\$53,322,336 | -\$16,411,049 | \$350,054,594 |
| Hotchkis \& Wiley Mid Cap | \$364,758,275 | \$0 | \$0 | \$0 | -\$11,038,306 | \$353,719,969 |
| L \& B Real Estate | \$124,746,993 | \$0 | \$26,954,171 | \$26,954,171 | \$1,298,937 | \$153,000,101 |
| Loomis High Yield | \$214,952,264 | -\$17,905,993 | \$0 | -\$17,905,993 | \$763,045 | \$197,809,316 |
| Loomis Sayles Core Plus | \$573,398,788 | \$0 | \$0 | \$0 | \$17,995,551 | \$591,394,339 |
| Lord Abbett Core Plus | \$568,554,924 | \$0 | \$0 | \$0 | \$12,292,845 | \$580,847,769 |
| Lord Abbett High Yield | \$213,687,528 | -\$17,537,051 | \$0 | -\$17,537,051 | \$1,692,374 | \$197,842,851 |
| Mackay High Yield | \$213,757,679 | -\$20,556,956 | \$0 | -\$20,556,956 | \$3,938,816 | \$197,139,539 |

OKLAHOMA TEACHERS
Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Mackay PE | \$864,639 | -\$318,166 | \$0 | -\$318,166 | -\$546,473 | \$0 |
| Mackay Shields Core Plus | \$573,125,575 | -\$4 | \$318,170 | \$318,166 | \$11,631,905 | \$585,075,646 |
| Northern Trust S\&P 500 Cap Wgt | \$0 | \$0 | \$446,287,436 | \$446,287,436 | -\$7,438,062 | \$438,849,374 |
| OK - OTRS/FP | \$32,107,489 | \$0 | \$14,400,000 | \$14,400,000 | -\$1,346,735 | \$45,160,754 |
| Pimco Bravo | \$51,752,791 | -\$499,253 | \$10,000,000 | \$9,500,747 | \$5,056,495 | \$66,310,033 |
| Pimco Distressed | \$60,621,698 | -\$12,402,211 | \$0 | -\$12,402,211 | \$8,519,811 | \$56,739,298 |
| Pimco Distressed 2 | \$47,025,031 | -\$7,644,730 | \$0 | -\$7,644,730 | \$8,337,988 | \$47,718,289 |
| Sawgrass Large Growth | \$562,770,358 | -\$199,075,073 | \$0 | -\$199,075,073 | -\$9,938,855 | \$353,756,430 |
| Shapiro Capital | \$539,844,778 | \$0 | \$0 | \$0 | -\$36,834,114 | \$503,010,664 |
| SSgA S\&P Eq Weighted Index Fund | \$0 | \$0 | \$444,974,151 | \$444,974,151 | -\$10,973,737 | \$434,000,414 |
| Stephens Capital Core Bonds | \$283,237,710 | \$0 | \$0 | \$0 | \$4,813,422 | \$288,051,131 |
| Swank Capital LLC | \$140,835,790 | \$0 | \$0 | \$0 | -\$10,893,261 | \$129,942,529 |
| Thornburg International | \$375,825,808 | \$0 | \$21,983,387 | \$21,983,387 | -\$23,337,197 | \$374,471,998 |
| Tocqueville | \$450,910,233 | \$0 | \$0 | \$0 | -\$34,364,413 | \$416,545,820 |
| Transition Account 1 | \$2,453,488 | -\$2,453,685 | \$0 | -\$2,453,685 | \$207 | \$10 |
| Transition Account 2 | \$1,711 | -\$1,612 | \$0 | -\$1,612 | -\$100 | \$0 |
| Transition Account 3 | \$0 | -\$101,289,441 | \$103,079,487 | \$1,790,046 | -\$1,790,044 | \$1 |
| Wasatch Int'I Small Cap | \$73,095,840 | \$0 | \$11,952,046 | \$11,952,046 | -\$1,225,257 | \$83,822,630 |
| Wellington | \$327,625,431 | \$0 | \$0 | \$0 | -\$42,360,699 | \$285,264,732 |
| Wellington Int'I Small Cap | \$72,110,785 | \$0 | \$16,725,605 | \$16,725,605 | -\$4,526,309 | \$84,310,081 |
| Total | \$10,357,165,824 | -\$1,470,354,579 | \$1,462,245,213 | -\$8,109,366 | -\$251,812,890 | \$10,097,243,568 |

OKLAHOMA TEACHERS

## Total Fund Performance Detail

|  | Market Value | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | 1 Yr (\%) | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK TEACHERS | 10,097,243,568 | 100.0 | -2.4 | 81 | 6.4 | 11 | 1.8 | 38 | 13.6 | 5 | 2.8 | 24 | 5.9 | 12 |
| TEACHERS Allocation Index |  |  | -2.0 | 60 | $\underline{5.6}$ | 54 | 1.5 | 44 | $\underline{12.3}$ | 28 | $\underline{2.3}$ | 42 | 5.2 | 45 |
| Over/Under |  |  | -0.4 |  | 0.8 |  | 0.3 |  | 1.3 |  | 0.5 |  | 0.7 |  |
| TEACHERS Policy Index |  |  | -2.3 | 76 | 6.1 | 28 | 1.2 | 49 | 12.8 | 18 | 1.8 | 58 | 5.0 | 58 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Total Equity Composite | 5,862,118,391 | 58.1 | -5.4 | 47 | 8.4 | 24 | -3.6 | 33 | 14.1 | 28 | -0.9 | 40 | 4.4 | 63 |
| Russell 3000 |  |  | -3.1 | 19 | 9.3 | 17 | 3.8 | 7 | 16.7 | 15 | 0.4 | 25 | 4.3 | 64 |
| Over/Under |  |  | -2.3 |  | -0.9 |  | -7.4 |  | -2.6 |  | -1.3 |  | 0.1 |  |
| eA All Global Equity Gross Median |  |  | -5.6 |  | 6.1 |  | -6.2 |  | 12.0 |  | -1.6 |  | 4.9 |  |
| U.S. Equity Comp | 4,423,789,489 | 43.8 | -4.8 | 59 | 9.4 | 34 | -0.7 | 59 | 16.3 | 60 | 0.2 | 69 | 4.4 | 69 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -2.0 |  | -0.1 |  | -6.1 |  | -0.1 |  | 0.0 |  | 0.3 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Advisory Research | 312,534,455 | 3.1 | -2.7 | 22 | 6.9 | 56 | 1.9 | 38 | 16.5 | 41 | -1.2 | 77 | -- | -- |
| Russell 3000 |  |  | -3.1 | 28 | 9.3 | 30 | 3.8 | 23 | 16.7 | 39 | 0.4 | 60 | 4.3 | 70 |
| Over/Under |  |  | 0.4 |  | -2.4 |  | -1.9 |  | -0.2 |  | -1.6 |  |  |  |
| Epoch | 308,431,526 | 3.1 | -4.6 | 50 | 7.2 | 54 | -0.3 | 52 | 15.7 | 51 | 1.5 | 43 | -- | -- |
| Russell 3000 |  |  | -3.1 | 28 | 9.3 | 30 | 3.8 | 23 | 16.7 | 39 | 0.4 | 60 | 4.3 | 70 |
| Over/Under |  |  | -1.5 |  | -2.1 |  | -4.1 |  | -1.0 |  | 1.1 |  |  |  |
| eA US All Cap Equity Gross Median |  |  | -4.6 |  | 7.5 |  | -0.2 |  | 15.7 |  | 1.0 |  | 5.4 |  |
| Sawgrass Large Growth | 353,756,430 | 3.5 | -2.5 | 9 | 10.0 | 47 | 9.2 | 9 | 17.1 | 36 | 2.6 | 48 | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | 5.5 | 45 |
| Over/Under |  |  | 1.5 |  | -0.1 |  | 3.4 |  | -0.4 |  | -0.3 |  |  |  |
| Goldman Sachs | 32 | 0.0 | 1.1 | 1 | 17.9 | 1 | 11.3 | 3 | 15.9 | 52 | 3.2 | 35 | 5.9 | 37 |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | $\underline{5.5}$ | 45 |
| Over/Under |  |  | 5.1 |  | 7.8 |  | 5.5 |  | -1.6 |  | 0.3 |  | 0.4 |  |
| eA US Large Cap Growth Equity Gross Median |  |  | -5.3 |  | 9.7 |  | 3.1 |  | 16.0 |  | 2.5 |  | 5.3 |  |
| Hotchkis \& Wiley Large Cap Value | 350,054,594 | 3.5 | -4.3 | 65 | 9.8 | 12 | 2.6 | 42 | 17.0 | 20 | -3.7 | 93 | 0.6 | 97 |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2.2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -2.1 |  | 1.1 |  | -0.4 |  | 1.2 |  | -1.5 |  | -2.3 |  |
| eA US Large Cap Value Equity Gross Median |  |  | -3.6 |  | 7.4 |  | 1.9 |  | 15.0 |  | -0.6 |  | 4.2 |  |

NEPC, LLC

## OKLAHOMA TEACHERS

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs <br> (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aronson Mid Cap | 323,308,687 | 3.2 | -4.7 | 41 | 8.2 | 43 | -2.1 | 46 | 19.5 | 36 | 1.3 | 59 | 5.3 | 73 |
| Russell MidCap |  |  | -4.4 | 36 | 8.0 | 48 | -1.7 | 41 | 19.4 | 36 | 1.1 | 63 | 5.4 | 66 |
| Over/Under |  |  | -0.3 |  | 0.2 |  | -0.4 |  | 0.1 |  | 0.2 |  | -0.1 |  |
| eA US Mid Cap Equity Gross Median |  |  | -4.9 |  | 7.8 |  | -2.4 |  | 18.5 |  | 2.1 |  | 6.2 |  |
| Frontier | 344,312,791 | 3.4 | -2.7 | 6 | 11.6 | 18 | -0.1 | 31 | 17.3 | 70 | 4.5 | 28 | 9.4 | 6 |
| Russell MidCap Growth |  |  | -5.6 | 48 | 8.1 | 57 | -3.0 | 48 | 19.0 | 50 | 1.9 | 68 | 5.8 | 71 |
| Over/Under |  |  | 2.9 |  | 3.5 |  | 2.9 |  | -1.7 |  | 2.6 |  | 3.6 |  |
| Wellington | 285,264,732 | 2.8 | -12.9 | 99 | 0.2 | 99 | -13.8 | 99 | 15.4 | 85 | -0.9 | 94 | 5.3 | 81 |
| Russell MidCap Growth |  |  | -5.6 | 48 | 8.1 | 57 | -3.0 | 48 | 19.0 | 50 | 1.9 | 68 | 5.8 | 71 |
| Over/Under |  |  | -7.3 |  | -7.9 |  | -10.8 |  | -3.6 |  | -2.8 |  | -0.5 |  |
| eA US Mid Cap Growth Equity Gross Median |  |  | -5.8 |  | 8.6 |  | -3.4 |  | 18.8 |  | 3.0 |  | 6.7 |  |
| Hotchkis \& Wiley Mid Cap | 353,719,969 | 3.5 | -3.0 | 20 | 19.3 | 1 | 5.4 | 3 | 25.0 | 2 | 1.7 | 37 | 5.5 | 53 |
| Russell MidCap Value |  |  | -3.3 | 22 | 7.8 | 39 | -0.4 | 33 | 19.9 | 22 | -0.1 | 75 | 4.8 | 75 |
| Over/Under |  |  | 0.3 |  | 11.5 |  | 5.8 |  | 5.1 |  | 1.8 |  | 0.7 |  |
| eA US Mid Cap Value Equity Gross Median |  |  | -4.6 |  | 7.2 |  | -2.2 |  | 17.9 |  | 1.1 |  | 5.7 |  |
| Shapiro Capital | 503,010,664 | 5.0 | -6.8 | 88 | 7.2 | 48 | -5.2 | 78 | 19.3 | 41 | 2.3 | 40 | 7.1 | 28 |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -3.8 |  | -1.0 |  | -3.8 |  | 1.9 |  | 3.3 |  | 3.7 |  |
| Tocqueville | 416,545,820 | 4.1 | -7.6 | 94 | 8.4 | 31 | -14.2 | 99 | 9.2 | 99 | -2.8 | 96 | 4.6 | 74 |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -4.6 |  | 0.2 |  | -12.8 |  | -8.2 |  | -1.8 |  | 1.2 |  |
| eA US Small Cap Value Equity Gross Median |  |  | -4.4 |  | 7.1 |  | -2.0 |  | 18.5 |  | 1.3 |  | 6.1 |  |
| Domestic Passive Equity | 872,849,789 | 8.6 |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern Trust S\&P 500 Cap Wgt | 438,849,374 | 4.3 | -1.7 | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S\&P 500 |  |  | -2.8 | 34 | 9.5 | 25 | 5.4 | 28 | 16.4 | 73 | 0.2 | 79 | 4.1 | 79 |
| Over/Under |  |  | 1.1 |  |  |  |  |  |  |  |  |  |  |  |
| SSgA S\&P Eq Weighted Index Fund | 434,000,414 | 4.3 | -2.5 | 16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S\&P 500 |  |  | -2.8 | 34 | 9.5 | 25 | 5.4 | 28 | 16.4 | 73 | 0.2 | 79 | 4.1 | 79 |
| Over/Under |  |  | 0.3 |  |  |  |  |  |  |  |  |  |  |  |
| eA US Passive Equity Gross Median |  |  | -3.1 |  | 9.3 |  | 4.1 |  | 16.7 |  | 0.4 |  | 4.3 |  |

## OKLAHOMA TEACHERS

## Total Fund Performance Detail

|  | Market Value (\$) |  | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | $\begin{array}{r} 7 \mathrm{Yrs} \\ (\%) \end{array}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| International Equity Composite | 1,438,328,903 | 14.2 | -7.3 | 55 | 5.2 | 41 | -12.2 | 47 | 7.4 | 72 | -4.3 | 67 | 3.7 | 76 |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.3 |  | 2.4 |  | 2.4 |  | 0.4 |  | 0.3 |  | -0.2 |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Thornburg International | 374,471,998 | 3.7 | -6.6 | 50 | 4.2 | 60 | -13.9 | 71 | 8.7 | 50 | -1.4 | 14 | -- | -- |
| MSCI EAFE |  |  | -7.1 | 62 | 3.0 | 79 | -13.8 | 70 | 6.0 | 87 | -6.1 | 81 | 2.3 | 88 |
| Over/Under |  |  | 0.5 |  | 1.2 |  | -0.1 |  | 2.7 |  | 4.7 |  |  |  |
| eA All EAFE Equity Gross Median |  |  | -6.6 |  | 4.9 |  | -12.3 |  | 8.7 |  | -4.5 |  | 4.0 |  |
| Brandes - Value | 345,443,570 | 3.4 | -8.5 | 69 | 1.8 | 68 | -12.8 | 49 | 4.1 | 85 | -5.9 | 74 | 2.8 | 68 |
| MSCI EAFE |  |  | -7.1 | 52 | 3.0 | 61 | -13.8 | 62 | 6.0 | 75 | -6.1 | 77 | 2.3 | 81 |
| Over/Under |  |  | -1.4 |  | -1.2 |  | 1.0 |  | -1.9 |  | 0.2 |  | 0.5 |  |
| eA EAFE Value Equity Gross Median |  |  | -7.1 |  | 3.6 |  | -12.9 |  | 8.1 |  | -4.5 |  | 3.6 |  |
| Causeway - Value | 382,040,838 | 3.8 | -7.3 | 54 | 7.8 | 6 | -11.6 | 35 | 10.6 | 26 | -3.6 | 36 | 3.6 | 54 |
| MSCI EAFE |  |  | -7.1 | 52 | 3.0 | 61 | -13.8 | 62 | 6.0 | 75 | -6.1 | 77 | $\underline{2.3}$ | 81 |
| Over/Under |  |  | -0.2 |  | 4.8 |  | 2.2 |  | 4.6 |  | 2.5 |  | 1.3 |  |
| International Small Cap Equity | 335,929,758 | 3.3 | -6.0 | 44 | 8.4 | 42 | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | 2.8 | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | 1.6 |  | 5.6 |  |  |  |  |  |  |  |  |  |
| Advisory Research Int'I Small Cap | 84,809,216 | 0.8 | -5.3 | 29 | 6.7 | 59 | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | 2.8 | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | 2.3 |  | 3.9 |  |  |  |  |  |  |  |  |  |
| EPOCH Int'I Small Cap | 82,987,830 | 0.8 | -8.5 | 84 | 5.1 | 81 | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | 2.8 | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | -0.9 |  | 2.3 |  |  |  |  |  |  |  |  |  |
| Wasatch Int'I Small Cap | 83,822,630 | 0.8 | -2.6 | 1 | 13.5 | 2 | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | 2.8 | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | 5.0 |  | 10.7 |  |  |  |  |  |  |  |  |  |
| Wellington Int'I Small Cap | 84,310,081 | 0.8 | -7.7 | 67 | 8.1 | 44 | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | $\underline{2.8}$ | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | -0.1 |  | 5.3 |  |  |  |  |  |  |  |  |  |
| eA ACWI ex-US Small Cap Equity Gross Median |  |  | -6.4 |  | 7.2 |  | -12.1 |  | 13.7 |  | -1.6 |  | 8.5 |  |

## OKLAHOMA TEACHERS

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs <br> (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fixed Composite | 2,935,807,004 | 29.1 | 3.1 | 12 | 5.4 | 21 | 11.2 | 13 | 11.9 | 24 | 10.5 | 7 | 8.3 | 10 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | 1.0 |  | 3.0 |  | 3.7 |  | 5.0 |  | 3.7 |  | 2.7 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Loomis Sayles Core Plus | 591,394,339 | 5.9 | 3.1 | 2 | 6.1 | 6 | 10.1 | 5 | 12.1 | 16 | 10.7 | 2 | 8.8 | 1 |
| Barclays Aggregate |  |  | 2.1 | 53 | $\underline{2.4}$ | 97 | 7.5 | 63 | 6.9 | 98 | 6.8 | 81 | 5.6 | 86 |
| Over/Under |  |  | 1.0 |  | 3.7 |  | 2.6 |  | 5.2 |  | 3.9 |  | 3.2 |  |
| Mackay Shields Core Plus | 585,075,646 | 5.8 | 2.0 | 56 | 4.6 | 37 | 8.6 | 21 | 9.9 | 53 | 8.7 | 23 | 7.0 | 24 |
| Barclays Aggregate |  |  | 2.1 | 53 | 2.4 | 97 | 7.5 | 63 | 6.9 | 98 | 6.8 | 81 | 5.6 | 86 |
| Over/Under |  |  | -0.1 |  | 2.2 |  | 1.1 |  | 3.0 |  | 1.9 |  | 1.4 |  |
| Lord Abbett Core Plus | 580,847,769 | 5.8 | 2.2 | 42 | 4.3 | 46 | 9.0 | 11 | 9.6 | 53 | 8.4 | 26 | 6.9 | 30 |
| Barclays Aggregate |  |  | 2.1 | 53 | $\underline{2.4}$ | 97 | 7.5 | 63 | 6.9 | 98 | 6.8 | 81 | 5.6 | 86 |
| Over/Under |  |  | 0.1 |  | 1.9 |  | 1.5 |  | 2.7 |  | 1.6 |  | 1.3 |  |
| eA US Core Plus Fixed Inc Gross Median |  |  | 2.1 |  | 4.2 |  | 7.9 |  | 10.1 |  | 7.6 |  | 6.4 |  |
| Stephens Capital Core Bonds | 288,051,131 | 2.9 | 1.7 | 85 | 2.1 | 96 | 4.3 | 98 | 4.8 | 99 | 6.8 | 78 | 5.5 | 85 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | -0.4 |  | -0.3 |  | -3.2 |  | -2.1 |  | 0.0 |  | -0.1 |  |
| eA US Core Fixed Inc Gross Median |  |  | 2.2 |  | 3.2 |  | 8.0 |  | 8.0 |  | 7.4 |  | 6.1 |  |
| Hoisington Long Bonds | 297,646,413 | 2.9 | 13.9 | 2 | 4.9 | 89 | 45.9 | 2 | 16.4 | 27 | 14.2 | 11 | 9.1 | 35 |
| Barclays Aggregate |  |  | 2.1 | 99 | 2.4 | 99 | 7.5 | 99 | 6.9 | 99 | 6.8 | 99 | 5.6 | 99 |
| Over/Under |  |  | 11.8 |  | 2.5 |  | 38.4 |  | 9.5 |  | 7.4 |  | 3.5 |  |
| eA US Long Duration Fixed Inc Gross Median |  |  | 6.6 |  | 5.8 |  | 22.9 |  | 15.7 |  | 11.8 |  | 8.5 |  |
| Loomis High Yield | 197,809,316 | 2.0 | 0.4 | 94 | 10.3 | 3 | 0.8 | 97 | 14.6 | 61 | -- | -- | -- | -- |
| BofA Merrill Lynch US High Yield Master II TR |  |  | 1.8 | 37 | 7.1 | 44 | 6.5 | 70 | 16.2 | 35 | 8.2 | 40 | 8.2 | 48 |
| Over/Under |  |  | -1.4 |  | 3.2 |  | -5.7 |  | -1.6 |  |  |  |  |  |
| Lord Abbett High Yield | 197,842,851 | 2.0 | 0.8 | 87 | 6.8 | 56 | 6.4 | 72 | 16.7 | 24 | -- | -- | -- | -- |
| BofA Merrill Lynch US High Yield Master II TR |  |  | 1.8 | 37 | 7.1 | 44 | 6.5 | 70 | 16.2 | 35 | 8.2 | 40 | 8.2 | 48 |
| Over/Under |  |  | -1.0 |  | -0.3 |  | -0.1 |  | 0.5 |  |  |  |  |  |
| Mackay High Yield | 197,139,539 | 2.0 | 1.9 | 29 | 6.5 | 65 | 8.6 | 15 | 14.7 | 58 | -- | -- | -- | -- |
| BofA Merrill Lynch US High Yield Master II TR |  |  | 1.8 | 37 | 7.1 | 44 | 6.5 | 70 | 16.2 | 35 | 8.2 | 40 | 8.2 | 48 |
| Over/Under |  |  | 0.1 |  | -0.6 |  | 2.1 |  | -1.5 |  |  |  |  |  |
| eA US High Yield Fixed Inc Gross Median |  |  | 1.6 |  | 6.9 |  | 7.1 |  | 15.3 |  | 7.9 |  | 8.1 |  |

NEPC, LLC

OKLAHOMA TEACHERS
Total Fund Performance Detail

|  | Market Value (\$) |  | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Private Equity | 283,762,861 | 2.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Pimco Distressed | 56,739,298 | 0.6 | 14.4 | -- | 7.4 | -- | -0.6 | -- | 37.6 | -- | -- | -- | -- | -- |
| Aldus PE | 67,834,488 | 0.7 | 6.1 | -- | 13.5 | -- | 13.4 | -- | 8.6 | -- | -- | -- | -- | -- |
| Pimco Distressed 2 | 47,718,289 | 0.5 | 19.3 | -- | 12.1 | -- | 0.1 | -- | 28.1 | -- | -- | -- | -- | -- |
| Pimco Bravo | 66,310,033 | 0.7 | 8.2 | -- | 8.4 | -- | 12.9 | -- | -- | -- | -- | -- | -- | -- |
| OK - OTRS/FP | 45,160,754 | 0.4 | -4.1 | -- | -13.7 | -- | -34.9 | -- | -- | -- | -- | -- | -- | -- |
| Master Limited Partnerships | 537,200,079 | 5.3 |  |  |  |  |  |  |  |  |  |  |  |  |
| Chicksaw Capital Management | 144,768,123 | 1.4 | -3.9 | -- | 2.2 | -- | 13.8 | -- | -- | -- | -- | -- | -- | -- |
| Alerion MLP Index |  |  | -2.3 | -- | -0.4 | -- | 7.8 | -- | $\underline{27.0}$ | -- | 9.9 | -- | 13.0 | -- |
| Over/Under |  |  | -1.6 |  | 2.6 |  | 6.0 |  |  |  |  |  |  |  |
| Swank Capital LLC | 129,942,529 | 1.3 | -7.7 | -- | -3.5 | -- | 4.2 | -- | -- | -- | -- | -- | -- | -- |
| Alerion MLP Index |  |  | -2.3 | -- | -0.4 | -- | 7.8 | -- | $\underline{27.0}$ | -- | 9.9 | -- | 13.0 | -- |
| Over/Under |  |  | -5.4 |  | -3.1 |  | -3.6 |  |  |  |  |  |  |  |
| Fiduciary Asset Management | 262,489,427 | 2.6 | -2.7 | -- | -2.3 | -- | 6.8 | -- | -- | -- | -- | -- | -- | -- |
| Alerion MLP Index |  |  | -2.3 | -- | -0.4 | -- | 7.8 | -- | $\underline{27.0}$ | -- | 9.9 | -- | 13.0 | -- |
| Over/Under |  |  | -0.4 |  | -1.9 |  | -1.0 |  |  |  |  |  |  |  |
| Total Core Real Estate | 472,317,628 | 4.7 |  |  |  |  |  |  |  |  |  |  |  |  |
| NCREIF ODCE |  |  | - |  | - |  | - |  | - |  | - |  | - |  |
| Over/Under |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| L \& B Real Estate | 153,000,101 | 1.5 | 0.9 | -- | 1.9 | -- | 2.2 | -- | -- | -- | -- | -- | -- | -- |
| NCREIF ODCE |  |  | 2.5 | -- | 5.4 | -- | 12.4 | -- | 8.4 | -- | -0.9 | -- | 4.3 | -- |
| Over/Under |  |  | -1.6 |  | -3.5 |  | -10.2 |  |  |  |  |  |  |  |
| Heitman Real Estate | 161,159,299 | 1.6 | 3.1 | -- | 5.0 | -- | 9.6 | -- | -- | -- | -- | -- | -- | -- |
| NCREIF ODCE |  |  | 2.5 | -- | 5.4 | -- | 12.4 | -- | 8.4 | -- | -0.9 | -- | 4.3 | -- |
| Over/Under |  |  | 0.6 |  | -0.4 |  | -2.8 |  |  |  |  |  |  |  |
| AEW Real Estate | 158,158,228 | 1.6 | 1.5 | -- | 3.3 | -- | 6.9 | -- | -- | -- | -- | -- | -- | -- |
| NCREIF ODCE |  |  | 2.5 | -- | 5.4 | -- | 12.4 | -- | 8.4 | -- | -0.9 | -- | 4.3 | -- |
| Over/Under |  |  | -1.0 |  | -2.1 |  | -5.5 |  |  |  |  |  |  |  |

OKLAHOMA TEACHERS

## Total Fund Return Summary vs. Peer Universe

OK TEACHERS vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - OK TEACHERS | -2.4 | (81) | 6.4 | (11) | 1.8 | (38) | 12.1 | (14) | 13.6 | (5) | 2.8 | (24) | 5.9 | (12) |
| - TEACHERS Allocation Index | -2.0 | (60) | 5.6 | (54) | 1.5 | (44) | 11.5 | (35) | 12.3 | (28) | 2.3 | (42) | 5.2 | (45) |
| $\times$ TEACHERS Policy Index | -2.3 | (76) | 6.1 | (28) | 1.2 | (49) | 12.1 | (14) | 12.8 | (18) | 1.8 | (58) | 5.0 | (58) |

OKLAHOMA TEACHERS

## Total Fund Return Summary vs. Peer Universe

OK TEACHERS vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK TEACHERS | 0.9 | (58) | 15.9 | (5) | 25.6 | (12) | -26.0 | (60) | 6.9 | (72) |
| - TEACHERS Allocation Index | 0.9 | (59) | 14.0 | (29) | 23.6 | (19) | -25.2 | (53) | 5.9 | (89) |
| $\times$ TEACHERS Policy Index | 0.4 | (72) | 14.4 | (23) | 23.5 | (19) | -27.5 | (76) | 6.3 | (83) |

OKLAHOMA TEACHERS

## Total Fund Risk Statistics vs. Peer Universe

Anlzd Return


- OK TEACHERS
$\begin{array}{lr}\text { Value } & 13.60 \\ \text { \%tile } & 5\end{array}$
- TEACHERS Allocation Index

Value 12.28

$\times$| \%tile |
| :--- |
| TEACHERS Policy Index |
| Va |
| 12.76 |

Value 12.76
\%tile 18

| Universe |  |
| :--- | ---: |
| 5th \%tile | 13.56 |
| 25th \%tile | 12.38 |
| Median | 11.51 |
| 75th \%tile | 10.38 |
| 95th \%tile | 9.11 |

Anlzd Standard Deviation


- OK TEACHERS

Value 11.60
\%tile

- TEACHERS Allocation Index

Value 11.44
\%tile 87
$\times$ TEACHERS Policy Index
Value 12.36
\%tile 94
Universe $\begin{array}{ll}\text { 5th \%tile } & 6.77 \\ \text { 25th \%tile } & 8.90\end{array}$

Median
75th \%tile $\quad 10.90$
95th \%tile $\quad 10.90$

## OK TEACHERS vs. ICC Public DB

3 Years

Anlzd Alpha


- OK TEACHERS

\%tile
26
- TEACHERS Allocation Index Value 0.00
\%tile
$\mathbf{x}$ TEACHERS Policy Index
Value $\quad-0.48$

Universe
5th \%tile $\quad 2.87$

25th \%tile $\quad 1.28$
Median 0.29
75th \%tile $\quad-0.60$

Sharpe Ratio


| Value | 1.17 |
| :--- | ---: |
| \%tile | 45 |

4 TEACHERS Allocation Index
Value $\quad 1.07$
\%tile $\quad 76$
$\times$ TEACHERS Policy Index
Value 1.03
\%tile 87

| Universe |  |
| :--- | :--- |
| 5th \%tile | 1.50 |
| 25th \%tile | 1.25 |
| Median | 1.16 |
| 75th \%tile | 1.07 |
| 95th \%tile | 0.97 |

Sortino Ratio RF


- OK TEACHERS

Value 1.96
\%tile 50
^ TEACHERS Allocation Index
Value 186
\%tile 68
$\times$ TEACHERS Policy Index

| Value | 1.84 |
| :--- | :--- |
| \%tile |  |

\%tile 70
Universe

| 5th \%tile | 2.83 |
| :--- | :--- |
| 25th \%tile | 2.20 |

25th \%tile $\quad 2.20$
Median 1.96
75th \%tile $\quad 1.79$

95th \%tile $\quad 1.60$

OKLAHOMA TEACHERS

## Total Fund Risk Statistics vs. Peer Universe

## OK TEACHERS vs. ICC Public DB <br> 5 Years

Anlzd Return


| - OK TEACHERS |  |
| :--- | ---: |
| Value | 2.84 |
| \%tile | 24 |

- TEACHERS Allocation Index

Value 2.28
\%tile 42
$\times$ TEACHERS Policy Index
Value 1.79
\%tile
58

| Universe |  |
| :--- | :--- |
| 5th \%tile | 4.80 |
| 25th \%tile | 2.78 |
| Median | 1.99 |
| 75th \%tile | 1.17 |
| 95th \%tile | 0.20 |

Anlzd Standard Deviation


- OK TEACHERS

Value 14.20
\%tile

- TEACHERS Allocation Index

Value 13.61 \%tile 13.6
$\times$ TEACHERS Policy Index
Value 15.09
\%tile 98
-
5th \%tile $\quad 7.59$
25th \%tile $\quad 10.89$
Median $\quad 12.25$

75th \%tile 13.54
95th \%tile $\quad 15.01$

Anlzd Alpha

$\begin{array}{ll}\text { OK TEACHERS } & \\ \text { Value } & 0.47\end{array}$
\%tile $\quad 23$

- TEACHERS Allocation Index Value 0.00
\%tile 37
x TEACHERS Policy Index
Value $\quad-0.73$
\%tile

Universe 5th \%tile 25th \%tile Median 75th \%tile 95th \%tile

Sharpe Ratio

$\begin{array}{lr}\text { Value } & 0.15 \\ \text { \%tile } & 30\end{array}$

- TEACHERS Allocation Index Value
0.11
\%tile 44
$\times$ TEACHERS Policy Index
Value 0.07
\%tile 64

| Universe |  |
| :--- | ---: |
| 5th \%tile | 0.55 |
| 25th \%tile | 0.16 |
| Median | 0.10 |
| 75th \%tile | 0.04 |
| 95th \%tile | -0.04 |

Sortino Ratio RF


- OK TEACHERS

Value 0.20
\%tile 29

- TEACHERS Allocation Index
\%tile 40
$\times$ TEACHERS Policy Index

| Value | 0.10 |
| :--- | ---: |
| \% tile | 63 |

\%tile 63
Universe
5th \%tile 0.75
25th \%tile $\quad 0.21$
Median 0.13
75th \%tile 0.05

95th \%tile $\quad-0.05$

OKLAHOMA TEACHERS

## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
\# of Portfolios

- OK TEACHERS



## OKLAHOMA TEACHERS

## Total Fund Attribution Analysis



|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Asset Allocation Effect | Interaction Effects |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual <br> Return | Target Return | Relative Return | Selection Effect |  |  | Tota Effects |
| U.S. Equity Comp | -4.8\% | -2.8\% | -2.0\% | -0.8\% | -0.1\% | -0.1\% | -1.0\% |
| International Equity Composite | -7.3\% | -7.1\% | -0.1\% | -0.1\% | 0.0\% | 0.0\% | 0.0\% |
| Fixed Composite | 3.1\% | 2.1\% | 1.0\% | 0.3\% | -0.1\% | 0.0\% | 0.2\% |
| Total Private Equity | 8.9\% | 0.0\% | 8.9\% | 0.4\% | 0.0\% | -0.2\% | 0.2\% |
| Master Limited Partnerships | -4.3\% | -2.3\% | -2.0\% | -0.1\% | 0.0\% | 0.0\% | -0.1\% |
| Total Core Real Estate | 1.9\% | 2.5\% | -0.6\% | 0.0\% | 0.0\% | 0.0\% | -0.1\% |
| Other | -1.9\% | 0.0\% | -1.9\% | -- | -- | -- | -- |
| Total | -2.2\% | -1.5\% | -0.8\% | -0.3\% | -0.2\% | -0.3\% | -0.8\% |

OKLAHOMA TEACHERS

## OK TEACHERS

## Performance Attribution

|  | Last 3 Mo. | YTD | 1 Yr |
| :--- | :---: | :---: | ---: |
| OK TEACHERS Return | $-2.2 \%$ | $6.6 \%$ | $1.9 \%$ |
| Policy Benchmark ** | $-1.5 \%$ | $5.6 \%$ | $3.9 \%$ |
| Excess Return | $-0.8 \%$ | $1.0 \%$ | $\mathbf{- 2 . 0 \%}$ |
| Selection Effect | $-0.3 \%$ | $1.1 \%$ | $-1.7 \%$ |
| Asset Allocation Effect | $-0.2 \%$ | $0.0 \%$ | $-0.3 \%$ |
| Interaction Effect | $-0.3 \%$ | $-0.1 \%$ | $0.0 \%$ |
|  |  |  |  |
| Returns by Asset Class |  |  |  |
| OK TEACHERS | $-2.4 \%$ | $6.4 \%$ | $1.8 \%$ |
| Total Equity Composite | $-5.4 \%$ | $8.4 \%$ | $-3.6 \%$ |
| U.S. Equity Comp | $-4.8 \%$ | $9.4 \%$ | $-0.7 \%$ |
| Domestic Passive Equity | $-2.1 \%$ |  |  |
| International Equity Composite | $-7.3 \%$ | $5.2 \%$ | $-12.2 \%$ |
| International Small Cap Equity | $-6.0 \%$ | $8.4 \%$ |  |
| Fixed Composite | $3.1 \%$ | $5.4 \%$ | $11.2 \%$ |
| Total Private Equity | $8.9 \%$ | $6.1 \%$ | $-0.9 \%$ |
| Master Limited Partnerships | $-4.3 \%$ | $-1.4 \%$ | $7.9 \%$ |
| Total Core Real Estate | $1.9 \%$ | $3.5 \%$ | $5.9 \%$ |
| Other | $-1.9 \%$ | $-1.5 \%$ | $5.9 \%$ |

**Calculated from benchmark returns and weightings of each component.


## OKLAHOMA PERS

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK PERS | \$6,805,023,672 | -2.0\% | 65 | 5.8\% | 44 | 2.4\% | 26 | 12.2\% | 29 | 2.7\% | 27 | 5.3\% | 37 |
| PERS Allocation Index |  | -2.1\% | 68 | 5.4\% | 62 | 1.0\% | 61 | 11.2\% | 58 | 2.7\% | 29 | 5.1\% | 55 |
| PERS Policy Index |  | -1.8\% | 50 | 5.7\% | 50 | 2.6\% | 21 | 11.9\% | 35 | 2.6\% | 29 | 5.4\% | 35 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


Actual vs Target Allocation (\%)


NEPC, LLC

OKLAHOMA PERS
Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


| 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK PERS | 12.21\% | 29 | 10.79\% | 74 |
| PERS Allocation Index | 11.16\% | 58 | 10.92\% | 76 |
| PERS Policy Index | 11.95\% | 35 | 10.88\% | 75 |
| 3 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK PERS | 1.12 | 63 | 2.01 | 34 |
| PERS Allocation Index | 1.01 | 89 | 1.78 | 70 |
| PERS Policy Index | 1.09 | 72 | 1.90 | 51 |

- OK PERS
- PERS Allocation Index
- PERS Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB

OKLAHOMA PERS
Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK PERS | 2.75\% | 27 | 13.17\% | 71 |
| PERS Allocation Index | 2.65\% | 29 | 12.89\% | 64 |
| PERS Policy Index | 2.61\% | 29 | 13.60\% | 79 |

- OK PERS
- PERS Allocation Index
- PERS Policy Index
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

OKLAHOMA PERS

## Total Fund Asset Allocation vs. Policy Targets



Asset Allocation History


OKLAHOMA PERS
Total Fund Asset Growth Summary


|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$6,930,701,472 | \$6,517,831,931 | \$6,827,935,018 |
| - Withdrawals | -\$373,302,697 | -\$668,208,408 | -\$843,719,959 |
| + Contributions | \$391,191,244 | \$574,821,532 | \$660,803,385 |
| = Net Cash Flow | \$17,888,547 | -\$93,386,876 | -\$182,916,575 |
| + Net Investment Change | -\$143,566,347 | \$380,578,618 | \$160,005,228 |
| = Ending Market Value | \$6,805,023,672 | \$6,805,023,672 | \$6,805,023,672 |

nepc, LLC

OKLAHOMA PERS

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Aronson Johnson \& Ortiz | \$164,486,361 | -\$47 | \$0 | -\$47 | -\$5,759,584 | \$158,726,731 |
| Barrow Hanley | \$135,197,409 | -\$325 | \$0 | -\$325 | -\$14,912,585 | \$120,284,500 |
| Blackrock | \$1,229,553,338 | -\$4,186 | \$0 | -\$4,186 | \$28,530,034 | \$1,258,079,186 |
| Blackrock ACWI Ex US | \$374,740,046 | \$0 | \$368,241,216 | \$368,241,216 | -\$47,179,664 | \$695,801,598 |
| Blackrock ACWI Ex US Growth | \$669,482,996 | -\$199,754,302 | \$0 | -\$199,754,302 | -\$35,732,668 | \$433,996,026 |
| Blackrock Russell 1000 | \$1,543,726,963 | -\$37,000,000 | \$0 | -\$37,000,000 | -\$48,337,440 | \$1,458,389,523 |
| Blackrock Russell 1000 Growth | \$181,871,732 | -\$36,000,000 | \$0 | -\$36,000,000 | -\$8,418,718 | \$137,453,014 |
| Blackrock Tips | \$235,085,718 | \$0 | \$0 | \$0 | \$7,467,374 | \$242,553,092 |
| Cash Account | \$16,948,957 | -\$19,300,000 | \$22,950,000 | \$3,650,000 | \$421,688 | \$21,020,645 |
| DePrince Race \& Zollo | \$118,960,267 | -\$321 | \$0 | -\$321 | -\$4,451,079 | \$114,508,867 |
| Hoisington | \$220,665,788 | -\$10 | \$0 | -\$10 | \$30,028,439 | \$250,694,217 |
| Mellon | \$369,567,830 | -\$40,000,094 | \$0 | -\$40,000,094 | -\$10,503,935 | \$319,063,801 |
| Met West | \$678,305,714 | \$0 | \$28 | \$28 | \$14,184,302 | \$692,490,044 |
| Mondrian | \$475,335,302 | \$0 | \$0 | \$0 | -\$29,019,715 | \$446,315,587 |
| State Street Index Fund | \$364,922,982 | -\$30,000,040 | \$0 | -\$30,000,040 | -\$12,823,223 | \$322,099,719 |
| UBS Global Asset Mgmt | \$151,850,068 | -\$10,000,176 | \$0 | -\$10,000,176 | -\$8,302,770 | \$133,547,122 |
| Total | \$6,930,701,472 | -\$372,059,500 | \$391,191,244 | \$19,131,744 | -\$144,809,545 | \$6,805,023,672 |

OKLAHOMA PERS
Total Fund Performance Detail

|  | Market Value (\$) |  | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | $\begin{gathered} 7 \text { Yrs } \\ \text { (\%) } \end{gathered}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK PERS | 6,805,023,672 | 100.0 | -2.0 | 65 | 5.8 | 44 | 2.4 | 26 | 12.2 | 29 | 2.7 | 27 | 5.3 | 37 |
| PERS Allocation Index |  |  | -2.1 | 68 | 5.4 | 62 | 1.0 | 61 | 11.2 | 58 | 2.7 | 29 | 5.1 | 55 |
| Over/Under |  |  | 0.1 |  | 0.4 |  | 1.4 |  | 1.0 |  | 0.0 |  | 0.2 |  |
| PERS Policy Index |  |  | -1.8 | 50 | 5.7 | 50 | 2.6 | 21 | 11.9 | 35 | 2.6 | 29 | 5.4 | 35 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Domestic Equity Composite | 2,764,073,277 | 40.6 | -3.7 | 39 | 9.6 | 30 | 4.1 | 26 | 17.0 | 51 | 0.2 | 69 | 4.1 | 76 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -0.9 |  | 0.1 |  | -1.3 |  | 0.6 |  | 0.0 |  | 0.0 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Aronson Johnson \& Ortiz | 158,726,731 | 2.3 | -3.5 | 47 | 8.9 | 24 | 2.3 | 45 | 15.8 | 39 | -1.4 | 66 | 3.6 | 63 |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2.2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -1.3 |  | 0.2 |  | -0.7 |  | 0.0 |  | 0.8 |  | 0.7 |  |
| eA US Large Cap Value Equity Gross Median |  |  | -3.6 |  | 7.4 |  | 1.9 |  | 15.0 |  | -0.6 |  | 4.2 |  |
| Mellon | 319,063,801 | 4.7 | -2.7 | 27 | 10.3 | 20 | 7.1 | 15 | 17.2 | 15 | 0.1 | 69 | 4.0 | 73 |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | 0.1 |  | 0.8 |  | 1.7 |  | 0.8 |  | -0.1 |  | -0.1 |  |
| State Street Index Fund | 322,099,719 | 4.7 | -3.4 | 42 | 9.6 | 30 | 5.0 | 33 | 16.9 | 20 | -0.9 | 88 | 3.5 | 86 |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | -0.6 |  | 0.1 |  | -0.4 |  | 0.5 |  | -1.1 |  | -0.6 |  |
| Blackrock Russell 1000 | 1,458,389,523 | 21.4 | -3.1 | 35 | 9.4 | 34 | 4.4 | 38 | -- | -- | -- | -- | -- | -- |
| Russell 1000 |  |  | -3.1 | 35 | 9.4 | 34 | 4.4 | 39 | 16.6 | 24 | 0.4 | 65 | 4.3 | 65 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |  |  |  |
| eA US Large Cap Core Equity Gross Median |  |  | -3.9 |  | 8.7 |  | 3.4 |  | 15.4 |  | 1.0 |  | 4.8 |  |
| Blackrock Russell 1000 Growth | 137,453,014 | 2.0 | -4.0 | 24 | 10.1 | 44 | 5.9 | 23 | -- | -- | -- | -- | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | 5.5 | 45 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | 0.1 |  |  |  |  |  |  |  |
| eA US Large Cap Growth Equity Gross Median |  |  | -5.3 |  | 9.7 |  | 3.1 |  | 16.0 |  | 2.5 |  | 5.3 |  |
| UBS Global Asset Mgmt | 133,547,122 | 2.0 | -5.3 | 69 | 12.5 | 6 | 2.1 | 14 | 24.4 | 5 | 2.7 | 32 | 5.6 | 60 |
| Russell 2000 Growth |  |  | -3.9 | 41 | 8.8 | 26 | -2.7 | 60 | 18.1 | 56 | 2.0 | 43 | 5.7 | 59 |
| Over/Under |  |  | -1.4 |  | 3.7 |  | 4.8 |  | 6.3 |  | 0.7 |  | -0.1 |  |
| eA US Small Cap Value Equity Gross Median |  |  | -4.4 |  | 7.1 |  | -2.0 |  | 18.5 |  | 1.3 |  | 6.1 |  |

NEPC, LLC

## OKLAHOMA PERS

## Total Fund Performance Detail

|  | Market Value (\$) | \% of <br> Portfolio | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | $\begin{array}{r} \text { YTD } \\ (\%) \end{array}$ | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | $\begin{array}{r} 5 \text { Yrs } \\ (\%) \end{array}$ | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barrow Hanley | 120,284,500 | 1.8 | -10.9 | 99 | 7.1 | 49 | -7.5 | 92 | 23.4 | 9 | 3.6 | 16 | 8.5 | 13 |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -7.9 |  | -1.1 |  | -6.1 |  | 6.0 |  | 4.6 |  | 5.1 |  |
| DePrince Race \& Zollo | 114,508,867 | 1.7 | -3.7 | 37 | 10.3 | 13 | 4.7 | 6 | -- | -- | -- | -- | -- | -- |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -0.7 |  | 2.1 |  | 6.1 |  |  |  |  |  |  |  |
| eA US Small Cap Value Equity Gross Median |  |  | -4.4 |  | 7.1 |  | -2.0 |  | 18.5 |  | 1.3 |  | 6.1 |  |
| Domestic Fixed Income Composite | 2,443,816,539 | 35.9 | 3.4 | 10 | 3.5 | 44 | 11.5 | 13 | 9.5 | 35 | 8.3 | 21 | 6.5 | 30 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | 1.3 |  | 1.1 |  | 4.0 |  | 2.6 |  | 1.5 |  | 0.9 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Blackrock | 1,258,079,186 | 18.5 | 2.4 | 25 | 3.0 | 66 | 7.7 | 67 | 8.1 | 48 | 6.8 | 80 | 5.6 | 83 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | 0.3 |  | 0.6 |  | 0.2 |  | 1.2 |  | 0.0 |  | 0.0 |  |
| Met West | 692,490,044 | 10.2 | 2.1 | 61 | 4.0 | 15 | 7.7 | 65 | 11.1 | 3 | 8.8 | 4 | 7.7 | 1 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | 0.0 |  | 1.6 |  | 0.2 |  | 4.2 |  | 2.0 |  | 2.1 |  |
| eA US Core Fixed Inc Gross Median |  |  | 2.2 |  | 3.2 |  | 8.0 |  | 8.0 |  | 7.4 |  | 6.1 |  |
| Hoisington | 250,694,217 | 3.7 | 13.6 | 2 | 4.8 | 91 | 45.4 | 2 | 16.4 | 29 | 14.4 | 8 | 9.3 | 30 |
| Barclays Treasury Long Term |  |  | 10.6 | 6 | 4.2 | 98 | $\underline{32.3}$ | 5 | 13.6 | 91 | 12.1 | 43 | 8.4 | 55 |
| Over/Under |  |  | 3.0 |  | 0.6 |  | 13.1 |  | 2.8 |  | 2.3 |  | 0.9 |  |
| eA US Long Duration Fixed Inc Gross Median |  |  | 6.6 |  | 5.8 |  | 22.9 |  | 15.7 |  | 11.8 |  | 8.5 |  |
| Blackrock Tips | 242,553,092 | 3.6 | 3.2 | 1 | 4.1 | 6 | 11.8 | 1 | -- | -- | -- | -- | -- | -- |
| Barclays US TIPS 1-5 Years |  |  | -0.3 | 99 | 1.1 | 99 | 1.7 | 99 | 4.8 | 94 | 5.1 | 97 | 4.5 | 99 |
| Over/Under |  |  | 3.5 |  | 3.0 |  | 10.1 |  |  |  |  |  |  |  |
| eA US Interm Duration Fixed Inc Gross Median |  |  | 1.4 |  | 2.6 |  | 5.9 |  | 6.4 |  | 6.6 |  | 5.6 |  |

NEPC, LLC

## OKLAHOMA PERS

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs <br> (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| International Equity Composite | 1,576,113,211 | 23.2 | -7.2 | 53 | 2.5 | 84 | -12.5 | 50 | 7.8 | 70 | -4.0 | 64 | 4.1 | 73 |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.4 |  | -0.3 |  | 2.1 |  | 0.8 |  | 0.6 |  | 0.2 |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Blackrock ACWI Ex US | 695,801,598 | 10.2 | -7.4 | 57 | 3.0 | 81 | -14.3 | 70 | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | $\underline{2.8}$ | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.2 |  | 0.2 |  | 0.3 |  |  |  |  |  |  |  |
| Mondrian | 446,315,587 | 6.6 | -6.1 | 31 | 1.5 | 93 | -9.4 | 22 | 7.8 | 69 | -3.5 | 57 | 4.7 | 58 |
| MSCI ACWI ex USA Value |  |  | -7.8 | 64 | 2.1 | 88 | -15.1 | 78 | 6.0 | 87 | -5.4 | 88 | 3.5 | 81 |
| Over/Under |  |  | 1.7 |  | -0.6 |  | 5.7 |  | 1.8 |  | 1.9 |  | 1.2 |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Blackrock ACWI Ex US Growth | 433,996,026 | 6.4 | -7.6 | 62 | 3.8 | 86 | -13.3 | 62 | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA Growth |  |  | -7.5 | 57 | 3.4 | 91 | -14.0 | 72 | 7.8 | 68 | -3.9 | 65 | 4.3 | 72 |
| Over/Under |  |  | -0.1 |  | 0.4 |  | 0.7 |  |  |  |  |  |  |  |
| eA ACWI ex-US All Cap Growth Eq Gross Median |  |  | -7.1 |  | 6.2 |  | -11.5 |  | 10.9 |  | -3.2 |  | 5.3 |  |

OKLAHOMA PERS

## Total Fund Return Summary vs. Peer Universe

OK PERS vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| OK PERS | -2.0 | (65) | 5.8 | (44) | 2.4 | (26) | 11.4 | (38) | 12.2 | (29) | 2.7 | (27) | 5.3 | (37) |
| - PERS Allocation Index | -2.1 | (68) | 5.4 | (62) | 1.0 | (61) | 10.5 | (58) | 11.2 | (58) | 2.7 | (29) | 5.1 | (55) |
| $\times$ PERS Policy Index | -1.8 | (50) | 5.7 | (50) | 2.6 | (21) | 11.6 | (30) | 11.9 | (35) | 2.6 | (29) | 5.4 | (35) |

NEPC, LLC

OKLAHOMA PERS

## Total Fund Return Summary vs. Peer Universe

OK PERS vs. ICC Public DB



OKLAHOMA PERS

## Total Fund Risk Statistics vs. Peer Universe

## OK PERS vs. ICC Public DB <br> 3 Years

Anlzd Return
Tracking Error


| OK PERS |  |
| :--- | ---: |
| Value | 12.21 |
| \%tile | 29 |
| PERS Allocation | Index |
| Value | 11.16 |
| \%tile | 58 |
| $\times$ PERS Policy Index |  |
| Value | 11.95 |
| \%tile | 35 |
|  |  |
| Universe |  |
| 5th \%tile | 13.56 |
| 25th \%tile | 12.38 |
| Median | 11.51 |
| 75th \%tile | 10.38 |
| 95th \%tile | 9.11 |


| - OK PERS |  |
| :--- | ---: |
| Value | 10.79 |
| \%tile | 74 |
| 4 PERS Allocation | Index |
| Value | 10.92 |
| \%tile | 76 |
| $\times$ |  |
| PERS Policy Index |  |
| Value | 10.88 |
| \%tile | 75 |
|  |  |
| Universe |  |
| 5th \%tile | 6.77 |
| 25th \%tile | 8.90 |
| Median | 9.76 |
| 75th \%tile | 10.90 |
| 95th \%tile | 12.47 |


| - OK PERS |  |
| :--- | ---: |
| Value | 1.20 |
| \%tile | 55 |
| • PERS Allocation Index |  |
| Value | 0.00 |
| \%tile | 90 |
| $\times$ PERS Policy Index |  |
| Value | 0.84 |
| \%tile | 70 |
|  |  |
| Universe |  |
| 5th \%tile | 3.72 |
| 25th \%tile | 2.22 |
| Median | 1.41 |
| 75th \%tile | 0.53 |
| 95th \%tile | -0.53 |




- PERS Allocation Index

Value 1.01
\%tile 89
x PERS Policy Index
$\begin{array}{lr}\text { Value } & 1.09 \\ \text { \%tile } & 72\end{array}$

| Universe |  |
| :--- | :--- |
| 5th \%tile | 1.49 |
| 25th \%tile | 1.25 |
| Median | 1.16 |
| 75th \%tile | 1.07 |
| 95th \%tile | 0.97 |



OKLAHOMA PERS

## Total Fund Risk Statistics vs. Peer Universe

## OK PERS vs. ICC Public DB <br> 5 Years

Anlzd Return
Tracking Error


| OK PERS |  |
| :--- | ---: |
| Value | 2.75 |
| \%tile | 27 |
| PERS Allocation | Index |
| Value | 2.65 |
| \%tile | 29 |
| $\times$ PERS Policy Index |  |
| Value | 2.61 |
| \%tile | 29 |
|  |  |
| Universe |  |
| 5th \%tile | 4.80 |
| 25th \%tile | 2.78 |
| Median | 1.99 |
| 75th \%tile | 1.17 |
| 95th \%tile | 0.20 |


| OK PERS |  |
| :--- | ---: |
| Value | 13.17 |
| \%tile | 71 |
| a PERS Allocation Index |  |
| Value | 12.89 |
| \%tile | 64 |
| $\times$ |  |
| PERS Policy Index |  |
| Value | 13.60 |
| \%tile | 79 |
|  |  |
| Universe |  |
| 5th \%tile | 7.59 |
| 25th \%tile | 10.89 |
| Median | 12.25 |
| 75th \%tile | 13.54 |
| 95th \%tile | 15.01 |


| - OK PERS |  |
| :--- | ---: |
| Value |  |
| \%tile | 0.05 |
| - PERS Allocation Index |  |
| Value | 0.00 |
| \%tile | 31 |
| $\times$ PERS Policy Index |  |
| Value | -0.18 |
| \%tile | 38 |
|  |  |
| Universe |  |
| 5th \%tile | 3.37 |
| 25th \%tile | 0.15 |
| Median | -0.54 |
| 75th \%tile | -1.27 |
| 95th \%tile | -2.46 |


$\begin{array}{lr}\text { OK PERS } & \\ \text { Value } & 0.15 \\ \text { \%tile } & 28\end{array}$

- PERS Allocation Index

Value 0.15
\%tile 30
x PERS Policy Index $\begin{array}{lr}\text { Value } & 0.14 \\ \text { \%tile } & 35\end{array}$

Universe
5th \%tile 0.55
25th \%tile
Median
75th \%tile
95th \%tile $\quad-0.04$

| - OK PERS | - OK PERS |  |  |
| :---: | :---: | :---: | :---: |
| Value | 0.21 | Value | 1.18 |
| \%tile | 27 | \%tile | 1 |
| ^ PERS Allocation Index |  | - PERS Allocation Index |  |
| Value | 0.20 | Value | 0.00 |
| \%tile | 29 | \%tile | 1 |
| $\times$ PERS Policy Index |  | $\times$ PERS Policy Index |  |
| Value | 0.18 | Value | 1.18 |
| \%tile | 34 | \%tile | 1 |
| Universe |  | Universe |  |
| 5th \%tile | 0.77 | 5th \%tile | 2.09 |
| 25th \%tile | 0.21 | 25th \%tile | 2.70 |
| Median | 0.13 | Median | 3.16 |
| 75th \%tile | 0.05 | 75th \%tile | 4.18 |
| 95th \%tile | -0.05 | 95th \%tile | 7.28 |

OKLAHOMA PERS

## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


5th Percentile
25th Percentile
Allocation (Rank)

| 52.3 | 17.7 | 58.0 |  |
| ---: | ---: | ---: | ---: |
| 50.8 | 12.0 | 48.7 |  |
| 44.4 | 9.1 | 29.3 |  |
| 34.2 | 5.5 | 25.7 |  |
| 16.2 | 4.3 | 14.4 |  |
| 22 | 18 | 22 |  |
| 40.6 | 23.2 | $(1)$ | 35.9 |

## OKLAHOMA PERS

## Total Fund Attribution Analysis



|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Allocation Effect | Interaction Effects |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual <br> Return | Target Return | Relative Return | Selection Effect |  |  | Total Effects |
| Domestic Equity Composite | -3.7\% | -2.8\% | -0.9\% | -0.4\% | 0.0\% | 0.0\% | -0.4\% |
| Domestic Fixed Income Composite | 3.4\% | 2.1\% | 1.4\% | 0.5\% | -0.1\% | 0.0\% | 0.3\% |
| International Equity Composite | -7.2\% | -7.6\% | 0.4\% | 0.1\% | 0.0\% | 0.0\% | 0.1\% |
| Total | -2.0\% | -2.1\% | 0.1\% | 0.2\% | -0.1\% | -0.1\% | 0.1\% |

OKLAHOMA PERS

## Total Fund Attribution Analysis

| Performance Attribution |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Last 3 Mo . | YTD | 1 Yr |
| OK PERS Return | -2.0\% | 5.9\% | 2.4\% |
| Policy Benchmark ** | -2.1\% | 5.5\% | 1.6\% |
| Excess Return | 0.1\% | 0.4\% | 0.9\% |
| Selection Effect | 0.2\% | 0.4\% | 1.5\% |
| Asset Allocation Effect | -0.1\% | -0.1\% | -0.5\% |
| Interaction Effect | -0.1\% | 0.0\% | -0.1\% |
| Asset Class Returns |  |  |  |
| OK PERS | -2.0\% | 5.8\% | 2.4\% |
| Domestic Equity Composite | -3.7\% | 9.6\% | 4.1\% |
| Domestic Fixed Income Composite | 3.4\% | 3.5\% | 11.5\% |
| International Equity Composite | -7.2\% | 2.5\% | -12.5\% |
| Cash Composite | 0.0\% | 0.1\% | 0.1\% |
| TERMINATED - R/E Composite |  |  |  |



## OKLAHOMA FIREFIGHTERS

## Total Plan Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK FIREFIGHTERS | \$1,695,828,443 | -2.4\% | 79 | 6.1\% | 28 | 0.8\% | 67 | 10.3\% | 79 | 1.3\% | 73 | 4.6\% | 73 |
| FIREFIGHTERS Allocation Index |  | -2.5\% | 84 | 6.0\% | 34 | 1.5\% | 45 | 11.7\% | 45 | 1.5\% | 70 | 4.7\% | 72 |
| FIREFIGHTERS Policy Index |  | -1.7\% | 44 | 6.4\% | 12 | 3.6\% | 5 | 12.6\% | 23 | 2.4\% | 37 | 5.0\% | 57 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


Actual vs Target Allocation (\%)


NEPC, LLC

## OKLAHOMA FIREFIGHTERS

## Total Plan Risk/Return - 3 Years

3 Years Ending June 30, 2012


3 Years Ending June 30, 2012

|  | 3 Years Ending June 30, 2012 |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |  |  |  |  |
|  | $10.30 \%$ | 79 | $10.61 \%$ | 70 |  |  |  |  |
| OK FIREFIGHTERS | $11.66 \%$ | 45 | $11.53 \%$ | 87 |  |  |  |  |
| FIREFIGHTERS Allocation Index | $12.56 \%$ | 23 | $10.96 \%$ | 77 |  |  |  |  |


|  | 3 Years Ending June 30, $\mathbf{2 0 1 2}$ |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Sharpe Ratio | Rank | Sortino Ratio | RF |
|  |  |  | Rank |  |
|  | 0.96 | 96 | 1.54 | 95 |
| OK FIREFIGHTERS | 1.00 | 91 | 1.78 | 70 |
| FIREFIGHTERS Allocation Index | 1.14 | 56 | 2.06 | 26 |

- OK FIREFIGHTERS
- FIREFIGHTERS Allocation Index
- FIREFIGHTERS Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB


## OKLAHOMA FIREFIGHTERS

## Total Plan Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK FIREFIGHTERS | 1.33\% | 73 | 11.98\% | 46 |
| FIREFIGHTERS Allocation Index | 1.48\% | 70 | 13.23\% | 71 |
| FIREFIGHTERS Policy Index | 2.41\% | 37 | 13.70\% | 82 |
| 5 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK FIREFIGHTERS | 0.05 | 72 | 0.07 | 72 |
| FIREFIGHTERS Allocation Index | 0.06 | 69 | 0.08 | 69 |
| FIREFIGHTERS Policy Index | 0.12 | 40 | 0.17 | 39 |

- OK FIREFIGHTERS
- FIREFIGHTERS Allocation Index
- FIREFIGHTERS Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB


## OKLAHOMA FIREFIGHTERS

Total Plan Asset Allocation vs. Policy Targets


## Asset Allocation History



NEPC, LLC

## OKLAHOMA FIREFIGHTERS

## Total Plan Asset Growth Summary



|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$1,744,811,778 | \$1,612,429,955 | \$1,729,469,789 |
| - Withdrawals | -\$31,321,717 | -\$63,934,552 | -\$243,680,197 |
| + Contributions | \$24,320,226 | \$49,400,960 | \$198,705,485 |
| = Net Cash Flow | -\$7,001,492 | -\$14,533,592 | -\$44,974,712 |
| + Net Investment Change | -\$41,981,843 | \$97,932,080 | \$11,333,366 |
| = Ending Market Value | \$1,695,828,443 | \$1,695,828,443 | \$1,695,828,443 |

NEPC, LLC

## OKLAHOMA FIREFIGHTERS

Total Plan Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Allianz (liquidating) | \$123,632 | \$0 | \$0 | \$0 | -\$79 | \$123,553 |
| Aronson | \$65,649,953 | \$0 | \$96 | \$96 | -\$2,324,343 | \$63,325,705 |
| Artio | \$98,649,506 | -\$5 | \$0 | -\$5 | -\$6,902,766 | \$91,746,734 |
| Attalus | \$51,646,285 | \$0 | \$0 | \$0 | -\$1,635,844 | \$50,010,441 |
| Azul Holdco | \$1,102,895 | \$0 | \$0 | \$0 | \$0 | \$1,102,895 |
| Brandywine | \$154,228,042 | \$0 | \$0 | \$0 | \$3,525,128 | \$157,753,170 |
| Brandywine (liquidating) | \$151,443 | \$0 | \$0 | \$0 | -\$2,517 | \$148,926 |
| Chase (liquidating) | \$366 | \$0 | \$0 | \$0 | \$0 | \$366 |
| Credit Suisse (liquidating) | \$5,003 | \$0 | \$0 | \$0 | \$0 | \$5,003 |
| Delaware Small Growth | \$67,402,036 | \$0 | \$0 | \$0 | -\$4,182,402 | \$63,219,634 |
| Earnest Partner | \$54,679,413 | \$0 | \$0 | \$0 | -\$3,827,533 | \$50,851,880 |
| Fred Alger Management | \$127,611,467 | \$0 | \$0 | \$0 | -\$5,738,691 | \$121,872,776 |
| Grosvenor | \$83,324,100 | \$0 | \$0 | \$0 | -\$2,751,375 | \$80,572,725 |
| Herndon Capital | \$63,521,152 | \$0 | \$0 | \$0 | -\$3,169,657 | \$60,351,495 |
| Inhouse Cash | \$1,204,794 | -\$22,649,766 | \$21,449,914 | -\$1,199,852 | \$381,905 | \$386,847 |
| Intech | \$123,596,345 | -\$38,610 | \$38,648 | \$38 | -\$2,348,620 | \$121,247,763 |
| JP Morgan RE | \$58,148,769 | \$0 | \$0 | \$0 | \$1,442,317 | \$59,591,086 |
| Lord Abbet | \$60,502,455 | \$0 | \$0 | \$0 | -\$1,415,381 | \$59,087,075 |
| Portfolio Advisors RE III | \$12,488,803 | \$0 | \$1,477,708 | \$1,477,708 | -\$245,682 | \$13,720,829 |
| Portfolio Advisors RE IV | \$1,584,908 | \$0 | \$953,860 | \$953,860 | \$12,928 | \$2,551,696 |

## OKLAHOMA FIREFIGHTERS

## Total Plan Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Private Advisors | \$125,072,171 | \$0 | \$0 | \$0 | -\$570,894 | \$124,501,277 |
| Realty Associates IX Corp | \$10,622,515 | \$0 | \$400,000 | \$400,000 | \$66,881 | \$11,089,396 |
| River Road | \$48,153,821 | \$0 | \$0 | \$0 | -\$249,510 | \$47,904,312 |
| SSgA Barclays Intermediate | \$92,219,040 | \$0 | \$0 | \$0 | \$1,209,325 | \$93,428,365 |
| SSgA EQ Wtd S\&P | \$124,441,564 | -\$8,500,000 | \$0 | -\$8,500,000 | -\$5,328,076 | \$110,613,488 |
| SSgA Equity Index | \$111,317,433 | \$0 | \$0 | \$0 | -\$3,053,792 | \$108,263,641 |
| SSgA NL Fixed Income | \$82,237,461 | \$0 | \$0 | \$0 | \$1,686,825 | \$83,924,286 |
| TA Associates | \$18,232,382 | -\$102,974 | \$0 | -\$102,974 | \$142,453 | \$18,271,861 |
| Thornburg | \$106,844,360 | \$0 | \$0 | \$0 | -\$6,721,345 | \$100,123,016 |
| Waddell \& Reed | \$38,201 | \$0 | \$0 | \$0 | \$0 | \$38,202 |
| Total | \$1,744,800,317 | - $\mathbf{\$ 3 1 , 2 9 1 , 3 5 5}$ | \$24,320,226 | -\$6,971,130 | -\$42,000,744 | \$1,695,828,443 |

## OKLAHOMA FIREFIGHTERS

## Total Plan Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD (\%) | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK FIREFIGHTERS | 1,695,828,443 | 100.0 | -2.4 | 79 | 6.1 | 28 | 0.8 | 67 | 10.3 | 79 | 1.3 | 73 | 4.6 | 73 |
| FIREFIGHTERS Allocation Index |  |  | -2.5 | 84 | 6.0 | 34 | 1.5 | 45 | 11.7 | 45 | 1.5 | 70 | 4.7 | 72 |
| Over/Under |  |  | 0.1 |  | 0.1 |  | -0.7 |  | -1.4 |  | -0.2 |  | -0.1 |  |
| FIREFIGHTERS Policy Index |  |  | -1.7 | 44 | 6.4 | 12 | 3.6 | 5 | 12.6 | 23 | 2.4 | 37 | 5.0 | 57 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Domestic Equity Composite | 938,611,324 | 55.3 | -3.7 | 39 | 8.3 | 50 | 1.5 | 43 | 14.2 | 82 | 1.0 | 56 | 4.5 | 68 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -0.9 |  | -1.2 |  | -3.9 |  | -2.2 |  | 0.8 |  | 0.4 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Large Cap Equity Composite | 585,824,160 | 34.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Aronson | 63,325,705 | 3.7 | -3.5 | 47 | 8.9 | 23 | 2.9 | 39 | 15.6 | 43 | -1.4 | 65 | 3.7 | 63 |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2.2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -1.3 |  | 0.2 |  | -0.1 |  | -0.2 |  | 0.8 |  | 0.8 |  |
| Herndon Capital | 60,351,495 | 3.6 | -5.0 | 76 | 11.3 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2.2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -2.8 |  | 2.6 |  |  |  |  |  |  |  |  |  |
| eA US Large Cap Value Equity Gross Median |  |  | -3.6 |  | 7.4 |  | 1.9 |  | 15.0 |  | -0.6 |  | 4.2 |  |
| SSgA Equity Index | 108,263,641 | 6.4 | -2.7 | 27 | 9.5 | 31 | 5.5 | 28 | 16.5 | 28 | 0.3 | 67 | 4.2 | 68 |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | 0.1 |  | 0.0 |  | 0.1 |  | 0.1 |  | 0.1 |  | 0.1 |  |
| SSgA EQ Wtd S\&P | 110,613,488 | 6.5 | -4.4 | 64 | 7.7 | 64 | -0.3 | 82 | 19.6 | 3 | 1.5 | 35 | 5.6 | 26 |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | -1.6 |  | -1.8 |  | -5.7 |  | 3.2 |  | 1.3 |  | 1.5 |  |
| Intech | 121,247,763 | 7.1 | -1.9 | 15 | 8.9 | 46 | 4.5 | 38 | 17.0 | 18 | 1.1 | 49 | 4.6 | 56 |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | 0.9 |  | -0.6 |  | -0.9 |  | 0.6 |  | 0.9 |  | 0.5 |  |
| eA US Large Cap Core Equity Gross Median |  |  | -3.9 |  | 8.7 |  | 3.4 |  | 15.4 |  | 1.0 |  | 4.8 |  |
| Fred Alger Management | 121,872,776 | 7.2 | -4.5 | 22 | 11.3 | 33 | 3.9 | 9 | -- | -- | -- | -- | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 21 | 10.1 | 61 | 5.8 | 5 | 17.5 | 70 | 2.9 | 32 | 5.5 | 82 |
| Over/Under |  |  | -0.5 |  | 1.2 |  | -1.9 |  |  |  |  |  |  |  |
| eA US Micro Cap Growth Equity Gross Median |  |  | -5.8 |  | 10.5 |  | -3.8 |  | 20.4 |  | 1.1 |  | 6.0 |  |

NEPC, LLC

## OKLAHOMA FIREFIGHTERS

## Total Plan Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo (\%) | Rank | YTD <br> (\%) | Rank | 1 Yr (\%) | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Small Cap Equity Composite | 221,101,102 | 13.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| Earnest Partner | 50,851,880 | 3.0 | -7.0 | 88 | 5.2 | 75 | -2.8 | 62 | 17.7 | 67 | 0.5 | 69 | -- | -- |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -4.0 |  | -3.0 |  | -1.4 |  | 0.3 |  | 1.5 |  |  |  |
| River Road | 47,904,312 | 2.8 | -0.5 | 3 | 8.0 | 36 | 4.8 | 6 | 13.5 | 96 | 0.0 | 74 | -- | -- |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | 2.5 |  | -0.2 |  | 6.2 |  | -3.9 |  | 1.0 |  |  |  |
| eA US Small Cap Value Equity Gross Median |  |  | -4.4 |  | 7.1 |  | -2.0 |  | 18.5 |  | 1.3 |  | 6.1 |  |
| Lord Abbet | 59,087,075 | 3.5 | -2.3 | 18 | 9.9 | 33 | -3.2 | 48 | -- | -- | -- | -- | -- | -- |
| Russell 2000 Growth |  |  | -3.9 | 33 | 8.8 | 45 | -2.7 | 42 | 18.1 | 69 | 2.0 | 55 | 5.7 | 63 |
| Over/Under |  |  | 1.6 |  | 1.1 |  | -0.5 |  |  |  |  |  |  |  |
| Delaware Small Growth | 63,219,634 | 3.7 | -6.2 | 70 | 10.4 | 28 | 1.7 | 15 | -- | -- | -- | -- | -- | -- |
| Russell 2500 Growth |  |  | -5.4 | 64 | 8.4 | 51 | -3.2 | 48 | 19.4 | 53 | 2.4 | 49 | 6.3 | 55 |
| Over/Under |  |  | -0.8 |  | 2.0 |  | 4.9 |  |  |  |  |  |  |  |
| eA US Small Cap Growth Equity Gross Median |  |  | -4.9 |  | 8.5 |  | -3.5 |  | 19.6 |  | 2.3 |  | 6.6 |  |
| Total Long/Short Equity | 131,686,062 | 7.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Grosvenor | 80,572,725 | 4.8 | -3.3 | 54 | 2.6 | 55 | -3.1 | 50 | 4.1 | 65 | -1.1 | 76 | -- | -- |
| Wilshire 5000 |  |  | -3.1 | 52 | 9.2 | 16 | 4.0 | 20 | 16.7 | 12 | 0.4 | 65 | 4.4 | 65 |
| Over/Under |  |  | -0.2 |  | -6.6 |  | -7.1 |  | -12.6 |  | -1.5 |  |  |  |
| Attalus | 50,010,441 | 2.9 | -3.2 | 52 | 3.2 | 50 | -3.8 | 53 | 1.4 | 78 | -1.0 | 76 | -- | -- |
| Wilshire 5000 |  |  | -3.1 | 52 | 9.2 | 16 | 4.0 | 20 | 16.7 | 12 | 0.4 | 65 | 4.4 | 65 |
| Over/Under |  |  | -0.1 |  | -6.0 |  | -7.8 |  | -15.3 |  | -1.4 |  |  |  |
| Azul Holdco | 1,102,895 | 0.1 | 0.0 | 23 | 0.0 | 71 | 0.0 | 37 | -- | -- | -- | -- | -- | -- |
| Wilshire 5000 |  |  | -3.1 | 52 | 9.2 | 16 | 4.0 | 20 | 16.7 | 12 | 0.4 | 65 | 4.4 | 65 |
| Over/Under |  |  | 3.1 |  | -9.2 |  | -4.0 |  |  |  |  |  |  |  |
| eA\|HFN Long/Short Equity Net Median |  |  | -3.0 |  | 3.2 |  | -3.2 |  | 6.3 |  | 2.3 |  | 5.9 |  |

## OKLAHOMA FIREFIGHTERS

## Total Plan Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| International Equity Composite | 191,998,306 | 11.3 | -6.6 | 51 | 3.9 | 64 | -15.5 | 81 | 6.0 | 86 | -7.1 | 90 | 2.7 | 81 |
| MSCI ACWI ex USA |  |  | -7.6 | 70 | 2.8 | 81 | -14.6 | 75 | 7.0 | 76 | -4.6 | 54 | 3.9 | 54 |
| Over/Under |  |  | 1.0 |  | 1.1 |  | -0.9 |  | -1.0 |  | -2.5 |  | -1.2 |  |
| eA All EAFE Equity Gross Median |  |  | -6.6 |  | 4.9 |  | -12.3 |  | 8.7 |  | -4.5 |  | 4.0 |  |
| Artio | 91,746,734 | 5.4 | -7.0 | 51 | 3.4 | 74 | -18.1 | 91 | 3.7 | 95 | -8.0 | 97 | 2.1 | 95 |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.6 |  | 0.6 |  | -3.5 |  | -3.3 |  | -3.4 |  | -1.8 |  |
| Thornburg | 100,123,016 | 5.9 | -6.3 | 36 | 4.4 | 60 | -13.0 | 53 | 8.4 | 58 | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 1.3 |  | 1.6 |  | 1.6 |  | 1.4 |  |  |  |  |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Fixed Income Composite | 335,105,821 | 19.8 | 2.0 | 42 | 3.8 | 39 | 8.2 | 32 | 8.0 | 48 | 7.5 | 35 | 6.1 | 43 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | -0.1 |  | 1.4 |  | 0.7 |  | 1.1 |  | 0.7 |  | 0.5 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Core Bonds |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SSgA NL Fixed Income | 83,924,286 | 4.9 | 2.1 | 66 | 2.4 | 88 | 7.4 | 73 | -- | -- | -- | -- | -- | -- |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | -0.1 |  |  |  |  |  |  |  |
| eA US Core Fixed Inc Gross Median |  |  | 2.2 |  | 3.2 |  | 8.0 |  | 8.0 |  | 7.4 |  | 6.1 |  |
| Intermediate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SSgA Barclays Intermediate | 93,428,365 | 5.5 | 1.3 | 69 | 2.0 | 86 | 5.2 | 79 | 5.9 | 69 | 6.3 | 72 | 5.3 | 73 |
| Barclays Int Govt/Credit |  |  | 1.5 | 47 | 2.1 | 80 | 5.4 | 74 | 5.8 | 78 | 6.0 | 84 | 5.1 | 89 |
| Over/Under |  |  | -0.2 |  | -0.1 |  | -0.2 |  | 0.1 |  | 0.3 |  | 0.2 |  |
| eA US Interm Duration Fixed Inc Gross Median |  |  | 1.4 |  | 2.6 |  | 5.9 |  | 6.4 |  | 6.6 |  | 5.6 |  |
| Global Fixed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Brandywine | 157,753,170 | 9.3 | 2.3 | 5 | 5.8 | 22 | 10.5 | 3 | -- | -- | -- | -- | -- | -- |
| Citigroup WGBI |  |  | 0.9 | 53 | 0.4 | 97 | 2.7 | 67 | 5.4 | 92 | 7.3 | 51 | 5.5 | 73 |
| Over/Under |  |  | 1.4 |  | 5.4 |  | 7.8 |  |  |  |  |  |  |  |
| eA All Global Fixed Inc Gross Median |  |  | 1.0 |  | 3.2 |  | 4.2 |  | 8.2 |  | 7.4 |  | 6.2 |  |

## OKLAHOMA FIREFIGHTERS

## Total Plan Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo (\%) | Rank | YTD <br> (\%) | Rank | 1 Yr <br> (\%) | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Real Estate Composite | 105,224,868 | 6.2 |  |  |  |  |  |  |  |  |  |  |  |  |
| JP Morgan RE | 59,591,086 | 3.5 | 2.5 | -- | 5.3 | -- | 12.0 | -- | 7.9 | -- | 0.2 | -- | 5.1 | -- |
| NCREIF Property Index |  |  | 2.7 | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -0.2 |  | 0.0 |  | 0.0 |  | -0.9 |  | -2.3 |  | -1.6 |  |
| TA Associates | 18,271,861 | 1.1 | 0.8 | -- | -1.5 | -- | 2.0 | -- | -9.8 | -- | -4.6 | -- | -- | -- |
| NCREIF Property Index |  |  | 2.7 | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -1.9 |  | -6.8 |  | -10.0 |  | -18.6 |  | -7.1 |  |  |  |
| Portfolio Advisors RE III | 13,720,829 | 0.8 | -1.9 | -- | -3.3 | -- | -0.4 | -- | -6.9 | -- | -- | -- | -- | -- |
| NCREIF Property Index |  |  | 2.7 | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -4.6 |  | -8.6 |  | -12.4 |  | -15.7 |  |  |  |  |  |
| Realty Associates IX Corp | 11,089,396 | 0.7 | 0.6 | -- | -1.3 | -- | 4.4 | -- | -- | -- | -- | -- | -- | -- |
| NCREIF Property Index |  |  | $\underline{2.7}$ | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -2.1 |  | -6.6 |  | -7.6 |  |  |  |  |  |  |  |
| Portfolio Advisors RE IV | 2,551,696 | 0.2 | 0.9 | -- | -0.6 | -- | -18.6 | -- | -- | -- | -- | -- | -- | -- |
| NCREIF Property Index |  |  | $\underline{2.7}$ | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | - |
| Over/Under |  |  | -1.8 |  | -5.9 |  | -30.6 |  |  |  |  |  |  |  |
| Hedge Fund Composite | 124,501,277 | 7.3 |  |  |  |  |  |  |  |  |  |  |  |  |
| Private Advisors | 124,501,277 | 7.3 | -0.5 | -- | 2.3 | -- | -0.2 | -- | 5.7 | -- | 1.6 | -- | -- | -- |
| HFRI Fund of Funds Composite Index |  |  | -2.3 | -- | 1.0 | -- | -4.4 | -- | 2.2 | -- | -2.0 | -- | 1.9 | -- |
| Over/Under |  |  | 1.8 |  | 1.3 |  | 4.2 |  | 3.5 |  | 3.6 |  |  |  |

## OKLAHOMA FIREFIGHTERS

## Total Plan Return Summary vs. Peer Universe

OK FIREFIGHTERS vs. ICC Public DB



## OKLAHOMA FIREFIGHTERS

## Total Plan Return Summary vs. Peer Universe

OK FIREFIGHTERS vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK FIREFIGHTERS | -0.2 | (83) | 12.6 | (62) | 15.4 | (78) | -24.3 | (44) | 9.8 | (21) |
| - FIREFIGHTERS Allocation Index | 0.7 | (67) | 13.7 | (35) | 18.5 | (58) | -25.8 | (58) | 7.2 | (65) |
| $\times$ FIREFIGHTERS Policy Index | 2.4 | (20) | 13.2 | (47) | 20.6 | (42) | -24.3 | (45) | 5.4 | (93) |

## OKLAHOMA FIREFIGHTERS

## Total Plan Risk Statistics vs. Peer Universe

Anlzd Return


| - OK FIREFIGHTERS |  | - OK FIREFIGHTERS |  |
| :---: | :---: | :---: | :---: |
| Value | 10.30 | Value | 10.61 |
| \%tile | 79 | \%tile | 70 |
| - FIREFIGHT | llocation Index | 4 FIREFIGHT | ERS Allocation Index |
| Value | 11.66 | Value | 11.53 |
| \%tile | 45 | \%tile | 87 |
| $\times$ FIREFIGHT | olicy Index | $\times$ FIREFIGHT | ERS Policy Index |
| Value | 12.56 | Value | 10.96 |
| \%tile | 23 | \%tile | 77 |
| Universe |  | Universe |  |
| 5th \%tile | 13.56 | 5th \%tile | 6.77 |
| 25th \%tile | 12.38 | 25th \%tile | 8.90 |
| Median | 11.51 | Median | 9.76 |
| 75th \%tile | 10.38 | 75th \%tile | 10.90 |
| 95th \%tile | 9.11 | 95th \%tile | 12.47 |

## OK FIREFIGHTERS vs. ICC Public DB

 3 YearsAnlzd Alpha


- OK FIREFIGHTERS

| OK FIREFIGHTERS |  |
| :--- | :---: |
| Value | -0.37 |
| \%tile | 95 |
| FIREFIGHTERS Allocation Index |  |
| Value | 0.00 |
| \%tile | 91 |
| $\times$ | FIREFIGHTERS Policy Index |
| Value | 1.51 |
| \%tile | 52 |

- FIREFIGHTERS Allocation Index
0.00
$\times$ FIREFIGHTERS Policy Index
\%tile $\quad 1.5$

5th \%tile $\quad 3.8$
25th \%tile 2.35 Median $\quad 1.57$ 75th \%tile $\quad 0.67$
95th \%tile $\quad-0.40$

## Sharpe Ratio



Sortino Ratio RF


- OK FIREFIGHTERS

| Value | 1.54 |
| :--- | ---: |
| \%tile | 95 |

- FIREFIGHTERS Allocation Index Value 1.78
\%tile
1.78
$\times$ FIREFIGHTERS Policy Index
Value 2.06
\%tile 26
Universe
5th \%tile $\quad 2.72$
25th \%tile $\quad 2.08$
Median 1.90
75th \%tile $\quad 1.72$
95th \%tile $\quad 1.53$


## OKLAHOMA FIREFIGHTERS

## Total Plan Risk Statistics vs. Peer Universe

Anlzd Return


- OK FIREFIGHTERS

| Value | 1.33 |
| :--- | ---: |
| \%tile | 73 |

- FIREFIGHTERS Allocation Index

Value 1.48
$\times$ FIREFIGHTERS Policy Index
Value $\quad 2.41$
\%tile 37

| Uth \%tile | 4.80 |
| :--- | :--- |
| 25th \%tile | 2.78 |
| Median | 1.99 |
| 75th \%tile | 1.17 |
| 95th \%tile | 0.20 |

Anlzd Standard Deviation


- OK FIREFIGHTERS

| Value | 11.98 |
| :--- | :--- |

\%tile

- FIREFIGHTERS Allocation Index Value 13.23

$$
\text { \%tile } \quad 71
$$

$\times$ FIREFIGHTERS Policy Index
Value 13.70
\%tile
82

5 th \% tile
$\begin{array}{ll}\text { Median } & 10.89 \\ & 12.25\end{array}$
75th \%tile $\quad 13.54$
95th \% tile $\quad 15.01$

## OK FIREFIGHTERS vs. ICC Public DB

 5 YearsAnlzd Alpha


- OK FIREFIGHTERS

| Value | 0.00 |
| :--- | ---: |
| \%tile | 72 |

- FIREFIGHTERS Allocation Index

Value $\quad 0.00$
\%tile
FIREFIGHTERS Policy Index
FIREFIGHTERS Policy Index
Value 0.89
\%tile 38
Universe
5th \%tile 4.03
25th \%tile $\quad 1.35$
Median 0.55
75th \%tile $\quad-0.16$

Sharpe Ratio


- OK FIREFIGHTERS
Value 0.05
- FIREFIGHTERS Allocation Index
$\begin{array}{ll}\text { FIREFIGHTERS Allocation } \\ \text { Value } & 0.06\end{array}$
\%tile 69
× FIREFIGHTERS Policy Index
Value 0.12
\%tile 40
Universe
5th \%tile
25th \%tile
Median
75th \%tile
95th \%tile

Sortino Ratio RF


- OK FIREFIGHTERS

Value

0.07
72

- FIREFIGHTERS Allocation Index
Value 0.08
$\times \begin{aligned} & \text { \%tile } \\ & \text { FIREFIGHTERS Policy Index }\end{aligned}$
Value 0.17
\%tile 39

5th \%tile $\quad 0.77$ 25th \%tile $\quad 0.21$
Median 0.13 75th \%tile $\quad 0.05$

## OKLAHOMA FIREFIGHTERS

## Total Plan Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


|  | Allocation (Rank) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 52.3 |  | 17.7 |  | 58.0 |  | 22.9 |  | 10.9 |  |
| 25th Percentile | 50.8 |  | 12.0 |  | 48.7 |  | 18.7 |  | 9.4 |  |
| Median | 44.4 |  | 9.1 |  | 29.3 |  | 13.9 |  | 5.9 |  |
| 75th Percentile | 34.2 |  | 5.5 |  | 25.7 |  | 7.6 |  | 3.8 |  |
| 95th Percentile | 16.2 |  | 4.3 |  | 14.4 |  | 3.3 |  | 2.1 |  |
| \# of Portfolios | 22 |  | 18 |  | 22 |  | 7 |  | 14 |  |
| OK FIREFIGHTERS | 55.3 | (2) | 11.3 | (33) | 19.8 | (81) | 7.3 | (84) | 6.2 | (46) |

## OKLAHOMA FIREFIGHTERS

## Total Plan Attribution Analysis



|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Allocation <br> Effect | Interaction Effects | Total <br> Effects |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual <br> Return | Target Return | Relative Return | Selection Effect |  |  |  |
| Domestic Equity Composite | -3.7\% | -3.1\% | -0.5\% | -0.2\% | -0.3\% | -0.1\% | -0.6\% |
| International Equity Composite | -6.6\% | -7.1\% | 0.5\% | 0.0\% | -0.1\% | 0.0\% | -0.1\% |
| Fixed Income Composite | 2.0\% | 2.1\% | -0.1\% | 0.0\% | 0.1\% | 0.0\% | 0.1\% |
| Real Estate Composite | 1.4\% | 2.7\% | -1.3\% | -0.1\% | -0.2\% | 0.0\% | -0.2\% |
| Hedge Fund Composite | -0.5\% | 2.1\% | -2.5\% | -0.2\% | 0.0\% | 0.0\% | -0.2\% |
| Total | -2.4\% | -1.2\% | -1.2\% | -0.6\% | -0.5\% | 0.0\% | -1.0\% |

## OKLAHOMA FIREFIGHTERS

## Total Plan Attribution Analysis

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Last 3 Mo . | YTD | 1 Yr |
| OK FIREFIGHTERS Return | -2.4\% | 6.0\% | 0.7\% |
| Policy Benchmark ** | -1.2\% | 5.4\% | 3.5\% |
| Excess Return | -1.2\% | 0.6\% | -2.8\% |
| Selection Effect | -0.6\% | -0.5\% | -2.3\% |
| Asset Allocation Effect | -0.5\% | 0.1\% | -0.9\% |
| Interaction Effect | 0.0\% | 0.1\% | -0.1\% |
| Asset Class Returns |  |  |  |
| OK FIREFIGHTERS | -2.4\% | 6.1\% | 0.8\% |
| Domestic Equity Composite | -3.7\% | 8.3\% | 1.5\% |
| Large Cap Equity Composite | -3.6\% | 9.5\% | 3.3\% |
| Small Cap Equity Composite | -4.2\% | 8.5\% | -0.1\% |
| Total Long/Short Equity | -3.2\% | 2.8\% | -3.4\% |
| International Equity Composite | -6.6\% | 3.9\% | -15.5\% |
| Fixed Income Composite | 2.0\% | 3.8\% | 8.2\% |
| Core Bonds | 2.1\% | 2.4\% | 7.4\% |
| Intermediate | 1.3\% | 2.0\% | 5.2\% |
| Global Fixed | 2.3\% | 5.8\% | 10.5\% |
| Real Estate Composite | 1.4\% | 2.1\% | 7.4\% |
| Hedge Fund Composite | -0.5\% | 2.3\% | -0.2\% |

**Calculated from benchmark returns and weightings of each component.


## OKLAHOMA POLICE

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK POLICE | \$1,752,185,842 | -1.2\% | 22 | 5.4\% | 62 | 0.8\% | 64 | 9.9\% | 84 | 1.6\% | 69 | 5.1\% | 53 |
| POLICE Allocation Index |  | -2.2\% | 76 | 7.1\% | 1 | 2.2\% | 31 | 13.0\% | 12 | 1.9\% | 54 | 5.1\% | 48 |
| POLICE Policy Index |  | -1.7\% | 42 | 6.7\% | 7 | 3.8\% | 4 | 12.8\% | 17 | 2.0\% | 48 | 4.7\% | 72 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


Actual vs Target Allocation (\%)


NEPC, LLC

## OKLAHOMA POLICE

## Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


| 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK POLICE | 9.91\% | 84 | 8.51\% | 22 |
| POLICE Allocation Index | 12.95\% | 12 | 12.30\% | 94 |
| POLICE Policy Index | 12.83\% | 17 | 11.08\% | 78 |
| 3 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK POLICE | 1.15 | 51 | 1.91 | 60 |
| POLICE Allocation Index | 1.05 | 78 | 1.95 | 52 |
| POLICE Policy Index | 1.15 | 52 | 2.06 | 37 |

- OK POLICE
- POLICE Allocation Index
- POLICE Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB


## OKLAHOMA POLICE

## Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK POLICE | 1.55\% | 69 | 10.06\% | 17 |
| POLICE Allocation Index | 1.90\% | 54 | 14.72\% | 93 |
| POLICE Policy Index | 2.05\% | 48 | 13.52\% | 74 |
| 5 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK POLICE | 0.08 | 61 | 0.10 | 61 |
| POLICE Allocation Index | 0.08 | 61 | 0.11 | 58 |
| POLICE Policy Index | 0.10 | 52 | 0.13 | 48 |

- OK POLICE
- POLICE Allocation Index
- POLICE Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB


## Total Fund Asset Allocation vs. Policy Targets

## Asset Allocation vs. Target

| Policy | Current |
| :---: | :---: |
| 15.0\% | 16.1\% |
| 5.0\% | 9.8\% |
| 15.0\% |  |
|  |  |
|  | 11.8\% |
| 15.0\% |  |
|  | 21.0\% |
|  |  |
| 10.0\% |  |
| 15.0\% | 13.0\% |
| 10.0\% | 13.8\% |
| 15.0\% | 8.8\% |
|  | 4.3\% |
| 0.0\% | 1.3\% |

$\square$ Large Cap Equity
$\square$ Small Cap Equity
$\square$ Non-US Equity
$\square$ Global Bonds
$\square$ Private Equity
$\square$ Long/Short
$\square$ Low Volatility
$\square$ Real Assets
$\square$ Cash
Total

| Current | Policy | CurrentDifference <br> $*$ | Policy Range | Within <br> Range |  |
| ---: | ---: | ---: | ---: | ---: | :---: |
| $\$ 281,408,088$ | $15.0 \%$ | $16.1 \%$ | $1.1 \%$ | $10.0 \%-20.0 \%$ | Yes |
| $\$ 172,566,613$ | $5.0 \%$ | $9.8 \%$ | $4.8 \%$ | $0.0 \%-10.0 \%$ | Yes |
| $\$ 206,000,714$ | $15.0 \%$ | $11.8 \%$ | $-3.2 \%$ | $5.0 \%-25.0 \%$ | Yes |
| $\$ 368,511,781$ | $15.0 \%$ | $21.0 \%$ | $6.0 \%$ | $10.0 \%-20.0 \%$ | No |
| $\$ 228,301,862$ | $10.0 \%$ | $13.0 \%$ | $3.0 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 242,380,253$ | $15.0 \%$ | $13.8 \%$ | $-1.2 \%$ | $10.0 \%-20.0 \%$ | Yes |
| $\$ 154,310,122$ | $10.0 \%$ | $8.8 \%$ | $-1.2 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 76,176,500$ | $15.0 \%$ | $4.3 \%$ | $-10.7 \%$ | $10.0 \%-20.0 \%$ | No |
| $\$ 22,527,164$ | $0.0 \%$ | $1.3 \%$ | $1.3 \%$ | $0.0 \%-5.0 \%$ | Yes |
| $\mathbf{\$ 1 , 7 5 2 , 1 8 3 , 0 9 7}$ | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ |  |  |  |

Asset Allocation History


NEPC, LLC

OKLAHOMA POLICE
Total Fund Asset Growth Summary

3 Years Ending June 30, 2012


|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$1,807,136,109 | \$1,700,065,715 | \$1,798,147,531 |
| - Withdrawals | -\$84,071,060 | -\$367,544,913 | -\$458,485,175 |
| + Contributions | \$52,152,868 | \$328,997,625 | \$400,075,108 |
| = Net Cash Flow | -\$31,918,192 | -\$38,547,287 | -\$58,410,066 |
| + Net Investment Change | -\$23,034,819 | \$90,664,670 | \$12,445,633 |
| = Ending Market Value | \$1,752,183,097 | \$1,752,183,097 | \$1,752,183,097 |

NEPC, LLC

OKLAHOMA POLICE
Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Accel Europe | \$4,693,616 | -\$671,883 | \$0 | -\$671,883 | \$770,241 | \$4,791,974 |
| ACTIS EM IV | \$76,426 | -\$4,192 | \$98,824 | \$94,632 | \$0 | \$171,058 |
| Agincourt | \$160,579,687 | -\$74,581 | \$0 | -\$74,581 | \$3,134,697 | \$163,639,803 |
| Arsenal | \$3,290,937 | \$0 | \$0 | \$0 | \$0 | \$3,290,937 |
| Arsenal II | \$18,714,052 | -\$3,465,186 | \$242,789 | -\$3,222,397 | \$2,284,617 | \$17,776,272 |
| Arsenal III | \$0 | \$0 | \$1,883,451 | \$1,883,451 | \$0 | \$1,883,451 |
| Artio | \$1,785 | -\$599 | \$0 | -\$599 | \$2,340 | \$3,526 |
| Attalus | \$76,638,500 | \$0 | \$0 | \$0 | -\$2,373,297 | \$74,265,203 |
| Baring Focused Intl Equity | \$75,796,500 | \$0 | \$0 | \$0 | -\$5,617,078 | \$70,179,422 |
| BBT Overseas | \$709,117 | \$0 | \$0 | \$0 | \$0 | \$709,117 |
| Boston Partners | \$103,741,345 | -\$295,882 | \$0 | -\$295,882 | -\$3,632,169 | \$99,813,294 |
| Calera Capital | \$8,275,205 | -\$2,537,985 | \$101,479 | -\$2,436,506 | -\$22,555 | \$5,816,144 |
| Cash Account | \$10,818,000 | -\$41,315,900 | \$39,629,755 | -\$1,686,145 | -\$46,871 | \$9,084,984 |
| Columbus Square | \$3,754,362 | -\$27,083 | \$0 | -\$27,083 | \$131,679 | \$3,858,958 |
| Firstmark V | \$557,629 | \$0 | \$250,000 | \$250,000 | -\$62,539 | \$745,090 |
| Fremont III | \$5,246,436 | \$0 | \$60,217 | \$60,217 | -\$30,987 | \$5,275,666 |
| Grosvenor | \$173,667,650 | \$0 | \$0 | \$0 | -\$5,552,600 | \$168,115,050 |
| Hicks Muse Tate | \$970,458 | -\$62,559 | \$0 | -\$62,559 | \$51,228 | \$959,127 |
| HM Capital | \$10,197,197 | \$0 | \$194,566 | \$194,566 | \$409,043 | \$10,800,806 |
| JP Morgan | \$45,035,000 | \$0 | \$0 | \$0 | \$1,004,834 | \$46,039,834 |
| Knightsbridge | \$9,991,370 | \$0 | \$0 | \$0 | \$647,877 | \$10,639,247 |
| Levine IV | \$7,756,558 | -\$628,701 | \$665,663 | \$36,962 | \$0 | \$7,793,520 |
| Levine Leic III | \$5,308,434 | -\$290,284 | \$46,006 | -\$244,278 | \$764,983 | \$5,829,139 |
| Lexington VI | \$13,833,554 | -\$794,940 | \$160,273 | -\$634,667 | \$285,497 | \$13,484,384 |
| Lightspeed Wpg | \$3,587,740 | \$0 | \$0 | \$0 | \$121,511 | \$3,709,251 |

## OKLAHOMA POLICE

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Loomis Sayles | \$90,112,000 | \$0 | \$0 | \$0 | \$1,022,402 | \$91,134,402 |
| Marathon Fund | \$83,391 | \$0 | \$0 | \$0 | \$357 | \$83,748 |
| Marathon V | \$10,908,876 | -\$78,583 | \$0 | -\$78,583 | -\$22,346 | \$10,807,947 |
| Mellon Index Fund | \$317,187,595 | -\$25,000,004 | \$0 | -\$25,000,004 | -\$10,779,503 | \$281,408,088 |
| Mondrian Int'I Value | \$93,060,612 | -\$115,561 | \$115,561 | \$0 | -\$5,907,687 | \$87,152,925 |
| Mt Lucas Peak | \$23,592,000 | \$0 | \$0 | \$0 | -\$1,420,547 | \$22,171,453 |
| Newstone | \$2,523,917 | -\$247,205 | \$3,076 | -\$244,129 | \$196,663 | \$2,476,451 |
| Newstone Capital Partners II | \$2,818,123 | -\$485,380 | \$0 | -\$485,380 | \$150,233 | \$2,482,976 |
| Oaktree | \$113,105,000 | \$0 | \$0 | \$0 | \$632,576 | \$113,737,576 |
| Oaktree Opp II | \$882 | \$0 | \$0 | \$0 | \$294 | \$1,176 |
| Oaktree Opp III | \$72,241 | -\$3,893 | \$0 | -\$3,893 | \$1,387 | \$69,735 |
| Oaktree Opp IV | \$31,807 | \$0 | \$0 | \$0 | \$265 | \$32,072 |
| Oaktree Opportunities VIII | \$7,776,151 | \$0 | \$0 | \$0 | \$491,697 | \$8,267,848 |
| Oaktree V | \$593,858 | \$0 | \$0 | \$0 | \$7,418 | \$601,276 |
| Oaktree VI | \$2,548,986 | -\$641,689 | \$0 | -\$641,689 | \$75,231 | \$1,982,528 |
| Oaktree VII A | \$4,948,340 | -\$900,000 | \$0 | -\$900,000 | \$381,311 | \$4,429,651 |
| Oaktree VII B | \$4,710,128 | -\$607,495 | \$0 | -\$607,495 | \$471,449 | \$4,574,082 |
| Ok Invest | \$9,202,000 | -\$1,638,774 | \$5,101,371 | \$3,462,597 | \$68,466 | \$12,733,063 |
| PAAMCO | \$155,519,799 | \$0 | \$0 | \$0 | -\$1,209,677 | \$154,310,122 |
| Pequot II | \$31,998 | \$0 | \$0 | \$0 | -\$4,784 | \$27,214 |
| Pequot III | \$5,410,336 | \$0 | \$0 | \$0 | -\$561,815 | \$4,848,521 |
| Pequot IV | \$5,742,173 | \$0 | \$100,000 | \$100,000 | \$327,324 | \$6,169,497 |
| Siguler Guff | \$8,160,021 | -\$444,423 | \$0 | -\$444,423 | \$274,022 | \$7,989,620 |
| Siguler Guff Distressed RE | \$2,725,082 | \$0 | \$1,321,566 | \$1,321,566 | \$59,607 | \$4,106,255 |
| Siguler II | \$11,839,507 | -\$1,170,884 | \$0 | -\$1,170,884 | \$2,825,087 | \$13,493,710 |

## OKLAHOMA POLICE

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Siguler III | \$13,008,306 | -\$1,875 | \$0 | -\$1,875 | \$767,485 | \$13,773,916 |
| Sun Capital V | \$7,638,458 | \$0 | \$537,147 | \$537,147 | \$0 | \$8,175,605 |
| TCW Mezzanine | \$6,456,179 | -\$178,234 | \$299,547 | \$121,313 | \$558,512 | \$7,136,004 |
| TCW/Cres III | \$962,178 | -\$489,616 | \$0 | -\$489,616 | \$223,968 | \$696,530 |
| TCW/Cres IV | \$4,528,749 | -\$526,112 | \$0 | -\$526,112 | \$880,655 | \$4,883,292 |
| Thompson Street | \$8,396,248 | \$0 | \$18,812 | \$18,812 | \$532,414 | \$8,947,474 |
| Thompson Street Capital III | \$0 | \$0 | \$572,765 | \$572,765 | -\$33,670 | \$539,095 |
| Venture Lending | \$348,435 | \$0 | \$0 | \$0 | \$0 | \$348,435 |
| Vontobel Emerging Markets | \$50,302,500 | \$0 | \$0 | \$0 | -\$1,637,659 | \$48,664,841 |
| Warburg | \$14,152,359 | -\$165,468 | \$225,000 | \$59,532 | \$0 | \$14,211,891 |
| Weatherage II | \$1,536,649 | \$0 | \$300,000 | \$300,000 | \$0 | \$1,836,649 |
| Weathergage | \$5,367,405 | -\$156,712 | \$225,000 | \$68,288 | \$209,497 | \$5,645,190 |
| Weiss Peck V | \$803,663 | \$0 | \$0 | \$0 | \$0 | \$803,663 |
| William Blair Small/Mid Cap Growth | \$77,688,600 | \$0 | \$0 | \$0 | -\$4,935,281 | \$72,753,319 |
| Total | \$1,807,136,109 | -\$83,021,682 | \$52,152,868 | -\$30,868,815 | -\$24,084,197 | \$1,752,183,097 |

OKLAHOMA POLICE

## Total Fund Performance Detail

|  | Market Value |  | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | $\begin{gathered} 7 \text { Yrs } \\ \text { (\%) } \end{gathered}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK POLICE | 1,752,185,842 | 100.0 | -1.2 | 22 | 5.4 | 62 | 0.8 | 64 | 9.9 | 84 | 1.6 | 69 | 5.1 | 53 |
| POLICE Allocation Index |  |  | -2.2 | 76 | 7.1 | 1 | 2.2 | 31 | 13.0 | 12 | 1.9 | 54 | 5.1 | 48 |
| Over/Under |  |  | 1.0 |  | -1.7 |  | -1.4 |  | -3.1 |  | -0.3 |  | 0.0 |  |
| POLICE Policy Index |  |  | -1.7 | 42 | 6.7 | 7 | 3.8 | 4 | 12.8 | 17 | 2.0 | 48 | 4.7 | 72 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Equity Composite |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Domestic Equity Composite | 453,977,446 | 25.9 | -3.7 | 39 | 8.9 | 41 | 2.3 | 38 | 17.2 | 49 | 0.2 | 69 | 4.1 | 76 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -0.9 |  | -0.6 |  | -3.1 |  | 0.8 |  | 0.0 |  | 0.0 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Mellon Index Fund | 281,408,088 | 16.1 | -3.1 | 29 | 9.4 | 32 | 4.4 | 32 | 16.7 | 15 | 0.4 | 52 | 4.4 | 46 |
| Russell 1000 |  |  | -3.1 | 30 | 9.4 | 33 | 4.4 | 32 | 16.6 | 16 | 0.4 | 54 | 4.3 | 49 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | 0.0 |  | 0.1 |  | 0.0 |  | 0.1 |  |
| eA US Large Cap Core Equity Net Median |  |  | -4.2 |  | 8.6 |  | 2.9 |  | 14.8 |  | 0.5 |  | 4.2 |  |
| Boston Partners | 99,813,294 | 5.7 | -3.5 | 29 | 9.9 | 6 | 0.7 | 19 | 18.4 | 46 | 1.9 | 37 | 6.0 | 46 |
| Russell 2500 Value |  |  | -3.0 | 22 | 8.1 | 17 | -1.5 | 39 | 18.8 | 40 | -0.2 | 78 | 4.0 | 91 |
| Over/Under |  |  | -0.5 |  | 1.8 |  | 2.2 |  | -0.4 |  | 2.1 |  | 2.0 |  |
| eA US Small-Mid Cap Value Equity Gross Median |  |  | -4.8 |  | 6.0 |  | -2.9 |  | 18.1 |  | 1.4 |  | 5.8 |  |
| William Blair Small/Mid Cap Growth | 72,753,319 | 4.2 | -6.2 | 70 | 5.7 | 85 | -5.0 | 62 | -- | -- | -- | -- | -- | -- |
| Russell 2000 Growth |  |  | -3.9 | 33 | 8.8 | 45 | -2.7 | 42 | 18.1 | 69 | 2.0 | 55 | 5.7 | 63 |
| Over/Under |  |  | -2.3 |  | -3.1 |  | -2.3 |  |  |  |  |  |  |  |
| eA US Small Cap Growth Equity Gross Median |  |  | -4.9 |  | 8.5 |  | -3.5 |  | 19.6 |  | 2.3 |  | 6.6 |  |
| International Equity Composite | 206,000,714 | 11.8 | -5.9 | 25 | 1.9 | 90 | -14.1 | 69 | 5.4 | 90 | -6.3 | 92 | 3.0 | 87 |
| Mondrian Int'I Value | 87,152,925 | 5.0 | -6.3 | 45 | -0.2 | 94 | -10.9 | 40 | 6.6 | 72 | -4.7 | 75 | 3.5 | 71 |
| MSCI ACWI ex USA |  |  | -7.6 | 50 | $\underline{2.8}$ | 62 | -14.6 | 78 | 7.0 | 69 | -4.6 | 69 | 3.9 | 64 |
| Over/Under |  |  | 1.3 |  | -3.0 |  | 3.7 |  | -0.4 |  | -0.1 |  | -0.4 |  |
| eA ACWI ex-US Value Equity Gross Median |  |  | -7.6 |  | 4.3 |  | -11.9 |  | 8.0 |  | -4.2 |  | 4.2 |  |
| Baring Focused Intl Equity | 70,179,422 | 4.0 | -7.3 | 56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.3 |  |  |  |  |  |  |  |  |  |  |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Vontobel Emerging Markets | 48,664,841 | 2.8 | -3.0 | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI Emerging Markets |  |  | -8.9 | 55 | 3.9 | 63 | -15.9 | 59 | 9.8 | 64 | -0.1 | 56 | 10.1 | 64 |
| Over/Under |  |  | 5.9 |  |  |  |  |  |  |  |  |  |  |  |
| eA Emg Mkts Equity Gross Median |  |  | -8.5 |  | 4.8 |  | -15.5 |  | 11.2 |  | 0.3 |  | 10.9 |  |

NEPC, LLC

## OKLAHOMA POLICE

## Total Fund Performance Detail

|  | Market Value (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | $\begin{gathered} \text { YTD } \\ \text { (\%) } \end{gathered}$ | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fixed Income Composite | 368,511,781 | 21.0 | 1.3 | 35 | 4.2 | 38 | 5.8 | 33 | 10.6 | 27 | 6.8 | 59 | 6.1 | 55 |
| eA All Global Fixed Inc Gross Median |  |  | 1.0 |  | 3.2 |  | 4.2 |  | 8.2 |  | 7.4 |  | 6.2 |  |
| Oaktree | 113,737,576 | 6.5 | 0.6 | 83 | 6.3 | 13 | 5.1 | 73 | 13.6 | 19 | 6.8 | 53 | 9.0 | 5 |
| Barclays Aggregate |  |  | 2.1 | 38 | $\underline{2.4}$ | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | -1.5 |  | 3.9 |  | -2.4 |  | 6.7 |  | 0.0 |  | 3.4 |  |
| Agincourt | 163,639,803 | 9.3 | 2.0 | 42 | 3.3 | 49 | 7.8 | 39 | 8.7 | 42 | 7.0 | 49 | 5.9 | 49 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | -0.1 |  | 0.9 |  | 0.3 |  | 1.8 |  | 0.2 |  | 0.3 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Loomis Sayles | 91,134,402 | 5.2 | 1.2 | 40 | 3.4 | 49 | 3.0 | 61 | 8.9 | 40 | -- | -- | -- | -- |
| Citigroup WGBI |  |  | 0.9 | 53 | 0.4 | 97 | 2.7 | 67 | 5.4 | 92 | 7.3 | 51 | 5.5 | 73 |
| Over/Under |  |  | 0.3 |  | 3.0 |  | 0.3 |  | 3.5 |  |  |  |  |  |
| eA All Global Fixed Inc Gross Median |  |  | 1.0 |  | 3.2 |  | 4.2 |  | 8.2 |  | 7.4 |  | 6.2 |  |
| Total Long/Short | 242,380,253 | 13.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Attalus | 74,265,203 | 4.2 | -3.1 | 51 | 3.3 | 50 | -3.8 | 53 | 1.5 | 78 | -0.9 | 76 | -- | -- |
| HFRI FOF: Strategic Index |  |  | -3.1 | 51 | 1.2 | 66 | -5.8 | 60 | 2.2 | 73 | -2.7 | 82 | 2.1 | 85 |
| Over/Under |  |  | 0.0 |  | 2.1 |  | 2.0 |  | -0.7 |  | 1.8 |  |  |  |
| Grosvenor | 168,115,050 | 9.6 | -3.0 | 50 | 3.4 | 49 | -2.3 | 46 | 4.7 | 61 | -0.8 | 74 | 2.7 | 80 |
| HFRI FOF: Strategic Index |  |  | -3.1 | 51 | 1.2 | 66 | -5.8 | 60 | 2.2 | 73 | -2.7 | 82 | 2.1 | 85 |
| Over/Under |  |  | 0.1 |  | 2.2 |  | 3.5 |  | 2.5 |  | 1.9 |  | 0.6 |  |
| eA\|HFN Long/Short Equity Net Median |  |  | -3.0 |  | 3.2 |  | -3.2 |  | 6.3 |  | 2.3 |  | 5.9 |  |

NEPC, LLC

## OKLAHOMA POLICE

## Total Fund Performance Detail

|  | Market Value (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Real Assets | 76,176,500 | 4.3 |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Core Real Estate | 49,898,792 | 2.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Columbus Square | 3,858,958 | 0.2 | 4.0 | -- | 7.8 | -- | 15.6 | -- | 17.0 | -- | 14.5 | -- | 14.1 | -- |
| NCREIF ODCE |  |  | 2.5 | -- | $\underline{5.4}$ | -- | 12.4 | -- | 8.4 | -- | -0.9 | -- | 4.3 | -- |
| Over/Under |  |  | 1.5 |  | 2.4 |  | 3.2 |  | 8.6 |  | 15.4 |  | 9.8 |  |
| JP Morgan | 46,039,834 | 2.6 | 2.5 | -- | 5.3 | -- | 12.0 | -- | 7.9 | -- | -- | -- | -- | -- |
| NCREIF ODCE |  |  | 2.5 | -- | 5.4 | -- | 12.4 | -- | 8.4 | -- | -0.9 | -- | 4.3 | -- |
| Over/Under |  |  | 0.0 |  | -0.1 |  | -0.4 |  | -0.5 |  |  |  |  |  |
| Siguler Guff Distressed RE | 4,106,255 | 0.2 | 1.8 | -- | 3.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mt Lucas Peak | 22,171,453 | 1.3 | -5.8 | -- | 3.5 | -- | -11.9 | -- | -7.9 | -- | 1.6 | -- | 6.0 | -- |
| Total Low Volatility Strategies | 154,310,122 | 8.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| PAAMCO | 154,310,122 | 8.8 | -0.8 | 19 | 1.8 | 43 | -3.0 | 45 | 4.9 | 37 | 1.1 | 43 | 4.0 | 49 |
| HFRI FOF: Conservative Index |  |  | -1.4 | 30 | 1.1 | 55 | -2.8 | 44 | 2.4 | 70 | -1.9 | 84 | 1.4 | 93 |
| Over/Under |  |  | 0.6 |  | 0.7 |  | -0.2 |  | 2.5 |  | 3.0 |  | 2.6 |  |
| eA\|HFN FOF - Single Strategy Net Median |  |  | -2.2 |  | 1.3 |  | -3.6 |  | 4.0 |  | 0.5 |  | 3.8 |  |

OKLAHOMA POLICE

## Total Fund Return Summary vs. Peer Universe

OK POLICE vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - OK POLICE | -1.2 | (22) | 5.4 | (62) | 0.8 | (64) | 9.3 | (85) | 9.9 | (84) | 1.6 | (69) | 5.1 | (53) |
| $\pm$ POLICE Allocation Index | -2.2 | (76) | 7.1 | (1) | 2.2 | (31) | 12.6 | (8) | 13.0 | (12) | 1.9 | (54) | 5.1 | (48) |
| $\times$ POLICE Policy Index | -1.7 | (42) | 6.7 | (7) | 3.8 | (4) | 13.0 | (5) | 12.8 | (17) | 2.0 | (48) | 4.7 | (72) |

OKLAHOMA POLICE

## Total Fund Return Summary vs. Peer Universe

OK POLICE vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK POLICE | 0.0 | (78) | 11.2 | (86) | 17.3 | (63) | -23.1 | (28) | 9.9 | (18) |
| - POLICE Allocation Index | 0.1 | (78) | 13.8 | (34) | 26.8 | (7) | -29.5 | (90) | 7.9 | (53) |
| $\times$ POLICE Policy Index | 2.5 | (16) | 13.5 | (41) | 19.6 | (48) | -26.2 | (62) | 6.3 | (84) |

OKLAHOMA POLICE
Total Fund Risk Statistics vs. Peer Universe

## OK POLICE vs. ICC Public DB 3 Years

Anlzd Return


- OK POLICE

| OK POLICE |  | - OK POLICE |  |
| :---: | :---: | :---: | :---: |
| Value | 9.91 | Value | 8.51 |
| \%tile | 84 | \%tile | 82 |
| 4 POLICE Allocation Index |  | - POLICE Allocation Index |  |
| Value | 12.95 | Value | 12.30 |
| \% tile | 12 | \%tile | 94 |
| $\times$ POLICE Polic |  | $\times$ POLICE Policy Index |  |
| Value | 12.83 | Value | 11.08 |
| \%tile | 17 | \%tile | 78 |
| Universe |  | Universe |  |
| 5th \%tile | 13.56 | 5th \%tile | 6.77 |
| 25th \%tile | 12.38 | 25th \%tile | 8.90 |
| Median | 11.51 | Median | 9.76 |
| 75th \%tile | 10.38 | 75th \%tile | 10.90 |
| 95th \%tile | 9.11 | 95th \%tile | 12.47 |

Anlzd Alpha


- OK POLICE
$\begin{array}{lr}\text { Value } & 1.07 \\ \text { \%tile } & 43\end{array}$
- POLICE Allocation Index Value 0.00
$\times$ \%tile
$\begin{array}{ll}\times \text { POLICE Policy Index } \\ \text { Value } \\ & 1.26\end{array}$
\%tile 35

| Universe |  |
| :--- | ---: |
| 5th \%tile | 3.23 |
| 25th \%tile | 1.70 |
| Median | 0.81 |
| 75th \%tile | -0.07 |
| 95th \%tile | -1.25 |

Sharpe Ratio


| - OK POLICE |  | - OK POLICE |  |
| :---: | :---: | :---: | :---: |
| Value | 1.15 | Value | 1.91 |
| \%tile | 51 | \%tile | 60 |
| ^ POLICE Allo | ndex | $\triangle$ POLICE Allo | ndex |
| Value | 1.05 | Value | 1.95 |
| \%tile | 78 | \%tile | 52 |
| $\times$ POLICE Policy |  | $\times$ POLICE Policy |  |
| Value | 1.15 | Value | 2.06 |
| \%tile | 52 | \%tile | 37 |
| Universe |  | Universe |  |
| 5th \%tile | 1.50 | 5th \%tile | 2.83 |
| 25th \%tile | 1.25 | 25th \%tile | 2.20 |
| Median | 1.16 | Median | 1.96 |
| 75th \%tile | 1.07 | 75th \%tile | 1.79 |
| 95th \%tile | 0.97 | 95th \%tile | 1.60 |

Sortino Ratio RF


95th \%tile $\quad 1.60$

## OKLAHOMA POLICE

## Total Fund Risk Statistics vs. Peer Universe

Anlzd Return
Anlzd Standard Deviation


- OK POLICE

Value \%tile

17

Sharpe Ratio


- OK POLICE

Value 0.08
\%tile
61

- POLICE Allocation Index

Value 0.08
\%tile
61
x POLICE Policy Index
Value 0.10
\%tile

| Universe |  |
| :--- | ---: |
| 5th \%tile | 0.55 |
| 25th \%tile | 0.16 |
| Median | 0.10 |
| 75th \%tile | 0.04 |
| 95th \%tile | -0.04 |

Sortino Ratio RF


- OK POLICE
$\square$
\%alue
0.10
61
- POLICE Allocation 6

Value $\quad 0.11$
$\times$ \%tile
$\times$ POLICE Policy Index
Value 0.13
\%tile 48

Universe
5th \%tile 0.75
25th \%tile 0.21
Median
75 th \%
5th \% \%tile
95th \%tile
0.11
58
0.13

POLICE Allocation Index
Value 14.72
\%tile 93
$\times$ POLICE Policy Index
Value 13.52
\%tile

| Universe | Universe |  |  |  | Universe |
| :--- | ---: | :--- | ---: | :--- | ---: |
| 5th \%tile | 4.80 | 5th \%tile | 7.59 | 5th \%tile | 3.78 |
| 25th \%tile | 2.78 | 25th \%tile | 10.89 | 25th \%tile | 0.83 |
| Median | 1.99 | Median | 12.25 | Median | 0.04 |
| 75th \%tile | 1.17 | 75th \%tile | 13.54 | 75 th \%tile | -0.70 |
| 95th \%tile | 0.20 | 95th \% \%tile | 15.01 | 95th \%tile | -1.76 |

OKLAHOMA POLICE

## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
\# of Portfolios

- OK POLICE

| Allocation (Rank) |
| ---: |
| 52.3 |
| 50.8 |
| 44.4 |
| 34.2 |
| 16.2 |
| 22 |
| 25.9 |


| (Rank) |  |
| ---: | ---: |
| 52.3 | 17.7 |
| 50.8 | 12.0 |
| 44.4 | 9.1 |
| 34.2 | 5.5 |
| 16.2 | 4.3 |
| 22 | 18 |
| 259 | $(81)$ |

## OKLAHOMA POLICE

## Total Fund Attribution Analysis



|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Asset <br> Allocation Effect | Interaction Effects | Total <br> Effects |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual Return | Target Return | Relative Return | Selection Effect |  |  |  |
| Domestic Equity Composite | -3.7\% | -2.8\% | -0.9\% | -0.2\% | -0.1\% | -0.1\% | -0.3\% |
| International Equity Composite | -5.9\% | -7.6\% | 1.7\% | 0.3\% | 0.1\% | -0.1\% | 0.3\% |
| Fixed Income Composite | 1.3\% | 2.1\% | -0.7\% | -0.1\% | 0.2\% | 0.0\% | 0.0\% |
| Total Long/Short | -3.0\% | -3.1\% | 0.1\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| Total Real Assets | -0.1\% | 2.5\% | -2.6\% | -0.4\% | -0.4\% | 0.3\% | -0.5\% |
| Total Low Volatility Strategies | -0.8\% | -1.4\% | 0.6\% | 0.1\% | 0.0\% | 0.0\% | 0.0\% |
| Private Equity | 5.9\% | 0.0\% | 5.9\% | 0.6\% | 0.0\% | 0.2\% | 0.8\% |
| Cash | 0.1\% | 0.0\% | 0.1\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| Total | -1.2\% | -1.6\% | 0.4\% | 0.2\% | -0.2\% | 0.2\% | 0.3\% |

## Total Fund Attribution Analysis

Performance Attribution

|  | Last 3 Mo . | YTD | 1 Yr |
| :---: | :---: | :---: | :---: |
| OK POLICE Return | -1.2\% | 5.4\% | 0.8\% |
| Policy Benchmark ** | -1.6\% | 4.5\% | 1.3\% |
| Excess Return | 0.4\% | 0.9\% | -0.5\% |
| Selection Effect | 0.2\% | 0.6\% | -1.4\% |
| Asset Allocation Effect | -0.2\% | 0.1\% | 0.2\% |
| Interaction Effect | 0.2\% | 0.3\% | 0.8\% |
| Asset Class Returns |  |  |  |
| OK POLICE | -1.2\% | 5.4\% | 0.8\% |
| Equity Composite | -4.2\% | 5.7\% | -2.6\% |
| Domestic Equity Composite | -3.7\% | 8.9\% | 2.3\% |
| International Equity Composite | -5.9\% | 1.9\% | -14.1\% |
| Fixed Income Composite | 1.3\% | 4.2\% | 5.8\% |
| Total Long/Short | -3.0\% | 3.3\% | -2.7\% |
| Total Real Assets | -0.1\% | 4.8\% | 3.4\% |
| Total Core Real Estate | 2.6\% | 5.5\% | 12.3\% |
| Total Low Volatility Strategies | -0.8\% | 1.8\% | -3.0\% |
| Private Equity | 5.9\% | 8.7\% | 9.6\% |
| Cash | 0.1\% | 0.9\% | 1.7\% |

**Calculated from benchmark returns and weightings of each component.


## OKLAHOMA LAW

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK LAW | \$702,059,533 | -1.9\% | 56 | 5.5\% | 60 | 1.9\% | 35 | 12.1\% | 29 | 1.7\% | 61 | 4.5\% | 74 |
| LAW Allocation Index |  | -1.8\% | 51 | 6.1\% | 24 | 3.5\% | 7 | 12.0\% | 33 | 2.4\% | 37 | 5.2\% | 47 |
| LAW Policy Index |  | -1.4\% | 25 | 5.7\% | 48 | 2.8\% | 20 | 11.3\% | 56 | 2.3\% | 42 | 5.1\% | 48 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


NEPC, LLC

## OKLAHOMA LAW

## Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


3 Years Ending June 30, 2012

|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| :--- | :---: | :---: | :---: | :---: |
| OK LAW | $12.12 \%$ | 29 | $9.80 \%$ | 51 |
| LAW Allocation Index | $12.04 \%$ | 33 | $10.46 \%$ | 66 |
| LAW Policy Index | $11.30 \%$ | 56 | $9.68 \%$ | 47 |

3 Years Ending June 30, 2012

|  | 3 Cars <br>  <br>  <br>  <br> Sharpe Ratio | Rank | Sortino Ratio | Rank |
| :--- | :---: | :---: | :---: | :---: |
| OK LAW | 1.23 | 28 | 2.17 | 18 |
| LAW Allocation Index | 1.14 | 55 | 2.08 | 25 |
| LAW Policy Index | 1.16 | 48 | 2.09 | 25 |

- OK LAW
- LAW Allocation Index
- LAW Policy Index
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

OKLAHOMA LAW
Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK LAW | 1.75\% | 61 | 11.38\% | 35 |
| LAW Allocation Index | 2.40\% | 37 | 12.36\% | 53 |
| LAW Policy Index | 2.26\% | 42 | 11.73\% | 42 |
| 5 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK LAW | 0.09 | 56 | 0.13 | 52 |
| LAW Allocation Index | 0.14 | 36 | 0.19 | 32 |
| LAW Policy Index | 0.13 | 36 | 0.18 | 35 |

- OK LAW
- LAW Allocation Index
- LAW Policy Index
- Universe Median
- $68 \%$ Confidence Interval
- ICC Public DB


## Total Fund Asset Allocation vs. Policy Targets

## Asset Allocation vs. Target


$\square$ Large Cap Equity
$\square$ Small/Mid Cap Equity
$\square$ Non-US Equity
$\square$ Domestic Fixed Income
$\square$ Global Bonds
$\square$ Cash
$\square$ Long/Short
$\square$ Rrivate Equity
$\square$ Real Estate
$\square$ Total

| Current | Policy | CurrentDifference <br> $*$ | Policy Range | Within <br> Range |  |
| ---: | ---: | ---: | ---: | ---: | :---: |
| $\$ 192,399,006$ | $20.0 \%$ | $27.4 \%$ | $7.4 \%$ | $15.0 \%-25.0 \%$ | No |
| $\$ 55,540,563$ | $10.0 \%$ | $7.9 \%$ | $-2.1 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 85,245,111$ | $15.0 \%$ | $12.1 \%$ | $-2.9 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 132,506,200$ | $20.0 \%$ | $18.9 \%$ | $-1.1 \%$ | $15.0 \%-25.0 \%$ | Yes |
| $\$ 88,881,994$ | $10.0 \%$ | $12.7 \%$ | $2.7 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 35,786,373$ | $0.0 \%$ | $5.1 \%$ | $5.1 \%$ | $0.0 \%-5.0 \%$ | No |
| $\$ 68,555,433$ | $10.0 \%$ | $9.8 \%$ | $-0.2 \%$ | $5.0 \%-15.0 \%$ | Yes |
| $\$ 24,396,163$ | $5.0 \%$ | $3.5 \%$ | $-1.5 \%$ | $0.0 \%-5.0 \%$ | Yes |
| $\$ 18,748,690$ | $10.0 \%$ | $2.7 \%$ | $-7.3 \%$ | $2.0 \%-12.0 \%$ | Yes |
| $\$ 702,059,533$ | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ |  |  |  |
|  |  |  |  |  |  |

*Difference between Policy and Current Allocation

## Asset Allocation History



NEPC, LLC

OKLAHOMA LAW
Total Fund Asset Growth Summary

3 Years Ending June 30, 2012


|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$720,657,141 | \$674,634,191 | \$708,725,602 |
| - Withdrawals | -\$83,336,538 | -\$116,841,076 | -\$131,832,877 |
| + Contributions | \$78,790,837 | \$107,440,672 | \$112,400,117 |
| = Net Cash Flow | -\$4,545,701 | -\$9,400,404 | -\$19,432,760 |
| + Net Investment Change | -\$14,051,907 | \$36,825,746 | \$12,766,691 |
| = Ending Market Value | \$702,059,533 | \$702,059,533 | \$702,059,533 |

NEPC, LLC

## OKLAHOMA LAW

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| American Private Equity II, LP | \$7,180,617 | \$0 | \$0 | \$0 | \$541,896 | \$7,722,513 |
| American Private Equity LP | \$2,598,558 | \$0 | \$0 | \$0 | \$104,303 | \$2,702,861 |
| Baring Focused International Equity | \$29,575,289 | \$0 | \$0 | \$0 | -\$2,212,904 | \$27,362,385 |
| Colcord Center | \$3,372,053 | \$0 | \$5,069 | \$5,069 | \$8 | \$3,377,130 |
| Columbus Circle | \$57,143,957 | -\$1,289 | \$0 | -\$1,289 | -\$3,012,010 | \$54,130,658 |
| Grosvenor | \$70,929,699 | \$0 | \$0 | \$0 | -\$2,374,266 | \$68,555,433 |
| Hotchkis Wiley | \$61,422,479 | -\$414,444 | \$0 | -\$414,444 | -\$2,675,882 | \$58,332,153 |
| Inhouse Cash | \$422,388 | -\$56,785 | \$35,368,842 | \$35,312,057 | \$51,928 | \$35,786,373 |
| JPMCB Strategic Property Fund | \$0 | \$0 | \$15,000,000 | \$15,000,000 | \$371,560 | \$15,371,560 |
| Kennedy Capital | \$58,220,918 | \$0 | \$0 | \$0 | -\$2,680,355 | \$55,540,563 |
| Knightsbridge VI, LP | \$8,823,579 | \$0 | \$114,444 | \$114,444 | \$886,494 | \$9,824,517 |
| Knightsbridge VII, LP | \$3,749,785 | \$0 | \$300,000 | \$300,000 | \$96,487 | \$4,146,272 |
| Mondrian International Equity | \$33,024,369 | \$0 | \$0 | \$0 | -\$2,151,615 | \$30,872,754 |
| NTGI Bond | \$89,769,787 | -\$2,775,000 | \$0 | -\$2,775,000 | \$1,887,207 | \$88,881,994 |
| NTGI S\&P | \$62,284,711 | -\$44,150,000 | \$0 | -\$44,150,000 | -\$515,617 | \$17,619,094 |
| RREEF | \$35,848,856 | -\$35,848,958 | \$0 | -\$35,848,958 | \$102 | -- |
| TCW | \$129,842,351 | \$0 | \$2,482 | \$2,482 | \$2,661,367 | \$132,506,200 |
| Vontobel Global EM | \$0 | \$0 | \$28,000,000 | \$28,000,000 | -\$990,028 | \$27,009,972 |
| Waddell And Reed | \$66,447,745 | \$0 | \$0 | \$0 | -\$4,130,644 | \$62,317,101 |
| Total | \$720,657,141 | -\$83,246,476 | \$78,790,837 | -\$4,455,639 | -\$14,141,969 | \$702,059,533 |

## OKLAHOMA LAW

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs <br> (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK LAW | 702,059,533 | 100.0 | -1.9 | 56 | 5.5 | 60 | 1.9 | 35 | 12.1 | 29 | 1.7 | 61 | 4.5 | 74 |
| LAW Allocation Index |  |  | -1.8 | 51 | 6.1 | 24 | 3.5 | 7 | 12.0 | 33 | 2.4 | 37 | 5.2 | 47 |
| Over/Under |  |  | -0.1 |  | -0.6 |  | -1.6 |  | 0.1 |  | -0.7 |  | -0.7 |  |
| LAW Policy Index |  |  | -1.4 | 25 | 5.7 | 48 | 2.8 | 20 | 11.3 | 56 | 2.3 | 42 | 5.1 | 48 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Domestic Equity Composite | 247,939,569 | 35.3 | -4.9 | 62 | 7.9 | 56 | 1.3 | 45 | 18.6 | 32 | -0.3 | 76 | 3.4 | 87 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -2.1 |  | -1.6 |  | -4.1 |  | 2.2 |  | -0.5 |  | -0.7 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Hotchkis Wiley | 58,332,153 | 8.3 | -4.4 | 66 | 9.8 | 13 | 2.5 | 42 | 17.1 | 19 | -3.9 | 93 | 0.5 | 97 |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2.2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -2.2 |  | 1.1 |  | -0.5 |  | 1.3 |  | -1.7 |  | -2.4 |  |
| eA US Large Cap Value Equity Gross Median |  |  | -3.6 |  | 7.4 |  | 1.9 |  | 15.0 |  | -0.6 |  | 4.2 |  |
| Kennedy Capital | 55,540,563 | 7.9 | -4.6 | 58 | 6.7 | 58 | 0.4 | 23 | 21.5 | 18 | 3.4 | 17 | 7.5 | 24 |
| Russell 2000 Value |  |  | -3.0 | 24 | 8.2 | 33 | -1.4 | 41 | 17.4 | 70 | -1.0 | 89 | 3.4 | 89 |
| Over/Under |  |  | -1.6 |  | -1.5 |  | 1.8 |  | 4.1 |  | 4.4 |  | 4.1 |  |
| eA US Small Cap Value Equity Gross Median |  |  | -4.4 |  | 7.1 |  | -2.0 |  | 18.5 |  | 1.3 |  | 6.1 |  |
| NTGI S\&P | 17,619,094 | 2.5 | -2.8 | 28 | 9.5 | 32 | 5.2 | 30 | 16.3 | 30 | -- | -- | -- | -- |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | -0.2 |  | -0.1 |  |  |  |  |  |
| eA US Large Cap Core Equity Gross Median |  |  | -3.9 |  | 8.7 |  | 3.4 |  | 15.4 |  | 1.0 |  | 4.8 |  |
| Columbus Circle | 54,130,658 | 7.7 | -5.3 | 49 | 8.1 | 70 | -4.2 | 92 | -- | -- | -- | -- | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | 5.5 | 45 |
| Over/Under |  |  | -1.3 |  | -2.0 |  | -10.0 |  |  |  |  |  |  |  |
| eA US Large Cap Growth Equity Gross Median |  |  | -5.3 |  | 9.7 |  | 3.1 |  | 16.0 |  | 2.5 |  | 5.3 |  |
| Waddell And Reed | 62,317,101 | 8.9 | -6.2 | 73 | 7.0 | 83 | 3.5 | 44 | -- | -- | -- | -- | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | 5.5 | 45 |
| Over/Under |  |  | -2.2 |  | -3.1 |  | -2.3 |  |  |  |  |  |  |  |

## OKLAHOMA LAW

## Total Fund Performance Detail

|  | Market Value <br> (\$) |  | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs <br> (\%) | Rank | 5 Yrs <br> (\%) | Rank | $\begin{array}{r} 7 \text { Yrs } \\ \text { (\%) } \end{array}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| International Equity Composite | 85,245,111 | 12.1 | -6.4 | 39 | 1.2 | 94 | -14.9 | 77 | 5.1 | 91 | -6.5 | 93 | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 1.2 |  | -1.6 |  | -0.3 |  | -1.9 |  | -1.9 |  |  |  |
| Mondrian International Equity | 30,872,754 | 4.4 | -6.4 | 39 | -0.2 | 98 | -10.9 | 36 | 6.6 | 82 | -4.7 | 78 | 3.5 | 81 |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 1.2 |  | -3.0 |  | 3.7 |  | -0.4 |  | -0.1 |  | -0.4 |  |
| Baring Focused International Equity | 27,362,385 | 3.9 | -7.4 | 56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.2 |  |  |  |  |  |  |  |  |  |  |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| Vontobel Global EM | 27,009,972 | 3.8 | -3.5 | 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MSCI Emerging Markets |  |  | -8.9 | 55 | 3.9 | 63 | -15.9 | 59 | 9.8 | 64 | -0.1 | 56 | 10.1 | 64 |
| Over/Under |  |  | 5.4 |  |  |  |  |  |  |  |  |  |  |  |
| eA Emg Mkts Equity Gross Median |  |  | -8.5 |  | 4.8 |  | -15.5 |  | 11.2 |  | 0.3 |  | 10.9 |  |
| Fixed Income Composite | 221,388,194 | 31.5 | 2.1 | 37 | 4.3 | 32 | 7.8 | 38 | 8.7 | 42 | 7.8 | 28 | 6.3 | 34 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | 0.0 |  | 1.9 |  | 0.3 |  | 1.8 |  | 1.0 |  | 0.7 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| TCW | 132,506,200 | 18.9 | 2.0 | 66 | 5.7 | 1 | 7.8 | 60 | 10.3 | 8 | 9.0 | 1 | 7.2 | 2 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | -0.1 |  | 3.3 |  | 0.3 |  | 3.4 |  | 2.2 |  | 1.6 |  |
| NTGI Bond | 88,881,994 | 12.7 | 2.1 | 9 | 2.4 | 60 | 7.6 | 20 | 7.1 | 69 | 6.7 | 61 | 5.5 | 73 |
| Barclays Aggregate |  |  | 2.1 | 9 | 2.4 | 60 | 7.5 | 21 | 6.9 | 73 | 6.8 | 59 | 5.6 | 73 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | 0.1 |  | 0.2 |  | -0.1 |  | -0.1 |  |
| eA All Global Fixed Inc Gross Median |  |  | 1.0 |  | 3.2 |  | 4.2 |  | 8.2 |  | 7.4 |  | 6.2 |  |

NEPC, LLC

OKLAHOMA LAW

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | 1 Yr <br> (\%) | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | 7 Yrs <br> (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Real Estate Composite | 18,748,690 | 2.7 |  |  |  |  |  |  |  |  |  |  |  |  |
| Colcord Center | 3,377,130 | 0.5 | 0.0 | -- | 0.0 | -- | 3.1 | -- | 0.5 | -- | -- | -- | -- | -- |
| NCREIF Property Index |  |  | 2.7 | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -2.7 |  | -5.3 |  | -8.9 |  | -8.3 |  |  |  |  |  |
| JPMCB Strategic Property Fund | 15,371,560 | 2.2 | 2.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NCREIF Property Index |  |  | 2.7 | -- | 5.3 | -- | 12.0 | -- | 8.8 | -- | 2.5 | -- | 6.7 | -- |
| Over/Under |  |  | -0.2 |  |  |  |  |  |  |  |  |  |  |  |
| Private Equity Composite | 24,396,163 | 3.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| American Private Equity II, LP | 7,722,513 | 1.1 | 7.5 | -- | 8.2 | -- | 14.0 | -- | 8.2 | -- | 7.0 | -- | -- | -- |
| American Private Equity LP | 2,702,861 | 0.4 | 4.0 | -- | 1.4 | -- | -4.3 | -- | -1.7 | -- | 0.5 | -- | 3.0 | -- |
| Knightsbridge VI, LP | 9,824,517 | 1.4 | 9.9 | -- | 9.9 | -- | 12.2 | -- | 17.2 | -- | 4.5 | -- | 4.5 | -- |
| Knightsbridge VII, LP | 4,146,272 | 0.6 | 2.4 | -- | 2.4 | -- | 10.5 | -- | 3.6 | -- | -- | -- | -- | -- |
| Hedge Funds Composite | 68,555,433 | 9.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Grosvenor | 68,555,433 | 9.8 | -3.3 | 54 | 2.5 | 56 | -4.4 | 56 | 3.9 | 65 | -- | -- | -- | -- |
| eA\|HFN Long/Short Equity Net Median |  |  | -3.0 |  | 3.2 |  | -3.2 |  | 6.3 |  | 2.3 |  | 5.9 |  |

OKLAHOMA LAW

## Total Fund Return Summary vs. Peer Universe

OK LAW vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - OK LAW | -1.9 | (56) | 5.5 | (60) | 1.9 | (35) | 11.4 | (36) | 12.1 | (29) | 1.7 | (61) | 4.5 | (74) |
| - LAW Allocation Index | -1.8 | (51) | 6.1 | (24) | 3.5 | (7) | 12.0 | (16) | 12.0 | (33) | 2.4 | (37) | 5.2 | (47) |
| $\times$ LAW Policy Index | -1.4 | (25) | 5.7 | (48) | 2.8 | (20) | 11.2 | (43) | 11.3 | (56) | 2.3 | (42) | 5.1 | (48) |

## Total Fund Return Summary vs. Peer Universe

OK LAW vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK LAW | 1.9 | (37) | 15.1 | (10) | 16.7 | (68) | -23.8 | (37) | 5.7 | (90) |
| - LAW Allocation Index | 2.2 | (26) | 13.1 | (51) | 18.4 | (59) | -23.3 | (30) | 6.8 | (74) |
| $\times$ LAW Policy Index | 1.9 | (37) | 13.0 | (52) | 16.2 | (72) | -21.4 | (22) | 6.2 | (85) |

## Total Fund Risk Statistics vs. Peer Universe

## OK LAW vs. ICC Public DB

3 Years
Anlzd Return Anlzd Standard Deviation

Anlzd Alpha
Sharpe Ratio

## Sortino Ratio RF

Tracking Error





| OK LAW |  |
| :--- | ---: |
| Value | 12.12 |
| \%tile | 29 |
| ■ LAW Allocation Index |  |
| Value | 12.04 |
| \%tile | 33 |
| $\times$ LAW Policy Index |  |
| Value | 11.30 |
| \%tile | 56 |
|  |  |
| Universe |  |
| 5th \%tile | 13.56 |
| 25th \%tile | 12.38 |
| Median | 11.51 |
| 75th \%tile | 10.38 |
| 95th \%tile | 9.11 |


| - OK LAW | - OK LAW |  |  |
| :---: | :---: | :---: | :---: |
| Value | 9.80 | Value | 0.93 |
| \%tile | 51 | \%tile | 29 |
| ^ LAW Allocation Ind |  | - LAW Allocation Index |  |
| Value | 10.46 | Value | 0.00 |
| \%tile | 66 | \%tile | 57 |
| $\times$ LAW Policy Index |  | $\times$ LAW Policy Index |  |
| Value | 9.68 | Value | 0.22 |
| \%tile | 47 | \%tile | 52 |
| Universe |  | Universe |  |
| 5th \%tile | 6.77 | 5th \%tile | 2.82 |
| 25th \%tile | 8.90 | 25th \%tile | 1.18 |
| Median | 9.76 | Median | 0.31 |
| 75th \%tile | 10.90 | 75th \%tile | -0.72 |
| 95th \%tile | 12.47 | 95th \%tile | -1.85 |


| OK LAW |  |
| :--- | ---: |
| Value | 1.23 |
| \%tile | 28 |
| LAW Allocation Index |  |
| Value | 1.14 |
| \%tile | 55 |
| $\times$ LAW Policy Index |  |
| Value | 1.16 |
| \%tile | 48 |
|  |  |
| Universe |  |
| 5th \%tile | 1.49 |
| 25th \%tile | 1.25 |
| Median | 1.16 |
| 75th \%tile | 1.07 |
| 95th \%tile | 0.97 |


| - OK LAW |  |
| :--- | ---: |
| Value |  |
| \%tile | 2.17 |
| LAW Allocation Index | 18 |
| Value | 2.08 |
| \%tile | 25 |
| $\times$ LAW Policy Index |  |
| Value | 2.09 |
| \%tile | 25 |
|  |  |
| Universe |  |
| 5th \%tile | 2.72 |
| 25th \%tile | 2.08 |
| Median | 1.90 |
| 75th \%tile | 1.72 |
| 95th \%tile | 1.53 |


| - OK LAW |  |
| :--- | ---: |
| Value |  |
| \%tile | 1.38 |
| LAW Allocation Index | 5 |
| Value | 0.00 |
| \%tile | 1 |
| $\times$ LAW Policy Index |  |
| Value | 1.24 |
| \%tile | 2 |
|  |  |
| Universe |  |
| 5th \%tile | 1.39 |
| 25th \%tile | 1.84 |
| Median | 2.18 |
| 75th \%tile | 3.26 |
| 95th \%tile | 5.00 |

## Total Fund Risk Statistics vs. Peer Universe

## OK LAW vs. ICC Public DB <br> 5 Years

Anlzd Return Anlzd Standard Deviation

Anlzd Alpha
Sharpe Ratio

## Sortino Ratio RF

Tracking Error


- OK LAW

| Value | 1.75 |
| :--- | ---: |
| \%tile | 61 |
| 4 LAW Allocation Index |  |

LAW Allocation Index
$\begin{array}{lr}\text { Value } & 2.40 \\ \text { \%tile } & 37\end{array}$
$\times$ LAW Policy Index
$\begin{array}{lr}\text { Value } & 2.26 \\ \text { \%tile } & 42\end{array}$
Universe
5th \%tile $\quad 4.80$
25th \%tile $\quad 2.78$
Median $\quad 1.99$
75th \%tile $\quad 1.17$
95th \%tile

- OK LAW

Value
\%tile

- LAW Allocation Index

Value 12.36
$\times$ LAW Policy Index
$\begin{array}{lr}\times \text { LAW Policy Index } & \\ \text { Value } & 11.73 \\ \text { \%tile } & 42\end{array}$

| Universe |  |
| :--- | ---: |
| 5th \%tile | 7.59 |
| 25th \%tile | 10.89 |
| Median | 12.25 |
| 75th \%tile | 13.54 |
| 95th \%tile | 15.01 |



| - OK LAW |  |
| :--- | ---: |
| Value | -0.44 |
| \%tile | 51 |
| 4 LAW Allocation Index |  |
| Value | 0.00 |
| \%tile | 38 |
| $\times$ LAW Policy Index |  |
| Value | 0.00 |
| \%tile | 38 |
|  |  |
| Universe |  |
| 5th \%tile | 3.49 |
| 25th \%tile | 0.34 |
| Median | -0.42 |
| 75th \%tile | -1.13 |
| 95th \%tile | -2.29 |





| - OK LAW |  |
| :--- | ---: |
| Value | 0.13 |
| \%tile | 52 |
| ath Allocation Index |  |
| Value | 0.19 |
| \%tile | 32 |
| $\times$ LAW Policy Index |  |
| Value | 0.18 |
| \%tile | 35 |
|  |  |
| Universe |  |
| 5th \%tile | 0.77 |
| 25th \%tile | 0.21 |
| Median | 0.13 |
| 75th \%tile | 0.05 |
| 95th \%tile | -0.05 |

- OK LAW

Value
\%tile
1.93

- LAW Allocation Index

Value 0.00
\%tile
x LAW Policy Index
Value 1.22
1
\%tile
Universe
5th \%tile
5th \%tile $\quad 1.87$
25th \%tile $\quad 2.33$
$\begin{array}{ll}\text { Median } & 2.87\end{array}$
75th \%tile $\quad 3.66$ 95th \%tile $\quad 6.75$

OKLAHOMA LAW

## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


5th Percentile
25th Percentile

| Allocation (Rank) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52.3 |  | 17.7 |  | 58.0 |  | 22.9 |  | 10.9 |  |
| 50.8 |  | 12.0 |  | 48.7 |  | 18.7 |  | 9.4 |  |
| 44.4 |  | 9.1 |  | 29.3 |  | 13.9 |  | 5.9 |  |
| 34.2 |  | 5.5 |  | 25.7 |  | 7.6 |  | 3.8 |  |
| 16.2 |  | 4.3 |  | 14.4 |  | 3.3 |  | 2.1 |  |
| 22 |  | 18 |  | 22 |  | 7 |  | 14 |  |
| 35.3 | (74) | 12.1 | (24) | 31.5 | (38) | 13.2 | (52) | 2.7 | (85) |

OKLAHOMA LAW
Total Fund Attribution Analysis


|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Albset Allocation Effect | Interaction Effects |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual <br> Return | Target Return | Relative Return | Selection Effect |  |  | Total Effects |
| Domestic Equity Composite | -4.9\% | -2.8\% | -2.2\% | -0.7\% | -0.1\% | -0.1\% | -0.9\% |
| International Equity Composite | -6.4\% | -7.6\% | 1.2\% | 0.2\% | 0.2\% | 0.0\% | 0.3\% |
| Fixed Income Composite | 2.1\% | 2.1\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| Real Estate Composite | 1.1\% | 2.7\% | -1.6\% | -0.2\% | -0.1\% | 0.1\% | -0.1\% |
| Private Equity Composite | 7.2\% | 5.4\% | 1.8\% | 0.1\% | -0.1\% | 0.0\% | -0.1\% |
| Hedge Funds Composite | -3.3\% | -4.5\% | 1.2\% | 0.1\% | 0.0\% | 0.0\% | 0.1\% |
| Cash Composite | 0.0\% | 0.0\% | 0.0\% | 0.0\% | -0.1\% | 0.0\% | -0.1\% |
| Total | -2.0\% | -1.2\% | -0.8\% | -0.4\% | -0.3\% | 0.0\% | -0.8\% |

OKLAHOMA LAW
Total Fund Attribution Analysis

| Performance Attribution |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Last 3 Mo . | YTD | 1 Yr |
| OK LAW Return | -2.0\% | 5.4\% | 1.8\% |
| Policy Benchmark ** | -1.2\% | 5.4\% | 2.9\% |
| Excess Return | -0.8\% | 0.0\% | -1.1\% |
| Selection Effect | -0.4\% | -0.5\% | -1.3\% |
| Asset Allocation Effect | -0.3\% | 0.1\% | 0.1\% |
| Interaction Effect | 0.0\% | 0.4\% | 0.0\% |
| Asset Class Returns |  |  |  |
| OK LAW | -1.9\% | 5.5\% | 1.9\% |
| Domestic Equity Composite | -4.9\% | 7.9\% | 1.3\% |
| International Equity Composite | -6.4\% | 1.2\% | -14.9\% |
| Fixed Income Composite | 2.1\% | 4.3\% | 7.8\% |
| Real Estate Composite | 1.1\% | 3.3\% | 8.4\% |
| Private Equity Composite | 7.2\% | 7.1\% | 10.3\% |
| Hedge Funds Composite | -3.3\% | 2.5\% | -4.4\% |
| Cash Composite | 0.0\% | 0.1\% | 0.1\% |

**Calculated from benchmark returns and weightings of each component.


## OKLAHOMA JUDGES

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK JUDGES | \$243,315,530 | -1.8\% | 52 | 5.8\% | 46 | 1.9\% | 34 | 12.2\% | 28 | 2.8\% | 25 | 5.0\% | 57 |
| JUDGES Allocation Index |  | -2.0\% | 60 | 5.4\% | 62 | 1.9\% | 34 | 11.0\% | 60 | 2.4\% | 35 | 4.7\% | 72 |
| JUDGES Policy Index |  | -1.8\% | 50 | 5.7\% | 50 | 2.1\% | 32 | 11.7\% | 44 | 2.4\% | 37 | 4.7\% | 71 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


Actual vs Target Allocation (\%)


NEPC, LLC

OKLAHOMA JUDGES
Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


| 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK JUDGES | 12.24\% | 28 | 10.97\% | 77 |
| JUDGES Allocation Index | 11.00\% | 60 | 10.61\% | 70 |
| JUDGES Policy Index | 11.74\% | 44 | 10.91\% | 76 |
| 3 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK JUDGES | 1.11 | 68 | 2.00 | 35 |
| JUDGES Allocation Index | 1.03 | 85 | 1.77 | 70 |
| JUDGES Policy Index | 1.07 | 75 | 1.91 | 50 |

- OK JUDGES
- JUDGES Allocation Index
- JUDGES Policy Index
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

OKLAHOMA JUDGES
Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


|  | Years Ending June 30, $\mathbf{2 0 1 2}$ |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |  |  |  |  |  |
| OK JUDGES | $2.79 \%$ | 25 | $13.24 \%$ | 71 |  |  |  |  |  |
| JUDGES Allocation Index | $2.45 \%$ | 35 | $12.64 \%$ | 61 |  |  |  |  |  |
| JUDGES Policy Index | $2.42 \%$ | 37 | $13.36 \%$ | 72 |  |  |  |  |  |

OK JUDGES

- JUDGES Allocation Index
- JUDGES Policy Index
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

NEPC, LLC

OKLAHOMA JUDGES

## Total Fund Asset Allocation vs. Policy Targets

| Policy |  | Current | Asset Allocation vs. Target |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Current | Policy | Current | Difference | Policy Range | Within Range |
|  |  |  |  | Large Cap Equity | \$84,610,571 | 35.0\% | 34.8\% | -0.2\% | 32.0\% - 38.0\% | Yes |
|  |  |  |  | Small Cap Equity | \$13,839,095 | 5.0\% | 5.7\% | 0.7\% | 2.0\% - 8.0\% | Yes |
|  |  |  |  | Non-US Equity | \$56,522,552 | 24.0\% | 23.2\% | -0.8\% | 21.0\% - $27.0 \%$ | Yes |
|  | 35.0\% |  | 34.8\% | Domestic Fixed Income | \$87,941,940 | 36.0\% | 36.1\% | 0.1\% | 32.0\% - 40.0\% | Yes |
|  |  |  |  | Cash | \$401,372 | 0.0\% | 0.2\% | 0.2\% | 0.0\% - 5.0\% | Yes |
|  |  |  |  | Total | \$243,315,530 | 100.0\% | 100.0\% |  |  |  |
|  |  |  |  | ence between Policy and C |  |  |  |  |  |  |

$5.7 \%$
23.2\%
$36.1 \%$
$0.2 \%$

NEPC, LLC

Asset Allocation History


NEPC, LLC

OKLAHOMA JUDGES
Total Fund Asset Growth Summary


|  | Last Three Months | Year-To-Date | One Year |
| :---: | :---: | :---: | :---: |
| Beginning Market Value | \$250,764,877 | \$234,354,025 | \$247,762,273 |
| - Withdrawals | -\$7,345,843 | -\$9,211,894 | -\$13,665,183 |
| + Contributions | \$4,519,891 | \$4,519,891 | \$4,693,075 |
| = Net Cash Flow | -\$2,825,952 | -\$4,692,003 | -\$8,972,108 |
| + Net Investment Change | -\$4,623,395 | \$13,653,508 | \$4,525,365 |
| = Ending Market Value | \$243,315,530 | \$243,315,530 | \$243,315,530 |

NEPC, LLC

OKLAHOMA JUDGES

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| BGI ACWI Ex US | \$56,360,686 | \$0 | \$4,250,000 | \$4,250,000 | -\$4,088,134 | \$56,522,552 |
| BGI Russell 1000 | \$94,165,886 | -\$6,450,000 | \$0 | -\$6,450,000 | -\$3,105,315 | \$84,610,571 |
| BGI Russell 2000 | \$14,329,079 | \$0 | \$0 | \$0 | -\$489,984 | \$13,839,095 |
| Blackrock | \$43,583,898 | \$0 | \$0 | \$0 | \$1,009,621 | \$44,593,519 |
| Blackrock Tips | \$8,923,629 | \$0 | \$0 | \$0 | \$283,454 | \$9,207,083 |
| Cash Account | \$239,804 | -\$110,000 | \$269,890 | \$159,890 | \$1,678 | \$401,372 |
| Hoisington | \$8,470,178 | -\$250,000 | \$0 | -\$250,000 | \$1,177,058 | \$9,397,236 |
| Met West | \$24,691,717 | -\$500,000 | \$1 | -\$499,999 | \$552,384 | \$24,744,102 |
| Total | \$250,764,877 | -\$7,310,000 | \$4,519,891 | -\$2,790,109 | -\$4,659,238 | \$243,315,530 |

OKLAHOMA JUDGES

## Total Fund Performance Detail

|  | Market Value <br> (\$) |  | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | YTD <br> (\%) | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs <br> (\%) | Rank | $\begin{gathered} 7 \text { Yrs } \\ \text { (\%) } \end{gathered}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK JUDGES | 243,315,530 | 100.0 | -1.8 | 52 | 5.8 | 46 | 1.9 | 34 | 12.2 | 28 | 2.8 | 25 | 5.0 | 57 |
| JUDGES Allocation Index |  |  | -2.0 | 60 | 5.4 | 62 | 1.9 | 34 | 11.0 | 60 | 2.4 | 35 | 4.7 | 72 |
| Over/Under |  |  | 0.2 |  | 0.4 |  | 0.0 |  | 1.2 |  | 0.4 |  | 0.3 |  |
| JUDGES Policy Index |  |  | -1.8 | 50 | 5.7 | 50 | 2.1 | 32 | 11.7 | 44 | 2.4 | 37 | 4.7 | 71 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| Domestic Equity Composite | 98,449,666 | 40.5 | -3.3 | 32 | 9.1 | 38 | 3.4 | 31 | 16.9 | 52 | 0.6 | 62 | 4.4 | 69 |
| S\&P 500 |  |  | -2.8 | 24 | 9.5 | 32 | 5.4 | 18 | 16.4 | 59 | 0.2 | 69 | 4.1 | 77 |
| Over/Under |  |  | -0.5 |  | -0.4 |  | -2.0 |  | 0.5 |  | 0.4 |  | 0.3 |  |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| BGI Russell 1000 | 84,610,571 | 34.8 | -3.1 | 35 | 9.4 | 34 | 4.4 | 38 | -- | -- | -- | -- | -- | -- |
| Russell 1000 |  |  | -3.1 | 35 | 9.4 | 34 | 4.4 | 39 | 16.6 | 24 | 0.4 | 65 | 4.3 | 65 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |  |  |  |
| eA US Large Cap Core Equity Gross Median |  |  | -3.9 |  | 8.7 |  | 3.4 |  | 15.4 |  | 1.0 |  | 4.8 |  |
| BGI Russell 2000 | 13,839,095 | 5.7 | -3.4 | 25 | 8.7 | 44 | -1.9 | 47 | 17.9 | 66 | -- | -- | -- | -- |
| Russell 2000 |  |  | -3.5 | 26 | 8.5 | 45 | -2.1 | 51 | 17.8 | 66 | 0.5 | 61 | 4.6 | 66 |
| Over/Under |  |  | 0.1 |  | 0.2 |  | 0.2 |  | 0.1 |  |  |  |  |  |
| eA US Small Cap Core Equity Gross Median |  |  | -4.6 |  | 8.1 |  | -2.0 |  | 18.7 |  | 1.4 |  | 5.8 |  |
| International Equity Composite | 56,522,552 | 23.2 | -7.4 | 57 | 3.0 | 81 | -14.3 | 70 | 7.4 | 72 | -5.2 | 85 | 3.1 | 87 |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.2 |  | 0.2 |  | 0.3 |  | 0.4 |  | -0.6 |  | -0.8 |  |
| BGI ACWI Ex US | 56,522,552 | 23.2 | -7.4 | 57 | 3.0 | 81 | -14.3 | 70 | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.2 |  | 0.2 |  | 0.3 |  |  |  |  |  |  |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |

NEPC, LLC

## OKLAHOMA JUDGES

## Total Fund Performance Detail

|  | Market Value (\$) |  | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | $\begin{array}{r} 7 \text { Yrs } \\ \text { (\%) } \end{array}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Domestic Fixed Income Composite | 87,941,940 | 36.1 | 3.6 | 10 | 3.6 | 43 | 12.1 | 11 | 9.9 | 33 | 8.4 | 20 | 6.6 | 29 |
| Barclays Aggregate |  |  | 2.1 | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | 1.5 |  | 1.2 |  | 4.6 |  | 3.0 |  | 1.6 |  | 1.0 |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Blackrock | 44,593,519 | 18.3 | 2.4 | 26 | 3.0 | 63 | 7.7 | 64 | 8.3 | 38 | 6.8 | 79 | 5.7 | 81 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | 0.3 |  | 0.6 |  | 0.2 |  | 1.4 |  | 0.0 |  | 0.1 |  |
| Met West | 24,744,102 | 10.2 | 2.2 | 37 | 4.1 | 10 | 8.0 | 52 | 11.6 | 2 | 8.5 | 9 | 7.5 | 1 |
| Barclays Aggregate |  |  | 2.1 | 65 | 2.4 | 88 | 7.5 | 72 | 6.9 | 82 | 6.8 | 79 | 5.6 | 83 |
| Over/Under |  |  | 0.1 |  | 1.7 |  | 0.5 |  | 4.7 |  | 1.7 |  | 1.9 |  |
| eA US Core Fixed Inc Gross Median |  |  | 2.2 |  | 3.2 |  | 8.0 |  | 8.0 |  | 7.4 |  | 6.1 |  |
| Hoisington | 9,397,236 | 3.9 | 13.9 | 2 | 4.9 | 90 | 46.0 | 2 | 16.3 | 31 | 14.5 | 8 | 9.3 | 30 |
| Barclays Treasury Long Term |  |  | 10.6 | 6 | 4.2 | 98 | $\underline{32.3}$ | 5 | 13.6 | 91 | 12.1 | 43 | 8.4 | 55 |
| Over/Under |  |  | 3.3 |  | 0.7 |  | 13.7 |  | 2.7 |  | 2.4 |  | 0.9 |  |
| eA US Long Duration Fixed Inc Gross Median |  |  | 6.6 |  | 5.8 |  | 22.9 |  | 15.7 |  | 11.8 |  | 8.5 |  |
| Blackrock Tips | 9,207,083 | 3.8 | 3.2 | 1 | 4.1 | 6 | 11.8 | 1 | -- | -- | -- | -- | -- | -- |
| Barclays US TIPS |  |  | 3.2 | 1 | 4.0 | 7 | 11.7 | 1 | 9.6 | 3 | 8.4 | 2 | 6.3 | 7 |
| Over/Under |  |  | 0.0 |  | 0.1 |  | 0.1 |  |  |  |  |  |  |  |
| eA US Interm Duration Fixed Inc Gross Median |  |  | 1.4 |  | 2.6 |  | 5.9 |  | 6.4 |  | 6.6 |  | 5.6 |  |

OKLAHOMA JUDGES

## Total Fund Return Summary vs. Peer Universe

OK JUDGES vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - OK JUDGES | -1.8 | (52) | 5.8 | (46) | 1.9 | (34) | 11.2 | (43) | 12.2 | (28) | 2.8 | (25) | 50 | (57) |
| - JUDGES Allocation Index | -2.0 | (60) | 5.4 | (62) | 1.9 | (34) | 10.7 | (52) | 11.0 | (60) | 2.4 | (35) | 4.7 | (72) |
| $\times$ JUDGES Policy Index | -1.8 | (50) | 5.7 | (50) | 2.1 | (32) | 11.3 | (41) | 11.7 | (44) | 2.4 | (37) | 4.7 | (71) |

NEPC, LLC

OKLAHOMA JUDGES

## Total Fund Return Summary vs. Peer Universe

OK JUDGES vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95 th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK JUDGES | 0.9 | (59) | 13.2 | (49) | 20.6 | (42) | -23.3 | (30) | 7.6 | (57) |
| 4 JUDGES Allocation Index | 1.1 | (52) | 11.3 | (84) | 18.7 | (55) | -21.7 | (23) | 7.5 | (59) |
| $\times$ JUDGES Policy Index | 1.1 | (50) | 12.9 | (57) | 19.4 | (50) | -23.8 | (37) | 7.5 | (59) |

OKLAHOMA JUDGES
Total Fund Risk Statistics vs. Peer Universe

## OK JUDGES vs. ICC Public DB 3 Years

Anlzd Return Anlzd Standard Deviation

Anlzd Alpha
Sharpe Ratio

## Sortino Ratio RF

Tracking Error


| OK JUDGES |  |
| :--- | ---: |
| Value | 12.24 |
| \%tile | 28 |
| a JUDGES Allocation Index |  |
| Value | 11.00 |
| \%tile | 60 |
| $\times$ JUDGES Policy Index |  |
| Value | 11.74 |
| \%tile | 44 |
|  |  |
| Universe |  |
| 5th \%tile | 13.56 |
| 25th \%tile | 12.38 |
| Median | 11.51 |
| 75th \%tile | 10.38 |
| 95th \%tile | 9.11 |


| - OK JUDGES |  |
| :--- | ---: |
| Value | 10.97 |
| \%tile | 77 |
| aUDGES Allocation Index |  |
| Value | 10.61 |
| \%tile | 70 |
| $\times$ JUDGES Policy Index |  |
| Value | 10.91 |
| \%tile | 76 |
|  |  |
| Universe |  |
| 5th \%tile | 6.77 |
| 25th \%tile | 8.90 |
| Median | 9.76 |
| 75th \%tile | 10.90 |
| 95th \%tile | 12.47 |


| - OK JUDGES |  | - OK JUDGES |  |
| :---: | :---: | :---: | :---: |
| Value | 0.91 | Value | 1.11 |
| \%tile | 65 | \%tile | 68 |
| ^ JUDGES Allocal | Index | ^ JUDGES Allocation Index |  |
| Value | 0.00 | Value | 1.03 |
| \%tile | 88 | \%tile | 85 |
| $\times$ JUDGES Poli |  | $\times$ JUDGES Policy Index |  |
| Value | 0.46 | Value | 1.07 |
| \%tile | 76 | \%tile | 75 |
| Universe |  | Universe |  |
| 5th \%tile | 3.63 | 5th \%tile | 1.49 |
| 25th \%tile | 2.12 | 25th \%tile | 1.25 |
| Median | 1.31 | Median | 1.16 |
| 75th \%tile | 0.46 | 75th \%tile | 1.07 |
| 95th \%tile | -0.62 | 95th \%tile | 0.97 |


| - OK JUDGES | - OK JUDGES |  |  |
| :---: | :---: | :---: | :---: |
| Value | 2.00 | Value | 1.12 |
| \%tile | 35 | \%tile | 1 |
| ^ JUDGES Allocation Index |  | 4 JUDGES Allocation Index |  |
| Value | 1.77 | Value | 0.00 |
| \%tile | 70 | \%tile | 1 |
| $\times$ JUDGES Poli |  | $\times$ JUDGES Policy Index |  |
| Value | 1.91 | Value | 0.94 |
| \%tile | 50 | \%tile | 1 |
| Universe |  | Universe |  |
| 5th \%tile | 2.72 | 5th \%tile | 1.55 |
| 25th \%tile | 2.08 | 25th \%tile | 2.03 |
| Median | 1.90 | Median | 2.38 |
| 75th \%tile | 1.72 | 75th \%tile | 3.17 |
| 95th \%tile | 1.53 | 95th \%tile | 5.15 |

OKLAHOMA JUDGES
Total Fund Risk Statistics vs. Peer Universe

## OK JUDGES vs. ICC Public DB 5 Years

Anlzd Return Anlzd Standard Deviation

Anlzd Alpha
Sharpe Ratio

## Sortino Ratio RF

Tracking Error


- OK JUDGES

| Value | 2.79 |
| :--- | ---: |
| \%tile | 25 |

- JUDGES Allocation Index
Value 2.45
$\times$ JUDGES Policy Index
$\begin{array}{lr}\text { Value } & 2.42 \\ \text { \%tile } & 37\end{array}$

| Universe |  |
| :--- | :--- |
| 5th \%tile | 4.80 |
| 25th \%tile | 2.78 |
| Median | 1.99 |
| 75th \%tile | 1.17 |
| 95th \%tile | 0.20 |

$\begin{array}{lr}\text { - OK JUDGES } \\ \text { Value } & 13.24 \\ \text { \%tile } & 71 \\ \text { 4 JUDGES Allocation Index } \\ \text { Value } & 12.64 \\ \text { \%tile } & 61 \\ \times \\ \text { UUDGES Policy Index } \\ \text { Value } & 13.36 \\ \text { \%tile } & 72 \\ \text { Universe } & \\ \text { 5th \%tile } & 7.59 \\ \text { 25th \%tile } & 10.89 \\ \text { Median } & 12.25 \\ \text { 75th \%tile } & 13.54 \\ \text { 95th \%tile } & 15.01\end{array}$

| - OK JUDGES |  |
| :--- | ---: |
| Value | 0.28 |
| \%tile | 26 |
| JUDGES Allocation Index |  |
| Value | 0.00 |
| \%tile | 38 |
| $\times$ |  |
| JUDGES Policy | Index |
| Value | -0.15 |
| \%tile | 41 |
|  |  |
| Universe |  |
| 5th \%tile | 3.45 |
| 25th \%tile | 0.29 |
| Median | -0.41 |
| 75th \%tile | -1.13 |
| 95th \%tile | -2.29 |



- OK JUDGES Value
\%tile
\%tile
- JUDGES Allocation Index Value
0.18
\%tile 35
x JUDGES Policy Index $\begin{array}{lr}\text { Value } & 0.17 \\ \text { \%tile } & 39\end{array}$ \%tile

| Universe |  |
| :--- | ---: |
| 5th \%tile | 0.77 |
| 25th \%tile | 0.21 |
| Median | 0.13 |
| 75th \%tile | 0.05 |
| 95th \%tile | -0.05 |



- OK JUDGES

| Value | 2.84 |
| :--- | ---: |
| \%tile | 22 |

- JUDGES Allocation Index
Value 0.00
\%tile
0.00
x JUDGES Policy Index

| Value |  |
| :--- | :--- |
| \%tile | 1.17 |

1

Universe
5th \%tile
$\begin{array}{ll}25 \text { th \%tile } & 2.42 \\ & 2.88\end{array}$
Median
75th \%tile
95th \%tile $\quad 6.96$

OKLAHOMA JUDGES
Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


| 5th Percentile | Allocation (Rank) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 52.3 |  | 17.7 |  | 58.0 |  |
| 25th Percentile | 50.8 |  | 12.0 |  | 48.7 |  |
| Median | 44.4 |  | 9.1 |  | 29.3 |  |
| 75th Percentile | 34.2 |  | 5.5 |  | 25.7 |  |
| 95th Percentile | 16.2 |  | 4.3 |  | 14.4 |  |
| \# of Portfolios | 22 |  | 18 |  | 22 |  |
| OK JUDGES | 40.5 | (66) | 23.2 | (1) | 36.1 | (36) |

## OKLAHOMA JUDGES

## Total Fund Attribution Analysis



OKLAHOMA JUDGES
Total Fund Attribution Analysis

## Performance Attribution

|  | Last 3 Mo . | YTD | 1 Yr |
| :---: | :---: | :---: | :---: |
| OK JUDGES Return | -1.9\% | 5.8\% | 1.9\% |
| Policy Benchmark ** | -2.1\% | 5.5\% | 1.6\% |
| Excess Return | 0.2\% | 0.3\% | 0.3\% |
| Selection Effect | 0.4\% | 0.4\% | 0.9\% |
| Asset Allocation Effect | -0.1\% | -0.1\% | -0.5\% |
| Interaction Effect | 0.0\% | 0.0\% | -0.1\% |
| Asset Class Returns |  |  |  |
| OK JUDGES | -1.8\% | 5.8\% | 1.9\% |
| Domestic Equity Composite | -3.3\% | 9.1\% | 3.4\% |
| International Equity Composite | -7.4\% | 3.0\% | -14.3\% |
| Domestic Fixed Income Composite | 3.6\% | 3.6\% | 12.1\% |
| Cash Composite | 0.0\% | 0.1\% | 0.1\% |

**Calculated from benchmark returns and weightings of each component.


## OKLAHOMA WILDLIFE

## Total Fund Performance Summary

|  | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 7 Yrs | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK WILDLIFE | \$76,298,358 | -1.3\% | 25 | 4.7\% | 92 | 2.9\% | 15 | 10.0\% | 82 | 1.7\% | 62 | 4.2\% | 91 |
| WILDLIFE Allocation Index |  | -1.1\% | 16 | 5.1\% | 78 | 3.5\% | 6 | 10.3\% | 79 | 2.8\% | 24 | 4.7\% | 70 |
| WILDLIFE Policy Index |  | 0.8\% | 1 | 1.5\% | 99 | 3.6\% | 5 | 4.2\% | 99 | 4.2\% | 9 | 4.0\% | 93 |
| ICC Public DB Median |  | -1.8\% |  | 5.7\% |  | 1.2\% |  | 11.5\% |  | 2.0\% |  | 5.1\% |  |

Quarterly and Cumulative Excess Performance


Actual vs Target Allocation (\%)


NEPC, LLC

OKLAHOMA WILDLIFE
Total Fund Risk/Return - 3 Years

3 Years Ending June 30, 2012


| 3 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK WILDLIFE | 10.02\% | 82 | 8.35\% | 21 |
| WILDLIFE Allocation Index | 10.30\% | 79 | 8.10\% | 17 |
| WILDLIFE Policy Index | 4.17\% | 99 | 1.22\% | 1 |
| 3 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK WILDLIFE | 1.19 | 41 | 2.01 | 43 |
| WILDLIFE Allocation Index | 1.26 | 25 | 2.28 | 16 |
| WILDLIFE Policy Index | 3.36 | 1 | 4.06 |  |

- OK WILDLIFE
- WILDLIFE Allocation Index
- WILDLIFE Policy Index
- Universe Median
- 68\% Confidence Interval
- ICC Public DB

OKLAHOMA WILDLIFE

## Total Fund Risk/Return - 5 Years

5 Years Ending June 30, 2012


| 5 Years Ending June 30, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
| OK WILDLIFE | 1.74\% | 62 | 10.07\% | 17 |
| WILDLIFE Allocation Index | 2.85\% | 24 | 9.93\% | 16 |
| WILDLIFE Policy Index | 4.16\% | 9 | 1.72\% | 1 |
| 5 Years Ending June 30, 2012 |  |  |  |  |
|  | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
| OK WILDLIFE | 0.10 | 48 | 0.13 | 49 |
| WILDLIFE Allocation Index | 0.21 | 18 | 0.28 | 19 |
| WILDLIFE Policy Index | 1.99 | 1 | 2.86 | 1 |

- OK WILDLIFE
- WILDLIFE Allocation Index
- WILDLIFE Policy Index
- Universe Median

68\% Confidence Interval

- ICC Public DB


## Total Fund Asset Allocation vs. Policy Targets



Asset Allocation History


OKLAHOMA WILDLIFE

## Total Fund Asset Growth Summary


$\left.\begin{array}{lrrr} & \begin{array}{r}\text { Last Three } \\ \text { Months }\end{array} & \text { Year-To-Date }\end{array}\right]$
nepc, LLC

## OKLAHOMA WILDLIFE

## Total Fund Asset Growth Summary by Manager

|  | Quarter Ending June 30, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Market Value | Withdrawals | Contributions | Net Cash Flow | Net Investment Change | Ending Market Value |
| Aberdeen | \$395,241 | \$0 | \$0 | \$0 | -\$16,174 | \$379,068 |
| Absolute Strategies | \$392,478 | \$0 | \$0 | \$0 | \$3,900 | \$396,378 |
| BOK Emerg Market | \$815,955 | -\$8,899 | \$0 | -\$8,899 | -\$63,491 | \$743,565 |
| BOK Fixed | \$33,823,176 | \$0 | \$0 | \$0 | \$707,397 | \$34,530,572 |
| BOK Small Cap | \$6,525,002 | -\$11,838 | \$0 | -\$11,838 | -\$246,216 | \$6,266,948 |
| Calamos | \$407,645 | -\$1,432 | \$0 | -\$1,432 | -\$537 | \$405,675 |
| Cash | \$1,314,856 | -\$1,118,122 | \$1,287,338 | \$169,215 | \$121,965 | \$1,606,037 |
| Core Equity | \$6,931,695 | -\$13 | \$0 | -\$13 | -\$406,384 | \$6,525,299 |
| Credit Suisse | \$364,621 | \$0 | \$0 | \$0 | -\$19,864 | \$344,757 |
| Gateway Fund - Y | \$236,771 | -\$1,032 | \$0 | -\$1,032 | \$682 | \$236,421 |
| Growth Equity | \$5,663,147 | -\$73 | \$0 | -\$73 | -\$205,115 | \$5,457,960 |
| International Small Cap | \$4,034,415 | -\$84,458 | \$0 | -\$84,458 | -\$277,897 | \$3,672,060 |
| IVY Asset Strategy | \$178,506 | \$0 | \$0 | \$0 | -\$12,239 | \$166,267 |
| Large Cap Value | \$4,221,718 | \$0 | \$0 | \$0 | -\$111,463 | \$4,110,255 |
| Merger | \$389,119 | \$0 | \$0 | \$0 | \$247 | \$389,366 |
| MSCI BRIC | \$192,136 | -\$3,086 | \$0 | -\$3,086 | -\$20,461 | \$168,589 |
| Multi-Cap Growth | \$676,628 | -\$1,128 | \$0 | -\$1,128 | -\$33,900 | \$641,600 |
| Permanent Portfolio | \$440,043 | \$0 | \$0 | \$0 | -\$14,897 | \$425,146 |
| Pimco AAF | \$400,948 | -\$2,280 | \$0 | -\$2,280 | -\$2,674 | \$395,994 |
| Russell 1000 Growth | \$3,363,472 | \$0 | \$0 | \$0 | -\$145,065 | \$3,218,407 |
| S\&P 500 Growth Index | \$1,620,455 | -\$6,359 | \$0 | -\$6,359 | -\$33,631 | \$1,580,465 |
| Tortoise Energy | \$123,660 | -\$1,680 | \$0 | -\$1,680 | -\$2,280 | \$119,700 |
| Value Equity | \$4,690,125 | \$0 | \$0 | \$0 | -\$172,297 | \$4,517,828 |
| Total | \$77,201,813 | -\$1,240,400 | \$1,287,338 | \$46,937 | -\$950,393 | \$76,298,358 |

## OKLAHOMA WILDLIFE

## Total Fund Performance Detail

|  | Market Value <br> (\$) | \% of Portfolio | 3 Mo <br> (\%) | Rank | YTD <br> (\%) | Rank | $\begin{gathered} 1 \mathrm{Yr} \\ (\%) \end{gathered}$ | Rank | 3 Yrs (\%) | Rank | 5 Yrs (\%) | Rank | $\begin{array}{r} 7 \text { Yrs } \\ \text { (\%) } \end{array}$ | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OK WILDLIFE | 76,298,358 | 100.0 | -1.3 | 25 | 4.7 | 92 | 2.9 | 15 | 10.0 | 82 | 1.7 | 62 | 4.2 | 91 |
| WILDLIFE Allocation Index |  |  | -1.1 | 16 | 5.1 | 78 | 3.5 | 6 | 10.3 | 79 | 2.8 | 24 | 4.7 | 70 |
| Over/Under |  |  | -0.2 |  | -0.4 |  | -0.6 |  | -0.3 |  | -1.1 |  | -0.5 |  |
| WILDLIFE Policy Index |  |  | 0.8 | 1 | 1.5 | 99 | 3.6 | 5 | 4.2 | 99 | 4.2 | 9 | 4.0 | 93 |
| ICC Public DB Median |  |  | -1.8 |  | 5.7 |  | 1.2 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| International Composite | 4,584,214 | 6.0 | -7.1 | 53 | 3.4 | 76 | -14.7 | 75 | 5.7 | 87 | -5.7 | 89 | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 61 | 2.8 | 83 | -14.6 | 73 | 7.0 | 81 | -4.6 | 75 | 3.9 | 74 |
| Over/Under |  |  | 0.5 |  | 0.6 |  | -0.1 |  | -1.3 |  | -1.1 |  |  |  |
| eA All ACWI ex-US Equity Gross Median |  |  | -7.0 |  | 4.7 |  | -12.5 |  | 9.3 |  | -3.4 |  | 5.0 |  |
| International Small Cap | 3,672,060 | 4.8 | -6.8 | 55 | 3.3 | 87 | -14.0 | 69 | 6.2 | 99 | -6.0 | 99 | -- | -- |
| MSCI ACWI ex USA |  |  | -7.6 | 65 | 2.8 | 91 | -14.6 | 72 | 7.0 | 99 | -4.6 | 94 | 3.9 | 89 |
| Over/Under |  |  | 0.8 |  | 0.5 |  | 0.6 |  | -0.8 |  | -1.4 |  |  |  |
| eA ACWI ex-US Small Cap Equity Gross Median |  |  | -6.4 |  | 7.2 |  | -12.1 |  | 13.7 |  | -1.6 |  | 8.5 |  |
| BOK Emerg Market | 743,565 | 1.0 | -7.8 | 33 | 4.4 | 57 | -16.0 | 59 | 8.7 | 76 | -0.3 | 60 | -- | -- |
| MSCI Emerging Markets |  |  | -8.9 | 55 | 3.9 | 63 | -15.9 | 59 | 9.8 | 64 | -0.1 | 56 | 10.1 | 64 |
| Over/Under |  |  | 1.1 |  | 0.5 |  | -0.1 |  | -1.1 |  | -0.2 |  |  |  |
| MSCI BRIC | 168,589 | 0.2 | -10.6 | 82 | 0.7 | 93 | -23.0 | 96 | -- | -- | -- | -- | -- | -- |
| MSCI Emerging Markets |  |  | -8.9 | 55 | 3.9 | 63 | -15.9 | 59 | 9.8 | 64 | -0.1 | 56 | 10.1 | 64 |
| Over/Under |  |  | -1.7 |  | -3.2 |  | -7.1 |  |  |  |  |  |  |  |
| eA Emg Mkts Equity Gross Median |  |  | -8.5 |  | 4.8 |  | -15.5 |  | 11.2 |  | 0.3 |  | 10.9 |  |
| Domestic Equity Comp | 32,318,762 | 42.4 | -4.0 | 45 | 8.1 | 53 | 2.5 | 37 | 14.9 | 77 | -0.1 | 73 | -- | -- |
| eA All US Equity Gross Median |  |  | -4.3 |  | 8.3 |  | 0.4 |  | 17.0 |  | 1.2 |  | 5.4 |  |
| Core Equity | 6,525,299 | 8.6 | -5.8 | 88 | 6.2 | 83 | -0.1 | 82 | 12.1 | 92 | -1.1 | 90 | -- | -- |
| S\&P 500 |  |  | -2.8 | 28 | 9.5 | 32 | 5.4 | 28 | 16.4 | 29 | 0.2 | 67 | 4.1 | 70 |
| Over/Under |  |  | -3.0 |  | -3.3 |  | -5.5 |  | -4.3 |  | -1.3 |  |  |  |
| eA US Large Cap Core Equity Gross Median |  |  | -3.9 |  | 8.7 |  | 3.4 |  | 15.4 |  | 1.0 |  | 4.8 |  |
| Multi-Cap Growth | 641,600 | 0.8 | -5.0 | 38 | 15.1 | 5 | 13.2 | 1 | -- | -- | -- | -- | -- | -- |
| Russell 3000 Growth |  |  | -4.0 | 26 | 10.0 | 41 | 5.0 | 13 | 17.5 | 36 | 2.8 | 46 | 5.5 | 66 |
| Over/Under |  |  | -1.0 |  | 5.1 |  | 8.2 |  |  |  |  |  |  |  |
| eA US All Cap Growth Equity Gross Median |  |  | -5.5 |  | 9.3 |  | -0.4 |  | 16.0 |  | 2.4 |  | 6.0 |  |
| Growth Equity | 5,457,960 | 7.2 | -3.6 | 19 | 9.1 | 57 | 6.0 | 22 | 16.7 | 44 | 3.0 | 39 | -- | -- |
| Large Cap Growth Equity Composite | 4,798,872 | 6.3 | -3.6 | 19 | 9.8 | 48 | 6.0 | 22 | -- | -- | -- | -- | -- | - |

NEPC, LLC

## OKLAHOMA WILDLIFE

## Total Fund Performance Detail

|  | Market Value (\$) | \% of Portfolio | $\begin{array}{r} 3 \mathrm{Mo} \\ (\%) \end{array}$ | Rank | $\begin{aligned} & \text { YTD } \\ & (\%) \end{aligned}$ | Rank | $\begin{aligned} & 1 \mathrm{Yr} \\ & (\%) \end{aligned}$ | Rank | $\begin{gathered} 3 \text { Yrs } \\ (\%) \end{gathered}$ | Rank | $\begin{gathered} 5 \mathrm{Yrs} \\ (\%) \end{gathered}$ | Rank | 7 Yrs (\%) | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Russell 1000 Growth | 3,218,407 | 4.2 | -4.3 | 27 | 9.7 | 49 | 5.3 | 26 | -- | -- | -- | - | -- | -- |
| Russell 1000 Growth |  |  | -4.0 | 24 | 10.1 | 44 | 5.8 | 23 | 17.5 | 30 | 2.9 | 41 | 5.5 | 45 |
| Over/Under |  |  | -0.3 |  | -0.4 |  | -0.5 |  |  |  |  |  |  |  |
| eA US Large Cap Growth Equity Gross Median |  |  | -5.3 |  | 9.7 |  | 3.1 |  | 16.0 |  | 2.5 |  | 5.3 |  |
| S\&P 500 Growth Index | 1,580,465 | 2.1 | -2.1 | 8 | 9.8 | 48 | 7.6 | 14 | -- | -- | -- | - | -- | -- |
| S\&P 500 Growth |  |  | -2.0 | 8 | 10.0 | 47 | 7.8 | 13 | 17.5 | 31 | 3.0 | 37 | 5.2 | 55 |
| Over/Under |  |  | -0.1 |  | -0.2 |  | -0.2 |  |  |  |  |  |  |  |
| Value Equity | 4,517,828 | 5.9 | -3.6 | 51 | 6.9 | 61 | 1.4 | 56 | 14.7 | 57 | -3.0 | 89 | - | -- |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2. 2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -1.4 |  | -1.8 |  | -1.6 |  | -1.1 |  | -0.8 |  |  |  |
| Large Cap Value | 4,110,255 | 5.4 | -2.6 | 32 | 8.0 | 39 | 2.3 | 46 | -- | - | - | - | - | -- |
| Russell 1000 Value |  |  | -2.2 | 25 | 8.7 | 28 | 3.0 | 38 | 15.8 | 39 | -2. 2 | 76 | 2.9 | 77 |
| Over/Under |  |  | -0.4 |  | -0.7 |  | -0.7 |  |  |  |  |  |  |  |
| eA US Large Cap Value Equity Gross Median |  |  | -3.6 |  | 7.4 |  | 1.9 |  | 15.0 |  | -0.6 |  | 4.2 |  |
| BOK Small Cap | 6,266,948 | 8.2 | -3.8 | 35 | 8.1 | 47 | -0.6 | 32 | 18.5 | 55 | 1.1 | 60 | -- | - |
| Russell 2000 |  |  | -3.5 | 29 | 8.5 | 41 | -2.1 | 47 | 17.8 | 67 | 0.5 | 67 | 4.6 | 74 |
| Over/Under |  |  | -0.3 |  | -0.4 |  | 1.5 |  | 0.7 |  | 0.6 |  |  |  |
| eA US Small Cap Equity Gross Median |  |  | -4.5 |  | 7.8 |  | -2.5 |  | 19.0 |  | 1.8 |  | 6.1 |  |
| Fixed Income Composite | 34,530,572 | 45.3 | 2.1 | 34 | 2.4 | 68 | 7.1 | 48 | 7.2 | 58 | 4.6 | 82 | -- | -- |
| BOK Fixed | 34,530,572 | 45.3 | 2.1 | 34 | 2.4 | 68 | 7.1 | 48 | 7.2 | 57 | 4.7 | 82 | -- | -- |
| Barclays Aggregate |  |  | $\underline{2.1}$ | 38 | 2.4 | 69 | 7.5 | 43 | 6.9 | 61 | 6.8 | 54 | 5.6 | 60 |
| Over/Under |  |  | 0.0 |  | 0.0 |  | -0.4 |  | 0.3 |  | -2.1 |  |  |  |
| eA All US Fixed Inc Gross Median |  |  | 1.7 |  | 3.2 |  | 6.9 |  | 7.8 |  | 6.9 |  | 5.9 |  |
| Alternative Investments Composite | 3,258,773 | 4.3 | -1.9 | -- | 1.9 | -- | -1.1 | -- | -- | -- | -. | -- | -- | - |

NEPC, LLC

OKLAHOMA WILDLIFE

## Total Fund Return Summary vs. Peer Universe

OK WILDLIFE vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | -0.4 |  | 6.8 |  | 3.6 |  | 13.0 |  | 13.6 |  | 4.8 |  | 6.1 |  |
| 25th Percentile | -1.4 |  | 6.1 |  | 2.4 |  | 11.7 |  | 12.4 |  | 2.8 |  | 5.6 |  |
| Median | -1.8 |  | 5.7 |  | 1.2 |  | 10.8 |  | 11.5 |  | 2.0 |  | 5.1 |  |
| 75th Percentile | -2.2 |  | 5.2 |  | 0.5 |  | 9.9 |  | 10.4 |  | 1.2 |  | 4.5 |  |
| 95 th Percentile | -3.2 |  | 4.3 |  | -0.7 |  | 8.4 |  | 9.1 |  | 0.2 |  | 3.9 |  |
| \# of Portfolios | 113 |  | 112 |  | 112 |  | 109 |  | 108 |  | 104 |  | 102 |  |
| - OK WILDLIFE | -1.3 | (25) | 4.7 | (92) | 2.9 | (15) | 9.7 | (80) | 10.0 | (82) | 1.7 | (62) | 4.2 | (91) |
| - WILDLIFE Allocation Index | -1.1 | (16) | 5.1 | (78) | 3.5 | (6) | 9.8 | (76) | 10.3 | (79) | 2.8 | (24) | 4.7 | (70) |
| $\times$ WILDLIFE Policy Index | 0.8 | (1) | 1.5 | (99) | 3.6 | (5) | 3.9 | (99) | 4.2 | (99) | 4.2 | (9) | 4.0 | (93) |

NEPC, LLC

## Total Fund Return Summary vs. Peer Universe

OK WILDLIFE vs. ICC Public DB


| Return (Rank) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5th Percentile | 3.9 |  | 15.6 |  | 27.5 |  | -10.0 |  | 11.0 |  |
| 25th Percentile | 2.3 |  | 14.2 |  | 22.3 |  | -22.6 |  | 9.6 |  |
| Median | 1.1 |  | 13.2 |  | 19.4 |  | -25.1 |  | 8.1 |  |
| 75th Percentile | 0.2 |  | 12.1 |  | 15.8 |  | -27.4 |  | 6.8 |  |
| 95th Percentile | -2.0 |  | 9.8 |  | 10.1 |  | -30.3 |  | 5.1 |  |
| \# of Portfolios | 146 |  | 144 |  | 144 |  | 141 |  | 140 |  |
| - OK WILDLIFE | 2.5 | (18) | 10.4 | (94) | 16.1 | (73) | -22.0 | (23) | 6.9 | (71) |
| - WILDLIFE Allocation Index | 2.7 | (14) | 10.8 | (90) | 15.3 | (78) | -18.1 | (14) | 6.4 | (81) |
| $\times$ WILDLIFE Policy Index | 4.2 | (5) | 4.8 | (99) | 3.0 | (99) | 3.3 | (1) | 5.7 | (91) |

## Total Fund Risk Statistics vs. Peer Universe

Anlzd Return Anlzd Standard Deviation

- OK WILDLIFE

| Value | 10.02 |
| :--- | ---: |
| \%tile | 82 |

WILDLIFE Allocation Index Value \%tile
79
Value $\quad 4.17$ \%tile 99

| Universe |  |
| :--- | ---: |
| 5th \%tile | 13.56 |
| 25th \%tile | 12.38 |
| Median | 11.51 |
| 75th \%tile | 10.38 |
| 95th \%tile | 9.11 |

OK WILDLIFE vs. ICC Public DB
3 Years
Anlzd Alpha
Sharpe Ratio

## Sortino Ratio RF

Tracking Error


| OK WILDLIFE |  |
| :--- | ---: |
| Value | -0.55 |
| \%tile | 26 |
| WILDLIFE Allocation Index |  |
| Value | 0.00 |
| \%tile | 20 |
| $\times$ WILDLIFE Policy Index |  |
| Value | 4.18 |
| \%tile | 1 |
|  |  |
| Universe |  |
| 5th \%tile | 1.66 |
| 25th \%tile | -0.43 |
| Median | -1.49 |
| 75th \%tile | -2.54 |
| 95th \%tile | -4.07 |


| OK WILDLIFE |  |
| :--- | ---: |
| Value | 1.19 |
| \%tile | 41 |
| WILDLIFE Allocation Index |  |
| Value | 1.26 |
| \%tile | 25 |
| WILDLIFE Policy Index |  |
| Value | 3.36 |
| \%tile | 1 |
|  |  |
| Universe |  |
| 5th \%tile | 1.50 |
| 25th \%tile | 1.25 |
| Median | 1.16 |
| 75th \%tile | 1.07 |
| 95th \%tile | 0.97 |


| - OK WILDLIFE | - OK WILDLIFE |  |  |
| :---: | :---: | :---: | :---: |
| Value | 2.01 | Value | 0.81 |
| \%tile | 43 | \%tile | 1 |
| - WILDLIFE Allocaid | Index | - WILDLIFE | Index |
| Value | 2.28 | Value | 0.00 |
| \%tile | 16 | \%tile | 1 |
| $\times$ WILDLIFE Polic |  | $\times$ WILDLIFE |  |
| Value | 4.06 | Value | 8.20 |
| \%tile | 1 | \%tile | 99 |
| Universe |  | Universe |  |
| 5th \%tile | 2.83 | 5th \%tile | 1.46 |
| 25th \%tile | 2.20 | 25th \%tile | 2.06 |
| Median | 1.96 | Median | 2.72 |
| 75th \%tile | 1.79 | 75th \%tile | 3.49 |
| 95th \%tile | 1.60 | 95th \%tile | 5.01 |

## Total Fund Risk Statistics vs. Peer Universe

Anlzd Return Anlzd Standard Deviation






| - OK WILDLIFE |  |
| :---: | :---: |
| Value | 1.74 |
| \%tile | 62 |
| ^ WILDLIFE Allocation Index |  |
| Value | 2.85 |
| \%tile | 24 |
| $\times$ WILDLIFE Policy Index |  |
| Value | 4.16 |
| \%tile | 9 |
| Universe |  |
| 5th \%tile | 4.80 |
| 25th \%tile | 2.78 |
| Median | 1.99 |
| 75th \%tile | 1.17 |
| 95th \%tile | 0.20 |


| OK WILDLIFE |  |
| :--- | ---: |
| Value | 10.07 |
| \%tile | 17 |
| WILDLIFE | Allocation Index |
| Value | 9.93 |
| \%tile | 16 |
| WILDLIFE Policy | Index |
| Value | 1.72 |
| \%tile | 1 |
|  |  |
| Universe |  |
| 5th \%tile | 7.59 |
| 25th \%tile | 10.89 |
| Median | 12.25 |
| 75th \%tile | 13.54 |
| 95th \%tile | 15.01 |


| OK WILDLIFE |  |
| :--- | ---: |
| Value | -1.11 |
| \%tile | 28 |
| WILDLIFE Allocation Index |  |
| Value | 0.00 |
| \%tile | 16 |
| $\times$ WILDLIFE Policy Index |  |
| Value | 3.99 |
| \%tile | 2 |
|  |  |
| Universe |  |
| 5th \%tile | 2.64 |
| 25th \%tile | -1.07 |
| Median | -1.81 |
| 75th \%tile | -2.65 |
| 95th \%tile | -3.82 |


| OK WILDLIFE |  |
| :--- | ---: |
| Value | 0.10 |
| \%tile | 48 |
| WILDLIFE Allocation Index |  |
| Value | 0.21 |
| \%tile | 18 |
| $\times$ |  |
| WILDLIFE Policy | Index |
| Value | 1.99 |
| \%tile | 1 |
|  |  |
| Universe |  |
| 5th \%tile | 0.55 |
| 25th \%tile | 0.16 |
| Median | 0.10 |
| 75th \%tile | 0.04 |
| 95th \%tile | -0.04 |


| - OK WILDLIFE |  | - OK WILDLIFE |  |
| :---: | :---: | :---: | :---: |
| Value | 0.13 | Value | 1.61 |
| \%tile | 49 | \%tile | 2 |
| ^ WILDLIFE Allo | Index | - WILDLIFE | Index |
| Value | 0.28 | Value | 0.00 |
| \%tile | 19 | \%tile | 1 |
| $\times$ WILDLIFE Policy Index |  | $\times$ WILDLIFE Policy Index |  |
| Value | 2.86 | Value | 9.50 |
| \%tile | 1 | \%tile | 99 |
| Universe |  | Universe |  |
| 5th \%tile | 0.75 | 5th \%tile | 2.06 |
| 25th \%tile | 0.21 | 25th \%tile | 2.80 |
| Median | 0.13 | Median | 3.92 |
| 75th \%tile | 0.05 | 75th \%tile | 4.55 |
| 95th \%tile | -0.05 | 95th \%tile | 6.11 |

OKLAHOMA WILDLIFE

## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. ICC Public DB


5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
\# of Portfolios

- OK WILDLIFE

Allocation (Rank)

| (Rank) |  |  |  |
| ---: | ---: | ---: | ---: |
| 52.3 | 17.7 | 58.0 | 22.9 |
| 50.8 | 12.0 | 48.7 | 18.7 |
| 44.4 | 9.1 | 29.3 | 13.9 |
| 34.2 | 5.5 | 25.7 | 7.6 |
| 16.2 | 4.3 | 14.4 | 3.3 |
| 22 | 18 | 22 | 7 |
| 42.4 | 6.0 |  | 45.3 |

## OKLAHOMA WILDLIFE

## Total Fund Attribution Analysis



|  | Attribution Summary <br> 3 Months Ending June 30, 2012 |  |  |  | Asset <br> Allocation Effect | Interaction Effects |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual <br> Return | Target Return | Relative Return | Selection Effect |  |  | Total Effects |
| International Composite | -7.1\% | -7.6\% | 0.5\% | 0.1\% | 0.2\% | 0.0\% | 0.2\% |
| Domestic Equity Comp | -4.0\% | -2.8\% | -1.2\% | -0.6\% | 0.0\% | 0.0\% | -0.6\% |
| Fixed Income Composite | 2.1\% | 2.1\% | 0.1\% | 0.0\% | 0.1\% | 0.0\% | 0.1\% |
| Alternative Investments Composite | -1.9\% | 0.0\% | -1.9\% | -0.1\% | 0.0\% | 0.0\% | -0.1\% |
| Total | -1.4\% | -1.1\% | -0.3\% | -0.6\% | 0.3\% | 0.0\% | -0.3\% |

OKLAHOMA WILDLIFE
Total Fund Attribution Analysis

## Performance Attribution

|  | Last 3 Mo . | YTD | 1 Yr |
| :---: | :---: | :---: | :---: |
| OK WILDLIFE Return | -1.4\% | 4.8\% | 3.0\% |
| Policy Benchmark ** | -1.1\% | 5.9\% | 4.6\% |
| Excess Return | -0.3\% | -1.1\% | -1.6\% |
| Selection Effect | -0.6\% | -0.7\% | -1.7\% |
| Asset Allocation Effect | 0.3\% | -0.4\% | 0.1\% |
| Interaction Effect | 0.0\% | 0.0\% | 0.0\% |
| Asset Class Returns |  |  |  |
| OK WILDLIFE | -1.3\% | 4.7\% | 2.9\% |
| International Composite | -7.1\% | 3.4\% | -14.7\% |
| Domestic Equity Comp | -4.0\% | 8.1\% | 2.5\% |
| Large Cap Growth Equity Composite | -3.6\% | 9.8\% | 6.0\% |
| Fixed Income Composite | 2.1\% | 2.4\% | 7.1\% |
| Alternative Investments Composite | -1.9\% | 1.9\% | -1.1\% |
| Cash Composite | 0.0\% | 0.0\% | 0.0\% |
| **Calculated from benchmark returns and weightings of each component. |  |  |  |

\# Of Portfolios/ Observations ${ }^{\mathbf{1}}$ - The total number of data points that make up a specified universe

Allocation Index ${ }^{3}$ - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect ${ }^{2}$ - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies) ${ }^{3}$ - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS) ${ }^{3}$ - Bonds which are similar to mortgagebacked securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution ${ }^{3}$ - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity ${ }^{4}$ - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

Batting Average ${ }^{\mathbf{1}}$ - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

Brinson Fachler (BF) Attribution ${ }^{1}$ - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution ${ }^{1}$ - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp) ${ }^{4}$ - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

Correlation ${ }^{1}$ - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: ${ }^{1}$ InvestorForce, ${ }^{2}$ Interaction Effect Performance Attribution, ${ }^{3} \mathrm{NEPC}, \mathrm{LLC},{ }^{4}$ Investopedia, ${ }^{5} \mathrm{Hedgeco}$.net

## Glossary of Investment Terminology

Coupon ${ }^{4}$ - The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect ${ }^{1}$ - Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument ${ }^{3}$ - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S\&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S\&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation ${ }^{1}$ - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:
Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

Duration ${ }^{3}$ - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/ Debt/ Cash Ratio ${ }^{\mathbf{1}}$ - The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7\% Equity, 89\% Debt, and 4\% Cash).

Foreign Bond ${ }^{3}$ - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle ${ }^{5}$ - is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark ${ }^{4}$ - The highest peak in value that an investment fund/ account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate ${ }^{4}$ - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects ${ }^{\mathbf{2}}$ - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median ${ }^{3}$ - The value (rate of return, market sensitivity, etc.) that exceeds onehalf of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50 .

Modified Duration ${ }^{3}$ - The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS) ${ }^{\mathbf{3}}$ - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni) ${ }^{4}$ - A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change ${ }^{1}$ - Is the change in an investment after accounting for all Net Cash Flows.

Performance $\mathbf{F e e}^{4}$ - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: ${ }^{1}$ InvestorForce, ${ }^{2}$ Interaction Effect Performance Attribution, ${ }^{3} \mathrm{NEPC}, \mathrm{LLC},{ }^{4}$ Investopedia, ${ }^{5} \mathrm{Hedgeco.net}$

## Glossary of Investment Terminology

Policy Index ${ }^{3}$ - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

Price to Book (P/B) ${ }^{4}$ - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings $(\mathbf{P} / E)^{3}$ - The weighted equity $P / E$ is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S) ${ }^{\mathbf{4}}$ - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE) ${ }^{\mathbf{4}}$ - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect ${ }^{2}$ - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect-the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate ${ }^{5}$ - is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee ${ }^{1}$ - A fee structure that is paid to fund managers based on the size of the investment (i.e. $1.00 \%$ fee on the first $\$ 10 \mathrm{M}$ invested, $0.90 \%$ on the next $\$ 10 \mathrm{M}$, and $0.80 \%$ on the remaining balance).

Total Effects ${ }^{\mathbf{2}}$ - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return ${ }^{1}$ - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe ${ }^{\mathbf{3}}$ - The list of all assets eligible for inclusion in a portfolio.
Upside Deviation ${ }^{\mathbf{1}}$ - Standard Deviation of Positive Returns
Weighted Avg. Market Cap. ${ }^{4}$ - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S\&P 500.

Yield (\% ) ${ }^{\mathbf{3}}$ - The current yield of a security is the current indicated annual dividend rate divided by current price.
Yield to Maturity ${ }^{3}$-The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: ${ }^{1}$ InvestorForce, ${ }^{2}$ Interaction Effect Performance Attribution, ${ }^{3} \mathrm{NEPC}$, LLC, ${ }^{4}$ Investopedia, ${ }^{5} \mathrm{Hedgeco.net}$

## Glossary of Investment Terminology—Risk Statistics

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

## Formula:

(Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100 . An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

## Formula:

Calculation Average $(X-Y) /$ Downside Deviation $(X-Y) * 2$
Where $X=$ Return Series $X Y=$ Return Series $Y$ which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

## Formula:

(Annualized Return of Portfolio - Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

## Formula:

Tracking Error $=$ Standard Deviation $(X-Y) * \sqrt{ }(\#$ of periods per year)
Where $X=$ periods portfolio return and $Y=$ the period's benchmark return For monthly returns, the periods per year $=12$
For quarterly returns, the periods per year $=4$
Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

## Formula:

(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta
Up/ Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines $10 \%$ over some period, and the manager declines only $9 \%$, then his or her capture ratio is $90 \%$. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

UpsideCapture $=$ TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is $>=0$

DownsideCapture $=$ TotalReturn(FundReturns)/TotalReturns(BMReturn) when Benchmark <0

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