



# Texas Municipal Retirement System

## Board Presentation/Executive Summary

Period Ended: December 31, 2016



# Capital Markets Update



Fourth Quarter Economic Environment

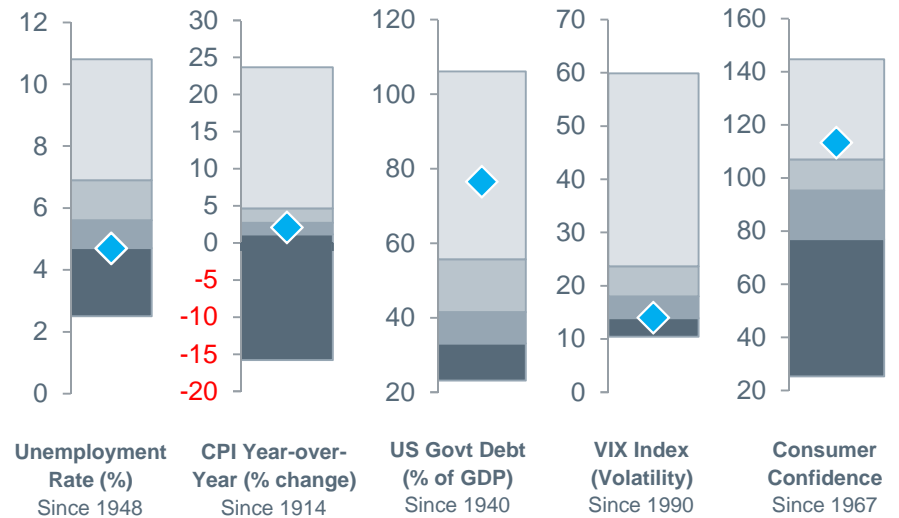
Key Economic Indicators

The surprising result of the United States presidential election produced an initial market shock, as US equity futures traded off nearly 5% during the night of November 8th. By morning however, the volatility and uncertainty gave way to renewed optimism for risk assets as markets contemplated the policy objectives and corresponding economic impact of the Trump administration's agenda. The bullish sentiment in the US cleared the path for the Federal Reserve Open Market Committee to raise the benchmark federal funds rate by 25 basis points during its December meeting. The move was widely anticipated, as economic data supported the Fed tightening at this point in the economic cycle. On November 30, 2016, OPEC announced a deal to cut oil production by 1.2 million barrels per day, the first cut since 2008, which drove the price of oil up nearly 10% on the day of the announcement. In Europe, the European Central Bank announced a moderation in the pace of asset purchases from €80 billion per month to €60 billion, but also extended the duration of the purchase program.

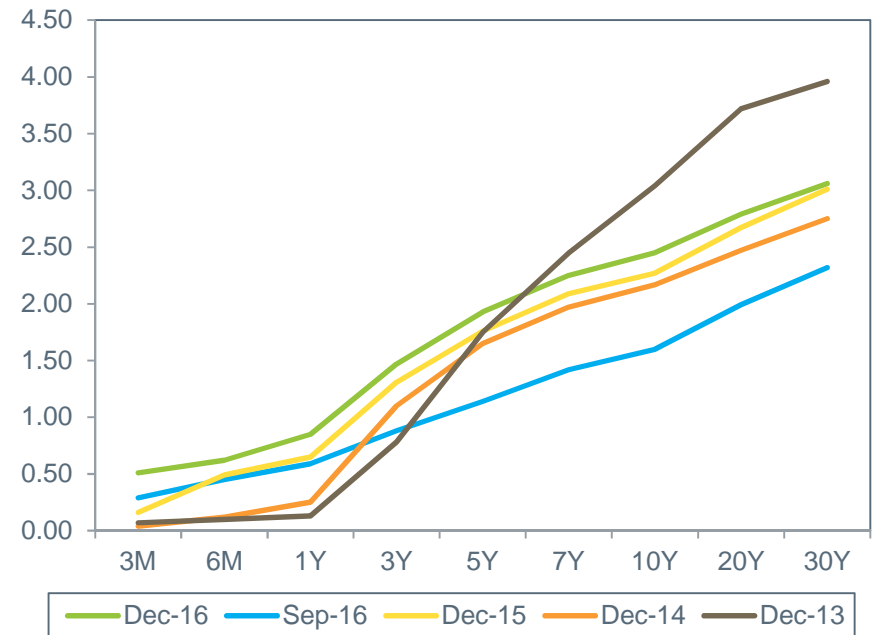
| Economic Indicators           | Dec-16    | Sep-16  | Dec-15  | Dec-13  | 20 Yr |
|-------------------------------|-----------|---------|---------|---------|-------|
| Federal Funds Rate (%)        | 0.55 ▲    | 0.29    | 0.20    | 0.07    | 2.35  |
| Breakeven Infl. - 1 Yr (%)    | 1.27 ▲    | 0.95    | 0.85    | 1.50    | N/A   |
| Breakeven Infl. - 10 Yr (%)   | 1.97 ▲    | 1.61    | 1.58    | 2.23    | N/A   |
| CPI YoY (Headline) (%)        | 2.1 ▲     | 1.5     | 0.7     | 1.5     | 2.2   |
| Unemployment Rate (%)         | 4.7 ▼     | 4.9     | 5.0     | 6.7     | 6.0   |
| Real GDP YoY (%)              | 1.9 ▲     | 1.7     | 1.9     | 2.7     | 2.3   |
| PMI - Manufacturing           | 54.50 ▲   | 51.70   | 47.90   | 56.00   | 52.20 |
| USD Total Wtd Idx             | 95.76 ▲   | 90.01   | 94.25   | 76.15   | 86.86 |
| WTI Crude Oil per Barrel (\$) | 53.7 ▲    | 48.2    | 37.0    | 98.4    | 56.0  |
| Gold Spot per Oz (\$)         | 1,152.3 ▼ | 1,315.8 | 1,061.4 | 1,205.7 | 784.3 |

| Market Performance (%) | QTD   | CYTD  | 1 Yr  | 5 Yr  | 10 Yr |
|------------------------|-------|-------|-------|-------|-------|
| S&P 500 (Cap Wtd)      | 3.82  | 11.96 | 11.96 | 14.66 | 6.95  |
| Russell 2000           | 8.83  | 21.31 | 21.31 | 14.46 | 7.07  |
| MSCI EAFE (Net)        | -0.71 | 1.00  | 1.00  | 6.53  | 0.75  |
| MSCI EAFE SC (Net)     | -2.86 | 2.18  | 2.18  | 10.56 | 2.95  |
| MSCI Emg Mkts (Net)    | -4.16 | 11.19 | 11.19 | 1.28  | 1.84  |
| Bloomberg US Agg Bond  | -2.98 | 2.65  | 2.65  | 2.23  | 4.34  |
| BofA ML 3 Mo US T-Bill | 0.08  | 0.33  | 0.33  | 0.12  | 0.80  |
| NCREIF ODCE (Gross)    | 2.11  | 8.77  | 8.77  | 12.21 | 5.82  |
| Wilshire US REIT       | -2.28 | 7.24  | 7.24  | 12.02 | 4.80  |
| HFRI FOF Comp          | 0.88  | 0.53  | 0.53  | 3.42  | 1.31  |
| Bloomberg Cmddy (TR)   | 2.66  | 11.74 | 11.74 | -8.96 | -5.58 |

Key Economic Indicators



Treasury Yield Curve (%)



Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.



Annual Asset Class Performance

As of December 31, 2016

|       | 2002                   | 2003                  | 2004                         | 2005                          | 2006                           | 2007                       | 2008                             | 2009                            | 2010                              | 2011                              | 2012                     | 2013                      | 2014                           | 2015                             | 2016  |
|-------|------------------------|-----------------------|------------------------------|-------------------------------|--------------------------------|----------------------------|----------------------------------|---------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------------------------|--------------------------------|----------------------------------|-------|
| Best  | 25.91                  | 61.34                 | 33.16                        | 34.00                         | 35.97                          | 39.38                      | 8.44                             | 78.51                           | 28.60                             | 22.49                             | 20.00                    | 38.82                     | 31.78                          | 15.02                            | 21.31 |
|       | 16.56                  | 55.81                 | 31.45                        | 26.19                         | 32.18                          | 16.23                      | 5.24                             | 58.21                           | 26.85                             | 15.99                             | 18.23                    | 32.39                     | 19.31                          | 9.59                             | 17.13 |
|       | 14.84                  | 47.25                 | 25.55                        | 21.39                         | 26.34                          | 15.97                      | 2.06                             | 46.78                           | 22.04                             | 13.56                             | 17.59                    | 29.30                     | 13.69                          | 4.23                             | 11.96 |
|       | 10.27                  | 38.59                 | 20.25                        | 21.36                         | 19.31                          | 11.63                      | -2.35                            | 31.78                           | 18.88                             | 9.24                              | 17.32                    | 22.78                     | 12.50                          | 1.38                             | 11.74 |
|       | 5.54                   | 36.18                 | 18.33                        | 13.82                         | 18.37                          | 11.17                      | -10.01                           | 28.60                           | 16.83                             | 7.84                              | 16.35                    | 13.94                     | 5.97                           | 0.55                             | 11.19 |
|       | 3.58                   | 28.96                 | 13.06                        | 13.54                         | 16.32                          | 10.25                      | -21.37                           | 27.17                           | 16.36                             | 4.98                              | 16.00                    | 8.96                      | 4.89                           | 0.05                             | 8.77  |
|       | 1.78                   | 28.68                 | 11.14                        | 7.49                          | 15.79                          | 6.97                       | -26.16                           | 26.46                           | 15.12                             | 2.11                              | 15.81                    | 7.44                      | 3.64                           | -0.27                            | 7.24  |
|       | 1.02                   | 23.93                 | 10.88                        | 5.34                          | 11.86                          | 6.60                       | -33.79                           | 18.91                           | 15.06                             | 0.10                              | 10.94                    | 1.86                      | 3.37                           | -0.31                            | 6.67  |
|       | -1.37                  | 11.61                 | 9.15                         | 4.91                          | 10.39                          | 5.49                       | -35.65                           | 11.47                           | 10.16                             | -4.18                             | 8.78                     | 0.07                      | 2.45                           | -1.44                            | 4.68  |
|       | -6.17                  | 9.28                  | 8.56                         | 4.55                          | 4.85                           | 5.00                       | -37.00                           | 11.41                           | 7.75                              | -5.72                             | 6.98                     | -2.02                     | 0.04                           | -3.30                            | 2.65  |
|       | -7.83                  | 8.39                  | 8.46                         | 3.07                          | 4.34                           | 1.87                       | -39.20                           | 5.93                            | 6.54                              | -12.14                            | 4.79                     | -2.60                     | -2.19                          | -4.41                            | 2.18  |
|       | -15.94                 | 5.88                  | 6.86                         | 2.84                          | 2.72                           | 1.45                       | -43.38                           | 1.92                            | 6.31                              | -13.32                            | 4.21                     | -8.61                     | -4.30                          | -4.47                            | 1.00  |
|       | -20.48                 | 4.11                  | 4.34                         | 2.74                          | 2.07                           | -1.57                      | -47.01                           | 0.21                            | 5.70                              | -15.94                            | 0.11                     | -8.83                     | -4.95                          | -14.92                           | 0.52  |
| Worst | -22.10                 | 1.15                  | 1.33                         | 2.43                          | 0.49                           | -17.55                     | -53.33                           | -29.76                          | 0.13                              | -18.42                            | -1.06                    | -9.52                     | -17.01                         | -24.66                           | 0.33  |
|       | S&P 500 - US Large Cap | R 2000 - US Small Cap | MSCI EAFE (Net) - Int'l Dev. | MSCI EAFE SC (Net) - Int'l SC | MSCI EM (Net) - Int'l Emg Mkts | Bloomberg US Agg Bond - FI | Bloomberg US Corp: Hi Yield - FI | Bloomberg US Trsy: US TIPS - FI | Bloomberg US Gov/Credit: Lng - FI | NCREIF ODCE (Gross) - Real Estate | Wilshire US REIT - REITs | HFRI FOF Comp Index - ARS | Bloomberg Cmdty (TR) - Commod. | BofA ML 3 Mo T-Bill - Cash Equiv |       |

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

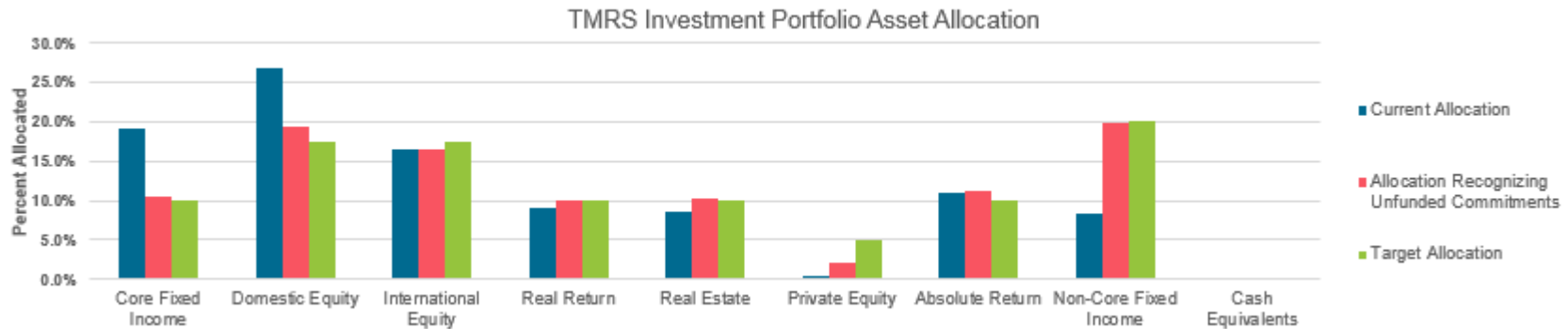


# TMRS Total Fund



Texas Municipal Retirement System  
Asset Allocation & Comparative Performance

As of December 31, 2016



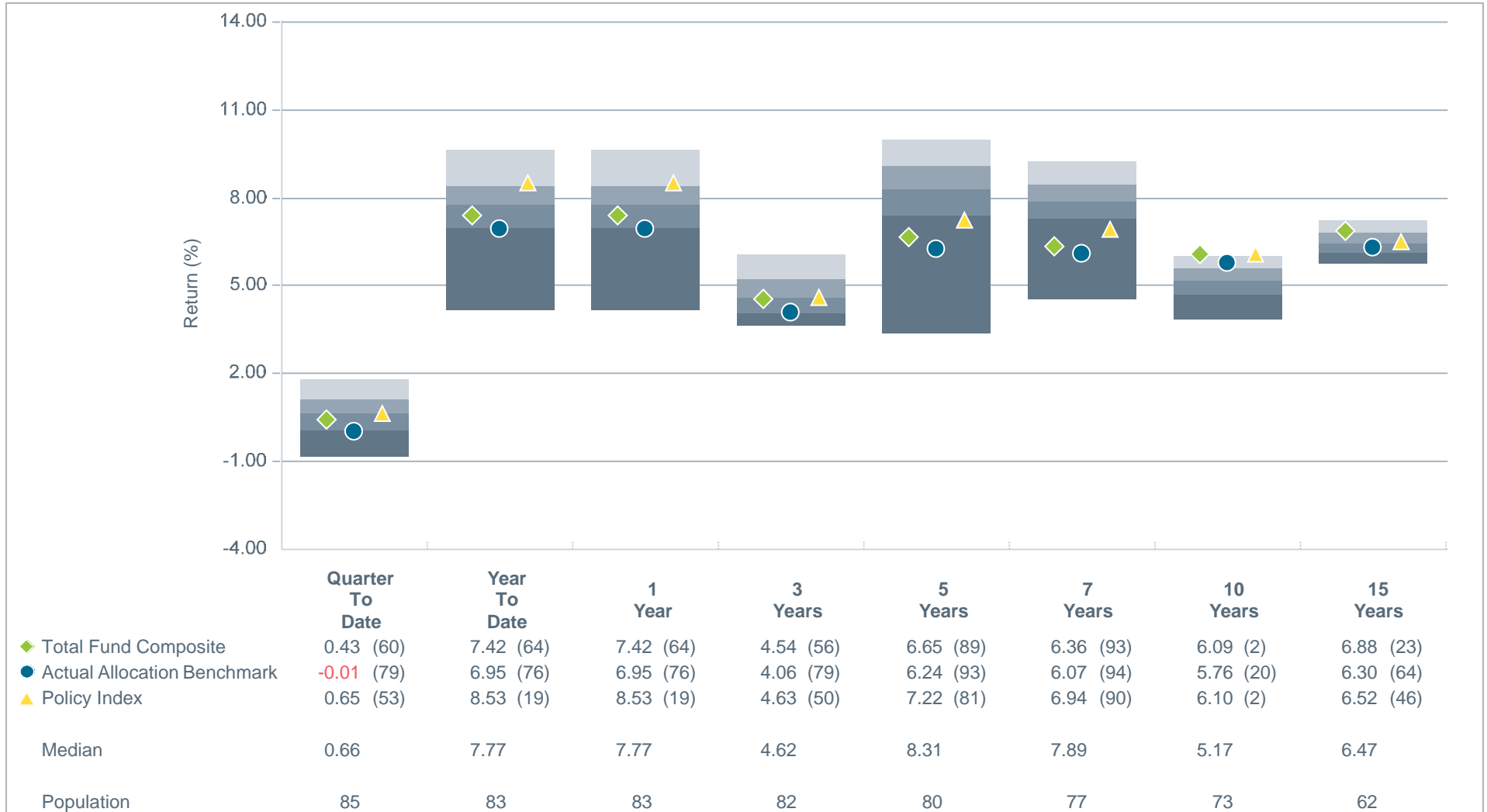
|  | Allocation        |        | Performance (%) |       |        |         |         |         |          |          |              |                |  |
|--|-------------------|--------|-----------------|-------|--------|---------|---------|---------|----------|----------|--------------|----------------|--|
|  | Market Value (\$) | %      | Quarter         | CYTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 15 Years | Since Incep. | Inception Date |  |
| <b>Total Fund Composite</b>                      | 25,103,517,939    | 100.00 | 0.33            | 7.04  | 7.04   | 4.29    | 6.45    | 6.21    | 5.98     | 6.80     | 8.46         | 01/01/1989     |  |
| Actual Allocation Benchmark                      |                   |        | -0.01           | 6.95  | 6.95   | 4.06    | 6.24    | 6.07    | 5.76     | 6.30     | 7.89         |                |  |
| <b>Global Equity Composite</b>                   | 10,871,590,687    | 43.31  | 1.45            | 9.39  | 9.39   | 4.32    | 10.59   | 8.28    | N/A      | N/A      | 4.43         | 02/01/2008     |  |
| Global Equity Benchmark                          |                   |        | 2.00            | 9.54  | 9.54   | 4.24    | 10.54   | 8.23    | N/A      | N/A      | 4.36         |                |  |
| <b>Domestic Equity Composite</b>                 | 6,744,316,200     | 26.87  | 4.28            | 13.17 | 13.17  | 8.25    | 14.46   | 12.77   | N/A      | N/A      | 8.01         | 02/01/2008     |  |
| Russell 3000 Index                               |                   |        | 4.21            | 12.74 | 12.74  | 8.43    | 14.67   | 12.92   | 7.07     | 7.11     | 8.12         |                |  |
| <b>International Equity Composite</b>            | 4,127,271,568     | 16.44  | -2.97           | 3.50  | 3.50   | -1.08   | 5.69    | 3.09    | N/A      | N/A      | 0.25         | 02/01/2008     |  |
| International Equity Benchmark                   |                   |        | -1.57           | 4.41  | 4.41   | -1.44   | 5.35    | 2.80    | 0.06     | 4.81     | -0.03        |                |  |
| <b>Core Fixed Income Composite</b>               | 4,809,721,532     | 19.16  | -2.86           | 2.89  | 2.89   | 3.08    | 2.40    | 3.74    | 4.23     | 5.62     | 7.82         | 01/01/1989     |  |
| Fixed Income Benchmark                           |                   |        | -2.98           | 2.65  | 2.65   | 3.03    | 2.23    | 3.63    | 4.05     | 5.15     | 7.27         |                |  |
| <b>Non-Core Fixed Income Composite</b>           | 2,092,565,800     | 8.34   | 2.19            | 7.62  | 7.62   | N/A     | N/A     | N/A     | N/A      | N/A      | 3.82         | 10/01/2014     |  |
| Non-Core Fixed Income Benchmark                  |                   |        | -0.99           | 13.56 | 13.56  | 3.15    | 5.18    | 6.14    | 6.50     | N/A      | 2.72         |                |  |
| <b>Real Return Composite</b>                     | 2,301,882,918     | 9.17   | -3.13           | 6.90  | 6.90   | 1.68    | 2.18    | N/A     | N/A      | N/A      | 3.00         | 02/01/2011     |  |
| Bloomberg Wrld Gov't Infl Lnk'd Index (Unhedged) |                   |        | -5.31           | 4.02  | 4.02   | 1.05    | 0.98    | 2.73    | 3.55     | 6.01     | 2.46         |                |  |
| <b>Real Estate Composite</b>                     | 2,133,170,548     | 8.50   | 2.60            | 12.33 | 12.33  | 14.52   | 11.72   | N/A     | N/A      | N/A      | 11.72        | 01/01/2012     |  |
| Real Estate Benchmark                            |                   |        | 2.07            | 9.97  | 9.97   | 12.44   | 12.39   | 12.42   | 6.02     | 8.03     | 12.39        |                |  |
| <b>Absolute Return Composite</b>                 | 2,749,266,326     | 10.95  | 1.80            | 2.25  | 2.25   | N/A     | N/A     | N/A     | N/A      | N/A      | 2.48         | 08/01/2014     |  |
| Absolute Return Benchmark                        |                   |        | 1.15            | 0.48  | 0.48   | 1.24    | 3.47    | 2.49    | 1.41     | 3.37     | 0.89         |                |  |
| <b>Private Equity Composite</b>                  | 114,184,633       | 0.45   | 7.20            | 1.68  | 1.68   | N/A     | N/A     | N/A     | N/A      | N/A      | 1.68         | 01/01/2016     |  |
| Russell 3000 Index + 3%                          |                   |        | 4.98            | 16.12 | 16.12  | 11.69   | 18.11   | 16.31   | 10.29    | 10.32    | 16.12        |                |  |
| <b>TMRS Unallocated Cash</b>                     | 31,135,494        | 0.12   | 0.07            | 0.58  | 0.58   | 0.53    | 0.36    | 0.28    | N/A      | N/A      | 0.36         | 06/01/2008     |  |
| BofA ML 3 Mo US T-Bill Index                     |                   |        | 0.08            | 0.33  | 0.33   | 0.14    | 0.12    | 0.12    | 0.80     | 1.34     | 0.24         |                |  |

Performance shown is net of fees and provided by State Street. Performance is annualized for periods greater than one year. Market value for the Global Equity Composite includes assets held in the Transition Account. Real Estate and Private Equity fund returns are calculated by Private Edge. Private Real Estate fund returns are lagged 1 quarter. Inception dates shown for Real Estate and Private Equity composite represent the first full quarter following initial funding. Inception dates for all other composites represents the first full month following initial funding.



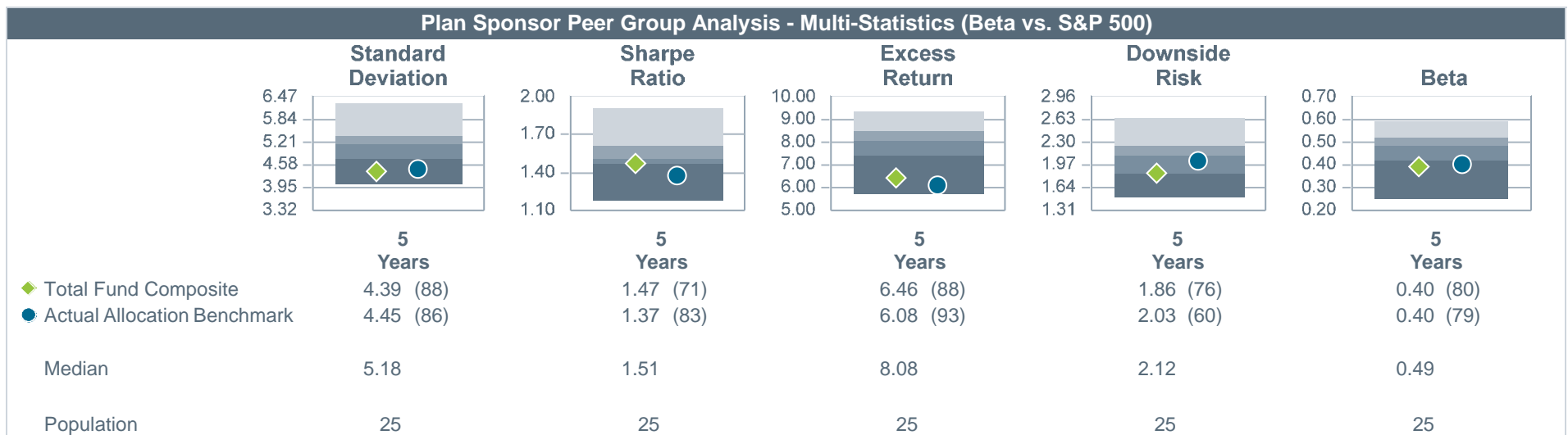
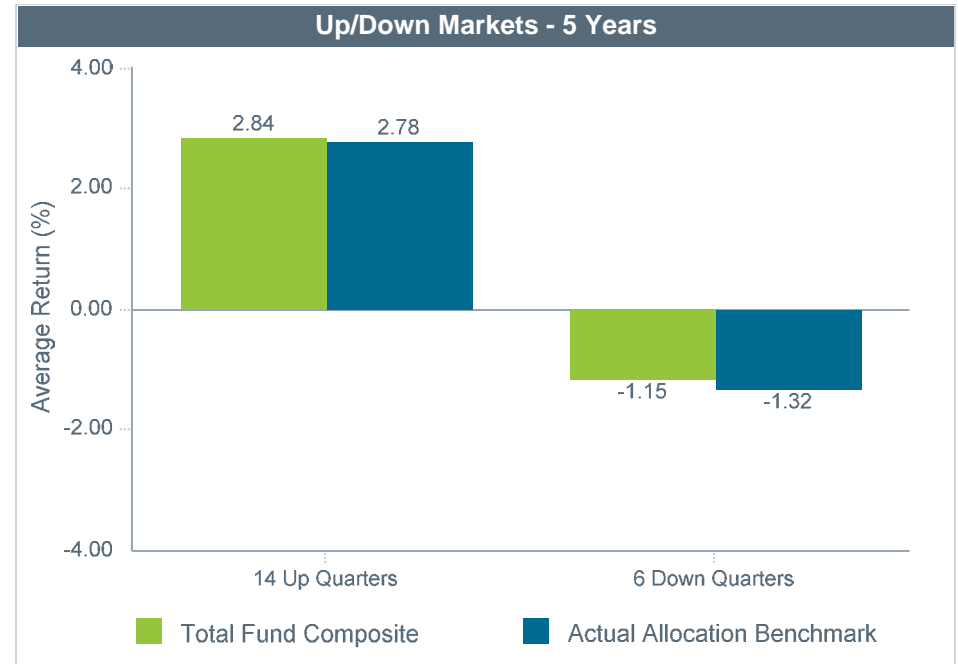
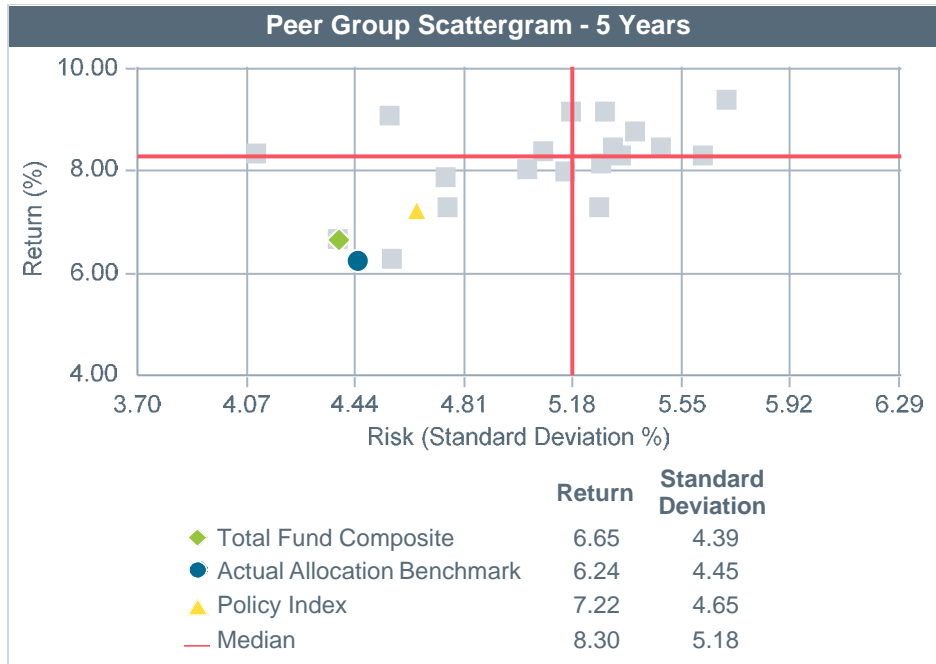
# Total Fund Performance vs. Peers

While performance relative to other systems is not an objective of the TMRS fund given the wide range in investment objectives and different benefit plan structures, it is generally of interest to be aware of the performance of other public pension systems.



The Total Fund is ranked against a universe of Public Plans > \$1B.  
Please see Supplemental Information for custom benchmark definitions.  
Performance shown is gross of fees, as of December 31, 2016

# Total Fund Composite vs. All Public Funds > \$10B-Total Fund



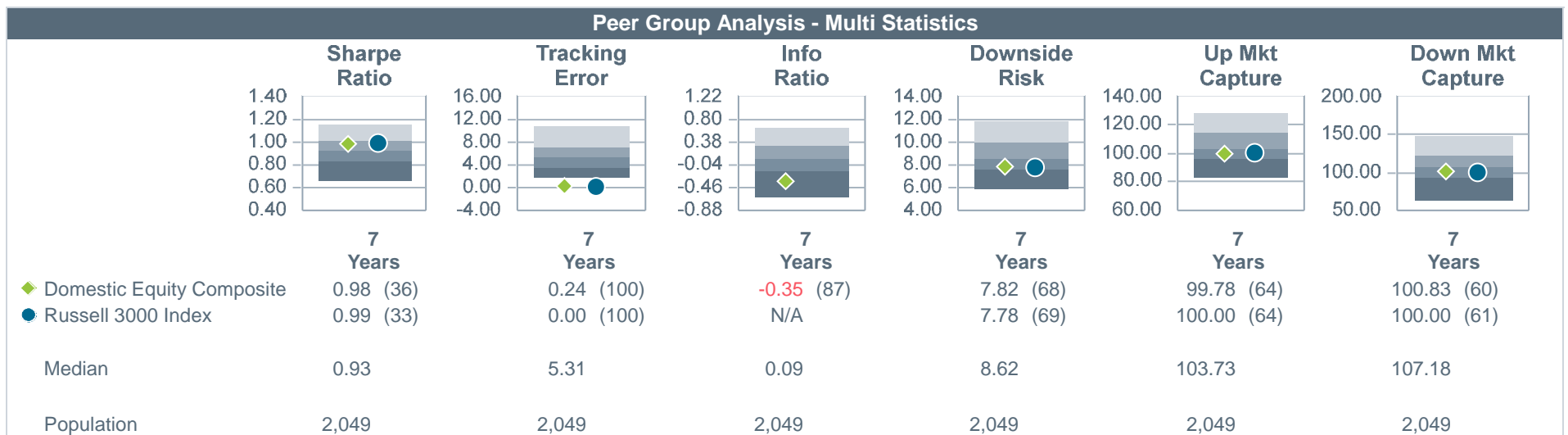
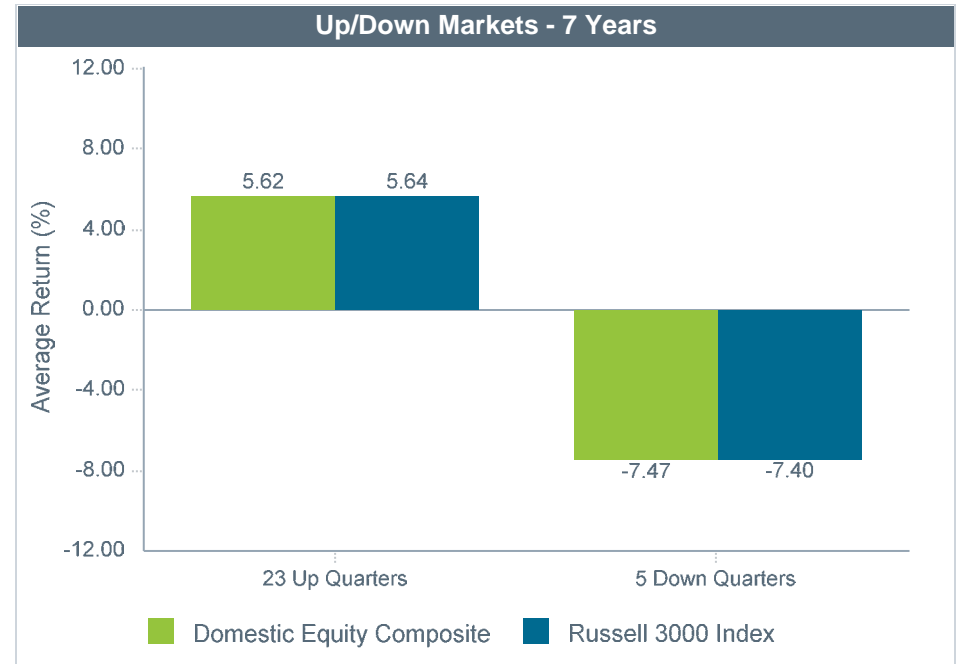
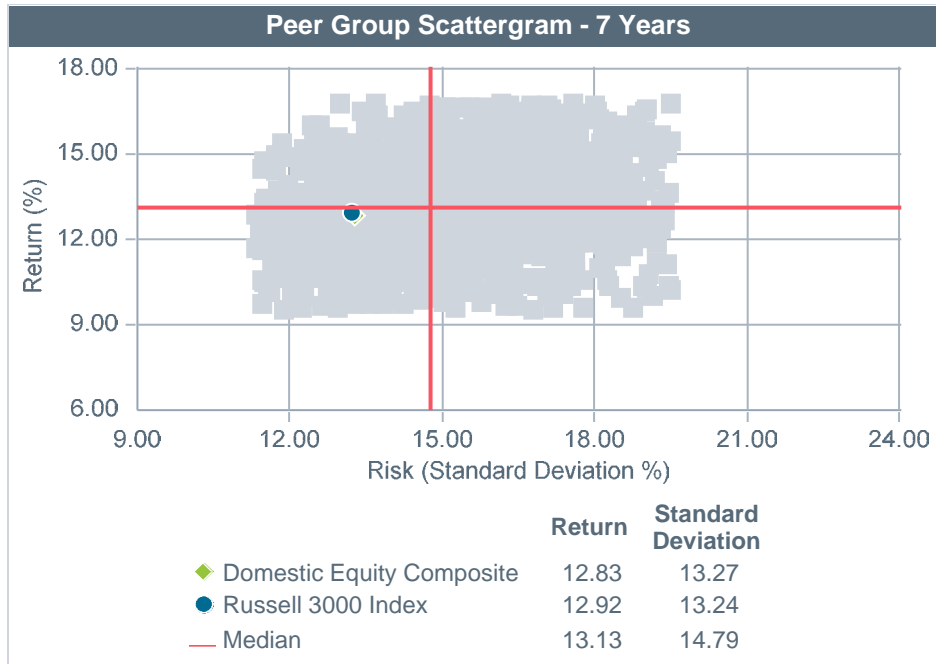
Performance shown is gross of fees. Calculations based on quarterly periodicity. Parenthesis contain percentile ranks.



# TMRS Asset Class Composites

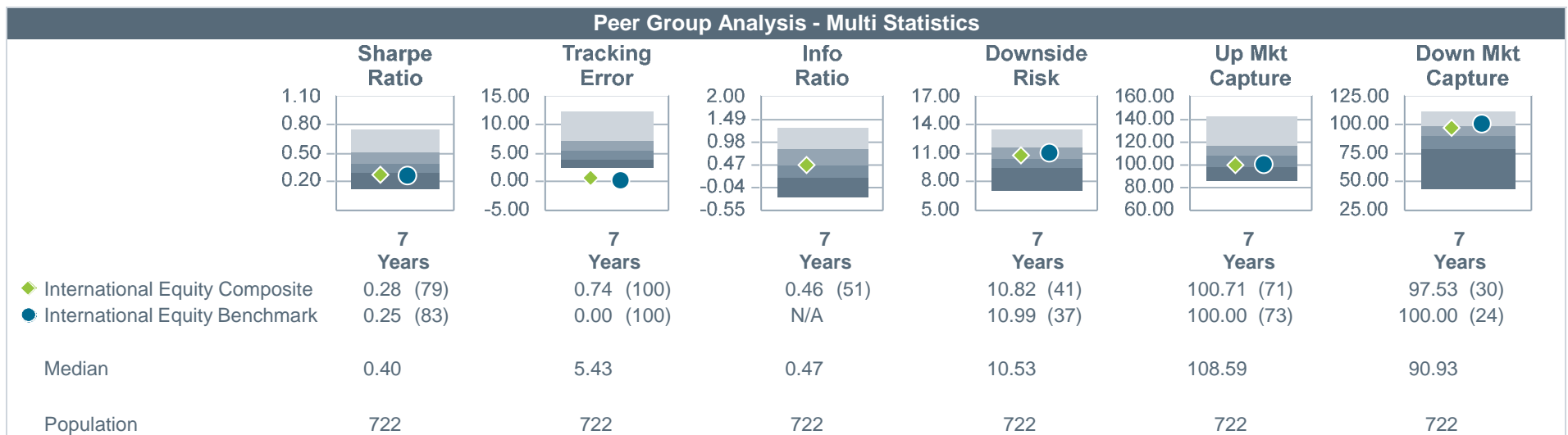
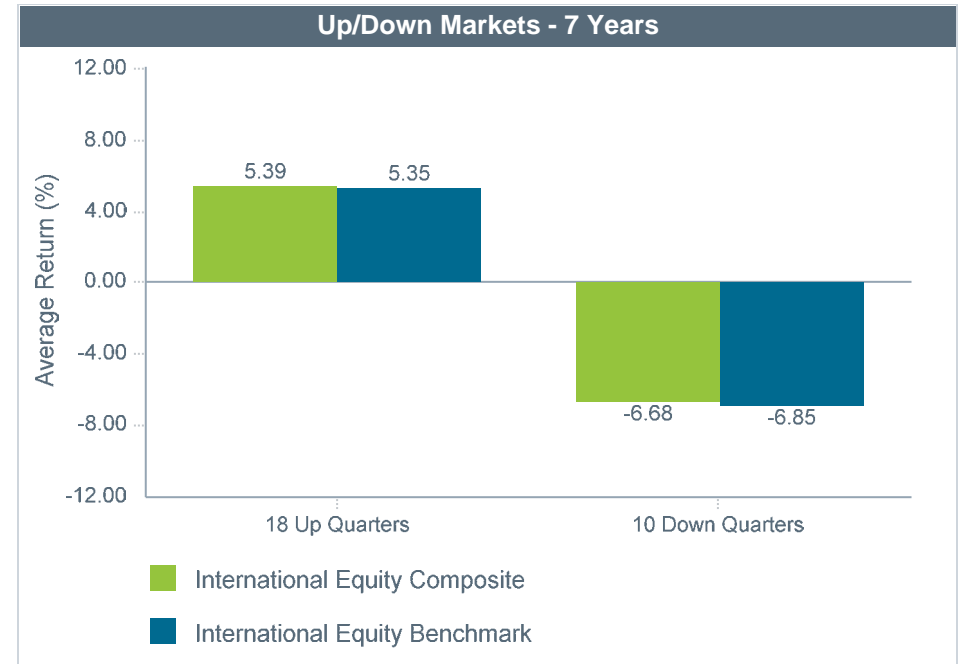
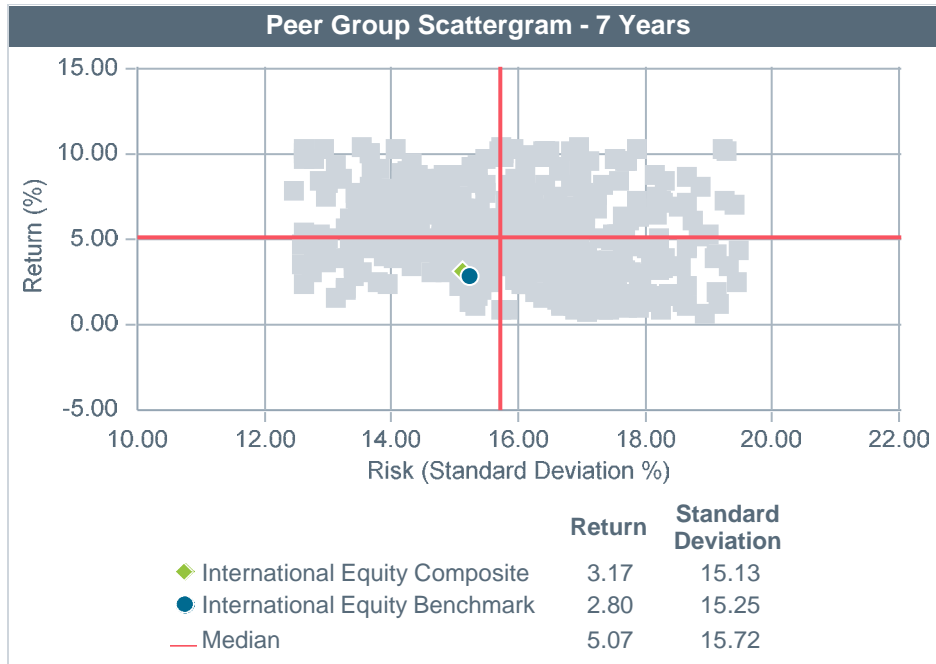


# Domestic Equity Composite vs. IM U.S. Equity



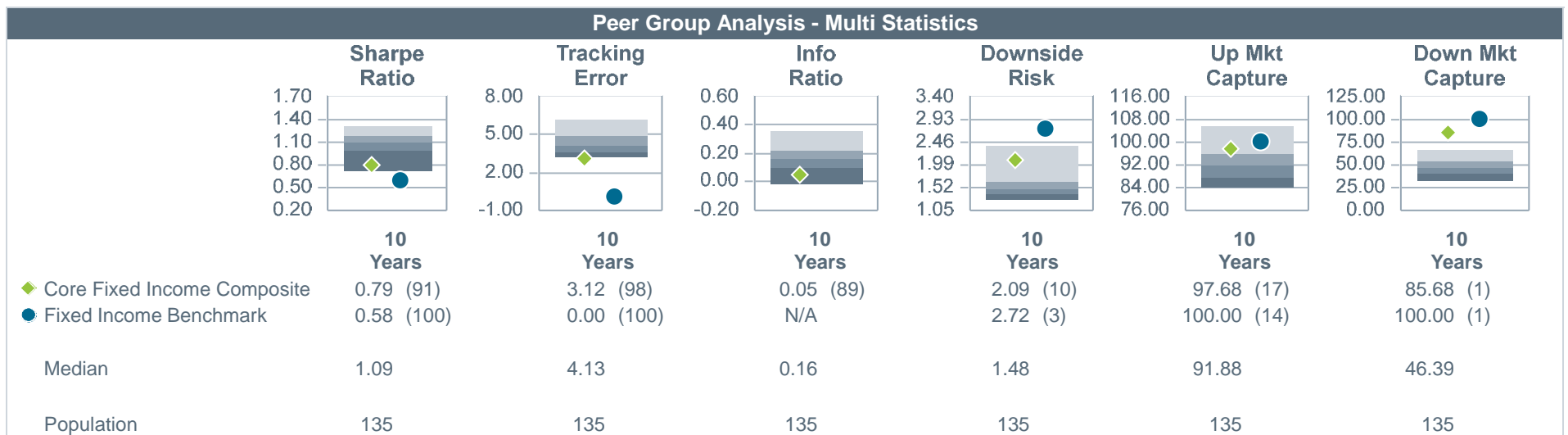
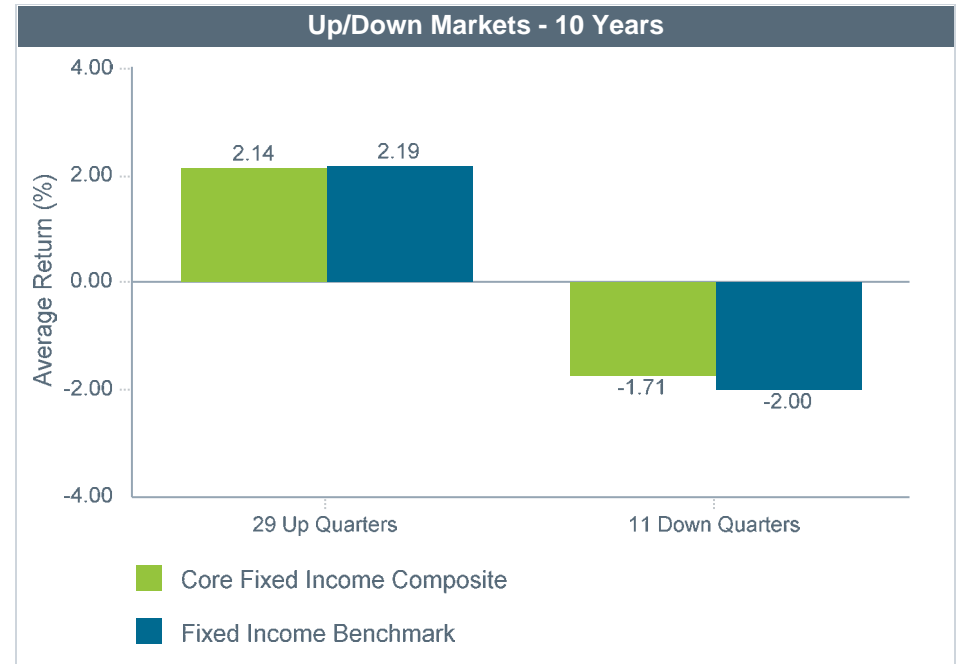
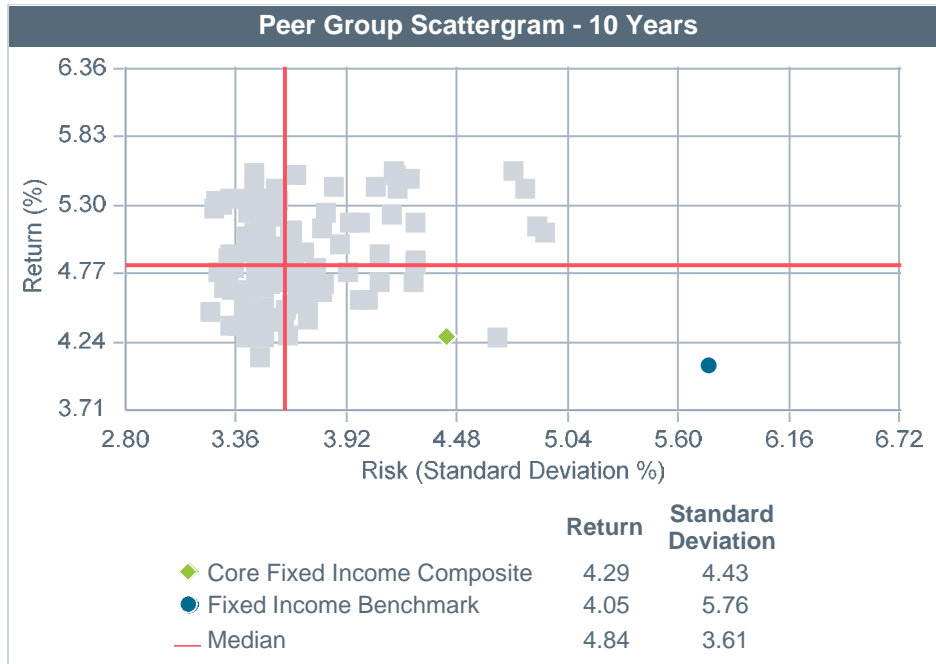
Performance shown is gross of fees. Calculations based on quarterly periodicity. Parenthesis contain percentile ranks.

# International Equity Composite vs. IM International Equity



Performance shown is gross of fees. Calculations based on quarterly periodicity. Parenthesis contain percentile ranks.

# Core Fixed Income Composite vs. IM U.S. Broad Market Core Fixed Income



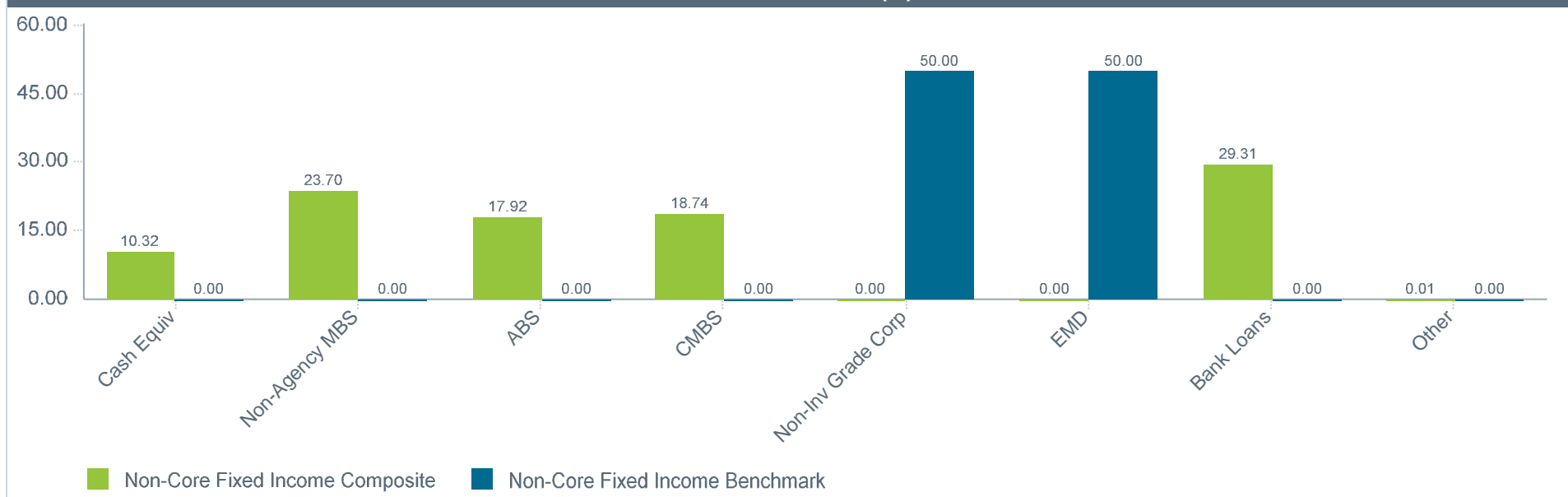
Performance shown is gross of fees. Calculations based on quarterly periodicity. Parenthesis contain percentile ranks.

# Non-Core Fixed Income Composite vs. Non-Core Fixed Income Benchmark

## Portfolio Characteristics

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Spread Duration       | 3.00      | N/A       |
| Avg. Maturity         | 10.61     | 6.95      |
| Avg. Quality          | B2        | Ba2       |
| Yield To Maturity (%) | 5.46      | 6.17      |
| Coupon Rate (%)       | 4.45      | 6.60      |

## Sector Distribution (%)



Bond characteristics exclude Private and Opportunistic Credit. Allocation to "Other" consists of miscellaneous differences between the account's net asset value and its trade date based clean holdings. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

# Real Return Composite Performance and Allocation

## Asset Allocation by Manager

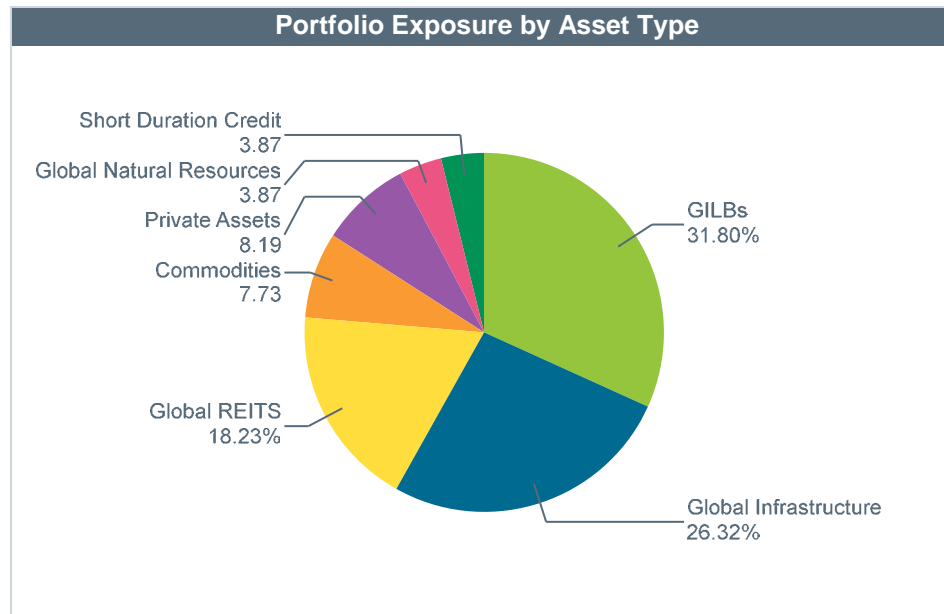
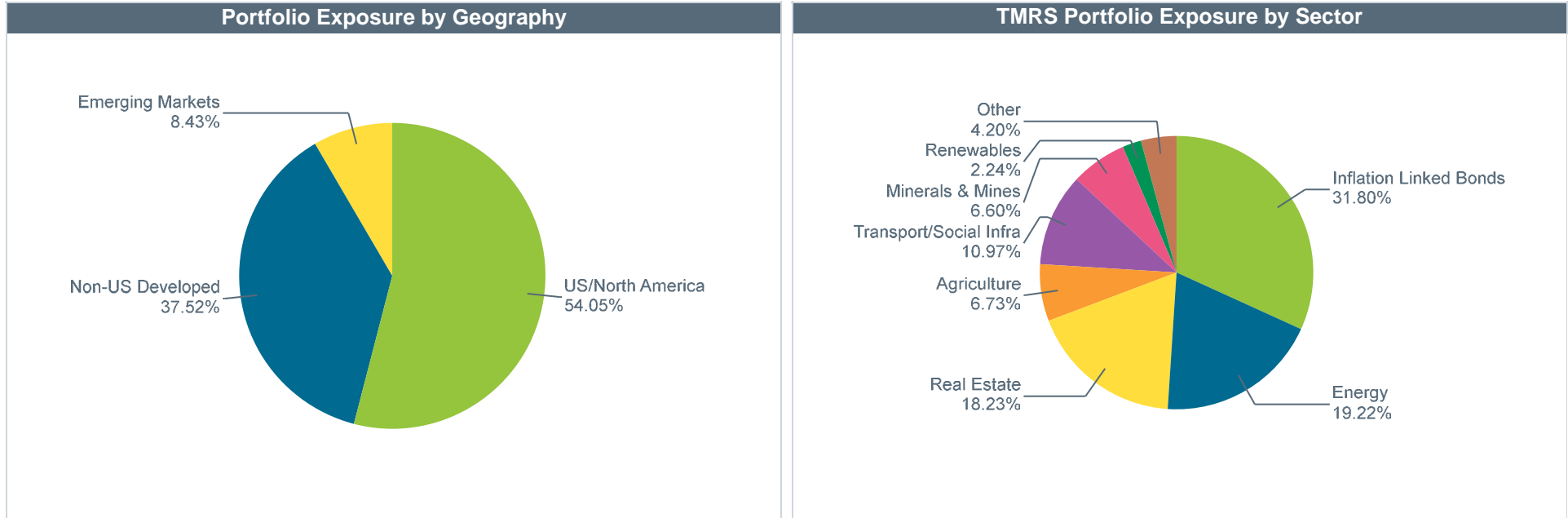


## Comparative Performance

|   | 1 Quarter    | Year To Date | 1 Year      | 3 Years     | 5 Years     | 10 Years   | 2015         | 2014        | 2013         | 2012         | 2011       | Since Incep. | Inception Date    |
|---|--------------|--------------|-------------|-------------|-------------|------------|--------------|-------------|--------------|--------------|------------|--------------|-------------------|
| <b>Real Return Composite</b>                    | <b>-3.07</b> | <b>6.95</b>  | <b>6.95</b> | <b>1.80</b> | <b>2.32</b> | <b>N/A</b> | <b>-5.55</b> | <b>4.44</b> | <b>-4.06</b> | <b>10.83</b> | <b>N/A</b> | <b>3.15</b>  | <b>02/01/2011</b> |
| Bloomberg Wrld Gov't Infl Lnkd Index (Unhedged) | -5.31        | 4.02         | 4.02        | 1.05        | 0.98        | 3.55       | -4.70        | 4.08        | -4.84        | 6.95         | 10.65      | 2.46         |                   |
| Difference                                      | 2.24         | 2.93         | 2.93        | 0.75        | 1.34        | N/A        | -0.85        | 0.36        | 0.78         | 3.88         | N/A        | 0.69         |                   |

Performance shown is gross of fees. Allocations shown may not sum up to 100% exactly due to rounding.

# Real Return Portfolio Diversification

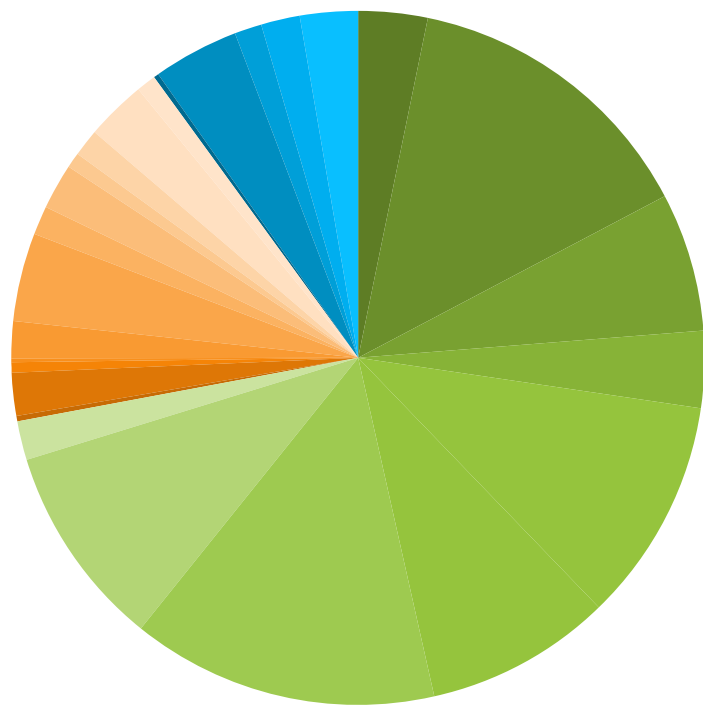


Allocations may not sum up to 100% exactly due to rounding. Allocations are by adjusted commitments. Allocation information is as of December 31, 2016 and provided by TMRS.

# Real Estate Composite Allocation

## Asset Allocation by Manager

December 31, 2016 : \$2,133,170,548



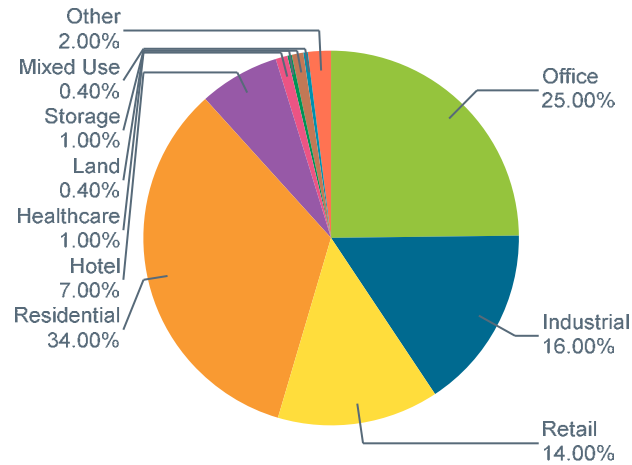
|   | Market Value (\$) | Allocation (%) |
|---|-------------------|----------------|
| Abacus Core Income Fund, LP             | 68,833,491        | 3.23           |
| BlackStone Property Partners            | 299,999,984       | 14.06          |
| H/2 CP, LP                              | 137,604,500       | 6.45           |
| H/2 CP Core RE Debt Fund, LP            | 76,496,700        | 3.59           |
| Harrison St. Real Estate                | 222,839,010       | 10.45          |
| INVESCO Advisers, Inc.                  | 185,476,635       | 8.69           |
| Stockbridge Smart Markets Fund, LP      | 305,051,465       | 14.30          |
| USAA Eagle Real Estate Fund, LP         | 202,303,888       | 9.48           |
| Walton St Real Estate Debt Fund         | 38,683,807        | 1.81           |
| Abacus Multi-Family Partners II, LP     | 5,295,926         | 0.25           |
| Abacus Multi-Family Partners III, LP    | 42,794,885        | 2.01           |
| Alcion RE Part Fund III-B, LP           | 10,322,738        | 0.48           |
| DivcoWest V                             | 3,542,819         | 0.17           |
| Greenfield Acquisition Partners VI, LP  | 36,722,163        | 1.72           |
| Greenfield Acquisition Partners VII, LP | 87,839,407        | 4.12           |
| Miller Global Fund VII                  | 28,643,927        | 1.34           |
| Rubenstein Properties Fund II           | 45,481,903        | 2.13           |
| Rubenstein Properties Fund III          | 14,966,516        | 0.70           |
| Stockbridge Value Fund, LLC             | 27,227,629        | 1.28           |
| Stockbridge Value Fund II, LP           | 60,075,976        | 2.82           |
| Torchlight Debt Opp Fund V, LP          | 19,507,481        | 0.91           |
| European Property Inv Special           | 4,954,330         | 0.23           |
| *Kildare European Partners II           | -                 | 0.00           |
| Lubert-Adler Fund VII                   | 85,228,762        | 4.00           |
| Moorfield Real Estate III               | 27,185,522        | 1.27           |
| TPG Real Estate Part II, LP             | 38,468,196        | 1.80           |
| Walton St Real Estate Fund VII          | 57,622,888        | 2.70           |

\*Represents approved investments that have not been funded and/or are pending legal documents. Allocations shown may not sum up to 100% exactly due to rounding.

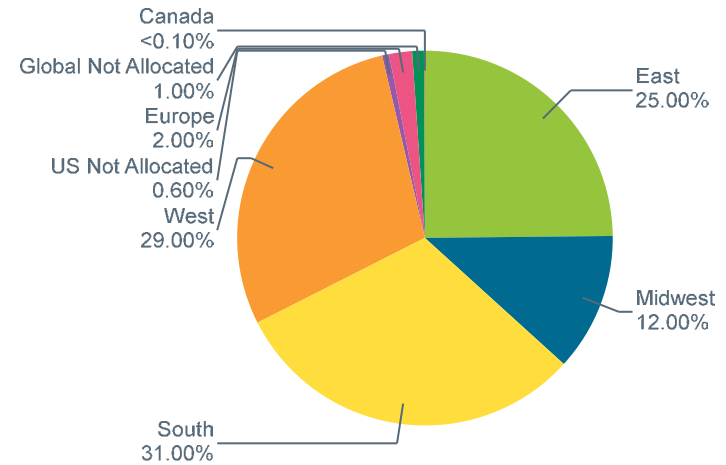


# Real Estate Portfolio Diversification

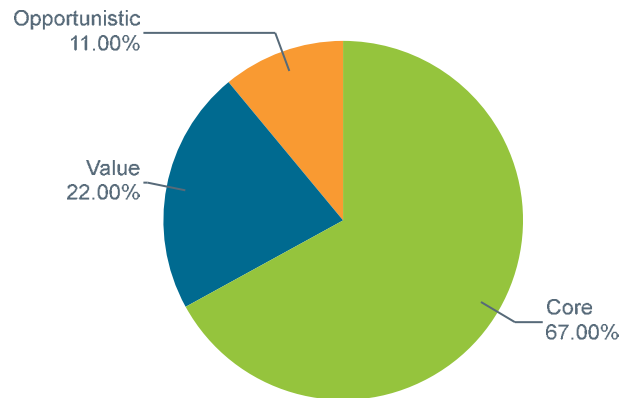
Property Type Diversification Based on Market Value



Geographic Diversification Based on Market Value



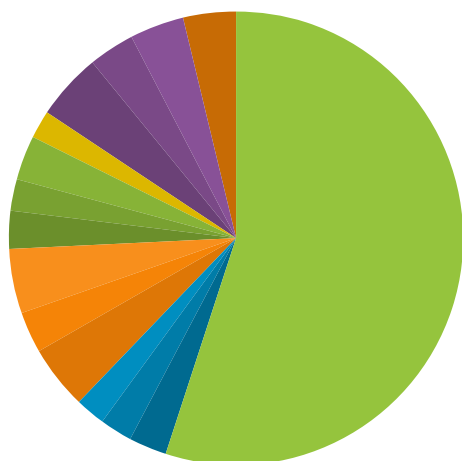
Sector Diversification Based on Market Value



# Absolute Return Performance and Allocation

## Asset Allocation by Manager

December 31, 2016 : \$2,749,266,326



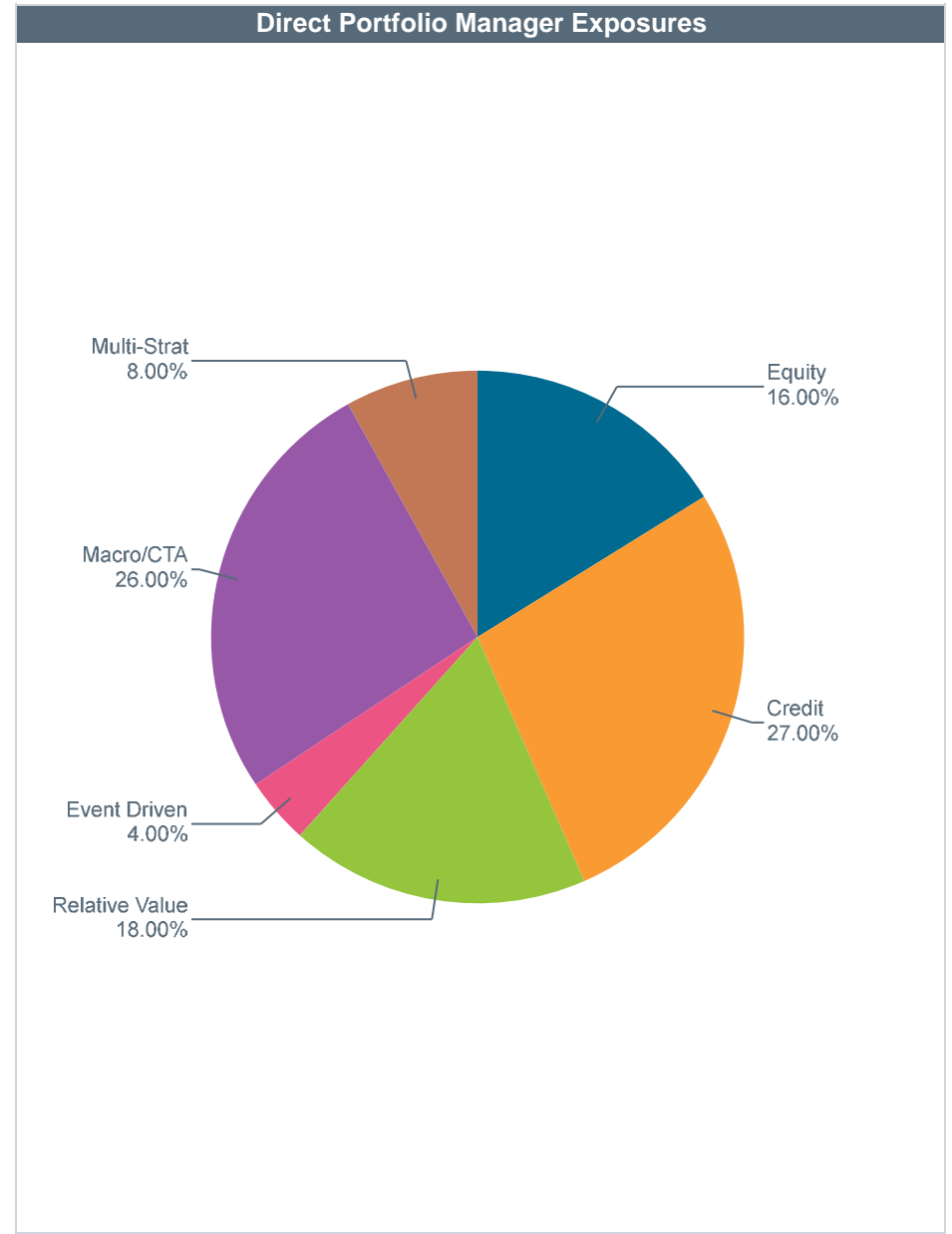
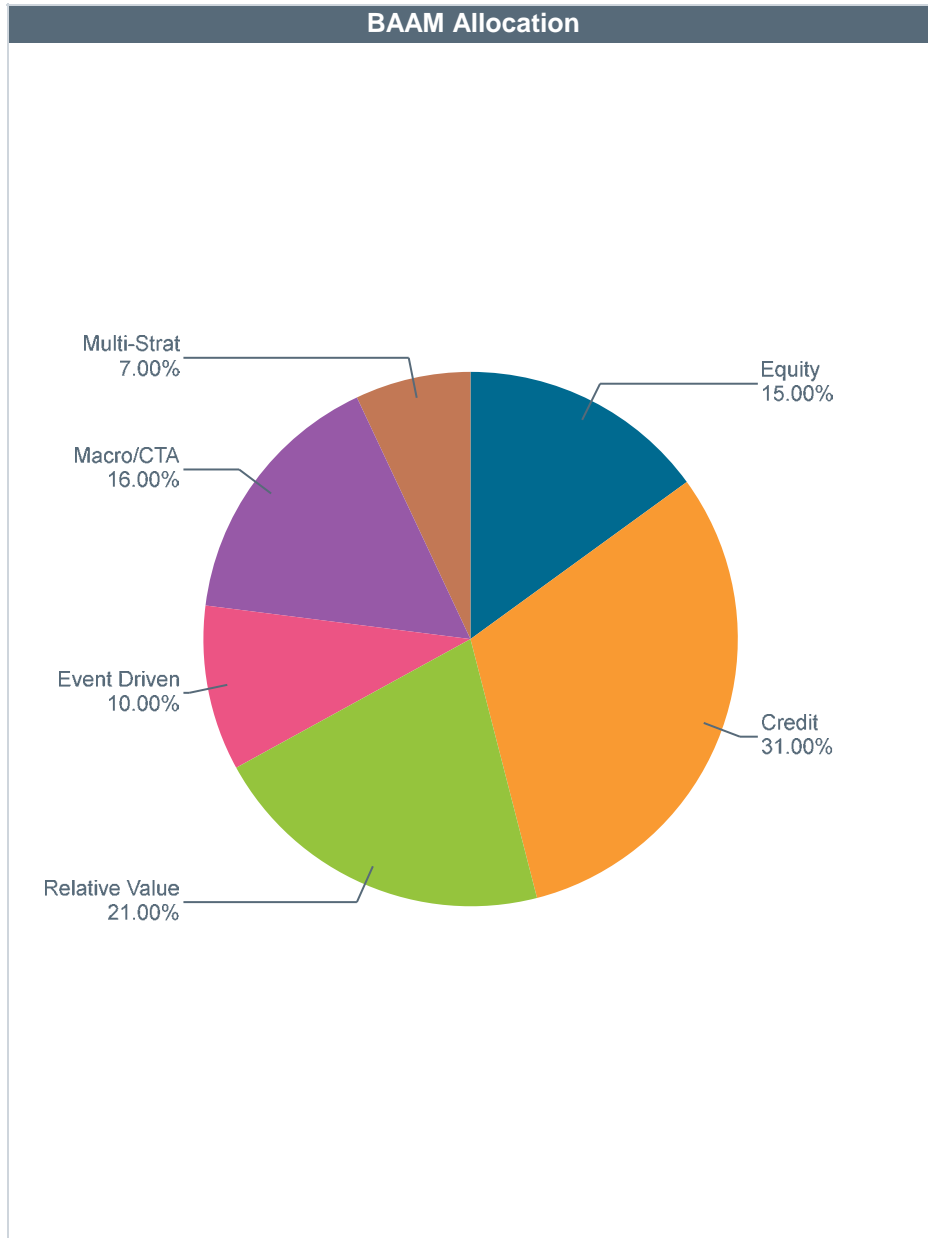
|                                | Market Value (\$) | Allocation (%) |
|--------------------------------|-------------------|----------------|
| Blackstone Treaty Oak Fund, LP | 1,512,462,736     | 55.01          |
| L/S Equity Manager 1           | 74,166,600        | 2.70           |
| L/S Equity Manager 2           | 63,736,140        | 2.32           |
| L/S Equity Manager 3           | 58,446,540        | 2.13           |
| Credit Manager 1               | 125,593,560       | 4.57           |
| Credit Manager 2               | 80,450,175        | 2.93           |
| Credit Manager 3               | 126,548,875       | 4.60           |
| Relative Value Manager 1       | 74,115,600        | 2.70           |
| Relative Value Manager 2       | 61,884,900        | 2.25           |
| Relative Value Manager 3       | 86,929,110        | 3.16           |
| *Relative Value Manager 4      | -                 | 0.00           |
| Event Driven Manager 1         | 54,960,660        | 2.00           |
| Global Macro Manager 1         | 130,600,250       | 4.75           |
| Global Macro Manager 2         | 89,747,280        | 3.26           |
| Global Macro Manager 3         | 106,548,100       | 3.88           |
| Multi-Strat Manager 1          | 103,075,800       | 3.75           |

## Comparative Performance

|   | 1 Quarter   | Year To Date | 1 Year      | 3 Years    | 5 Years    | 10 Years   | 2015        | 2014       | 2013       | 2012       | 2011       | Since Incep. | Inception Date    |
|---|-------------|--------------|-------------|------------|------------|------------|-------------|------------|------------|------------|------------|--------------|-------------------|
| <b>Absolute Return Composite</b>        | <b>2.04</b> | <b>2.97</b>  | <b>2.97</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>3.39</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>2.99</b>  | <b>08/01/2014</b> |
| Absolute Return Benchmark               | 1.15        | 0.48         | 0.48        | 1.24       | 3.47       | 1.41       | 0.11        | 3.15       | 9.04       | 4.81       | -5.01      | 0.89         |                   |
| Difference                              | 0.89        | 2.49         | 2.49        | N/A        | N/A        | N/A        | 3.28        | N/A        | N/A        | N/A        | N/A        | 2.10         |                   |
| <b>Blackstone Treaty Oak Fund, LP</b>   | <b>2.44</b> | <b>3.04</b>  | <b>3.04</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>3.39</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>3.01</b>  | <b>08/01/2014</b> |
| Absolute Return Benchmark               | 1.15        | 0.48         | 0.48        | 1.24       | 3.47       | 1.41       | 0.11        | 3.15       | 9.04       | 4.81       | -5.01      | 0.89         |                   |
| Difference                              | 1.29        | 2.56         | 2.56        | N/A        | N/A        | N/A        | 3.28        | N/A        | N/A        | N/A        | N/A        | 2.12         |                   |
| <b>Absolute Return Direct Composite</b> | <b>1.43</b> | <b>2.65</b>  | <b>2.65</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>2.65</b>  | <b>01/01/2016</b> |
| Absolute Return Benchmark               | 1.15        | 0.48         | 0.48        | 1.24       | 3.47       | 1.41       | 0.11        | 3.15       | 9.04       | 4.81       | -5.01      | 0.48         |                   |
| Difference                              | 0.28        | 2.17         | 2.17        | N/A        | N/A        | N/A        | N/A         | N/A        | N/A        | N/A        | N/A        | 2.17         |                   |

\*Represents approved investments that have not been funded and/or are pending legal documents.  
Performance shown is gross of fees. Allocations shown may not sum up to 100% exactly due to rounding.

# Absolute Return Strategy Exposures

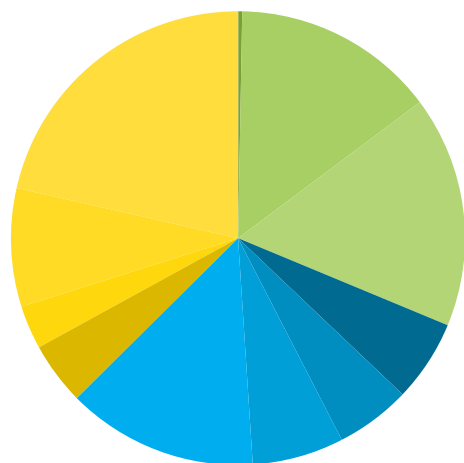


Allocations shown may not sum up to 100% exactly due to rounding. Allocation information is as of December 31, 2016 and provided by TMRS.

# Private Equity Performance and Allocation

## Asset Allocation by Manager

\$114,184,633



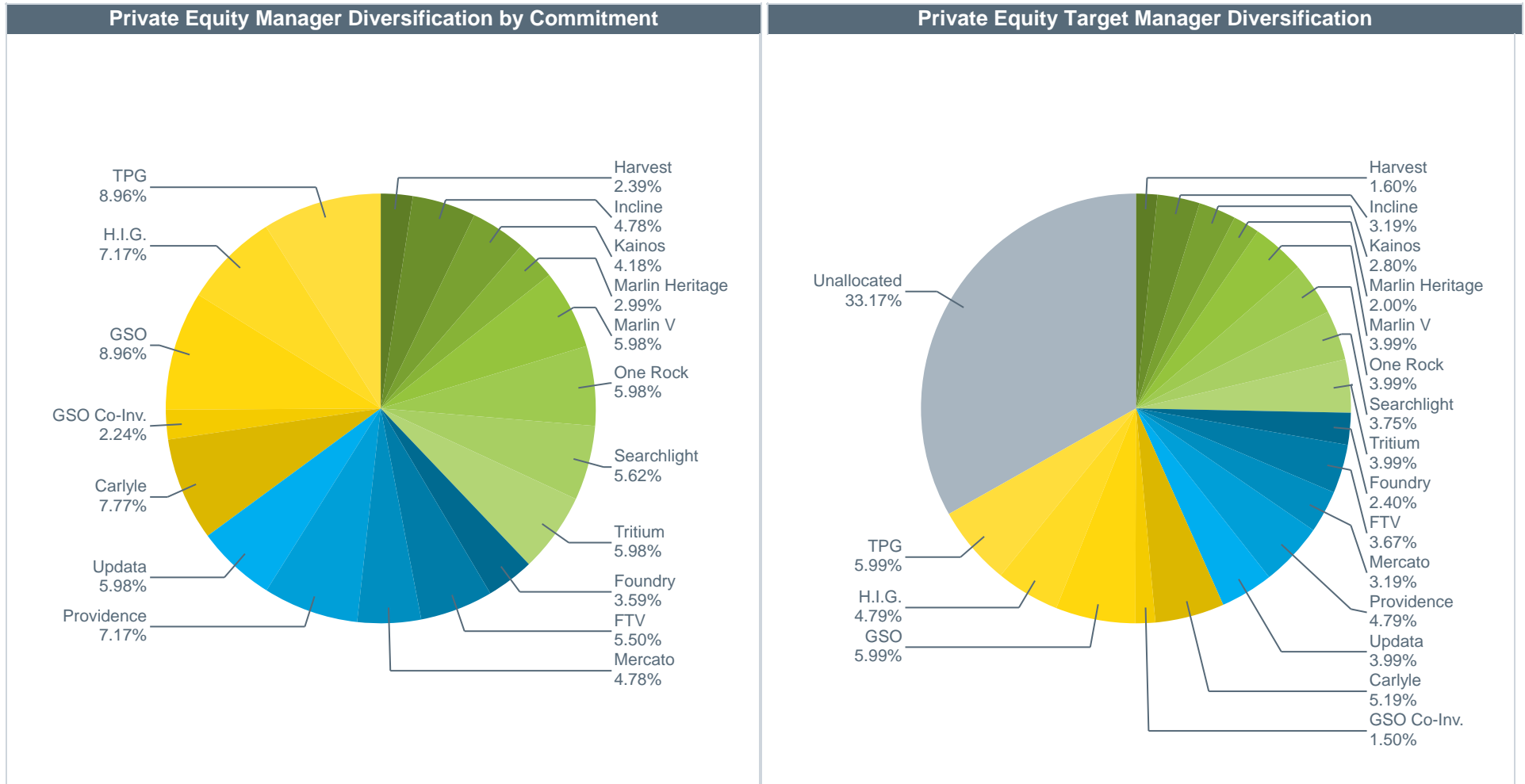
|  | Market Value (\$) | Allocation (%) |
|--|-------------------|----------------|
| Harvest Partners VII                   | 59,231            | 0.05           |
| *Incline Equity IV                     | -                 | 0.00           |
| Kainos Capital Partners II             | 272,182           | 0.24           |
| *Marlin Heritage II, LP                | -                 | 0.00           |
| *Marlin Equity V, LP                   | -                 | 0.00           |
| *One Rock Capital Partners II, LP      | -                 | 0.00           |
| Searchlight Capital II                 | 16,532,796        | 14.48          |
| Tritium I, LP                          | 18,835,141        | 16.50          |
| Foundry Group Next Fund, LP            | 6,662,949         | 5.84           |
| *FTV V                                 | -                 | 0.00           |
| Mercato Partners Growth III, LP        | 6,106,948         | 5.35           |
| Providence Strategic Growth II         | 7,437,097         | 6.51           |
| Udata Partners V, LP                   | 15,515,672        | 13.59          |
| Carlyle Energy Mezzanine Fund II       | 5,100,540         | 4.47           |
| *GSO COF III Co-investment Fund, LP    | -                 | 0.00           |
| GSO Capital Opportunities Fund III, LP | 3,539,068         | 3.10           |
| H.I.G. Bayside Fund IV                 | 9,627,887         | 8.43           |
| TSSP Adjacent Opportunities Fund III   | 24,495,122        | 21.45          |

## Comparative Performance

|  | 1 Quarter    | Year To Date | 1 Year       | 3 Years    | 5 Years    | 10 Years   | 2015       | 2014       | 2013       | 2012       | 2011       | Since Incep.  | Inception Date    |
|--|--------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|-------------------|
| <b>Private Equity Composite</b>            | <b>7.20</b>  | <b>1.68</b>  | <b>1.68</b>  | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>1.68</b>   | <b>01/01/2016</b> |
| Russell 3000 Index+3%                      | 4.98         | 16.12        | 16.12        | 11.69      | 18.11      | 10.29      | 3.49       | 15.93      | 37.56      | 19.91      | 4.06       | 16.12         |                   |
| Difference                                 | 2.22         | -14.44       | -14.44       | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | -14.44        |                   |
| <b>Private Equity - Buy Out</b>            | <b>9.19</b>  | <b>23.91</b> | <b>23.91</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>23.91</b>  | <b>01/01/2016</b> |
| Russell 3000 Index+3%                      | 4.98         | 16.12        | 16.12        | 11.69      | 18.11      | 10.29      | 3.49       | 15.93      | 37.56      | 19.91      | 4.06       | 16.12         |                   |
| Difference                                 | 4.21         | 7.79         | 7.79         | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | 7.79          |                   |
| <b>Private Equity - Venture/Growth</b>     | <b>26.91</b> | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>-14.77</b> | <b>07/01/2016</b> |
| Russell 3000 Index+3%                      | 4.98         | 16.12        | 16.12        | 11.69      | 18.11      | 10.29      | 3.49       | 15.93      | 37.56      | 19.91      | 4.06       | 10.41         |                   |
| Difference                                 | 21.93        | N/A          | N/A          | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | -25.18        |                   |
| <b>Private Equity - Special Situations</b> | <b>5.46</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>1.40</b>   | <b>04/01/2016</b> |
| Russell 3000 Index+3%                      | 4.98         | 16.12        | 16.12        | 11.69      | 18.11      | 10.29      | 3.49       | 15.93      | 37.56      | 19.91      | 4.06       | 14.16         |                   |
| Difference                                 | 0.48         | N/A          | N/A          | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | -12.76        |                   |

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# Private Equity Strategic Allocation



## Policy Strategy Ranges

No more than 35% with any one investment manager  
 No more than 25% in any one investment vehicle

Allocations may not sum up to 100% exactly due to rounding. Allocation information is as of December 31, 2016 and provided by TMRS.

PORTLAND

CHICAGO

NEW YORK

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