# Callan

March 31, 2016 City of Milwaukee Employes' Retirement System

Investment Measurement Service Quarterly Review

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# Table of Contents March 31, 2016

| Capital Markets Review                    | 1   |
|-------------------------------------------|-----|
| Total Fund                                |     |
| Investment Manager Asset Allocation       | 24  |
| Actual vs. Target Asset Allocation        | 25  |
| Total Fund vs. Total Public Fund Database | 27  |
| Quarterly Total Fund Attribution          | 30  |
| Cumulative Total Fund Attribution         | 31  |
| Investment Manager Returns - Gross of Fee | 32  |
| Investment Manager Returns - Net of Fee   | 36  |
| Asset Class Rankings                      | 38  |
| Asset Class Rankings                      | 39  |
| Domestic Equity                           |     |
| Total Domestic Equity Composite           | 43  |
| Northern Trust Global                     | 47  |
| Cornerstone Investment Partners           | 55  |
| Polen Capital Management                  | 63  |
| Earnest Partners LLC                      | 71  |
| Dimensional Fund Advisors Inc.            | 81  |
| CastleArk Management                      | 89  |
| Global Equity                             |     |
| Global Equity                             | 98  |
| MFS Investment Management                 | 99  |
| International Equity                      |     |
| International Equity                      | 106 |
| Brandes Investment Partners               | 109 |
| William Blair & Company                   | 118 |
| Dimensional Fund Advisors Inc.            | 127 |
| Fixed Income                              |     |
| Fixed Income                              | 137 |
| BlackRock Intermediate Agg                | 140 |
| Reams Asset Management                    | 143 |
| Loomis, Sayles & Company, L.P.            | 148 |
| Wellington Management Company             | 153 |
| Absolute Return                           |     |
| Allianz SA 1000                           | 159 |
| Newton                                    | 162 |
| UBS A & Q                                 | 165 |

# Table of Contents March 31, 2016

### Callan Research/Education

Disclosures

168

171

Capital Markets Review

# Callan



### CALLAN INVESTMENTS INSTITUTE

### First Quarter 2016

Capital

Market Review

# Don't Believe the Hype (or the Markets)

### ECONOMY

The U.S. economy's expansion is now entering its seventh year. However, you'd hardly know it if you looked at the capital markets' reaction over the past nine months. First quarter GDP growth came in at a weak 0.5%, down from 1.4% the prior quarter.

### **Tale of Two Halves**

U.S. EQUITY

The first quarter of 2016 was a tale of two halves. The S&P 500 Index declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large capitalization companies held their lead over small cap, but in a trend of reversals, value overtook growth across capitalizations.

## Slow and Low

#### REAL ESTATE

The NCREIF Property Index advanced 2.21% and the NCREIF Open End Diversified Core Equity Index earned 2.18%, the lowest quarterly return since 2010. Capital flows to core funds continued to decline, as more investors reached their allocation targets.

# Progress Discounted

### FUND SPONSOR

Global financial markets made little progress in the FAGE first quarter. Corporate funds beat other fund types, due in part to their high U.S. fixed income exposure. Endowments/foundations trailed due to more exposure to non-U.S. equity and less to U.S. fixed income.

# Mr. Draghi's Wild Ride

### NON-U.S. EQUITY

P A G E Non-U.S. equity markets endured a rocky January and February, but managed to rally in March to finish at a modest loss (MSCI ACWI ex USA Index: -0.38%). The MSCI Emerging Markets Index (+5.71%) bounced much higher than its developed counterpart (MSCI World ex USA: -1.95%).

# Drip, Drip, Drip

### PRIVATE EQUITY

**19** PAGE Liquidity in the private equity market declined notably. Fundraising and company investments held relatively steady. Venture capital fundraising was surprisingly strong given the drop-off in IPO activity due to zig-zagging public equity markets.

# **Broad Market Quarterly Returns**



Sources: Barclays, Bloomberg, Citigroup, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

# More T-Bills, Please

### U.S. FIXED INCOME

**12** PAGE Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. The **Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

# Market Tremors Panic Hedge Funds

### HEDGE FUNDS

20 PAGE Investor pessimism over softening global growth slammed stocks and commodities. The Credit Suisse Hedge Fund Index sank 2.20% and the median manager in the Callan Hedge Fund-of-Funds Database fell 2.99%.

# A Dole of Doves

### NON-U.S. FIXED INCOME

**15** PAGE Sovereign debt surged in the first quarter, driven by risk-on sentiment and the U.S. dollar's relative weakness. The **Citi Non-U.S. World Government Bond Index** jumped 9.10%. The hard currency JPM **EMBI Global Diversified Index** rose 5.04% while the local currency JPM **GBI-EM Global Diversified** soared 11.02%.

# Strong Quarter Can't Save 2015

### DEFINED CONTRIBUTION

21 PAGE The Callan DC Index<sup>™</sup> finished 2015 with a strong 3.50% gain in the fourth quarter. Nonetheless, the DC Index turned out a negative 2015 calendar year return: -0.34%, the weakest annual return since 2011.

# Don't Believe the Hype (or the Markets)

### ECONOMY | Jay Kloepfer

The U.S. economy's expansion—while subpar relative to past expansions in the 1980s and 1990s—has been slowly building strength and is now entering its seventh year. However, you'd hardly know it if you looked at the capital markets' reaction over the past nine months. Concerns about China, a slowing global recovery, political uncertainty in more than a few countries, and an unclear path as to future interest rates have all spurred investors to swing wildly from lows to highs and back again, all while the broad underlying economic data remain solid.

The National Bureau of Economic Research tracks four monthly indicators in order to identify turning points in the economic cycles. Only one of those—industrial production—is declining, and that decline began back in 2014, when the collapse in oil prices hit the mining sector and the U.S. dollar began to rally, hampering U.S. manufacturing and exports. The other three indicators show no signs of a slowdown, let alone a decline: employment, personal incomes, and real business sales. Adding to this incongruity is the first report on GDP growth for the first quarter of 2016. It came in at a weak 0.5%, down from 1.4% in the fourth quarter of 2015. Almost all economic indicators have been more upbeat than GDP over the past year or two, suggesting that the sum has been less than the parts, that we are misrepresenting economic growth with our GDP calculation, or that we are misreading the headwinds to aggregate growth.

Real GDP growth has continued a familiar pattern, showing anemic first-quarter growth in five of the past six years. Such a pattern is a recent development in U.S. economic history, and suggests (to us) that part of this weakness may in fact be a problematic seasonal-adjustment process within the data calculation. Consumer spending grew 1.9% in the quarter, with the bulk of that growth occurring in services (2.7% gain). The brightest spot was a 14.8% jump in housing, which contributed almost 0.5% to total GDP growth. The residential housing market has finally turned the corner after the plunge that began in late 2005, and several markets on the coasts and in a few other



Source: Bureau of Economic Analysis

### Inflation Year-Over-Year



Source: Bureau of Labor Statistics

large metro areas are seeing substantial gains in existing home prices and sales. However, housing was the only bright spot in private domestic investment as non-residential sectors suffered declines, led by a 10.7% drop in structures.

The plunge in oil prices early in 2016 triggered another sharp decline in energy-sector capital spending, a trend that has hampered the sector since the initial oil price collapse in 2014. The cause of the drop in equipment spending is less

### U.S. ECONOMY (Continued)

clear, but may be traced to corporate caution following the stock market turmoil that began last summer and reappeared with a vengeance this past January and February.

The continuing drag from inventories was larger than expected in the first quarter, but on the plus side, it appears that the bulk of the inventory adjustment is now behind us. The rebound in energy prices in March may spell the end of the rout in the energy sector. These factors, combined with signs of continuing economic growth, give businesses confidence and are likely to limit the decline in business fixed investment. The forward-looking Institute for Supply Management activity indices, which measure sentiment for business investment in manufacturing and non-manufacturing areas, are both back above 50, the dividing line between expansion and contraction, and are at levels consistent with GDP growth in excess of 2%.

Concerns about China's growth and its role in restraining confidence elsewhere in the global economy have fueled negative investor sentiment and subsequent capital market volatility. China adopted a new Five-Year Plan with a goal of GDP growth averaging at least 6.5% during 2016-2020. History suggests that goal may be ambitious for an economy that has reached China's level of current development. Official figures stated growth averaging 7.8% per year from 2011-2015, but economists from Capital Economics, a research consultancy based in London, and other forecasters estimate that growth has been closer to 6.5%. A more reasonable estimate for China's economy for the next five years may be closer to 5%; however, a figure that far below the official target could spur further stimulus from the Chinese government, increasing the medium-term risks to growth.

### The Long-Term View

|                       | 2016    | Periods e | riods ended December 31, 2015 |        |        |  |
|-----------------------|---------|-----------|-------------------------------|--------|--------|--|
| Index                 | 1st Qtr | Year      | 5 Yrs                         | 10 Yrs | 25 Yrs |  |
| U.S. Equity           |         |           |                               |        |        |  |
| Russell 3000          | 0.97    | 0.48      | 12.18                         | 7.35   | 10.03  |  |
| S&P 500               | 1.35    | 1.38      | 12.57                         | 7.31   | 9.82   |  |
| Russell 2000          | -1.52   | -4.41     | 9.19                          | 6.80   | 10.50  |  |
| Non-U.S. Equity       |         |           |                               |        |        |  |
| MSCI EAFE             | -3.01   | -0.81     | 3.60                          | 3.03   | 5.40   |  |
| MSCI Emerging Markets | 5.71    | -14.92    | -4.80                         | 3.61   | _      |  |
| S&P ex-U.S. Small Cap | 0.52    | 5.92      | 5.51                          | 5.33   | 6.80   |  |
| Fixed Income          |         |           |                               |        |        |  |
| Barclays Aggregate    | 3.03    | 0.55      | 3.25                          | 4.51   | 6.15   |  |
| 90-Day T-Bill         | 0.07    | 0.05      | 0.07                          | 1.24   | 2.93   |  |
| Barclays Long G/C     | 7.30    | -3.30     | 6.98                          | 6.45   | 8.08   |  |
| Citi Non-U.S. Govt    | 9.10    | -5.54     | -1.30                         | 3.05   | 5.37   |  |
| Real Estate           |         |           |                               |        |        |  |
| NCREIF Property       | 2.21    | 13.33     | 12.18                         | 7.76   | 8.05   |  |
| FTSE NAREIT Equity    | 6.00    | 3.20      | 11.96                         | 7.41   | 12.13  |  |
| Alternatives          |         |           |                               |        |        |  |
| CS Hedge Fund         | -2.20   | -0.71     | 3.55                          | 4.97   | _      |  |
| Cambridge PE*         | _       | 8.66      | 14.70                         | 11.80  | 15.74  |  |
| Bloomberg Commodity   | 0.42    | -24.66    | -13.47                        | -6.43  | _      |  |
| Gold Spot Price       | 16.54   | -10.46    | -5.70                         | 7.41   | 4.02   |  |
| Inflation – CPI-U     | 0.68    | 0.73      | 1.53                          | 1.86   | 2.30   |  |

\*Private equity data are time-weighted returns for periods ended September 30, 2015. Sources: Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

The strong dollar has been a significant drag on U.S. exports and manufacturing. It has also certainly lowered the cost of imports, particularly energy. The dollar reached its most recent peak in January, but has since declined sharply. The rebound in commodity prices and a scaling back of expectations for the Fed to raise rates will continue to dictate the dollar's course over the next two years.

#### **Recent Quarterly Indicators**

| Economic Indicators                       | 1Q16   | 4Q15  | 3Q15  | 2Q15  | 1Q15  | 4Q14  | 3Q14  | 2Q14  |
|-------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|
| Employment Cost–Total Compensation Growth | 1.9%   | 2.0%  | 2.0%  | 2.0%  | 2.6%  | 2.2%  | 2.2%  | 2.0%  |
| Nonfarm Business–Productivity Growth      | -0.3%* | -2.2% | 2.0%  | 3.1%  | -0.8% | -1.7% | 3.1%  | 2.4%  |
| GDP Growth                                | 0.5%   | 1.4%  | 2.0%  | 3.9%  | 0.6%  | 2.1%  | 4.3%  | 4.6%  |
| Manufacturing Capacity Utilization        | 75.4%  | 75.4% | 75.6% | 75.5% | 75.5% | 76.0% | 75.7% | 75.1% |
| Consumer Sentiment Index (1966=100)       | 91.5   | 91.3  | 90.8  | 94.2  | 95.5  | 89.8  | 83.0  | 82.8  |
|                                           |        |       |       |       |       |       |       |       |

#### \*Estimate

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

# **Progress Discounted**

### FUND SPONSOR | Rufash Lama

Global financial markets made little progress in the first quarter, as concerns over sluggish economic growth and falling oil prices led to sharp declines through mid-February. However, U.S. equity and fixed income markets staged a strong rally to end the quarter in the black. Non-U.S. equity markets (**MSCI ACWI ex USA Index**: -0.38%) lagged U.S. equity markets (**S&P 500 Index**: +1.35%) amid concerns over economic growth. The Federal Reserve's decision to delay rate hikes supported U.S. bonds (**Barclays Aggregate**: +3.03%), which nonetheless trailed the non-U.S. fixed income markets (**Citi Non-U.S. World Government Bond Index**: +9.10%).

The funded status of corporate plans deteriorated over the quarter as liabilities outgrew assets. The median and average funded status of U.S. corporate defined benefit plans fell to 80.0% and 79.9%, respectively, based on a peer group\* of seven different funded ratio measures. While assets grew for the quarter, liabilities rose faster due to a fall in discount rates.

Looking at the Callan Fund Sponsor Quarterly Returns table, we see corporate funds outperformed other fund types at the median and across percentiles. Performance dispersion was highest in the 10th percentile: corporate funds gained 3.75%,

#### 3% 2% 1% ٥% -1% --Endow/Fndn Taft-Hartley Public Corporate Database Database Database Database 10th Percentile 1.91 3.75 1.72 1.65 25th Percentile 1.54 2.50 1.19 1.35

1.42

0 74

0.28

0.54

0.05

-0.58

1.02

0.69

0.24

#### Callan Fund Sponsor Returns for the Quarter



75th Percentile

Median

1.17

0 67

0.10

4%

due in part to their high U.S. fixed income exposure, while at the low end of the spectrum Taft-Hartley funds ended the quarter at +1.65%. Endowments/foundations trailed significantly in the 90th percentile at -0.58%. Overall, endowments/foundations performed the worst due to a relatively high exposure to non-U.S. equity and low exposure to U.S. fixed income. Public funds were buoyed by greater exposure to non-U.S. fixed income as accommodative central bank policies helped fixed income markets stage a strong rally. The Barclays Global Aggregate Index gained 5.90% for the quarter.

### Callan Database Median and Index Returns\*\* for Periods ended March 31, 2016

| Fund Sponsor                           | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
|----------------------------------------|---------|-------|---------|---------|----------|----------|
| Public Database                        | 1.17    | -1.03 | 6.02    | 6.41    | 5.39     | 6.09     |
| Corporate Database                     | 1.42    | -1.91 | 5.47    | 6.41    | 5.54     | 6.17     |
| Endowments/Foundations Database        | 0.54    | -2.72 | 4.79    | 5.48    | 5.11     | 5.85     |
| Taft-Hartley Database                  | 1.02    | -0.13 | 6.56    | 6.73    | 5.27     | 5.76     |
| Diversified Manager                    | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Asset Allocator Style                  | 0.76    | -2.12 | 6.00    | 6.41    | 5.72     | 6.48     |
| U.S. Balanced Database                 | 1.46    | -1.59 | 5.78    | 6.33    | 5.57     | 6.12     |
| Global Balanced Database               | 0.45    | -4.20 | 3.11    | 4.60    | 5.08     | 7.30     |
| 60% Russell 3000 + 40% Barclays Agg    | 1.79    | 0.73  | 7.73    | 8.35    | 6.53     | 6.27     |
| 60% MSCI World + 40% Barclays Glbl Agg | 2.15    | -0.11 | 4.51    | 4.77    | 4.58     | 5.38     |

\* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms. \*\*Returns less than one year are not annualized.

Sources: Callan, Barclays, MSCI, Russell Investment Group.

### FUND SPONSOR (Continued)

While one-year returns were consistently in the red, all fund types maintained performance in the +5% - +7% range for longer time periods. Taft-Hartley funds kept their lead over other fund types during three- and five-year periods, and corporate funds boasted the top returns over longer periods (10 and 15 years). Although the blended 60% Russell 3000 + 40% Barclays

Aggregate Index (+1.79%) trailed the 60% MSCI World + 40% Barclays Global Aggregate Index (+2.15%) for the quarter, the U.S.-based benchmark continues to outperform over longer time periods. Callan's U.S. Balanced Database group maintained its edge over the Global Balanced Database group across all but the longest time periods shown in the table.



### Callan Fund Sponsor Average Asset Allocation

### Callan Public Fund Database Average Asset Allocation

### (10 Years)



Knowledge. Experience. Integrity. 5

# **Tale of Two Halves**

### U.S. EQUITY | Lauren Mathias, CFA

The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large cap companies held their lead over small cap, but in the trend of reversals, value overtook growth in all capitalizations. (**Russell 1000 Index**: +1.17% and **Russell 2000 Index**: -1.52%; **Russell 1000 Value Index:** +1.64% and **Russell 1000 Growth Index**: +0.74%).

Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, fourth-quarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around

the price of oil abated as the crude oil spot price ended the quarter at \$38/barrel after bottoming at \$26/barrel in mid-February. Investor sentiment rose in tandem with these positive developments. Despite some improvement, the U.S. Federal Reserve stated that global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%–0.50%.

Growth lost its lead over value. The difference was most significant within small cap (**Russell 2000 Growth Index**: -4.68% and **Russell 2000 Value Index**: +1.70). Micro and small cap companies declined while mid and large cap advanced (**Russell Microcap Index**: -5.43%, **Russell 2000 Index**: -1.52%, and **Russell Midcap Index**: +2.24%, **Russell 1000 Index**: +1.17%).

Sector performance over the quarter also revealed reversals. Cyclical areas like Energy, Industrials, and Materials added



#### **Economic Sector Quarterly Performance**

Source: Russell Investment Group

Note: As of the fourth quarter of 2015, the Capital Markets Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing ten sectors.

value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February's pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns

### **Rolling One-Year Relative Returns**

(vs. Russell 1000)



### U.S. Equity Index Characteristics as of March 31, 2016

S&P 500 Rus 3000 **Rus 1000 Rus Midcap** Rus 2500 Rus 2000 Cap Range Min (\$mm) 1,401 5 147 147 5 5 Cap Range Max (\$bn) 604.30 627.89 627.89 20.34 5.97 3.77 Number of Issues 504 2.978 1.017 818 2.468 1.957 % of Russell 3000 82% 92% 27% 17% 7% 100% Wtd Avg Mkt Cap (\$bn) 128.89 107.53 116.14 12.43 4.13 1.90 Price/Book Ratio 2.7 2.6 2.1 26 24 1.9 Forward P/E Ratio 16.7 18.4 17.0 16.8 18.5 18.8 **Dividend Yield** 2.2% 2.1% 1.8% 1.7% 1.6% 2.1% 5-Yr Earnings (forecasted) 10.3% 10.7% 10.5% 9.4% 11.5% 13.1%

Sources: Russell Investment Group, Standard & Poor's.

were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

### **Callan Style Group Quarterly Returns**



Sources: Callan, Russell Investment Group

# U.S. EQUITY (Continued)

### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

| Large Cap Equity        | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
|-------------------------|---------|--------|---------|---------|----------|----------|
| Large Cap Core Style    | -0.12   | -0.84  | 11.55   | 11.43   | 7.32     | 6.67     |
| Large Cap Growth Style  | -1.87   | 0.44   | 13.05   | 11.51   | 8.10     | 6.14     |
| Large Cap Value Style   | 0.52    | -2.37  | 9.67    | 10.25   | 6.40     | 7.20     |
| Aggressive Growth Style | -3.86   | -1.09  | 11.81   | 9.50    | 7.24     | 6.65     |
| Contrarian Style        | 0.34    | -4.94  | 9.21    | 9.77    | 6.14     | 7.33     |
| Yield-Oriented Style    | 2.30    | -0.92  | 9.16    | 9.88    | 6.97     | 7.63     |
| Russell 3000            | 0.97    | -0.34  | 11.15   | 11.01   | 6.90     | 6.38     |
| Russell 1000            | 1.17    | 0.50   | 11.52   | 11.35   | 7.06     | 6.28     |
| Russell 1000 Growth     | 0.74    | 2.52   | 13.61   | 12.38   | 8.28     | 6.03     |
| Russell 1000 Value      | 1.64    | -1.54  | 9.38    | 10.25   | 5.72     | 6.41     |
| S&P Composite 1500      | 1.57    | 1.18   | 11.53   | 11.34   | 7.05     | 6.37     |
| S&P 500                 | 1.35    | 1.78   | 11.82   | 11.58   | 7.01     | 5.99     |
| NYSE                    | 1.33    | -3.91  | 6.67    | 8.39    | 5.70     | 6.31     |
| Dow Jones Industrials   | 2.20    | 2.08   | 9.29    | 10.27   | 7.54     | 6.55     |
| Mid Cap Equity          | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Mid Cap Core Style      | 1.04    | -3.68  | 10.56   | 10.37   | 7.71     | 9.87     |
| Mid Cap Growth Style    | -2.14   | -7.69  | 9.55    | 8.50    | 7.47     | 8.31     |
| Mid Cap Value Style     | 2.03    | -4.34  | 9.72    | 10.02   | 7.85     | 10.16    |
| Russell Midcap          | 2.24    | -4.04  | 10.45   | 10.30   | 7.45     | 9.11     |
| S&P MidCap 400          | 3.79    | -3.60  | 9.46    | 9.52    | 7.78     | 9.42     |
| Small Cap Equity        | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Small Cap Core Style    | -0.20   | -6.50  | 9.29    | 9.75    | 7.07     | 10.28    |
| Small Cap Growth Style  | -5.18   | -13.12 | 7.24    | 7.69    | 6.31     | 8.07     |
| Small Cap Value Style   | 2.42    | -4.93  | 8.92    | 9.09    | 6.92     | 10.77    |
| Russell 2000            | -1.52   | -9.76  | 6.84    | 7.20    | 5.26     | 7.65     |
| S&P SmallCap 600        | 2.66    | -3.20  | 10.39   | 10.41   | 6.99     | 9.60     |
| NASDAQ                  | -2.43   | 0.55   | 15.63   | 13.28   | 8.78     | 7.67     |
| Smid Cap Equity         | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Smid Cap Broad Style    | 0.09    | -7.42  | 8.93    | 8.73    | 7.57     | 9.73     |
| Smid Cap Growth Style   | -3.51   | -9.97  | 8.27    | 8.34    | 6.78     | 8.92     |
| Smid Cap Value Style    | 3.00    | -5.56  | 8.32    | 8.43    | 7.42     | 10.79    |
| Russell 2500            | 0.39    | -7.31  | 8.16    | 8.58    | 6.47     | 8.76     |
| S&P 1000                | 3.45    | -3.47  | 9.75    | 9.80    | 7.51     | 9.46     |
| Russell 3000 Sectors    | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Consumer Discretionary  | 1.88    | 2.43   | 13.87   | 15.59   | 9.79     | _        |
| Consumer Staples        | 5.22    | 12.19  | 13.98   | 15.64   | 12.35    | _        |
| Energy                  | 3.13    | -18.92 | -6.73   | -3.91   | 2.57     | _        |
| Financial Services      | -3.30   | -2.34  | 10.03   | 9.91    | 0.69     | _        |
| Health Care             | -7.05   | -7.62  | 15.51   | 17.25   | 10.20    | -        |
| Materials & Processing  | 5.70    | -4.62  | 6.38    | 5.70    | 5.56     | _        |
| Producer Durables       | 4.76    | 0.59   | 11.59   | 10.27   | 6.42     | _        |
| Technology              | 1.73    | 4.51   | 15.91   | 11.85   | 8.91     | -        |
| Utilities               | 15.23   | 15.78  | 10.78   | 11.98   | 8.16     | -        |

\*Returns less than one year are not annualized. Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market.

# Mr. Draghi's Wild Ride

### NON-U.S. EQUITY | Kevin Nagy

Non-U.S. equity markets endured a rocky January and February but rallied in March to finish at a modest loss (**MSCI ACWI ex USA Index**: -0.38%). Emerging markets (**MSCI Emerging Markets Index**: +5.71%) did better than their developed counterparts (**MSCI World ex USA**: -1.95%).

Falling oil prices, concerns about global economic growth, and declining corporate profits prompted a January sell-off, as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodity prices helped kick-start a comeback in February and March, but were not enough to drive the broader non-U.S. indices into the black.

The MSCI Emerging Markets Index (+5.71%) handily surpassed the MSCI World ex USA Index (-1.95%). Small cap stocks rode the rally further than large cap and posted a slight positive return, due to strong performance in the Utilities sector (**MSCI ACWI ex USA Small Cap Index**: +0.68%). Sector results were mixed: Energy (+9.81%) and Materials (+7.20%) were strongest while Health Care and Financials retreated (-7.50% and -4.96%, respectively).

European stocks were unable to complete their rebound despite further rate cuts and bond purchases by the ECB (**MSCI Europe Index**: -2.51%). The banking sector was hurt by slashed interest rates. Health Care also struggled, dropping 7.45% amid renewed political tension over rising drug prices. The Netherlands (+3.35%) was the top performer in Europe due to strong domestic performance from Energy (+15.73%) and Consumer Discretionary (+12.32%). Italy (-11.66%) was the worst performer; its Financial sector lost 25.84% due to Italian banks carrying massive amounts of non-performing loans on their balance sheets.

Southeast Asia and the Pacific (**MSCI Pacific Index**: -3.79%) underperformed Europe and other broad benchmarks. Japan





### **Callan Style Group Quarterly Returns**

Sources: Callan, MSCI

(-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

### NON-U.S. EQUITY (Continued)

China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%), Financials (-9.68%), and Health Care (-6.65%) were three significant detractors. In keeping with the rest of the world, surging commodity prices buoyed Energy (+6.75%) and Materials (+7.26%). Latin America was the big winner of the first quarter as Brazil, Colombia, Chile, and Peru (+28.58%, +22.49%, +13.25%, and +27.02%) made the **MSCI Latin America Index** the top-performing regional index at +19.23%. The real appreciated 12% against the dollar on the back of the commodities rally and the prospect of political change.

### **Quarterly Returns: Strong and Struggling Sectors**



Source: MSCI

### **Quarterly and Annual Country Performance Snapshot**

| Quarterly Retur | (1      | J.S. Dollar) |          |        |
|-----------------|---------|--------------|----------|--------|
| Country         | Total   | Local        | Currency | Wtg    |
| Australia       | 2.10%   | -3.44%       | 5.73%    | 7.16%  |
| Austria         | -0.52%  | -5.17%       | 4.90%    | 0.18%  |
| Belgium         | -2.43%  | -6.99%       | 4.90%    | 1.45%  |
| Denmark         | -0.96%  | -5.75%       | 5.08%    | 1.99%  |
| Finland         | -5.19%  | -9.62%       | 4.90%    | 1.01%  |
| France          | 0.12%   | -4.56%       | 4.90%    | 9.98%  |
| Germany         | -2.50%  | -7.06%       | 4.90%    | 9.17%  |
| Hong Kong       | -0.55%  | -0.47%       | -0.08%   | 3.31%  |
| Ireland         | -4.15%  | -8.63%       | 4.90%    | 0.50%  |
| Israel          | -10.16% | -12.84%      | 3.50%    | 0.71%  |
| Italy           | -11.66% | -15.79%      | 4.90%    | 2.18%  |
| Japan           | -6.52%  | -12.66%      | 7.03%    | 22.48% |
| Netherlands     | 3.35%   | -1.30%       | 4.90%    | 3.08%  |
| New Zealand     | 11.60%  | 10.04%       | 1.42%    | 0.18%  |
| Norway          | 1.72%   | -4.94%       | 7.01%    | 0.58%  |
| Portugal        | 3.24%   | -1.59%       | 4.90%    | 0.17%  |
| Singapore       | 5.05%   | -0.20%       | 5.35%    | 1.36%  |
| Spain           | -4.09%  | -8.57%       | 4.90%    | 3.15%  |
| Sweden          | -0.22%  | -4.05%       | 4.00%    | 2.94%  |
| Switzerland     | -5.51%  | -9.60%       | 4.53%    | 9.12%  |
| U.K.            | -2.34%  | 0.15%        | -2.48%   | 19.30% |

Year Quarter World ex-USA 11.6% New Zealand 6.5% 11.3% Canada -10.2% 28.6% Brazil -11.5% ЫN 27.0% Peru -7.7% World ex-USA -11.7% Italy -15.4% -10.2% Per Israel -9.0% terly -12 2% Quar Greece -51.9% Σ Ш 'orst -5.8% Egypt -29.0%

Source: MSCI

Sources: MSCI, Russell Investment Group, Standard & Poor's.

### NON-U.S. EQUITY (Continued)





### Style Median and Index Returns\* for Periods ended March 31, 2016

| Non-U.S. Equity                | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
|--------------------------------|---------|--------|---------|---------|----------|----------|
| Non-U.S. Equity Style          | -2.46   | -6.23  | 3.54    | 3.45    | 3.00     | 6.32     |
| MSCI EAFE                      | -3.01   | -8.27  | 2.23    | 2.29    | 1.80     | 4.35     |
| MSCI EAFE (local)              | -6.52   | -11.17 | 6.47    | 6.20    | 1.72     | 2.76     |
| MSCI ACWI ex USA               | -0.38   | -9.19  | 0.32    | 0.31    | 1.94     | 4.99     |
| MSCI ACWI ex USA Growth        | -0.34   | -6.08  | 1.92    | 1.61    | 2.72     | 4.88     |
| MSCI ACWI ex USA Value         | -0.42   | -12.31 | -1.34   | -1.03   | 1.11     | 5.03     |
| Global Equity                  | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Global Equity Style            | -0.83   | -3.45  | 7.27    | 7.11    | 5.15     | 6.48     |
| MSCI World                     | -0.35   | -3.45  | 6.82    | 6.51    | 4.27     | 4.97     |
| MSCI World (local)             | -1.96   | -4.56  | 8.86    | 8.38    | 4.12     | 4.19     |
| MSCI ACWI                      | 0.24    | -4.34  | 5.53    | 5.22    | 4.08     | 5.10     |
| Regional Equity                | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| MSCI Europe                    | -2.51   | -8.44  | 2.71    | 2.07    | 2.05     | 4.46     |
| MSCI Europe (local)            | -4.92   | -10.63 | 5.87    | 5.42    | 2.56     | 2.97     |
| MSCI Japan                     | -6.52   | -7.06  | 3.84    | 4.03    | -0.42    | 2.27     |
| MSCI Japan (local)             | -12.66  | -12.90 | 10.21   | 10.57   | -0.91    | 1.53     |
| MSCI Pacific ex Japan          | 1.81    | -9.65  | -2.95   | 0.68    | 5.60     | 9.18     |
| MSCI Pacific ex Japan (local)  | -2.11   | -10.23 | 3.69    | 4.53    | 4.67     | 6.72     |
| Emerging/Frontier Markets      | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Emerging Market Style          | 4.53    | -10.27 | -3.47   | -2.64   | 4.08     | 10.96    |
| MSCI Emerging Markets          | 5.71    | -12.03 | -4.50   | -4.13   | 3.02     | 9.35     |
| MSCI Emerging Markets (local)  | 2.73    | -7.70  | 1.91    | 1.33    | 5.33     | 10.24    |
| MSCI Frontier Markets          | -0.94   | -12.54 | 1.75    | 1.30    | -0.78    |          |
| Non-U.S. Small Cap Equity      | Quarter | Year   | 3 Years | 5 Years | 10 Years | 15 Years |
| Non-U.S. Small Cap Style       | -0.89   | 2.36   | 7.94    | 7.23    | 5.28     | 10.34    |
| MSCI World ex USA Small Cap    | 0.60    | 1.99   | 5.54    | 3.84    | 3.09     | 8.66     |
| MSCI ACWI ex USA Small Cap     | 0.68    | -0.60  | 3.67    | 2.39    | 3.87     | 8.91     |
| MSCI Emerging Market Small Cap | 0.97    | -9.20  | -2.69   | -2.56   | 5.07     | 10.96    |
|                                |         |        |         |         |          |          |

\*Returns less than one year are not annualized.

Sources: Callan, MSCI.

# More T-Bills, Please

### U.S. FIXED INCOME | Irina Sushch

Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

Yields fell nearly 50 bps during a volatile first quarter. The yield curve flattened further in markets abundant with uncertainty over global economic growth. Investment grade credit, mortgage-backed (MBS), commercial mortgage-backed (CMBS), and high yield spreads all tightened, while asset-backed spreads widened.

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to

### U.S. Treasury Yield Curves

Callan

12



1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries

### **Historical 10-Year Yields**



### **Callan Style Group Quarterly Returns**



Sources: Barclays, Callan

### U.S. FIXED INCOME (Continued)

#### Absolute Return Excess Return versus Like-Duration Treasuries Barclays Aggregate 3.03% -0.04% Barclays Treasury 3.20% 0.00% **Barclays** Agencies 2.04% 0.12% Barclays CMBS 3.61% 0.58% Barclays ABS 1.36% 0.16% 1.98% -0.38% Barclays MBS Barclays Credit 3.92% 0.18% Barclays Corp. High Yield 3.35% 0.77%

#### **Fixed Income Index Quarterly Returns**

Source: Barclays

by 0.18%. MBS was the only sector to trail like-duration Treasuries (down by 0.38%), yet still rose 1.98%. Investment grade Financials, hurt by worries over persistent low or negative interest rates, underperformed like-duration Treasuries by nearly 100 bps; Industrials, buoyed by a rebound in commodity prices, outperformed by 70 bps.

High yield corporate bonds rebounded from severe underperformance in January and early February (down 5% through February 11) to finish in the black. The Barclays Corporate High Yield Index was up 3.35%, outpacing Treasuries by 77 bps. Including an upsurge in issuance in the last few weeks of the quarter, new high yield issuance was \$35.9 billion—60% lower than one year ago.

### **Effective Yield Over Treasuries**



Source: Barclays

### U.S. Fixed Income Index Characteristics as of March 31, 2016

| Barclays Indices         | Yield to Worst | Mod Adj Duration | Avg Maturity | % of Barclays G/C | % of Barclays Agg |
|--------------------------|----------------|------------------|--------------|-------------------|-------------------|
| Barclays Aggregate       | 2.16           | 5.47             | 7.79         |                   | 100.00            |
| Barclays Govt/Credit     | 2.09           | 6.48             | 8.73         | 100.00            | 69.44             |
| Intermediate             | 1.63           | 4.04             | 4.39         | 78.18             | 54.29             |
| Long-Term                | 3.74           | 15.22            | 24.30        | 21.82             | 15.15             |
| Barclays Govt            | 1.31           | 5.96             | 7.29         | 56.54             | 39.26             |
| Barclays Credit          | 3.10           | 7.15             | 10.61        | 43.46             | 30.18             |
| Barclays MBS             | 2.35           | 3.06             | 5.70         |                   | 28.21             |
| Barclays ABS             | 1.57           | 2.31             | 2.47         |                   | 0.50              |
| Barclays CMBS            | 2.43           | 5.23             | 5.87         |                   | 1.76              |
| Barclays Corp High Yield | 8.18           | 4.22             | 6.25         |                   |                   |

Source: Barclays

### U.S. FIXED INCOME (Continued)

### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

| Broad Fixed Income                | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
|-----------------------------------|---------|-------|---------|---------|----------|----------|
| Core Bond Style                   | 3.01    | 2.11  | 2.76    | 4.22    | 5.35     | 5.41     |
| Core Bond Plus Style              | 2.90    | 1.35  | 2.65    | 4.47    | 5.76     | 5.97     |
| Barclays Aggregate                | 3.03    | 1.96  | 2.50    | 3.78    | 4.90     | 4.97     |
| Barclays Govt/Credit              | 3.47    | 1.75  | 2.42    | 4.04    | 4.93     | 5.03     |
| Barclays Govt                     | 3.12    | 2.37  | 2.11    | 3.42    | 4.52     | 4.57     |
| Barclays Credit                   | 3.92    | 0.93  | 2.86    | 5.00    | 5.70     | 5.79     |
| Citi Broad Investment Grade       | 3.04    | 1.93  | 2.49    | 3.78    | 4.98     | 5.04     |
| Long-Term                         | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Extended Maturity Style           | 7.08    | 0.36  | 4.95    | 8.90    | 8.14     | 7.74     |
| Barclays Long Govt/Credit         | 7.30    | 0.39  | 4.81    | 8.51    | 7.57     | 7.38     |
| Barclays Long Govt                | 8.06    | 2.80  | 6.04    | 9.52    | 7.88     | 7.43     |
| Barclays Long Credit              | 6.82    | -1.08 | 4.10    | 7.77    | 7.25     | 7.40     |
| Citi Pension Discount Curve       | 9.21    | 1.02  | 7.27    | 11.67   | 9.36     | 9.74     |
| Intermediate-Term                 | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Intermediate Style                | 2.34    | 2.11  | 2.00    | 3.30    | 4.82     | 4.86     |
| Barclays Intermediate Aggregate   | 2.31    | 2.20  | 2.14    | 3.11    | 4.53     | 4.62     |
| Barclays Intermediate Govt/Credit | 2.45    | 2.06  | 1.83    | 3.01    | 4.34     | 4.46     |
| Barclays Intermediate Govt        | 2.28    | 2.21  | 1.52    | 2.48    | 3.97     | 4.03     |
| Barclays Intermediate Credit      | 2.70    | 1.82  | 2.36    | 3.98    | 5.16     | 5.26     |
| Short-Term                        | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Defensive Style                   | 1.01    | 1.26  | 1.16    | 1.59    | 3.13     | 3.28     |
| Active Duration Style             | 2.78    | 2.22  | 2.23    | 3.83    | 4.84     | 5.05     |
| Money Market Funds (net of fees)  | 0.01    | 0.02  | 0.01    | 0.01    | 1.07     | 1.32     |
| ML Treasury 1–3-Year              | 0.90    | 0.92  | 0.77    | 0.87    | 2.48     | 2.71     |
| 90-Day Treasury Bills             | 0.07    | 0.12  | 0.07    | 0.08    | 1.15     | 1.51     |
| High Yield                        | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| High Yield Style                  | 2.65    | -2.87 | 2.37    | 5.17    | 6.87     | 7.59     |
| Barclays Corporate High Yield     | 3.35    | -3.69 | 1.84    | 4.93    | 7.01     | 7.38     |
| ML High Yield Master              | 3.23    | -3.90 | 1.76    | 4.71    | 6.78     | 7.20     |
| Mortgage/Asset-Backed             | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Mortgage Style                    | 1.91    | 2.40  | 2.94    | 3.77    | 5.14     | 5.29     |
| Barclays MBS                      | 1.98    | 2.43  | 2.70    | 3.24    | 4.85     | 4.85     |
| Barclays ABS                      | 1.36    | 1.71  | 1.39    | 2.46    | 3.40     | 3.87     |
| Barclays CMBS                     | 3.61    | 2.80  | 2.84    | 4.41    | 5.63     | 5.82     |
| Municipal                         | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Barclays Muni                     | 1.67    | 3.98  | 3.63    | 5.59    | 4.86     | 4.97     |
| Barclays Muni 1–10-Year           | 1.24    | 2.86  | 2.50    | 3.68    | 4.21     | 4.17     |
| Barclays Muni 3-Year              | 0.77    | 1.54  | 1.31    | 1.80    | 3.07     | 3.11     |
| TIPS                              | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Barclays TIPS Full Duration       | 4.46    | 1.51  | -0.71   | 3.02    | 4.62     | 5.49     |
| Barclays TIPS 1-10 Year           | 3.60    | 1.84  | -0.72   | 1.88    | 4.00     | 4.78     |

\*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

# A Dole of Doves

### NON-U.S. FIXED INCOME | Kyle Fekete

Sovereign debt rallied in the first quarter, driven by risk-on sentiment and the impact of the U.S. dollar's relative weakness. The **Citi Non-U.S. World Government Bond Index** jumped 9.10% (+4.16% on a hedged basis). The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%.

The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accomodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included

### 10-Year Global Government Bond Yields



07 08 09 10 11 12 13 14 15 16

Change in 10-Year Yields from 4Q15 to 1Q16



Source: Bloomberg

06

non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The **Barclays Global Aggregate** rose 5.90% (+3.28% hedged).

On an unhedged basis, returns approached 10% for many countries, including Japan, which was up 12% on the back of falling rates combined with yen strength. Yield on the Japanese 10-year bond reached negative territory after a surprise move by the Bank of Japan (BoJ) in January to adopt a negative interest rate policy, indicating bond investors would have to pay-toown before adjusting for inflation. The BoJ owns approximately one-third of outstanding Japanese bonds as a result of its

# **Quarterly Return Attribution for Non-U.S. Gov't Indices** (U.S. Dollar)

| Country      | Total  | Local | Currency | Wtg    |
|--------------|--------|-------|----------|--------|
| Australia    | 8.29%  | 2.42% | 5.73%    | 2.11%  |
| Austria      | 8.73%  | 3.64% | 4.90%    | 1.79%  |
| Belgium      | 9.93%  | 4.79% | 4.90%    | 2.98%  |
| Canada       | 8.60%  | 1.12% | 7.39%    | 2.30%  |
| Denmark      | 9.88%  | 4.57% | 5.08%    | 0.79%  |
| Finland      | 8.12%  | 3.07% | 4.90%    | 0.76%  |
| France       | 9.18%  | 4.08% | 4.90%    | 11.62% |
| Germany      | 8.88%  | 3.79% | 4.90%    | 8.66%  |
| Ireland      | 7.62%  | 2.59% | 4.90%    | 0.95%  |
| Italy        | 7.60%  | 2.57% | 4.90%    | 11.44% |
| Japan        | 12.05% | 4.69% | 7.03%    | 33.67% |
| Malaysia     | 12.49% | 2.22% | 10.05%   | 0.53%  |
| Mexico       | 3.48%  | 2.68% | 0.78%    | 1.14%  |
| Netherlands  | 8.98%  | 3.88% | 4.90%    | 2.88%  |
| Norway       | 8.84%  | 1.71% | 7.01%    | 0.36%  |
| Poland       | 7.82%  | 1.62% | 6.10%    | 0.73%  |
| Singapore    | 10.26% | 4.66% | 5.35%    | 0.45%  |
| South Africa | 12.34% | 6.63% | 5.35%    | 0.50%  |
| Spain        | 7.64%  | 2.61% | 4.90%    | 6.45%  |
| Sweden       | 7.02%  | 2.90% | 4.00%    | 0.58%  |
| Switzerland  | 5.75%  | 1.17% | 4.53%    | 0.34%  |
| U.K.         | 2.66%  | 5.28% | -2.48%   | 8.96%  |

Source: Citigroup

### NON-U.S. FIXED INCOME (Continued)

quantitative easing program. Regulations require the nation's banks, insurers, and pension funds to carry Japanese bonds on their balance sheets.

The unhedged U.K. gilt advanced 2.66%, hampered by the pound's 3% fall. Worries over a potential Brexit put pressure on the currency. Yield on the 10-year U.K. gilt declined more than 50 bps, hitting an all-time low early in the quarter. The Bank of England elected to maintain its relaxed monetary policy for the seventh straight year, citing weak growth and global market turmoil.

Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%, bolstered by the dollar's relative weakness. Brazil led both indices as investors cheered the prospect of an impeachment of President Dilma Rousseff, hoping a new government could bring better days for the beleaguered country.



#### **Callan Style Group Quarterly Returns**



Sources: Callan, Citigroup, JPMorgan Chase

#### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

| Global Fixed Income              | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
|----------------------------------|---------|-------|---------|---------|----------|----------|
| Global Style                     | 5.73    | 3.39  | 0.90    | 2.15    | 4.98     | 5.98     |
| Citi World Govt                  | 7.09    | 5.92  | 0.49    | 1.16    | 4.19     | 5.28     |
| Citi World Govt (Local)          | 3.68    | 2.84  | 4.20    | 4.88    | 4.27     | 4.19     |
| Barclays Global Aggregate        | 5.90    | 4.57  | 0.87    | 1.81    | 4.35     | 5.25     |
| Non-U.S. Fixed                   | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Non-U.S. Style                   | 8.71    | 5.38  | 0.01    | 1.22    | 4.69     | 6.27     |
| Citi Non-U.S. World Govt         | 9.10    | 7.74  | -0.16   | 0.24    | 3.97     | 5.39     |
| Citi Non-U.S. World Govt (Local) | 3.95    | 3.10  | 5.11    | 5.48    | 4.29     | 4.14     |
| European Fixed                   | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Citi Euro Govt Bond              | 8.50    | 6.95  | 2.45    | 2.49    | 4.57     | 7.15     |
| Citi Euro Govt Bond (Local)      | 3.43    | 0.79  | 5.97    | 6.71    | 5.01     | 5.22     |
| Emerging Markets Fixed           | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| JPM EMBI Global Diversified      | 5.04    | 4.19  | 3.45    | 6.22    | 7.20     | 9.12     |
| JPM GBI-EM Global Diversified    | 11.02   | -1.65 | -6.72   | -2.00   | 4.95     |          |

\*Returns less than one year are not annualized. Sources: Callan, Citigroup, JPMorgan Chase.

# Slow and Low

### **REAL ESTATE** | Avery Robinson

The **NCREIF Property Index** advanced 2.21%, recording a 1.17% income return and a 1.04% appreciation return during the quarter. Industrial (+2.96%) and Retail (+2.96%) led property sector performance for the quarter while Hotels (+1.16%) lagged. Regionally, the West bested other areas with a 2.75% return and the East brought up the rear with 1.66%.

During the quarter there were 184 asset trades representing \$7.5 billion of overall transactional volume. This marks a considerable decline from the fourth quarter of 2015's \$11.3 billion, but it is still above the five-year quarterly transaction average of \$6.4 billion. During the first quarter of 2016, appraisal capitalization rates decreased from 4.59% to 4.54%, setting an all-time low.

The **NCREIF Open End Diversified Core Equity Index** earned 2.18%, comprising a 1.11% income return and a 1.07% appreciation return. This marks the lowest quarterly return for the Index since 2010. Capital flows to core funds continued to decline, as a growing number of institutional investors are reaching or surpassing their real estate allocation targets. As a result, entry queues have also declined by more than 40% for the ODCE funds over the past six months.

In the listed real estate market, the **FTSE EPRA/NAREIT Developed REIT Index (USD)** gained 5.43% and U.S. REITs tracked by the **FTSE NAREIT Equity REITs Index** advanced 6.00%.

In the U.S., volatility continued as REIT sectors rebounded sharply in March to generate positive returns for the quarter. Sector performance was led once again by Self-Storage (+10.85%), followed by Retail (+8.21%), Residential (+8.38%), and Industrial (+6.49%). The only negative was single family homes (-1.03%). As of March 31, U.S. REITs were trading at a 3% premium to net asset value. This marked the first time REITs have traded at a premium over the past 10 months. U.S.

REITs raised \$15.1 billion, despite no IPO activity for the quarter. There were 24 secondary equity offerings and 14 secondary debt offerings.

In Europe, the momentum in core markets was put on pause during the first quarter as a result of the uncertainty surrounding a potential "Brexit." According to Lambert Smith Hampton, investment volume in central London offices totaled £2.2 billion—31% below the 10-year average and less than half of the £4.6 billion recorded in the previous quarter. Optimism remains strong for the medium and long term, however, as capital raising remains robust and investors continue to see value on the continent. Despite continued concerns about the economic growth outlook for China, Asian real estate funds are still attracting new capital flows, with 2015 totals surpassing 2014.

CMBS issuance reached \$19.3 billion, significantly down from the first quarter of 2015 (\$27.0 billion). This decline was widely credited to the instability in the broader financial market.

### **Rolling One-Year Returns**



Source: Callan

### **REAL ESTATE** (Continued)

### NCREIF Transaction and Appraisal Capitalization Rates



# NCREIF Capitalization Rates by Property Type



Source: NCREIF Note: Capitalization rates are appraisal-based.

# Callan Database Median and Index Returns\* for Periods ended March 31, 2016

| Private Real Estate                | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
|------------------------------------|---------|-------|---------|---------|----------|----------|
| Real Estate Database (net of fees) | 2.42    | 13.40 | 13.11   | 12.66   | 5.23     | 7.44     |
| NCREIF Property                    | 2.21    | 11.84 | 11.91   | 11.93   | 7.61     | 8.95     |
| NFI-ODCE (value wtd. net)          | 1.95    | 12.62 | 12.59   | 12.20   | 5.38     | 6.93     |
| Public Real Estate                 | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| REIT Database                      | 5.33    | 4.87  | 11.57   | 12.46   | 7.36     | 12.70    |
| FTSE NAREIT Equity                 | 6.00    | 4.43  | 10.47   | 11.89   | 6.56     | 11.57    |
| Global Real Estate                 | Quarter | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
| Global REIT Database               | 4.80    | 1.69  | 7.32    | 9.28    | 5.18     | 10.60    |
| FTSE EPRA/NAREIT Developed REIT    | 5.43    | 1.27  | 6.31    | 8.47    | 4.58     | 9.97     |

\*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

# Drip, Drip, Drip

### PRIVATE EQUITY | Gary Robertson

In fundraising, *Private Equity Analyst* reports that new first-quarter commitments totaled \$53.1 billion with 177 new partnerships formed. This represents a moderate start to the year. The number of funds raised increased 20% from 147 in the first quarter of 2015, but the dollar volume dropped 5% from \$56.2 billion. According to the National Venture Capital Association (NVCA), venture capital had the strongest fundraising quarter in 10 years.

According to *Buyouts* newsletter, the investment pace by funds into companies totaled 329 transactions, a 32% fall from 484 deals in the first quarter of 2015. The announced aggregate dollar volume was \$57.9 billion, up 56% from \$37.1 billion a year ago. The \$14.2 billion take-private of Keurig Green Mountain helped boost the announced value. Twelve deals with announced values of \$1 billion or more closed in the quarter.

According to the NVCA, new investments in venture capital companies totaled \$12.1 billion in 969 rounds of financing. The dollar volume and number of rounds decreased compared to the first quarter of 2015's \$13.6 billion and 1,063 rounds.

Regarding exits, *Buyouts* reports that steep declines occurred in the first quarter of 2016. There were 107 private M&A exits of buyout-backed companies, with 31 deals disclosing values totaling

### Funds Closed January 1 to March 31, 2016

| Strategy            | No. of Funds | Amt (\$mm) | Percent |
|---------------------|--------------|------------|---------|
| Venture Capital     | 94           | 8,881      | 17%     |
| Buyouts             | 60           | 38,237     | 72%     |
| Subordinated Debt   | 1            | 158        | 0%      |
| Distressed Debt     | 6            | 2,265      | 4%      |
| Secondary and Other | 1            | 94         | 0%      |
| Fund-of-funds       | 15           | 3,513      | 7%      |
| Totals              | 177          | 53,147     | 100%    |

Source: Private Equity Analyst

\$14.6 billion. The M&A exits count was down 27% year-over-year from 147, and the announced value declined 53% from \$30.9 billion. There were no buyout-backed IPOs in the first quarter.

Venture-backed M&A exits totaled 79 transactions, with 20 disclosing a total dollar volume of \$4.8 billion. The number of exits declined but the announced dollar volume increased from the first quarter of 2015, which had 97 sales with 18 announcing dollar values totaling \$2.8 billion. There were six VC-backed IPOs in the first quarter with a combined float of \$575 million. For comparison, the first quarter of 2015 had 17 IPOs and total issuance of \$1.4 billion.

Please see our upcoming issue of *Private Markets Trends* for more in-depth coverage.

(Pooled Horizon IRRs through Sept. 30, 2015\*)

#### Private Equity Performance Database (%)

| 3 Months | Year                                                       | 3 Years                                                                                     | 5 Years                                                                                                                                | 10 Years                                                                                                                             | 15 Years                                                                                                                                                               | 20 Years                                                                                                                                                                                                |
|----------|------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1      | 24.2                                                       | 15.2                                                                                        | 14.9                                                                                                                                   | 9.8                                                                                                                                  | 9.5                                                                                                                                                                    | 27.4                                                                                                                                                                                                    |
| 1.8      | 20.1                                                       | 14.9                                                                                        | 15.1                                                                                                                                   | 13.5                                                                                                                                 | 13.0                                                                                                                                                                   | 15.0                                                                                                                                                                                                    |
| -0.8     | 15.1                                                       | 15.3                                                                                        | 15.5                                                                                                                                   | 14.0                                                                                                                                 | 11.8                                                                                                                                                                   | 13.4                                                                                                                                                                                                    |
| 2.6      | 12.5                                                       | 13.1                                                                                        | 12.1                                                                                                                                   | 11.0                                                                                                                                 | 8.3                                                                                                                                                                    | 10.2                                                                                                                                                                                                    |
| 0.5      | 13.1                                                       | 16.0                                                                                        | 13.9                                                                                                                                   | 11.4                                                                                                                                 | 11.7                                                                                                                                                                   | 11.8                                                                                                                                                                                                    |
| 0.2      | 16.7                                                       | 15.3                                                                                        | 15.1                                                                                                                                   | 12.8                                                                                                                                 | 11.4                                                                                                                                                                   | 14.6                                                                                                                                                                                                    |
| 1.1      | 19.7                                                       | 23.0                                                                                        | 15.7                                                                                                                                   | 8.1                                                                                                                                  | 4.9                                                                                                                                                                    | 9.6                                                                                                                                                                                                     |
|          | 3 Months<br>2.1<br>1.8<br>-0.8<br>2.6<br>0.5<br>0.2<br>1.1 | 3 Months Year   2.1 24.2   1.8 20.1   -0.8 15.1   2.6 12.5   0.5 13.1   0.2 16.7   1.1 19.7 | 3 Months Year 3 Years   2.1 24.2 15.2   1.8 20.1 14.9   -0.8 15.1 15.3   2.6 12.5 13.1   0.5 13.1 16.0   0.2 16.7 15.3   1.1 19.7 23.0 | 3 MonthsYear3 Years5 Years2.124.215.214.91.820.114.915.1-0.815.115.315.52.612.513.112.10.513.116.013.90.216.715.315.11.119.723.015.7 | 3 MonthsYear3 Years5 Years10 Years2.124.215.214.99.81.820.114.915.113.5-0.815.115.315.514.02.612.513.112.111.00.513.116.013.911.40.216.715.315.112.81.119.723.015.78.1 | 3 MonthsYear3 Years5 Years10 Years15 Years2.124.215.214.99.89.51.820.114.915.113.513.0-0.815.115.315.514.011.82.612.513.112.111.08.30.513.116.013.911.411.70.216.715.315.112.814.91.119.723.015.78.14.9 |

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/Cambridge.

\*Most recent data available at time of publication.

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of Capital Market Review and other Callan publications.

# **Market Tremors Panic Hedge Funds**

### HEDGE FUNDS | Jim McKee

Investor pessimism over softening global growth slammed stocks and commodities at the opening of 2016. The 10-Year Treasury yield fell 50 bps during the quarter as investors fled to the sidelines. Despite foreign central bankers pushing their funding rates into the negative, the dollar unexpectedly lost ground to the euro (+4.90%) and yen (+7.03%). After oil fell to new cyclical lows in February, talk of production freeze excited oil buyers. Similarly, chatter of China reopening the credit spigot to jumpstart its sagging growth revved markets. After initially falling 10% or more, stocks around the globe—particularly emerging markets—rebounded to finish mostly positive.

Illustrating performance of an unmanaged hedge fund universe, the **Credit Suisse Hedge Fund Index** (CS HFI) sank 2.20%, gross of implementation costs. Representing actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** fell 2.99%, net of all fees.

Within the CS HFI, *Managed Futures* (+4.35%) topped other strategies thanks to trend-following factors. Given the highly unusual incidence of crowded trades and related short squeezes in a de-risking market, *Event-Driven Multi-Strategy* (-5.58%) and *Long/Short Equity* (-3.85%) performed worst.



### **Callan Style Group Quarterly Returns**

Sources: Callan, Merrill Lynch

Market exposures did not seem to help in the first quarter within Callan's Hedge Fund-of-Funds Database. Despite mildly positive equity tailwinds, the median *Callan Long/Short Equity FOF* (-4.94%) trailed the *Callan Absolute Return FOF* (-1.93%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* dropped 3.56%.

### Callan Database Median and Index Returns\* for Periods ended March 31, 2016

| Quarter | Year                                                                                                                                | 3 Years                                                                                                                                                                                                     | 5 Years                                                                                                                                                                                                             | 10 Years                                                                                                                                                                                                                                                                             | 15 Years                                                                                                                                                                                                                                                                                                                                               |
|---------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -2.99   | -6.38                                                                                                                               | 2.22                                                                                                                                                                                                        | 2.53                                                                                                                                                                                                                | 3.27                                                                                                                                                                                                                                                                                 | 4.73                                                                                                                                                                                                                                                                                                                                                   |
| -2.20   | -5.25                                                                                                                               | 2.33                                                                                                                                                                                                        | 2.65                                                                                                                                                                                                                | 4.19                                                                                                                                                                                                                                                                                 | 5.80                                                                                                                                                                                                                                                                                                                                                   |
| -0.36   | 3.88                                                                                                                                | 2.79                                                                                                                                                                                                        | 2.19                                                                                                                                                                                                                | -1.82                                                                                                                                                                                                                                                                                | 1.10                                                                                                                                                                                                                                                                                                                                                   |
| -0.39   | -0.05                                                                                                                               | 0.65                                                                                                                                                                                                        | 1.79                                                                                                                                                                                                                | 3.82                                                                                                                                                                                                                                                                                 | 4.48                                                                                                                                                                                                                                                                                                                                                   |
| -1.22   | -0.49                                                                                                                               | 1.76                                                                                                                                                                                                        | 4.11                                                                                                                                                                                                                | 3.51                                                                                                                                                                                                                                                                                 | 4.26                                                                                                                                                                                                                                                                                                                                                   |
| -0.58   | 0.24                                                                                                                                | 5.72                                                                                                                                                                                                        | 5.77                                                                                                                                                                                                                | 5.53                                                                                                                                                                                                                                                                                 | 6.71                                                                                                                                                                                                                                                                                                                                                   |
| -1.95   | -7.39                                                                                                                               | 1.71                                                                                                                                                                                                        | 2.86                                                                                                                                                                                                                | 4.16                                                                                                                                                                                                                                                                                 | 7.22                                                                                                                                                                                                                                                                                                                                                   |
| 2.12    | 1.85                                                                                                                                | 1.90                                                                                                                                                                                                        | 1.47                                                                                                                                                                                                                | 3.44                                                                                                                                                                                                                                                                                 | 3.54                                                                                                                                                                                                                                                                                                                                                   |
| -5.58   | -13.72                                                                                                                              | -0.63                                                                                                                                                                                                       | -0.71                                                                                                                                                                                                               | 4.00                                                                                                                                                                                                                                                                                 | 5.85                                                                                                                                                                                                                                                                                                                                                   |
| -3.85   | -2.23                                                                                                                               | 5.59                                                                                                                                                                                                        | 3.94                                                                                                                                                                                                                | 4.69                                                                                                                                                                                                                                                                                 | 6.06                                                                                                                                                                                                                                                                                                                                                   |
| -0.90   | 5.97                                                                                                                                | -7.71                                                                                                                                                                                                       | -8.79                                                                                                                                                                                                               | -8.43                                                                                                                                                                                                                                                                                | -7.89                                                                                                                                                                                                                                                                                                                                                  |
| -2.23   | -6.25                                                                                                                               | 1.03                                                                                                                                                                                                        | 3.10                                                                                                                                                                                                                | 5.96                                                                                                                                                                                                                                                                                 | 8.37                                                                                                                                                                                                                                                                                                                                                   |
| 4.35    | -3.67                                                                                                                               | 4.77                                                                                                                                                                                                        | 2.30                                                                                                                                                                                                                | 4.23                                                                                                                                                                                                                                                                                 | 5.35                                                                                                                                                                                                                                                                                                                                                   |
| -1.23   | -2.77                                                                                                                               | 1.37                                                                                                                                                                                                        | 1.96                                                                                                                                                                                                                | 4.15                                                                                                                                                                                                                                                                                 | 7.97                                                                                                                                                                                                                                                                                                                                                   |
|         | Quarter<br>-2.99<br>-2.20<br>-0.36<br>-0.39<br>-1.22<br>-0.58<br>-1.95<br>2.12<br>-5.58<br>-3.85<br>-0.90<br>-2.23<br>4.35<br>-1.23 | Quarter Year   -2.99 -6.38   -2.20 -5.25   -0.36 3.88   -0.39 -0.05   -1.22 -0.49   -0.58 0.24   -1.95 -7.39   2.12 1.85   -5.58 -13.72   -3.85 -2.23   -0.90 5.97   -2.23 -6.25   4.35 -3.67   -1.23 -2.77 | QuarterYear3 Years-2.99-6.382.22-2.20-5.252.33-0.363.882.79-0.39-0.050.65-1.22-0.491.76-0.580.245.72-1.95-7.391.712.121.851.90-5.58-13.72-0.63-3.85-2.235.59-0.905.97-7.71-2.23-6.251.034.35-3.674.77-1.23-2.771.37 | QuarterYear3 Years5 Years-2.99-6.382.222.53-2.20-5.252.332.65-0.363.882.792.19-0.39-0.050.651.79-1.22-0.491.764.11-0.580.245.725.77-1.95-7.391.712.862.121.851.901.47-5.58-13.72-0.63-0.71-3.85-2.235.593.94-0.905.97-7.71-8.79-2.23-6.251.033.104.35-3.674.772.30-1.23-2.771.371.96 | QuarterYear3 Years5 Years10 Years-2.99-6.382.222.533.27-2.20-5.252.332.654.19-0.363.882.792.19-1.82-0.39-0.050.651.793.82-1.22-0.491.764.113.51-0.580.245.725.775.53-1.95-7.391.712.864.162.121.851.901.473.44-5.58-13.72-0.63-0.714.00-3.85-2.235.593.944.69-0.905.97-7.71-8.79-8.43-2.23-6.251.033.105.964.35-3.674.772.304.23-1.23-2.771.371.964.15 |

\*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

# Strong Quarter Can't Save 2015

### DEFINED CONTRIBUTION | Tom Szkwarla

The Callan DC Index<sup>™</sup> finished the year with a strong 3.50% gain in the fourth quarter. The rebound helped offset thirdquarter losses, which were among the worst ever in the Index's 10-year history. This strong finish did not keep the DC Index out of negative territory for the year; a 2015 calendar year return of -0.34% is the weakest since 2011. 2016 marks the 10th anniversary of the Callan DC Index. Since inception, the Index's annualized return is 5.18%, compared to the Age 45 Target Date return of 5.25%.

The Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—beat the DC Index for the quarter, but underperformed it by 1.03% for the year. Both results were driven by the fact that the Age 45 Target Date Fund has a higher allocation to equities than the average DC plan: 74% for the Age 45 Target Date Fund versus 66% for the average DC plan.

The year was noteworthy for target date funds, which overtook large cap equity as the single-largest holding in the typical DC plan. As usual, target date funds absorbed a majority of cash flows during the quarter, taking in more than 80 cents of every dollar. Stable value funds continued net inflows for the third consecutive quarter. In contrast, many asset classes saw net outflows—U.S. equity (both large and small/mid cap) and company stock in particular.

Fourth quarter turnover (i.e., net transfer activity) in the DC Index was 0.46%. Turnover has been steadily increasing since the beginning of the year, but remains below the historical average of 0.65%.

The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.

### **Investment Performance\***



### **Growth Sources\***



### Net Cash Flow Analysis (Fourth Quarter 2015)\* (Top Two and Bottom Two Asset Gatherers)

| Asset Class          | Flows as % of<br>Total Net Flows |
|----------------------|----------------------------------|
| Target Date Funds    | 81.15%                           |
| Stable Value         | 7.15%                            |
| U.S./Global Balanced | -16.88%                          |
| U.S. Large Cap       | -28.91%                          |
| Total Turnover**     | 0.46%                            |

Source: Callan DC Index

Data provided here is the most recent available at time of publication.

\* DC Index inception date is January 2006. DB plan performance is gross of fees.

\*\*Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

Total Fund

# **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2016, with the distribution as of December 31, 2015.

### **Asset Distribution Across Investment Managers**

|                                       | March 31, 2            | 016     | December 31, 2015 |        |  |  |
|---------------------------------------|------------------------|---------|-------------------|--------|--|--|
|                                       | Market Value           | Weight  | Market Value      | Weight |  |  |
| Total Domestic Equity                 | \$1,249,130,022        | 26.14%  | \$1,352,532,040   | 28.71% |  |  |
| Northern Trust Global                 | 481,290,985            | 10.07%  | 479,688,976       | 10.18% |  |  |
| BlackRock R1000 Alpha Tilts           | -                      | -       | 122,361,433       | 2.60%  |  |  |
| Cornerstone Investment Partners       | 177,626,336            | 3.72%   | 175,333,053       | 3.72%  |  |  |
| Polen Capital Management              | 194,636,410            | 4.07%   | 204,312,466       | 4.34%  |  |  |
| Farnest Partners LLC                  | 121 123 747            | 2 54%   | 119 976 557       | 2 55%  |  |  |
| Dimensional Fund Advisors Inc.        | 188 572 275            | 3 95%   | 159 991 956       | 3 40%  |  |  |
| CastleArk Management                  | 85,880,268             | 1.80%   | 90,867,600        | 1.93%  |  |  |
|                                       |                        |         |                   |        |  |  |
| Total Global Equity                   | \$518,808,103          | 10.86%  | \$331,029,212     | 7.03%  |  |  |
| BlackRock ACWI Value                  | 82,969                 | 0.00%   | 91,663,022        | 1.95%  |  |  |
| BlackRock Global Alpha Tilts          | 278,157,193            | 5.82%   | -                 | -      |  |  |
| MFS Investment Management             | 240,567,941            | 5.04%   | 239,366,190       | 5.08%  |  |  |
| Cotal International Equity            | \$920 157 631          | 19 26%  | \$1 008 195 083   | 21 40% |  |  |
| BlackRock ACW/I                       | <i>\\\</i> 020,107,001 | 13.2070 | 230 201 065       | / 80%  |  |  |
| PlackDack Emorging Marketa            | -<br>59 671 146        | 1 220/  | 230,201,905       | 4.09%  |  |  |
| Diauknuck Emerging Warkers            | 30,07 1,140            | 1.23%   | -                 | 0.450/ |  |  |
|                                       | 402,802,388            | 0.43%   | 398,380,002       | 8.45%  |  |  |
| William Blair & Company               | 280,751,742            | 5.88%   | 238,989,518       | 5.07%  |  |  |
| Dimensional Fund Advisors Inc.        | 177,932,355            | 3.72%   | 140,623,597       | 2.98%  |  |  |
| Fotal Fixed Income                    | \$1,112,678.837        | 23.29%  | \$1,137,635.159   | 24.14% |  |  |
| BlackRock Intermediate Agg            | 243.062.372            | 5.09%   | 262,202,157       | 5.56%  |  |  |
| Reams Asset Management                | 257 004 948            | 5 38%   | 266 260 558       | 5 65%  |  |  |
| Loomis Savles & Company L P           | 412 029 572            | 8.62%   | 411 594 313       | 8 74%  |  |  |
| Wellington Management Company         | 200,581,945            | 4.20%   | 197,578,131       | 4.19%  |  |  |
| Fatal Driveta Faults                  | \$407 040 C47          | 2.02%   | \$104 040 470     | 2.0.4% |  |  |
| I otal Private Equity                 | \$187,810,617          | 3.93%   | \$181,049,472     | 3.84%  |  |  |
| Abbott Capital Management 2010        | 23,243,184             | 0.49%   | 22,893,184        | 0.49%  |  |  |
| Abbott Capital Management 2011        | 32,935,837             | 0.69%   | 31,560,837        | 0.67%  |  |  |
| Abbott Capital Management 2012        | 16,847,469             | 0.35%   | 15,647,469        | 0.33%  |  |  |
| Abbott Capital Management 2013        | 11,477,716             | 0.24%   | 10,427,716        | 0.22%  |  |  |
| Abbott Capital Management 2014        | 8,924,964              | 0.19%   | 7,699,964         | 0.16%  |  |  |
| Abbott Capital Management 2015        | 2,337,865              | 0.05%   | 2,165,365         | 0.05%  |  |  |
| Abbott Capital Management 2016        | 15,000                 | 0.00%   | -                 | -      |  |  |
| Mesirow V                             | 63.054.869             | 1.32%   | 62.056.394        | 1.32%  |  |  |
| Mesirow VI                            | 13 357 447             | 0.28%   | 11 674 586        | 0.25%  |  |  |
| NB Secondary Opp Fund III             | 11 983 888             | 0.25%   | 11 983 888        | 0.25%  |  |  |
| Private Advisors                      | 3,632,378              | 0.08%   | 4,940,069         | 0.10%  |  |  |
|                                       | ADDE 744 000           | E E00/  | ¢000.000.000      | E 070/ |  |  |
| ADSOIUTE RETURN                       | \$265,741,832          | 5.56%   | \$266,969,992     | 5.67%  |  |  |
| Allianz SA 1000                       | 74,366,071             | 1.56%   | /2,619,32/        | 1.54%  |  |  |
| Newton                                | 63,555,224             | 1.33%   | 64,238,428        | 1.36%  |  |  |
| UBS A & Q                             | 127,820,538            | 2.68%   | 130,112,238       | 2.76%  |  |  |
| Real Assets                           | \$87,274,208           | 1.83%   | -                 | -      |  |  |
| Principal DRA                         | 87,274,208             | 1.83%   | _                 | -      |  |  |
| · · · · · · · · · · · · · · · · · · · |                        |         |                   |        |  |  |
| Fotal Real Estate                     | \$406,368,011          | 8.51%   | \$394,800,944     | 8.38%  |  |  |
| Real Estate                           | 406,368,011            | 8.51%   | 394,800,944       | 8.38%  |  |  |
| Total Cash                            | \$29 741 697           | 0.62%   | \$39 584 979      | 0 84%  |  |  |
| Cash                                  | 29,741,697             | 0.62%   | 39,584,979        | 0.84%  |  |  |
|                                       |                        |         |                   |        |  |  |
| Total Fund                            | \$4,777,710,957        | 100.0%  | \$4,711,796,882   | 100.0% |  |  |

# Actual vs Target Asset Allocation As of March 31, 2016

The top left chart shows the Fund's asset allocation as of March 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund - Large (>1B).



|                      | \$000s    | Weight | <b>-</b> . | Percent    | \$000s     |
|----------------------|-----------|--------|------------|------------|------------|
| Asset Class          | Actual    | Actual | larget     | Difference | Difference |
| US Equity            | 1,249,130 | 26.1%  | 28.0%      | (1.9%)     | (88,629)   |
| Global Equity        | 518,808   | 10.9%  | 10.0%      | 0.9%       | 41,037     |
| International Equity | 920,158   | 19.3%  | 20.0%      | (0.7%)     | (35,385)   |
| Fixed Income         | 1,112,679 | 23.3%  | 28.0%      | (4.7%)     | (225,080)  |
| Private Equity       | 187,811   | 3.9%   | 2.0%       | `1.9%´     | 92,256     |
| Absolute Return      | 265,742   | 5.6%   | 5.0%       | 0.6%       | 26,856     |
| Real Estate          | 406,368   | 8.5%   | 7.0%       | 1.5%       | 71,928     |
| Real Assets          | 87,274    | 1.8%   | 0.0%       | 1.8%       | 87,274     |
| Cash                 | 29,742    | 0.6%   | 0.0%       | 0.6%       | 29,742     |
| Total                | 4,777,711 | 100.0% | 100.0%     |            |            |





\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.



### **Actual Historical Asset Allocation**

### **Target Historical Asset Allocation**



### Average Public Fund Sponsor Database Historical Asset Allocation



\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

### Total Fund Period Ended March 31, 2016

### **Investment Philosophy**

The Public Fund Sponsor Database consists of public employee pension total funds including both Callan Associates client and surveyed non-client funds. The Total Fund Reference Index consists of 33% Russell 3000, 28% Barclays Capital Aggregate, 22% MSCI EAFE (net), 10% MSCI World (net) and 7% NCREIF Property (One Quarter in Arrears).

### **Quarterly Summary and Highlights**

- Total Fund's portfolio posted a 1.95% return for the quarter placing it in the 9 percentile of the Public Fund Sponsor Database group for the quarter and in the 10 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Reference Index by 1.01% for the quarter and outperformed the Total Fund Reference Index for the year by 0.94%.

| Quarterly Asset Growth    |                 |  |  |  |  |  |  |
|---------------------------|-----------------|--|--|--|--|--|--|
| Beginning Market Value    | \$4,711,796,882 |  |  |  |  |  |  |
| Net New Investment        | \$-23,725,087   |  |  |  |  |  |  |
| Investment Gains/(Losses) | \$89,639,162    |  |  |  |  |  |  |
| Ending Market Value       | \$4,777,710,957 |  |  |  |  |  |  |

### Performance vs Public Fund Sponsor Database (Gross)



**Relative Return vs Total Fund Reference Index** 



### Public Fund Sponsor Database (Gross) Annualized Ten Year Risk vs Return



# Total Fund Return Analysis Summary

### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

### Performance vs Public Fund Sponsor Database (Gross)



**Cumulative and Quarterly Relative Return vs Total Fund Reference Index** 

![](_page_30_Figure_6.jpeg)

Risk Adjusted Return Measures vs Total Fund Reference Index Rankings Against Public Fund Sponsor Database (Gross) Ten Years Ended March 31, 2016

![](_page_30_Figure_8.jpeg)

![](_page_30_Figure_9.jpeg)

# Total Fund Total Fund vs Target Risk Analysis

### **Risk Analysis**

The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the target. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns over time compared to the range of tracking error patterns for the peer group. The last two charts show the ranking of the fund's risk statistics versus the peer group.

### Risk Analysis vs Public Fund Sponsor Database Ten Years Ended March 31, 2016

![](_page_31_Figure_4.jpeg)

![](_page_31_Figure_5.jpeg)

![](_page_31_Figure_6.jpeg)

### Risk Statistics Rankings vs Targets Rankings Against Public Fund Sponsor Database Ten Years Ended March 31, 2016

![](_page_31_Figure_8.jpeg)

![](_page_31_Figure_9.jpeg)

City of Milwaukee Employes' Retirement System

29

# **Quarterly Total Fund Relative Attribution - March 31, 2016**

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

![](_page_32_Figure_2.jpeg)

Asset Class Under or Overweighting

### **Actual vs Target Returns**

![](_page_32_Figure_5.jpeg)

### **Relative Attribution by Asset Class**

0.5%

1.0%

1.5%

### Relative Attribution Effects for Quarter ended March 31, 2016

| Asset Class                                                      | Effective<br>Actual<br>Weight | Effective<br>Target<br>Weight | Actual<br>Return                   | Target<br>Return                 | Manager<br>Effect           | Asset<br>Allocation                  | Total<br>Relative<br>Return          |
|------------------------------------------------------------------|-------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------|--------------------------------------|--------------------------------------|
| Domestic Equity<br>Global Equity<br>International Equity         | 28%<br>9%<br>20%              | 28%<br>10%<br>20%             | 0.96%<br>3.08%<br>0.28%            | 0.97%<br>0.24%<br>(3.01%)        | (0.00%)<br>0.25%<br>0.67%   | (0.00%)<br>0.01%<br>(0.02%)          | (0.00%)<br>0.26%<br>0.65%            |
| Fixed Income<br>Private Equity<br>Absolute Return<br>Real Estate | 23%<br>4%<br>6%               | 28%<br>2%<br>5%<br>7%         | 4.37%<br>(0.53%)<br>0.66%<br>3.67% | 3.03%<br>6.89%<br>0.81%<br>3.21% | 0.31%<br>(0.29%)<br>(0.01%) | (0.10%)<br>0.11%<br>(0.00%)<br>0.03% | 0.22%<br>(0.18%)<br>(0.01%)<br>0.07% |
| Real Assets<br>Cash                                              | 1%<br>1%                      | 0%<br>0%                      | 0.11%                              | 1.59%<br>0.11%                   | 0.00%                       | 0.03 %<br>0.01%<br>(0.01%)           | 0.01%<br>0.01%<br>(0.01%)            |
| Total                                                            |                               |                               | 1.95% =                            | 0.95%                            | + 0.97% +                   | 0.03%                                | 1.01%                                |

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

# Cumulative Total Fund Relative Attribution - March 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

![](_page_33_Figure_2.jpeg)

### **One Year Relative Attribution Effects**

### **Cumulative Relative Attribution Effects**

![](_page_33_Figure_5.jpeg)

### **One Year Relative Attribution Effects**

| Asset Class          | Effective<br>Actual<br>Weight | Effective<br>Target<br>Weight | Actual<br>Return | Target<br>Return | Manager<br>Effect | Asset<br>Allocation | Total<br>Relative<br>Return |
|----------------------|-------------------------------|-------------------------------|------------------|------------------|-------------------|---------------------|-----------------------------|
| Domestic Equity      | 28%                           | 28%                           | (0.46%)          | (0.34%)          | (0.03%)           | (0.01%)             | (0.04%)                     |
| Global Equity        | 7%                            | 10%                           | (0.97%)          | (4.34%)          | 0.29%             | 0.10%               | 0.39%                       |
| International Equity | 21%                           | 20%                           | (5.11%)          | (8.27%)          | 0.69%             | (0.12%)             | 0.56%                       |
| Fixed Income         | 25%                           | 28%                           | `1.36%´          | `1.96%´          | (0.19%)           | (0.11%)             | (0.29%)                     |
| Private Equity       | 3%                            | 2%                            | 11.20%           | 3.54%            | 0.18%             | 0.03%               | 0.21%                       |
| Absolute Return      | 5%                            | 5%                            | 2.49%            | 3.12%            | (0.03%)           | 0.00%               | (0.03%)                     |
| Real Estate          | 8%                            | 7%                            | 14.42%           | 14.18%           | 0.01%             | 0.12%               | 0.13%                       |
| Real Assets          | 0%                            | 0%                            | -                | -                | 0.00%             | 0.01%               | 0.01%                       |
| Cash                 | 1%                            | 0%                            | 0.98%            | 0.98%            | 0.00%             | 0.00%               | 0.00%                       |
|                      |                               |                               |                  |                  |                   |                     |                             |
| Total                |                               |                               | 0.60% =          | (0.34%) +        | 0.92% +           | 0.02%               | 0.94%                       |

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

# **Investment Manager Returns and Peer Group Rankings**

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                 | Last<br>Quarter |    | Last<br>Year |    | Last<br>3<br>Years |    | Last<br>5<br>Years |    | Since<br>Inception |
|---------------------------------|-----------------|----|--------------|----|--------------------|----|--------------------|----|--------------------|
| Total Domestic Equity           | 0.96%           |    | (0.46%)      |    | 10.93%             |    | 9.69%              |    | 6.20% (7/98)       |
| Russell 3000 Index              | 0.97%           |    | (0.34%)      |    | 11.15%             |    | 11.01%             |    | 5.71% (7/98)       |
| Northern Trust Global           | 1.38%           | 21 | 1.92%        | 18 | 11.91%             | 37 | 11.66%             | 47 | 10.05% (8/88)      |
| S&P 500 Index                   | 1.35%           | 21 | 1.78%        | 19 | 11.82%             | 39 | 11.58%             | 49 | 10.00% (8/88)      |
| CAI Large Cap Core Style        | (0.12%)         |    | (0.84%)      |    | 11.55%             |    | 11.43%             |    | -                  |
| Cornerstone Investment Partners | 1.31%           | 25 | (7.42%)      | 95 | 5.13%              | 99 | -                  |    | 9.97% (6/12)       |
| S&P 500 Index                   | 1.35%           | 24 | 1.78%        | 6  | 11.82%             | 6  | 11.58%             | 11 | 14.95% (6/12)      |
| CAI Large Cap Value Style       | 0.52%           |    | (2.37%)      |    | 9.67%              |    | 10.25%             |    | -                  |
| Polen Capital Management        | 0.17%           | 22 | 11.58%       | 1  | 16.51%             | 3  | -                  |    | 16.14% (7/12)      |
| S&P 500 Index                   | 1.35%           | 9  | 1.78%        | 32 | 11.82%             | 73 | 11.58%             | 49 | 14.07% (7/12)      |
| CAI Lrg Cap Growth Style        | (1.87%)         |    | 0.44%        |    | 13.05%             |    | 11.51%             |    | -                  |
| Earnest Partners LLC            | 0.96%           | 43 | (1.58%)      | 13 | 10.07%             | 45 | 9.61%              | 51 | 9.32% (5/05)       |
| Russell MidCap Index            | 2.24%           | 24 | (4.04%)      | 36 | 10.45%             | 38 | 10.30%             | 33 | 9.05% (5/05)       |
| CAI Mid Cap Style               | 0.39%           |    | (5.53%)      |    | 9.81%              |    | 9.65%              |    | -                  |
| Dimensional Fund Advisors Inc.  | 2.54%           | 46 | (6.10%)      | 67 | 8.28%              | 63 | 8.69%              | 57 | 12.00% (11/96)     |
| Russell 2000 Value Index        | 1.70%           | 66 | (7.72%)      | 84 | 5.73%              | 89 | 6.67%              | 88 | 9.03% (11/96)      |
| CAI Small Cap Value Style       | 2.41%           |    | (4.93%)      |    | 8.92%              |    | 9.09%              |    | -                  |
| CastleArk Management            | (5.49%)         | 53 | (13.27%)     | 51 | -                  |    | -                  |    | 5.24% (9/13)       |
| Russell 2000 Growth Index       | (4.68%)         | 43 | (11.84%)     | 44 | 7.91%              | 46 | 7.70%              | 50 | 5.51% (9/13)       |
| CAI Sm Cap Growth Style         | (5.18%)         |    | (13.12%)     |    | 7.24%              |    | 7.69%              |    | -                  |
| Total Global Equity             | 3.08%           |    | (0.97%)      |    | 6.68%              |    | 5.12%              |    | 6.41% (4/10)       |
| MSCI World Index                | (0.35%)         |    | (3.45%)      |    | 6.82%              |    | 6.51%              |    | 7.64% (4/10)       |
| MFS Investment Management       | 3.86%           | 5  | 1.05%        | 13 | 8.02%              | 36 | -                  |    | 9.98% (12/12)      |
| MSCI ACWI Idx                   | 0.38%           | 31 | (3.81%)      | 53 | 6.10%              | 70 | 5.80%              | 67 | 8.26% (12/12)      |
| CAI Global Eq Broad Style       | (0.83%)         |    | (3.45%)      |    | 7.27%              |    | 7.11%              |    | -                  |

### Returns and Rankings for Periods Ended March 31, 2016

## **Investment Manager Returns and Peer Group Rankings**

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                                                                                                                                                                                                                                                                                                                                      | Last<br>Quarter                                                                              |          | Last<br>Year                                                                                                        |          | Last<br>3<br>Years                                                                             |           | Last<br>5<br>Years                                                                                                                       |           | Since<br>Inception                                                                                                           | n                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Total International Equity<br>MSCI EAFE Index                                                                                                                                                                                                                                                                                                        | <b>0.28%</b><br>(3.01%)                                                                      |          | <b>(5.11%)</b><br>(8.27%)                                                                                           |          | <b>4.80%</b><br>2.23%                                                                          |           | <b>4.43%</b><br>2.29%                                                                                                                    |           | <b>6.85%</b><br>3.98%                                                                                                        | (5/96)<br>(5/96)                                                                                                      |
| Brandes Investment Partners<br>MSCI EAFE Index<br>CAI Non-U.S. Eq. Style                                                                                                                                                                                                                                                                             | 1.11%<br>(3.01%)<br>(2.46%)                                                                  | 6<br>67  | (5.98%)<br>(8.27%)<br>(6.23%)                                                                                       | 45<br>71 | 5.56%<br>2.23%<br>3.54%                                                                        | 14<br>75  | 3.62%<br>2.29%<br>3.45%                                                                                                                  | 47<br>73  | 8.08%<br>4.01%<br>-                                                                                                          | (2/98)<br>(2/98)                                                                                                      |
| William Blair & Company<br>MSCI ACWI ex-US Index<br>CAI Non-U.S. Eq. Style                                                                                                                                                                                                                                                                           | (2.21%)<br>(0.26%)<br>(2.46%)                                                                | 46<br>19 | (6.63%)<br>(8.78%)<br>(6.23%)                                                                                       | 54<br>77 | 3.64%<br>0.76%<br>3.54%                                                                        | 46<br>92  | 4.98%<br>0.76%<br>3.45%                                                                                                                  | 18<br>92  | 7.26%<br>6.31%<br>-                                                                                                          | (12/03)<br>(12/03)                                                                                                    |
| Dimensional Fund Advisors Inc.<br>Blended Benchmark<br>CAI Int'l Small Cap Style                                                                                                                                                                                                                                                                     | (0.81%)<br>(0.60%)<br>(0.89%)                                                                | 46<br>41 | <mark>(1.46%)</mark><br>3.20%<br>2.36%                                                                              | 87<br>41 | 6.33%<br>7.29%<br>7.94%                                                                        | 71<br>61  | 4.63%<br>5.58%<br>7.23%                                                                                                                  | 81<br>71  | 3.98%<br>2.00%                                                                                                               | (5/06)<br>(5/06)                                                                                                      |
| Total Fixed Income<br>Barclays Capital Aggregate                                                                                                                                                                                                                                                                                                     | <b>4.37%</b><br>3.03%                                                                        |          | <b>1.36%</b><br>1.96%                                                                                               |          | <b>1.58%</b><br>2.50%                                                                          |           | <b>3.86%</b><br>3.78%                                                                                                                    |           | <b>7.86%</b><br>6.68%                                                                                                        | (12/87)<br>(12/87)                                                                                                    |
| BlackRock Intermediate Agg<br>Barclays Capital Int Aggregate<br>CAI Intermediate F-I Styl                                                                                                                                                                                                                                                            | 2.33%<br>2.31%<br>2.34%                                                                      | 54<br>57 | 2.28%<br>2.20%<br>2.11%                                                                                             | 29<br>40 | 2.24%<br>2.14%<br>2.00%                                                                        | 19<br>31  | 3.24%<br>3.11%<br>3.30%                                                                                                                  | 56<br>72  | 5.14%<br>5.02%<br>-                                                                                                          | (7/99)<br>(7/99)                                                                                                      |
| Reams Asset Management<br>Barclays Capital Aggregate<br>CAI FI Core Plus Style                                                                                                                                                                                                                                                                       | 4.25%<br>3.03%<br>2.90%                                                                      | 3<br>38  | 3.21%<br>1.96%<br>1.35%                                                                                             | 3<br>14  | 2.43%<br>2.50%<br>2.65%                                                                        | 77<br>70  | 4.41%<br>3.78%<br>4.47%                                                                                                                  | 54<br>100 | 6.05%<br>5.09%<br>-                                                                                                          | (1/01)<br>(1/01)                                                                                                      |
| Loomis, Sayles & Company, L.P.<br>Barclays Capital Aggregate<br>CAI FI Core Plus Style                                                                                                                                                                                                                                                               | 4.20%<br>3.03%<br>2.90%                                                                      | 3<br>38  | <mark>(2.63%)</mark><br>1.96%<br>1.35%                                                                              | 99<br>14 | 1.15%<br>2.50%<br>2.65%                                                                        | 100<br>70 | 4.96%<br>3.78%<br>4.47%                                                                                                                  | 16<br>100 | 9.18%<br>6.68%<br>-                                                                                                          | (12/87)<br>(12/87)                                                                                                    |
| Wellington Management Company<br>CG WGBI Index<br>CAI GlbI Fixed Inc Style                                                                                                                                                                                                                                                                           | 7.33%<br>7.09%<br>5.73%                                                                      | 14<br>19 | 6.30%<br>5.92%<br>3.39%                                                                                             | 4<br>14  | 0.52%<br>0.49%<br>0.90%                                                                        | 68<br>69  | 1.58%<br>1.16%<br>2.15%                                                                                                                  | 83<br>90  | 1.81%<br>1.24%<br>-                                                                                                          | (1/11)<br>(1/11)                                                                                                      |
| Total Private Equity<br>Abbott Capital Management 2010<br>Abbott Capital Management 2011<br>Abbott Capital Management 2012<br>Abbott Capital Management 2013<br>Abbott Capital Management 2014<br>Abbott Capital Management 2015<br>Mesirow V<br>Mesirow VI<br>NB Secondary Opp Fund III<br>Private Advisors<br>Russell 3000 (1 Qtr in Arrears) + 3% | (0.53%)<br>0.00%<br>0.00%<br>0.00%<br>0.00%<br>(1.39%)<br>(0.93%)<br>0.00%<br>0.00%<br>7.02% |          | 11.20%<br>12.32%<br>10.12%<br>2.45%<br>2.23%<br>0.39%<br>11.25%<br>17.75%<br>(4.88%)<br>22.38%<br>(16.74%)<br>3.53% |          | 11.90%<br>10.65%<br>6.75%<br>1.59%<br>-<br>-<br>17.65%<br>-<br>-<br>17.65%<br>-<br>-<br>18.10% |           | 7.32%<br>(1.60%)<br>-<br>-<br>-<br>12.78%<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- |           | 5.71%<br>(15.88%)<br>(13.52%)<br>(1.07%)<br>(1.88%)<br>(7.01%)<br>11.25%<br>11.34%<br>(1.05%)<br>6.13%<br>(16.74%)<br>15.74% | (6/10)<br>(6/10)<br>(6/11)<br>(7/12)<br>(5/13)<br>(4/14)<br>(4/15)<br>(6/10)<br>(7/13)<br>(12/13)<br>(4/15)<br>(9/10) |
| Absolute Return                                                                                                                                                                                                                                                                                                                                      | 0.66%                                                                                        |          | 2.49%                                                                                                               |          | -                                                                                              |           | -                                                                                                                                        |           | 4.91%                                                                                                                        | (6/14)                                                                                                                |
| Allianz SA 1000<br>T-Bills + 10%<br>Absolute Rtn FoFs                                                                                                                                                                                                                                                                                                | 2.41%<br>2.48%<br>(1.93%)                                                                    | 1<br>1   | 7.92%<br>10.12%<br><mark>(3.92%)</mark>                                                                             | 1<br>1   | -<br>10.07%<br>2.42%                                                                           | 1         | -<br>10.08%<br>1.93%                                                                                                                     | 1         | 9.95%<br>10.08%<br>-                                                                                                         | (6/14)<br>(6/14)                                                                                                      |
| Newton<br>1-month LIBOR + 4%<br>Absolute Rtn FoFs                                                                                                                                                                                                                                                                                                    | 3.61%<br>1.09%<br>(1.93%)                                                                    | 1<br>2   | 2.02%<br>4.26%<br>(3.92%)                                                                                           | 6<br>3   | -<br>4.20%<br>2.42%                                                                            | 21        | -<br>4.21%<br>1.93%                                                                                                                      | 10        | 3.84%<br>4.22%<br>-                                                                                                          | (8/14)<br>(8/14)                                                                                                      |
| UBS A & Q<br>1-month LIBOR + 4%<br>Absolute Rtn FoFs                                                                                                                                                                                                                                                                                                 | (1.76%)<br>1.09%<br>(1.93%)                                                                  | 40<br>2  | (0.20%)<br>4.26%<br>(3.92%)                                                                                         | 12<br>3  | -<br>4.20%<br>2.42%                                                                            | 21        | -<br>4.21%<br>1.93%                                                                                                                      | 10        | 1.69%<br>4.24%<br>-                                                                                                          | (12/14)<br>(12/14)                                                                                                    |
| Total Real Estate                                                                                                                                                                                                                                                                                                                                    | 3.67%                                                                                        |          | 14.42%                                                                                                              |          | 13.93%                                                                                         |           | 13.14%                                                                                                                                   |           | 6.46%                                                                                                                        | (7/86)                                                                                                                |
| Real Estate<br>Blended Benchmark (1)<br>Total Real Estate DB                                                                                                                                                                                                                                                                                         | 3.67%<br>3.21%<br>2.42%                                                                      | 13<br>23 | 14.42%<br>14.18%<br>13.40%                                                                                          | 41<br>42 | 13.93%<br>12.26%<br>13.11%                                                                     | 36<br>61  | 13.14%<br>12.31%<br>12.66%                                                                                                               | 36<br>60  | 6.46%<br>-<br>-                                                                                                              | (7/86)                                                                                                                |
| Total Fund<br>Total Fund Reference Index*                                                                                                                                                                                                                                                                                                            | <b>1.95%</b><br>0.95%                                                                        |          | 0.60%<br>(0.34%)                                                                                                    |          | <b>7.06%</b><br>6.66%                                                                          |           | <b>6.92%</b><br>7.02%                                                                                                                    |           | 9.52%                                                                                                                        | (1/79)                                                                                                                |

### Returns and Rankings for Periods Ended March 31, 2016

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

(1) Blended Benchmark consists of NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.
## **Investment Manager Returns and Peer Group Rankings**

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                 | 12/2015-<br>3/2016 |    | 2015     |    | 2014   |    | 2013   |    | 2012   |    |
|---------------------------------|--------------------|----|----------|----|--------|----|--------|----|--------|----|
| Total Domestic Equity           | 0.96%              |    | (0.07%)  |    | 11.63% |    | 33.86% |    | 16.12% |    |
| Russell 3000 Index              | 0.97%              |    | 0.48%    |    | 12.56% |    | 33.55% |    | 16.42% |    |
| Northern Trust Global           | 1.38%              | 21 | 1.49%    | 45 | 13.77% | 47 | 32.46% | 77 | 16.07% | 48 |
| S&P 500 Index                   | 1.35%              | 21 | 1.38%    | 50 | 13.69% | 48 | 32.39% | 77 | 16.00% | 48 |
| CAI Large Cap Core Style        | (0.12%)            |    | 1.38%    |    | 13.63% |    | 34.45% |    | 15.89% |    |
| Cornerstone Investment Partners | 1.31%              | 25 | (13.54%) | 98 | 8.32%  | 95 | 34.87% | 46 | -      |    |
| S&P 500 Index                   | 1.35%              | 24 | 1.38%    | 3  | 13.69% | 27 | 32.39% | 75 | 16.00% | 59 |
| CAI Large Cap Value Style       | 0.52%              |    | (2.57%)  |    | 12.54% |    | 34.59% |    | 16.78% |    |
| Polen Capital Management        | 0.17%              | 22 | 15.51%   | 3  | 17.60% | 6  | 23.45% | 99 | -      |    |
| S&P 500 Index                   | 1.35%              | 9  | 1.38%    | 93 | 13.69% | 25 | 32.39% | 79 | 16.00% | 55 |
| CAI Lrg Cap Growth Style        | (1.87%)            |    | 6.43%    |    | 11.83% |    | 35.60% |    | 16.14% |    |
| Earnest Partners LLC            | 0.96%              | 43 | 1.25%    | 27 | 10.38% | 46 | 31.29% | 90 | 16.53% | 47 |
| Russell MidCap Index            | 2.24%              | 24 | (2.44%)  | 67 | 13.22% | 23 | 34.76% | 63 | 17.28% | 41 |
| CAI Mid Cap Style               | 0.39%              |    | (0.69%)  |    | 9.88%  |    | 35.84% |    | 16.26% |    |
| Dimensional Fund Advisors Inc.  | 2.54%              | 46 | (6.06%)  | 76 | 5.04%  | 67 | 42.70% | 23 | 22.43% | 20 |
| Russell 2000 Value Index        | 1.70%              | 66 | (7.47%)  | 83 | 4.22%  | 82 | 34.52% | 81 | 18.05% | 50 |
| CAI Small Cap Value Style       | 2.41%              |    | (3.73%)  |    | 5.93%  |    | 38.72% |    | 18.12% |    |
| CastleArk Management            | (5.49%)            | 53 | (4.90%)  | 78 | 6.15%  | 31 | -      |    | -      |    |
| Russell 2000 Growth Index       | (4.68%)            | 43 | (1.38%)  | 50 | 5.60%  | 32 | 43.30% | 74 | 14.59% | 50 |
| CAI Sm Cap Growth Style         | (5.18%)            |    | (1.29%)  |    | 3.41%  |    | 46.83% |    | 14.56% |    |
| Total Global Equity             | 3.08%              |    | (2.08%)  |    | 2.32%  |    | 24.81% |    | 15.39% |    |
| MSCI The World Index            | (0.35%)            |    | (0.87%)  |    | 4.94%  |    | 26.68% |    | 15.83% |    |
| MFS Investment Management       | 3.86%              | 5  | (0.49%)  | 58 | 5.59%  | 27 | 23.08% | 85 | -      |    |
| MSCI ACWI Idx                   | 0.38%              | 31 | (1.84%)  | 72 | 4.71%  | 46 | 23.44% | 84 | 16.80% | 61 |
| CAI Global Eq Broad Style       | (0.83%)            |    | 0.08%    |    | 4.53%  |    | 28.49% |    | 17.85% |    |

## **Investment Manager Returns and Peer Group Rankings**

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                                                                                                                                                                                | 12/2015-<br>3/2016                                   |          | 2015                                                         |           | 2014                                                 |          | 2013                                      |          | 2012                                         |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------|--------------------------------------------------------------|-----------|------------------------------------------------------|----------|-------------------------------------------|----------|----------------------------------------------|-----------|
| Total International Equity<br>MSCI EAFE Index                                                                                                                                                  | 0.28%<br>(3.01%)                                     |          | <b>(0.41%)</b><br>(0.81%)                                    |           | <b>(3.63%)</b><br>(4.90%)                            |          | <b>26.26%</b><br>22.78%                   |          | <b>18.88%</b><br>17.32%                      |           |
| Brandes Investment Partners<br>MSCI EAFE Index<br>CAI Non-U.S. Eq. Style                                                                                                                       | 1.11%<br>(3.01%)<br>(2.46%)                          | 6<br>67  | (1.25%)<br>(0.81%)<br>0.72%                                  | 68<br>64  | (4.45%)<br>(4.90%)<br>(4.12%)                        | 53<br>60 | 29.45%<br>22.78%<br>23.32%                | 8<br>52  | 11.97%<br>17.32%<br>18.99%                   | 96<br>69  |
| William Blair & Company<br>MSCI ACWI ex-US Index<br>CAI Non-U.S. Eq. Style                                                                                                                     | (2.21%)<br>(0.26%)<br>(2.46%)                        | 46<br>19 | 0.18%<br>(5.25%)<br>0.72%                                    | 55<br>92  | (1.77%)<br>(3.44%)<br>(4.12%)                        | 19<br>42 | 21.92%<br>15.78%<br>23.32%                | 58<br>87 | 23.79%<br>17.39%<br>18.99%                   | 9<br>69   |
| Dimensional Fund Advisors Inc.<br>Blended Benchmark<br>CAI Int'I Small Cap Style                                                                                                               | (0.81%)<br>(0.60%)<br>(0.89%)                        | 46<br>41 | 3.99%<br>9.59%<br>9.90%                                      | 85<br>51  | (4.99%)<br>(4.95%)<br>(3.94%)                        | 58<br>58 | 32.60%<br>29.30%<br>31.08%                | 27<br>64 | 22.79%<br>20.00%<br>23.64%                   | 65<br>79  |
| Total Fixed Income<br>Barclays Capital Aggregate                                                                                                                                               | <b>4.37%</b><br>3.03%                                |          | <mark>(2.49%)</mark><br>0.55%                                |           | <b>4.00%</b><br>5.97%                                |          | <b>(0.53%)</b><br>(2.02%)                 |          | <b>8.82%</b><br>4.21%                        |           |
| BlackRock Intermediate Agg<br>Barclays Capital Int Aggregate<br>CAI Intermediate F-I Styl                                                                                                      | 2.33%<br>2.31%<br>2.34%                              | 54<br>57 | 1.31%<br>1.21%<br>1.28%                                      | 44<br>66  | 4.37%<br>4.12%<br>3.42%                              | 9<br>13  | (0.93%)<br>(1.02%)<br>(0.49%)             | 67<br>74 | 3.68%<br>3.56%<br>4.89%                      | 86<br>87  |
| Reams Asset Management<br>Barclays Capital Aggregate<br>CAI FI Core Plus Style                                                                                                                 | 4.25%<br>3.03%<br>2.90%                              | 3<br>38  | 0.38%<br>0.55%<br>0.30%                                      | 48<br>37  | 4.09%<br>5.97%<br>6.16%                              | 97<br>60 | (1.08%)<br>(2.02%)<br>(0.71%)             | 75<br>96 | 7.94%<br>4.21%<br>8.29%                      | 61<br>100 |
| Loomis, Sayles & Company, L.P.<br>Barclays Capital Aggregate<br>CAI FI Core Plus Style                                                                                                         | 4.20%<br>3.03%<br>2.90%                              | 3<br>38  | <mark>(6.10%)</mark><br>0.55%<br>0.30%                       | 100<br>37 | 5.94%<br>5.97%<br>6.16%                              | 61<br>60 | 2.41%<br>(2.02%)<br>(0.71%)               | 4<br>96  | 15.47%<br>4.21%<br>8.29%                     | 1<br>100  |
| Wellington Management Company<br>CG WGBI Index<br>CAI GlbI Fixed Inc Style                                                                                                                     | 7.33%<br>7.09%<br>5.73%                              | 14<br>19 | (3.20%)<br>(3.57%)<br>(3.31%)                                | 44<br>57  | (0.55%)<br>(0.48%)<br>1.30%                          | 92<br>86 | (5.38%)<br>(4.00%)<br>(3.44%)             | 95<br>65 | 3.21%<br>1.65%<br>5.31%                      | 77<br>95  |
| Total Private Equity<br>Abbott Capital Management 2010<br>Abbott Capital Management 2011<br>Abbott Capital Management 2012<br>Abbott Capital Management 2013<br>Abbott Capital Management 2014 | (0.53%)<br>0.00%<br>0.00%<br>0.00%<br>0.00%<br>0.00% |          | <b>12.34%</b><br>12.32%<br>10.12%<br>2.45%<br>2.23%<br>0.39% |           | <b>15.40%</b><br>12.36%<br>9.17%<br>4.97%<br>(2.17%) |          | <b>8.66%</b><br>7.33%<br>1.20%<br>(2.50%) |          | <b>3.44%</b><br>(1.66%)<br>(5.63%)<br>-<br>- |           |
| Abbott Capital Management 2015<br>Mesirow V<br>NB Secondary Opp Fund III<br>Private Advisors                                                                                                   | (1.39%)<br>(0.93%)<br>0.00%<br>0.00%                 |          | 19.41%<br>( <mark>3.99%)</mark><br>33.37%                    |           | -<br>21.07%<br>2.22%<br>19.77%                       |          | 14.22%<br>-<br>-                          |          | 6.65%<br>-<br>-                              |           |
| Russell 3000 (1 Qtr in Arrears) + 3%                                                                                                                                                           | 7.02%<br>0.66%                                       |          | 2.53%<br><b>4.92%</b>                                        |           | 21.19%<br>-                                          |          | 25.11%<br>-                               |          | 33.90%<br>-                                  |           |
| Allianz SA 1000<br>T-Bills + 10%<br>Absolute Rtn FoFs                                                                                                                                          | 2.41%<br>2.48%<br>(1.93%)                            | 1<br>1   | 9.76%<br>10.05%<br>(0.33%)                                   | 1<br>1    | -<br>10.03%<br>3.78%                                 | 1        | -<br>10.07%<br>8.92%                      | 34       | -<br>10.11%<br>6.42%                         | 9         |
| Newton<br>1-month LIBOR + 4%<br>Absolute Rtn FoFs                                                                                                                                              | 3.61%<br>1.09%<br>(1.93%)                            | 1<br>2   | 1.50%<br>4.19%<br>(0.33%)                                    | 29<br>8   | -<br>4.16%<br>3.78%                                  | 39       | 4.19%<br>8.92%                            | 89       | -<br>4.24%<br>6.42%                          | 79        |
| UBS A & Q<br>1-month LIBOR + 4%<br>Absolute Rtn FoFs                                                                                                                                           | (1.76%)<br>1.09%<br>(1.93%)                          | 40<br>2  | 4.09%<br>4.19%<br>(0.33%)                                    | 9<br>8    | -<br>4.16%<br>3.78%                                  | 39       | -<br>4.19%<br>8.92%                       | 89       | -<br>4.24%<br>6.42%                          | 79        |
| Total Real Estate                                                                                                                                                                              | 3.67%                                                |          | 13.44%                                                       |           | 13.87%                                               |          | 13.58%                                    |          | 9.22%                                        |           |
| Real Estate<br>Blended Benchmark (1)<br>Total Real Estate DB                                                                                                                                   | 3.67%<br>3.21%<br>2.42%                              | 13<br>23 | 13.44%<br>13.82%<br>13.60%                                   | 50<br>50  | 13.87%<br>11.26%<br>12.59%                           | 44<br>62 | 13.58%<br>10.99%<br>12.08%                | 41<br>60 | 9.22%<br>11.00%<br>10.51%                    | 59<br>47  |
| Total Fund<br>Total Fund Reference Index*                                                                                                                                                      | <b>1.95%</b><br>0.95%                                |          | <b>0.74%</b><br>1.21%                                        |           | <b>5.31%</b><br>6.00%                                |          | <b>19.59%</b><br>18.20%                   |          | <b>14.10%</b><br>12.90%                      |           |

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

(1) Blended Benchmark consists of NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

#### **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                            | <b>Returns for Peri</b> | ods Ended Mar | ch 31, 2016 |         |                                 |
|--------------------------------------------|-------------------------|---------------|-------------|---------|---------------------------------|
|                                            |                         |               | Last        | Last    |                                 |
|                                            | Last                    | Last          | 3           | 5       | Since                           |
|                                            | Quarter                 | Year          | Years       | Years   | Incention                       |
| Net of Fee Returns                         | Quarter                 | i cui         | i cui s     | Tears   | mooption                        |
| Total Domostic Equity                      | 0.88%                   | (0.78%)       | 10 58%      | 0.35%   | 5 87% (7/00)                    |
| Russell 3000 Index                         | 0.00%                   | (0.34%)       | 11 15%      | 11 01%  | 571% (7/98)                     |
| Northern Trust Global                      | 1.37%                   | 1.89%         | 11.89%      | 11.64%  | 9.08% (9/94)                    |
| S&P 500 Index                              | 1.35%                   | 1.78%         | 11.82%      | 11.58%  | 9.11% (9/94)                    |
| Cornerstone Investment Partners            | 1.21%                   | (7.80%)       | 4.71%       | -       | 9.54% (6/12)                    |
| S&P 500 Index                              | 1.35%                   | 1.78%         | 11.82%      | 11.58%  | 14.95% (6/12)                   |
| Polen Capital Management                   | 0.04%                   | 11.03%        | 15.94%      | -       | 15.56% (7/12)                   |
| S&P 500 Index<br>Earnost Partners LLC      | 1.35%                   | 1.78%         | 11.82%      | 11.58%  | 14.07% (7/12)<br>8.46% (5/05)   |
| Russell MidCap Index                       | 2 24%                   | (4 04%)       | 10 45%      | 10.30%  | 9.05% (5/05)                    |
| Dimensional Fund Advisors Inc.             | 2.40%                   | (6.61%)       | 7.70%       | 8.09%   | 11.33% (11/96)                  |
| Russell 2000 Value Index                   | 1.70%                   | (7.72%)       | 5.73%       | 6.67%   | 9.03% (11/96)                   |
| CastleArk Management                       | (5.65%)                 | (13.85%)      | -           | -       | 4.54% (9/13)                    |
| Russell 2000 Growth Index                  | (4.68%)                 | (11.84%)      | 7.91%       | 7.70%   | 5.51% (9/13)                    |
| Total Global Equity                        | 2.99%                   | (1.33%)       | 6.30%       | 4.72%   | 5.95% (4/10)                    |
| MSCI World Index                           | (0.35%)                 | (3.45%)       | 6.82%       | 6.51%   | 7.64% (4/10)                    |
| MFS Investment Management                  | 3.76%                   | 0.64%         | 7.59%       | -       | 9.54% (12/12)                   |
| MSCI ACWI Idx                              | 0.30%                   | (3.01%)       | 0.10%       | 5.60%   | 0.20% (12/12)                   |
| Total International Equity                 | 0.16%                   | (5.57%)       | 4.30%       | 3.89%   | 6.04% (5/96)                    |
| MSCI EAFE Index                            | (3.01%)                 | (8.27%)       | 2.23%       | 2.29%   | 3.98% (5/96)                    |
| Brandes Investment Partners                | 1.01%                   | (6.36%)       | 5.13%       | 3.19%   | 7.29% (2/98)                    |
| MSCI EAFE INDEX<br>William Blair & Company | (3.01%)                 | (8.27%)       | 2.23%       | 2.29%   | 4.01% (2/98)<br>6.82% (12/92)   |
| MSCLACWLex-US Index                        | (0.26%)                 | (8 78%)       | 0.76%       | 4.30%   | 6 31% (12/03)                   |
| Dimensional Fund Advisors Inc.             | (0.81%)                 | (1.46%)       | 6.33%       | 4.40%   | 3.50% (5/06)                    |
| Blended Benchmark                          | (0.60%)                 | 3.20%         | 7.29%       | 5.58%   | 2.00% (5/06)                    |
| Total Fixed Income                         | 4.32%                   | 1.21%         | 1.43%       | 3.71%   | 6.94% (9/94)                    |
| Barclays Capital Aggregate                 | 3.03%                   | 1.96%         | 2.50%       | 3.78%   | 5.85% (9/94)                    |
| BlackRock Intermediate Agg                 | 2.32%                   | 2.25%         | 2.21%       | 3.21%   | 5.09% (7/99)                    |
| Barclays Capital Int Aggregate             | 2.31%                   | 2.20%         | 2.14%       | 3.11%   | 5.02% (7/99)                    |
| Reams Asset Management                     | 4.22%                   | 3.05%         | 2.28%       | 4.25%   | 5.79% (1/01)                    |
| Barclays Capital Aggregate                 | 4.10%                   | 196%          | 2.50%       | 4.04%   | 5 85% (9/94)                    |
| Wellington Management Company              | 7.27%                   | 6.05%         | 0.27%       | 1.32%   | 1.55% (1/11)                    |
| CG WGBI Index                              | 7.09%                   | 5.92%         | 0.49%       | 1.16%   | 1.24% (1/11)                    |
| Total Private Equity                       | (0.53%)                 | 11.20%        | 11.90%      | 7.32%   | 5.71% (6/10)                    |
| Abbott Capital Management 2010             | 0.00%                   | 12.32%        | 10.65%      | (1.60%) | (15.88%) (6/10)                 |
| Abbott Capital Management 2011             | 0.00%                   | 10.12%        | 6.75%       | -       | (13.52%) (6/11)                 |
| Abbott Capital Management 2012             | 0.00%                   | 2.45%         | 1.59%       | -       | (1.07%) (7/12)                  |
| Abbott Capital Management 2013             | 0.00%                   | 2.23%         | -           | -       | (1.88%) (5/13)                  |
| Abbott Capital Management 2014             | 0.00%                   | 0.39%         | -           | -       | (7.01%) (4/14)<br>11.25% (4/15) |
| Mesirow V                                  | (1.39%)                 | 17.75%        | 17.65%      | 12.78%  | 11.34% (6/10)                   |
| Mesirow IV                                 | (0.93%)                 | (4.88%)       | -           | -       | (1.05%) (7/13)                  |
| NB Secondary Opp Fund III                  | 0.00%                   | 22.38%        | -           | -       | 6.13% (12/13)                   |
| Private Advisors                           | 0.00%                   | (16.74%)      | -           | -       | (16.74%) (4/15)                 |
| Russell 3000 (1 Qtr in Arrears) + 3%       | 7.02%                   | 3.53%         | 18.10%      | 15.49%  | 15.74% (9/10)                   |
| Absolute Return                            | 0.66%                   | 2.49%         | -           | -       | 4.91% (6/14)                    |
| Allianz SA 1000                            | 2.41%                   | 7.92%         | -           | -       | 9.95% (6/14)                    |
| I-DIIIS + 10%                              | 2.40%                   | 2 02%         | 10.07 %     | 10.00%  | 10.00% (6/14)<br>3.84% (9/14)   |
| 1-month LIBOR + 4%                         | 1 09%                   | 4 26%         | 4 20%       | 4 21%   | 4 22% (8/14)                    |
| UBS A & Q                                  | (1.76%)                 | (0.20%)       | -           | -       | 1.69% (12/14)                   |
| 1-month LIBOR + 4%                         | 1.09%                   | 4.26%         | 4.20%       | 4.21%   | 4.24% (12/14)                   |
| Total Real Estate                          | 3.61%                   | 14.13%        | 13.59%      | 12.78%  | 5.25% (7/86)                    |
| Real Estate                                | 3.61%                   | 14.13%        | 13.59%      | 12.78%  | 5.25% (7/86)                    |
| Blended Benchmark (1)                      | 3.21%                   | 14.18%        | 12.26%      | 12.31%  | -                               |
| Total Fund                                 | 1.88%                   | 0.32%         | 6.76%       | 6.62%   | 9.14% (1/79)                    |
| I otal Fund Reterence Index*               | 0.95%                   | (0.34%)       | 6.66%       | 7.02%   | -                               |

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%. (1) Blended Benchmark consists of NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.



#### **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

|                                      | 12/2015- |          |         |         |                 |
|--------------------------------------|----------|----------|---------|---------|-----------------|
|                                      | 3/2016   | 2015     | 2014    | 2013    | 2012            |
| Net of Fee Returns                   |          |          |         |         |                 |
| Total Domestic Equity                | 0.88%    | (0.39%)  | 11.28%  | 33.44%  | 15.82%          |
| Russell 3000 Index                   | 0.97%    | 0.48%    | 12.56%  | 33.55%  | 16.42%          |
| Northern Trust Global                | 1.37%    | 1.47%    | 13.75%  | 32.43%  | 16.04%          |
| S&P 500 Index                        | 1.35%    | 1.38%    | 13.69%  | 32.39%  | 16.00%          |
| BlackRock R1000 Alpha Tilts          | -        | 0.81%    | 13.83%  | 32.90%  | 19.74%          |
| Russell 1000 Index                   | 1.17%    | (12 90%) | 13.24%  | 33.11%  | 10.42%          |
| S&P 500 Index                        | 1.21%    | (13.09%) | 13 69%  | 32 30%  | -               |
| Polen Canital Management             | 0.04%    | 14 94%   | 17.09%  | 22.35%  | 10.00 %         |
| S&P 500 Index                        | 1 35%    | 1 38%    | 13 69%  | 32 39%  | 16 00%          |
| Earnest Partners LLC                 | 0.82%    | 0.71%    | 9.79%   | 30.60%  | 15.87%          |
| Russell MidCap Index                 | 2.24%    | (2.44%)  | 13.22%  | 34.76%  | 17.28%          |
| Dimensional Fund Advisors Inc.       | 2.40%    | (6.57%)  | 4.47%   | 41.95%  | 21.77%          |
| Russell 2000 Value Index             | 1.70%    | (7.47%)  | 4.22%   | 34.52%  | 18.05%          |
| CastleArk Management                 | (5.65%)  | (5.54%)  | 5.45%   | -       | -               |
| Russell 2000 Growth Index            | (4.68%)  | (1.38%)  | 5.60%   | 43.30%  | 14.59%          |
| Total Global Equity                  | 2.99%    | (2.44%)  | 1.95%   | 24.37%  | 14.88%          |
| MSCI The World Index                 | (0.35%)  | (0.87%)  | 4.94%   | 26.68%  | 15.83%          |
| MFS Investment Management            | 3./6%    | (0.89%)  | 5.17%   | 22.47%  | -               |
| MSCI ACWI                            | 0.38%    | (1.84%)  | 4.71%   | 23.44%  | 16.80%          |
| Total International Equity           | 0.16%    | (0.89%)  | (4.09%) | 25.66%  | 18.32%          |
| MSCI EAFE Index                      | (3.01%)  | (0.81%)  | (4.90%) | 22.78%  | 17.32%          |
| Brandes Investment Partners          | 1.01%    | (1.66%)  | (4.84%) | 28.93%  | 11.51%          |
| MSCI EAFE Index                      | (3.01%)  | (0.81%)  | (4.90%) | 22.78%  | 17.32%          |
| VVIIIIam Biair & Company             | (2.31%)  | (0.22%)  | (2.17%) | 21.36%  | 23.38%          |
| Dimonsional Fund Advisors Inc        | (0.20%)  | (3.25%)  | (3.44%) | 10./0%  | 17.39%          |
| Blended Benchmark                    | (0.60%)  | 9.59%    | (4.95%) | 29.30%  | 20.00%          |
| Total Fixed Income                   | 4 32%    | (2.63%)  | 3 85%   | (0.69%) | 8 65%           |
| Barclays Capital Aggregate           | 3.03%    | 0.55%    | 5.97%   | (2.02%) | 4.21%           |
| BlackRock Intermediate Agg           | 2.32%    | 1.28%    | 4.34%   | (0.96%) | 3.65%           |
| Barclays Capital Int Aggregate       | 2.31%    | 1.21%    | 4.12%   | (1.02%) | 3.56%           |
| Reams Asset Management               | 4.22%    | 0.23%    | 3.94%   | (1.23%) | 7.78%           |
| Loomis, Sayles & Company, L.P.       | 4.16%    | (6.20%)  | 5.82%   | 2.29%   | 15.33%          |
| Barclays Capital Aggregate           | 3.03%    | 0.55%    | 5.97%   | (2.02%) | 4.21%           |
| Wellington Management Company        | 7.27%    | (3.43%)  | (0.78%) | (5.61%) | 2.93%           |
| CG WGBI Index                        | 7.09%    | (3.57%)  | (0.48%) | (4.00%) | 1.05%           |
| Total Private Equity                 | (0.53%)  | 12.34%   | 15.40%  | 8.66%   | 3.44%           |
| Abbott Capital Management 2010       | 0.00%    | 12.32%   | 12.36%  | 7.33%   | (1.66%)         |
| Abbott Capital Management 2011       | 0.00%    | 10.12%   | 9.17%   | 1.20%   | (5.63%)         |
| Abbott Capital Management 2012       | 0.00%    | 2.45%    | 4.97%   | (2.50%) | -               |
| Abbott Capital Management 2013       | 0.00%    | 2.23%    | (2.17%) | -       | -               |
| Abboll Capital Management 2014       | 0.00%    | 0.39%    | -       | -       | -               |
| Mesirow V                            | (1 39%)  | 19.41%   | 21.07%  | 14 22%  | 6 65%           |
| Mesirow VI                           | (0.93%)  | (3.99%)  | 2 22%   | -       | -               |
| NB Secondary Opp Fund III            | 0.00%    | 33.37%   | 19.77%  | -       | -               |
| Private Advisors                     | 0.00%    | -        | -       | -       | -               |
| Russell 3000 (1 Qtr in Arrears) + 3% | 7.02%    | 2.53%    | 21.19%  | 25.11%  | 33.90%          |
| Absolute Return                      | 0.66%    | 4.92%    | -       | -       | -               |
| Allianz SA 1000                      | 2.41%    | 9.76%    | -       | -       | -               |
| T-Bills + 10%                        | 2.48%    | 10.05%   | 10.03%  | 10.07%  | 10.11%          |
| Newton                               | 3.61%    | 1.50%    | -       | -       | -               |
| 1-month LIBOR + 4%                   | 1.09%    | 4.19%    | 4.16%   | 4.19%   | 4.24%           |
| 1-month LIBOR + 4%                   | (1.76%)  | 4.09%    | - 4.16% | - 4.19% | - 4.24%         |
|                                      | 0.040    | 40.45%   | 40.540  | 40.45%  | 0.000           |
| I OTAL Real Estate                   | 3.61%    | 13.15%   | 13.54%  | 13.15%  | 8.83%           |
| Real ESTATE<br>Plandad Banahmark (1) | 3.01%    | 13.15%   | 13.54%  | 13.15%  | 8.83%<br>11.00% |
| biended benchmärk (1)                | 3.21%    | 13.0∠%   | 11.20%  | 10.99%  | 11.00%          |
| Total Fund                           | 1.88%    | 0.46%    | 5.02%   | 19.26%  | 13.78%          |
| Total Fund Reference Index*          | 0.95%    | 1.21%    | 6.00%   | 18.20%  | 12.90%          |

\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

(1) Blended Benchmark consists of NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.



## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.







\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## **Asset Class Rankings**

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.







\* Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## Active Share Structure Analysis For One Quarter Ended March 31, 2016

This analysis compares multiple portfolios and composites in an active share context, illustrating the varying degrees of active risk taken by individual portfolios, and how they combine into active risk profiles for composites and the equity structure. Two sources of active share (active risk) are shown: 1) Total Holdings-Based Active Share based on individual position comparisons to the index (and the subcomponent from holding non-index securities), and 2) Sector Exposure Active Share that quantifies the more macro-level sector differences from the index.

#### Active Share Analysis Ended March 31, 2016



|                               |                        | Total     | Non-Idx   | Sector    | Number     | Security |
|-------------------------------|------------------------|-----------|-----------|-----------|------------|----------|
|                               | Index                  | Act Share | Act Share | Act Share | Securities | Diverse  |
| Domestic Equity Composite     | Russell 3000           | 42.20%    | 1.09%     | 28.15%    | 1708       | 79.06    |
| Northern Trust Global         | S&P 500                | 0.12%     | 0.00%     | 0.00%     | 504        | 54.29    |
| Cornerstone Investment Partne | ers S&P 500            | 84.24%    | 3.47%     | 28.69%    | 30         | 11.59    |
| Polen Capital Management      | S&P 500                | 86.99%    | 4.74%     | 45.39%    | 23         | 8.13     |
| Earnest Partners LLC          | Russell MidCap         | 92.02%    | 7.35%     | 20.16%    | 56         | 19.23    |
| DFA Small Cap Value           | Russell 2000 Value     | 63.13%    | 11.06%    | 25.79%    | 1030       | 101.61   |
| CastleArk Management          | Russell 2000 Growth    | 86.71%    | 17.40%    | 11.08%    | 100        | 38.33    |
| *Global Equity                | MSCI World             | 66.14%    | 8.49%     | 11.97%    | 711        | 70.70    |
| MFS Investment Management     | MSCI ACWI Gross        | 88.51%    | 2.60%     | 27.58%    | 91         | 27.67    |
| BlackRock Global Alpha Tilts  | MSCI World             | 65.54%    | 9.84%     | 4.96%     | 645        | 72.92    |
| International Equity          | MSCI EAFE              | 41.49%    | 15.89%    | 7.20%     | 3273       | 148.73   |
| BlackRock Emerging Markets    | MSCI EM Gross          | 8.51%     | 1.21%     | 0.89%     | 831        | 93.62    |
| Brandes Investment Partners   | MSCI EAFE              | 89.05%    | 10.54%    | 17.71%    | 59         | 19.19    |
| William Blair & Company       | MSCI ACWIxUS Gross     | 84.55%    | 11.57%    | 14.83%    | 198        | 48.80    |
| DFA Intl Small Cap M          | SCI World ex US Sm Cap | 70.88%    | 11.79%    | 15.36%    | 2171       | 182.63   |

\*3/31/16 portfolio characteristics generated using most recently available holdings (12/31/15) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



## Global Holdings Based Style Analysis For One Quarter Ended March 31, 2016

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitialization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

#### Style Map

#### Holdings for One Quarter Ended March 31, 2016



|                               | Weight<br>% | Wtd Median<br>Mkt Cap | Combined<br>Z-Score | Growth<br>Z-Score | Value<br>Z-Score | Number of<br>Securities I | Security<br>Diversification |
|-------------------------------|-------------|-----------------------|---------------------|-------------------|------------------|---------------------------|-----------------------------|
| Northern Trust Global         | 17.91%      | 76.98                 | (0.04)              | (0.01)            | 0.03             | 504                       | 54.29                       |
| Cornerstone Investment        | 6.61%       | 75.44                 | (0.60)              | (0.13)            | 0.47             | 30                        | 11.59                       |
| Polen Capital Management      | 7.24%       | 83.04                 | 1.32                | 0.60              | (0.72)           | 23                        | 8.13                        |
| Earnest Partners LLC          | 4.51%       | 10.61                 | 0.10                | 0.02              | (0.08)           | 56                        | 19.23                       |
| DFA Small Cap Value           | 7.02%       | 1.47                  | (0.53)              | (0.15)            | 0.39             | 1030                      | 101.61                      |
| CastleArk Management          | 3.19%       | 2.31                  | 0.69                | 0.26              | (0.43)           | 100                       | 38.33                       |
| MFS Investment Management     | 8.95%       | 38.50                 | 0.66                | 0.18              | (0.49)           | 91                        | 27.67                       |
| *BlackRock Global Alpha Tilts | 10.35%      | 36.74                 | 0.04                | 0.14              | 0.10             | 645                       | 72.92                       |
| BlackRock Emerging Markets    | 2.18%       | 13.74                 | (0.08)              | (0.04)            | 0.03             | 831                       | 93.62                       |
| Brandes Investment Partners   | 14.99%      | 22.58                 | (0.78)              | (0.32)            | 0.46             | 59                        | 19.19                       |
| William Blair & Company       | 10.44%      | 21.30                 | 0.65                | 0.30              | (0.35)           | 198                       | 48.80                       |
| DFA Intl Small Cap            | 6.62%       | 1.51                  | (0.61)              | (0.11)            | 0.50             | 2171                      | 182.63                      |

\*3/31/16 portfolio characteristics generated using most recently available holdings (12/31/15) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



Domestic Equity

## Domestic Equity Composite Period Ended March 31, 2016

#### **Quarterly Summary and Highlights**

- Domestic Equity Composite's portfolio posted a 0.96% return for the quarter placing it in the 36 percentile of the Pub Pln- Domestic Equity group for the quarter and in the 29 percentile for the last year.
- Domestic Equity Composite's portfolio underperformed the Russell 3000 Index by 0.01% for the quarter and underperformed the Russell 3000 Index for the year by 0.12%.

#### **Quarterly Asset Growth**

| Beginning Market Value    | \$1,352,532,040 |
|---------------------------|-----------------|
| Net New Investment        | \$-108,190,813  |
| Investment Gains/(Losses) | \$4,788,795     |
| Ending Market Value       | \$1,249,130,022 |

Percent Cash: 1.4%



**Relative Return vs Russell 3000 Index** 



#### Pub Pln- Domestic Equity (Gross) Annualized Ten Year Risk vs Return



## **Domestic Equity Composite Return Analysis Summary**

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs Pub PIn- Domestic Equity (Gross)



**Cumulative and Quarterly Relative Return vs Russell 3000 Index** 



**Risk Adjusted Return Measures vs Russell 3000 Index** Rankings Against Pub PIn- Domestic Equity (Gross) Five Years Ended March 31, 2016



## **Domestic Equity Composite Risk Analysis Summary**

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs Pub PIn- Domestic Equity (Gross) Five Years Ended March 31, 2016













## Active Share Structure Analysis For One Quarter Ended March 31, 2016

This analysis compares multiple portfolios and composites in an active share context, illustrating the varying degrees of active risk taken by individual portfolios, and how they combine into active risk profiles for composites and the equity structure. Two sources of active share (active risk) are shown: 1) Total Holdings-Based Active Share based on individual position comparisons to the index (and the subcomponent from holding non-index securities), and 2) Sector Exposure Active Share that quantifies the more macro-level sector differences from the index.

#### Active Share Analysis Ended March 31, 2016



|                                        |                    | Total     | Non-Idx   | Sector    | Number     | Security |
|----------------------------------------|--------------------|-----------|-----------|-----------|------------|----------|
|                                        | Index              | Act Share | Act Share | Act Share | Securities | Diverse  |
| Domestic Equity Composite              | Russell 3000       | 42.20%    | 1.09%     | 28.15%    | 1708       | 79.06    |
| Northern Trust Global                  | S&P 500            | 0.12%     | 0.00%     | 0.00%     | 504        | 54.29    |
| <b>Cornerstone Investment Partners</b> | S&P 500            | 84.24%    | 3.47%     | 28.69%    | 30         | 11.59    |
| Polen Capital Management               | S&P 500            | 86.99%    | 4.74%     | 45.39%    | 23         | 8.13     |
| Earnest Partners LLC                   | Russell MidCap     | 92.02%    | 7.35%     | 20.16%    | 56         | 19.23    |
| Dimensional Fund Advisors Inc. F       | Russell 2000 Value | 63.13%    | 11.06%    | 25.79%    | 1030       | 101.61   |
| CastleArk Management R                 | ussell 2000 Growth | 86.71%    | 17.40%    | 11.08%    | 100        | 38.33    |

## Northern Trust Global Period Ended March 31, 2016

#### **Investment Philosophy**

Northern Trust seeks to replicate the risk and returns of the S&P 500 equity index and believes that a passive approach to portfolio management will provide index-like returns with minimal transaction costs.

#### **Quarterly Summary and Highlights**

• Northern Trust Global's portfolio posted a 1.38% return for the quarter placing it in the 21 percentile of the CAI Large Cap Core Style group for the quarter and in the 18 percentile for the last year.

| Quarterly Asset Growth    |               |  |  |  |  |  |  |
|---------------------------|---------------|--|--|--|--|--|--|
| Beginning Market Value    | \$479,688,976 |  |  |  |  |  |  |
| Net New Investment        | \$-5,000,000  |  |  |  |  |  |  |
| Investment Gains/(Losses) | \$6,602,010   |  |  |  |  |  |  |
| Ending Market Value       | \$481,290,985 |  |  |  |  |  |  |

 Northern Trust Global's portfolio outperformed the S&P 500 Index by 0.03% for the quarter and outperformed the S&P 500 Index for the year by 0.13%.





#### **Relative Return vs S&P 500 Index**

#### CAI Large Cap Core Style (Gross) Annualized Ten Year Risk vs Return



## **Northern Trust Global Return Analysis Summary**

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





Cumulative and Quarterly Relative Return vs S&P 500 Index



## **Risk Adjusted Return Measures vs S&P 500 Index** Rankings Against CAI Large Cap Core Style (Gross) Five Years Ended March 31, 2016



## **Northern Trust Global Risk Analysis Summary**

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Large Cap Core Style (Gross) Five Years Ended March 31, 2016





Rolling 12 Quarter Tracking Error vs S&P 500 Index



#### **Risk Statistics Rankings vs S&P 500 Index** Rankings Against CAI Large Cap Core Style (Gross) Five Years Ended March 31, 2016



## Northern Trust Global Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.





#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.





## Northern Trust Global Top 10 Portfolio Holdings Characteristics as of March 31, 2016

## 10 Largest Holdings

|                                     |                        |              |           |          |         | Price/     |          |            |
|-------------------------------------|------------------------|--------------|-----------|----------|---------|------------|----------|------------|
|                                     |                        | Ending       | Percent   |          |         | Forecasted |          | Forecasted |
|                                     |                        | Market       | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                               | Sector                 | Value        | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Apple Inc                           | Information Technology | \$16,191,383 | 3.4%      | 4.10%    | 604.30  | 11.42      | 1.91%    | 10.00%     |
| Microsoft Corp                      | Information Technology | \$11,707,082 | 2.4%      | 0.25%    | 436.83  | 18.53      | 2.61%    | 10.00%     |
| Exxon Mobil Corp                    | Energy                 | \$9,301,817  | 1.9%      | 8.21%    | 347.13  | 29.55      | 3.49%    | 13.20%     |
| Johnson & Johnson                   | Health Care            | \$8,002,965  | 1.7%      | 6.09%    | 298.45  | 16.38      | 2.77%    | 5.23%      |
| General Electric Co                 | Industrials            | \$7,949,029  | 1.7%      | 2.86%    | 295.17  | 20.26      | 2.89%    | 12.50%     |
| Berkshire Hathaway Inc Del CI B New | Financials             | \$7,128,749  | 1.5%      | 7.45%    | 177.97  | 18.06      | 0.00%    | 8.80%      |
| Facebook Inc CI A                   | Information Technology | \$7,017,731  | 1.5%      | 9.02%    | 261.85  | 33.67      | 0.00%    | 35.00%     |
| At&t Inc                            | Telecommunications     | \$6,458,057  | 1.3%      | 15.44%   | 240.94  | 13.60      | 4.90%    | 5.20%      |
| Amazon.Com                          | Consumer Discretionary | \$6,142,201  | 1.3%      | (12.17)% | 279.51  | 104.66     | 0.00%    | 38.80%     |
| Wells Fargo & Co New                | Financials             | \$5,983,742  | 1.2%      | (10.34)% | 244.57  | 11.28      | 3.10%    | 9.60%      |

#### **10 Best Performers**

|                            |                        |           |           |        |         | Price/     |          |            |
|----------------------------|------------------------|-----------|-----------|--------|---------|------------|----------|------------|
|                            |                        | Ending    | Percent   |        |         | Forecasted |          | Forecasted |
|                            |                        | Market    | of        | Qtrly  | Market  | Earnings   | Dividend | Growth in  |
| Stock                      | Sector                 | Value     | Portfolio | Return | Capital | Ratio      | Yield    | Earnings   |
| Freeport-Mcmoran Inc CI B  | Materials              | \$344,594 | 0.1%      | 52.73% | 12.94   | 35.90      | 0.00%    | (38.43)%   |
| Newmont Mining Hldg        | Materials              | \$373,283 | 0.1%      | 47.89% | 14.07   | 28.92      | 0.38%    | 0.61%      |
| Urban Outfitters Inc       | Consumer Discretionary | \$81,361  | 0.0%      | 45.45% | 3.88    | 16.34      | 0.00%    | 9.00%      |
| Michael Kors Hldgs Ltd Shs | Consumer Discretionary | \$269,220 | 0.1%      | 42.19% | 10.22   | 12.49      | 0.00%    | 4.00%      |
| Wynn Resorts Ltd           | Consumer Discretionary | \$206,504 | 0.0%      | 35.91% | 9.51    | 26.63      | 2.14%    | 9.80%      |
| Pvh Corp                   | Consumer Discretionary | \$219,971 | 0.0%      | 34.57% | 8.05    | 14.73      | 0.15%    | 6.60%      |
| Range Resources Corp       | Energy                 | \$149,236 | 0.0%      | 31.66% | 5.49    | (50.20)    | 0.25%    | (8.23)%    |
| Exelon Corp                | Utilities              | \$880,015 | 0.2%      | 30.42% | 33.05   | 14.13      | 3.46%    | 3.25%      |
| Spectra Energy Corp        | Energy                 | \$549,887 | 0.1%      | 29.66% | 20.56   | 24.40      | 5.29%    | 5.00%      |
| Centurylink Inc            | Telecommunications     | \$470,174 | 0.1%      | 29.23% | 17.38   | 12.71      | 6.76%    | (2.00)%    |

#### **10 Worst Performers**

|                             |                        | <b>F</b> . <b>(</b> ) | Price/    |          |         |            |                 | <b>F</b>   |
|-----------------------------|------------------------|-----------------------|-----------|----------|---------|------------|-----------------|------------|
|                             |                        | Ending                | Percent   | 0.1      | M       | Forecasted | <b>D</b> : 11.1 | Forecasted |
|                             | <b>a</b> (             | Market                | or        | Qtriy    | Market  | Earnings   | Dividend        | Growth In  |
| Stock                       | Sector                 | Value                 | Portfolio | Return   | Capital | Ratio      | Yield           | Earnings   |
| Endo Intl Plc Shs           | Health Care            | \$155,449             | 0.0%      | (54.02)% | 6.26    | 4.61       | 0.00%           | 12.20%     |
| Vertex Pharmaceuticals      | Health Care            | \$527,560             | 0.1%      | (36.83)% | 19.59   | 28.72      | 0.00%           | 61.00%     |
| Williams Cos                | Energy                 | \$293,020             | 0.1%      | (34.95)% | 12.05   | 15.05      | 15.93%          | (28.97)%   |
| Regeneron Pharmaceutical    | Health Care            | \$754,367             | 0.2%      | (33.60)% | 37.08   | 27.75      | 0.00%           | 19.00%     |
| Marathon Pete Corp          | Energy                 | \$525,299             | 0.1%      | (27.56)% | 19.68   | 8.46       | 3.44%           | 8.33%      |
| Alexion Pharmaceuticals Inc | Health Care            | \$836,623             | 0.2%      | (27.01)% | 31.28   | 24.97      | 0.00%           | 20.15%     |
| Transocean Ltd Reg Shs      | Energy                 | \$82,613              | 0.0%      | (26.17)% | 3.34    | (338.52)   | 11.49%          | 24.30%     |
| Micron Technology Inc       | Information Technology | \$290,636             | 0.1%      | (26.06)% | 10.86   | 18.21      | 0.00%           | 50.45%     |
| Cf Inds HIdgs Inc           | Materials              | \$194,404             | 0.0%      | (22.38)% | 7.30    | 11.12      | 3.83%           | 6.00%      |
| Tripadvisor Inc             | Consumer Discretionary | \$202,606             | 0.0%      | (21.99)% | 8.81    | 31.99      | 0.00%           | 14.20%     |

## Current Holdings Based Style Analysis Northern Trust Global As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 

Holdings as of March 31, 2016



#### Style Map vs CAI Large Cap Core Style Holdings as of March 31, 2016

#### Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## Historical Holdings Based Style Analysis Northern Trust Global For Three Years Ended March 31, 2016

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

Average Style Exposure Matrix



#### Average Style Map vs CAI Large Cap Core Style Holdings for Three Years Ended March 31, 2016

#### Northern Trust Global Historical Region/Style Exposures







## **Northern Trust Global** Active Share Analysis as of March 31, 2016 vs. S&P 500 Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.



#### **Sector Exposure Active Share**



## Total Active Share: 0.12%

|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 0.14%                                  | 0.00%                                      | 0.14%                                  | 12.90%          | 12.90%            | 0.02%                                              |
| Consumer Staples       | 0.08%                                  | 0.00%                                      | 0.08%                                  | 10.40%          | 10.40%            | 0.01%                                              |
| Energy                 | 0.16%                                  | 0.00%                                      | 0.16%                                  | 6.76%           | 6.76%             | 0.01%                                              |
| Financials             | 0.14%                                  | 0.00%                                      | 0.14%                                  | 15.64%          | 15.64%            | 0.02%                                              |
| Health Care            | 0.19%                                  | 0.00%                                      | 0.19%                                  | 14.26%          | 14.26%            | 0.02%                                              |
| Industrials            | 0.13%                                  | 0.00%                                      | 0.13%                                  | 10.13%          | 10.13%            | 0.01%                                              |
| Information Technology | 0.05%                                  | 0.00%                                      | 0.05%                                  | 20.84%          | 20.84%            | 0.01%                                              |
| Materials              | 0.22%                                  | 0.00%                                      | 0.22%                                  | 2.83%           | 2.83%             | 0.01%                                              |
| Telecommunications     | 0.04%                                  | 0.00%                                      | 0.04%                                  | 2.79%           | 2.79%             | 0.00%                                              |
| Utilities              | 0.14%                                  | 0.00%                                      | 0.14%                                  | 3.45%           | 3.45%             | 0.00%                                              |
| Total                  | 0.12%                                  | 0.00%                                      | 0.12%                                  | 100.00%         | 100.00%           | 0.12%                                              |

#### Active Share vs. CAI Large Cap Core Style



## **Cornerstone Investment Partners Period Ended March 31, 2016**

#### **Investment Philosophy**

Cornerstone has observed that despite an efficient market the fundamentals of large companies change less dramatically than their stock prices due to the short term nature of investors, and that by remaining disciplined and valuation driven, they can take advantage of those pricing anomalies in the market.

#### **Quarterly Summary and Highlights**

- Cornerstone Investment Partners's portfolio posted a 1.31% return for the quarter placing it in the 25 percentile of the CAI Large Cap Value Style group for the quarter and in the 95 percentile for the last year.
- Cornerstone Investment Partners's portfolio underperformed the S&P 500 Index by 0.04% for the quarter and underperformed the S&P 500 Index for the year by 9.21%.

| Quarterly Asset Growth    |               |  |  |  |  |  |
|---------------------------|---------------|--|--|--|--|--|
| Beginning Market Value    | \$175,333,053 |  |  |  |  |  |
| Net New Investment        | \$0           |  |  |  |  |  |
| Investment Gains/(Losses) | \$2,293,283   |  |  |  |  |  |
| Ending Market Value       | \$177,626,336 |  |  |  |  |  |

Percent Cash: 4.5%









Cumulative Returns vs S&P 500 Index



## Cornerstone Investment Partners Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.



#### Cumulative and Quarterly Relative Return vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against CAI Large Cap Value Style (Gross) Three and Three-Quarter Years Ended March 31, 2016



## Cornerstone Investment Partners Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Large Cap Value Style (Gross) Three and Three-Quarter Years Ended March 31, 2016









#### Risk Statistics Rankings vs S&P 500 Index Rankings Against CAI Large Cap Value Style (Gross) Three and Three-Quarter Years Ended March 31, 2016



## **Cornerstone Investment Partners Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against CAI Large Cap Value Style as of March 31, 2016



#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.





## Cornerstone Investment Partners Top 10 Portfolio Holdings Characteristics as of March 31, 2016

## **10 Largest Holdings**

|                         |                        |             |           |         |         | Price/     |          |            |
|-------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|
|                         |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |
|                         |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                   | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Johnson & Johnson       | Health Care            | \$8,545,095 | 4.8%      | 6.09%   | 298.45  | 16.38      | 2.77%    | 5.23%      |
| Microsoft Corp          | Information Technology | \$8,425,336 | 4.7%      | 0.14%   | 436.83  | 18.53      | 2.61%    | 10.00%     |
| JPMorgan Chase & Co     | Financials             | \$8,185,685 | 4.6%      | (9.69)% | 217.35  | 10.16      | 2.97%    | 7.91%      |
| Oracle Corp             | Information Technology | \$7,988,700 | 4.5%      | 12.46%  | 169.77  | 14.74      | 1.47%    | 6.50%      |
| Cisco Sys Inc           | Information Technology | \$7,918,930 | 4.5%      | 5.68%   | 143.26  | 12.08      | 3.65%    | 10.00%     |
| Honeywell International | Industrials            | \$7,193,610 | 4.1%      | 8.81%   | 85.31   | 16.61      | 2.12%    | 8.25%      |
| Alphabet Inc CI A       | Information Technology | \$6,766,923 | 3.8%      | (1.90)% | 223.21  | 21.21      | 0.00%    | 15.60%     |
| Capital One Finl Corp   | Financials             | \$6,745,596 | 3.8%      | (3.34)% | 35.98   | 8.80       | 2.31%    | 4.00%      |
| Parker Hannifin Corp    | Industrials            | \$6,670,354 | 3.8%      | 15.25%  | 15.01   | 17.34      | 2.27%    | 8.00%      |
| Chevron Corp New        | Energy                 | \$6,611,220 | 3.7%      | 7.39%   | 179.65  | 44.60      | 4.49%    | 39.23%     |

#### **10 Best Performers**

|                                  |                        | Ending      | Percent   |        | Forecasted |          |          | Forecasted |
|----------------------------------|------------------------|-------------|-----------|--------|------------|----------|----------|------------|
|                                  |                        | Market      | of        | Qtrly  | Market     | Earnings | Dividend | Growth in  |
| Stock                            | Sector                 | Value       | Portfolio | Return | Capital    | Ratio    | Yield    | Earnings   |
| Cummins                          | Industrials            | \$6,173,131 | 3.5%      | 26.17% | 18.73      | 13.96    | 3.55%    | (3.11)%    |
| Gap                              | Consumer Discretionary | \$5,740,350 | 3.2%      | 20.10% | 11.68      | 12.96    | 3.13%    | 5.90%      |
| Dollar Gen Corp New              | Consumer Discretionary | \$3,826,320 | 2.2%      | 19.28% | 24.52      | 18.37    | 1.17%    | 13.90%     |
| Grainger W W Inc                 | Industrials            | \$4,527,375 | 2.6%      | 15.87% | 14.37      | 19.45    | 2.00%    | 2.40%      |
| Parker Hannifin Corp             | Industrials            | \$6,670,354 | 3.8%      | 15.25% | 15.01      | 17.34    | 2.27%    | 8.00%      |
| Oracle Corp                      | Information Technology | \$7,988,700 | 4.5%      | 12.46% | 169.77     | 14.74    | 1.47%    | 6.50%      |
| Honeywell International          | Industrials            | \$7,193,610 | 4.1%      | 8.81%  | 85.31      | 16.61    | 2.12%    | 8.25%      |
| American Express Co              | Financials             | \$3,671,720 | 2.1%      | 8.42%  | 58.84      | 11.12    | 1.89%    | 6.85%      |
| Royal Dutch Shell Plc Spon Adr A | Energy                 | \$3,766,988 | 2.1%      | 7.64%  | 103.97     | 20.91    | 7.99%    | 20.40%     |
| Chevron Corp New                 | Energy                 | \$6,611,220 | 3.7%      | 7.39%  | 179.65     | 44.60    | 4.49%    | 39.23%     |

#### **10 Worst Performers**

|                         |                        |             |           |          |         | Price/     |          |            |
|-------------------------|------------------------|-------------|-----------|----------|---------|------------|----------|------------|
|                         |                        | Ending      | Percent   |          |         | Forecasted |          | Forecasted |
|                         |                        | Market      | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                   | Sector                 | Value       | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Ensco Intl Inc          | Energy                 | \$1,915,598 | 1.1%      | (32.56)% | 2.45    | 5.54       | 0.39%    | (42.03)%   |
| Lincoln National Corp   | Financials             | \$3,935,680 | 2.2%      | (21.58)% | 9.45    | 6.02       | 2.55%    | 13.10%     |
| Western Digital Corp    | Information Technology | \$2,764,721 | 1.6%      | (20.48)% | 11.00   | 7.53       | 4.23%    | 5.00%      |
| Citigroup Inc           | Financials             | \$5,826,212 | 3.3%      | (19.22)% | 122.80  | 8.12       | 0.48%    | 18.21%     |
| Boeing Co               | Industrials            | \$5,839,240 | 3.3%      | (11.49)% | 82.64   | 14.53      | 3.43%    | 10.79%     |
| State Street Corp       | Financials             | \$4,985,904 | 2.8%      | (11.28)% | 23.41   | 11.90      | 2.32%    | 5.96%      |
| Borgwarner Inc          | Consumer Discretionary | \$5,337,600 | 3.0%      | (10.82)% | 8.38    | 11.64      | 1.35%    | 8.85%      |
| Pnc Finl Services Group | Financials             | \$5,353,281 | 3.0%      | (10.76)% | 42.38   | 11.25      | 2.41%    | 5.00%      |
| JPMorgan Chase & Co     | Financials             | \$8,185,685 | 4.6%      | (9.69)%  | 217.35  | 10.16      | 2.97%    | 7.91%      |
| Us Bancorp Del          | Financials             | \$5,390,352 | 3.0%      | (4.17)%  | 70.46   | 11.96      | 2.51%    | 5.57%      |

## Current Holdings Based Style Analysis Cornerstone Investment Partners As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



#### Style Map vs CAI Large Cap Value Style Holdings as of March 31, 2016

## Style Exposure Matrix Holdings as of March 31, 2016

|       | Value       | Core               | Growth             | Total              |
|-------|-------------|--------------------|--------------------|--------------------|
|       | 36.5% (194) | <b>33.9%</b> (178) | <b>29.6%</b> (132) | 100.0% (504)       |
| Total | 51.9% (17)  | 39.1% (10)         | 8.9% (3)           | 100.0% (30)        |
|       | 0.0% (0)    | 0.0% (0)           | 0.0% (0)           | 0.0% (0)           |
| Micro |             |                    | ,- (-)             |                    |
|       | 0.0% (0)    | 0.0% (0)           | 0.0% (0)           | 0.0% (0)           |
| Sman  | 0.0% (3)    | 0.0% (3)           | 0.0% (1)           | 0.1% (7)           |
| Small | 1.1% (1)    | 0.0% (0)           | 0.0% (0)           | 1.1% (1)           |
|       | 4.2% (88)   | 3.8% (75)          | 2.6% (47)          | 10.7% (210)        |
| Mid   | 7.170 (3)   | 0.170 (2)          | 0.0% (0)           | 13.170 (5)         |
|       | 7 1% (2)    | 6 1% (2)           | 0.0% (0)           | 13 1% (5)          |
| _arge | 32.2% (103) | 30.1% (100)        | 26.9% (84)         | <b>89.2%</b> (287) |
|       | 43.7% (13)  | 33.1% (8)          | 8.9% (3)           | 85.7% (24)         |

#### Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## **Current Holdings Based Style Analysis Cornerstone Investment Partners** As of March 31. 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

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#### Style Map vs CAI Large Cap Value Style Holdings as of March 31, 2016

## **Style Exposure Matrix** Holdings as of March 31, 2016

| 0.0% (0)<br>0.0% (0)<br>51.9% (17)<br>36.5% (194) | 0.0% (0)<br>0.0% (0)<br>39.1% (10)<br>33.9% (178)                       | 0.0% (0)<br>0.0% (0)<br>8.9% (3)<br>29.6% (132)                                                                                | 0.0% (0)<br>0.0% (0)<br>100.0% (30)<br>100.0% (504)                                                                                                                                   |
|---------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.0% (0)<br>0.0% (0)<br>51.9% (17)                | 0.0% (0)<br>0.0% (0)<br>39.1% (10)                                      | 0.0% (0)<br>0.0% (0)<br>8.9% (3)                                                                                               | 0.0% (0)<br>0.0% (0)<br>100.0% (30)                                                                                                                                                   |
| 0.0% (0)<br>0.0% (0)<br>51.9% (17)                | 0.0% (0)<br>0.0% (0)<br>39.1% (10)                                      | 0.0% (0)<br>0.0% (0)<br>8.9% (3)                                                                                               | 0.0% (0)<br>0.0% (0)<br>100.0% (30)                                                                                                                                                   |
| 0.0% (0)<br>0.0% (0)                              | 0.0% (0)                                                                | 0.0% (0)<br>0.0% (0)                                                                                                           | 0.0% (0)<br>0.0% (0)                                                                                                                                                                  |
| 0.0% (0)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 0.0% (0)                                                                                                                                                                              |
| 0.0% (0)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 0.0% (0)                                                                                                                                                                              |
|                                                   |                                                                         |                                                                                                                                |                                                                                                                                                                                       |
| 0.0% (0)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 0.0% (0)                                                                                                                                                                              |
|                                                   |                                                                         |                                                                                                                                |                                                                                                                                                                                       |
| 0.0% (0)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 0.0% (0)                                                                                                                                                                              |
| 36.5% (194)                                       | 33.9% (178)                                                             | 29.6% (132)                                                                                                                    | 100.0% (504)                                                                                                                                                                          |
|                                                   |                                                                         |                                                                                                                                |                                                                                                                                                                                       |
| 49.7% (16)                                        | 39.1% (10)                                                              | 8.9% (3)                                                                                                                       | 97.8% (29)                                                                                                                                                                            |
| 0.0% (0)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 0.0% (0)                                                                                                                                                                              |
| 2.2% (1)                                          | 0.0% (0)                                                                | 0.0% (0)                                                                                                                       | 2.2% (1)                                                                                                                                                                              |
| 1                                                 | .2% (1)<br>0.0% (0)<br>9.7% (16)<br>36.5% (194)<br>1.0% (0)<br>0.0% (0) | 2.2% (1) 0.0% (0)   0.0% (0) 0.0% (0)   9.7% (16) 39.1% (10)   36.5% (194) 33.9% (178)   0.0% (0) 0.0% (0)   0.0% (0) 0.0% (0) | .2% (1) 0.0% (0) 0.0% (0)   0.0% (0) 0.0% (0) 0.0% (0)   9.7% (16) 39.1% (10) 8.9% (3)   36.5% (194) 33.9% (178) 29.6% (132)   .0% (0) 0.0% (0) 0.0% (0)   0.0% (0) 0.0% (0) 0.0% (0) |

#### **Combined Z-Score Style Distribution** Holdings as of March 31, 2016



#### **Sector Weights Distribution** Holdings as of March 31, 2016



## **Cornerstone Investment Partners** Active Share Analysis as of March 31, 2016 vs. S&P 500 Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.



# **Sector Exposure Active Share**



## Total Active Share: 84.24%

|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 85.74%                                 | 11.59%                                     | 97.33%                                 | 12.90%          | 15.53%            | 13.87%                                             |
| Consumer Staples       | 100.00%                                | 0.00%                                      | 100.00%                                | 10.40%          | 0.00%             | 5.20%                                              |
| Energy                 | 62.09%                                 | 23.11%                                     | 85.20%                                 | 6.76%           | 7.24%             | 6.00%                                              |
| Financials             | 77.78%                                 | 0.00%                                      | 77.78%                                 | 15.64%          | 29.36%            | 19.02%                                             |
| Health Care            | 88.34%                                 | 0.00%                                      | 88.34%                                 | 14.26%          | 5.04%             | 7.99%                                              |
| Industrials            | 87.02%                                 | 0.00%                                      | 87.02%                                 | 10.13%          | 20.17%            | 13.84%                                             |
| Information Technology | 62.86%                                 | 0.00%                                      | 62.86%                                 | 20.84%          | 22.66%            | 13.79%                                             |
| Materials              | 100.00%                                | 0.00%                                      | 100.00%                                | 2.83%           | -                 | 1.41%                                              |
| Telecommunications     | 100.00%                                | 0.00%                                      | 100.00%                                | 2.79%           | -                 | 1.39%                                              |
| Utilities              | 100.00%                                | 0.00%                                      | 100.00%                                | 3.45%           | -                 | 1.72%                                              |
| Total                  | 80.77%                                 | 3.47%                                      | 84.24%                                 | 100.00%         | 100.00%           | 84.24%                                             |

#### Active Share vs. CAI Large Cap Value Style



## Polen Capital Management Period Ended March 31, 2016

#### **Investment Philosophy**

Polen Capital Management believes consistent earnings growth drives intrinsic value growth and stock price appreciation. Accordingly, they focus on identifying a concentrated portfolio of high quality companies able to deliver sustainable above average growth in earnings driven by solid franchises, superior financial strength, proven management teams and powerful products/services. First full quarter of performance is third quarter 2012. Prior history represents manager composite returns.

#### **Quarterly Summary and Highlights**

- Polen Capital Management's portfolio posted a 0.17% return for the quarter placing it in the 22 percentile of the CAI Large Cap Growth Style group for the quarter and in the 1 percentile for the last year.
- Polen Capital Management's portfolio underperformed the S&P 500 Index by 1.18% for the quarter and outperformed the S&P 500 Index for the year by 9.80%.

| Qualterly Asset Growth    |               |  |  |  |  |
|---------------------------|---------------|--|--|--|--|
| Beginning Market Value    | \$204,312,466 |  |  |  |  |
| Net New Investment        | \$-10,000,000 |  |  |  |  |
| Investment Gains/(Losses) | \$323,944     |  |  |  |  |
| Ending Market Value       | \$194,636,410 |  |  |  |  |

Quarterly Asset Growth

#### Percent Cash: 2.1%





#### **Relative Return vs S&P 500 Index**

## CAI Large Cap Growth Style (Gross) Annualized Ten Year Risk vs Return



## Polen Capital Management Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs CAI Large Cap Growth Style (Gross)



Cumulative and Quarterly Relative Return vs S&P 500 Index



#### Risk Adjusted Return Measures vs S&P 500 Index Rankings Against CAI Large Cap Growth Style (Gross) Five Years Ended March 31, 2016





## Polen Capital Management Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Large Cap Growth Style (Gross) Five Years Ended March 31, 2016





#### Rolling 12 Quarter Tracking Error vs S&P 500 Index



#### Risk Statistics Rankings vs S&P 500 Index Rankings Against CAI Large Cap Growth Style (Gross) Five Years Ended March 31, 2016





## Polen Capital Management Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against CAI Large Cap Growth Style as of March 31, 2016



#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



## Polen Capital Management Top 10 Portfolio Holdings Characteristics as of March 31, 2016

## 10 Largest Holdings

|                                   |                        | Ending       | Percent   |         |         | Forecasted |          | Forecasted |
|-----------------------------------|------------------------|--------------|-----------|---------|---------|------------|----------|------------|
|                                   |                        | Market       | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                             | Sector                 | Value        | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Visa Inc Com CI A                 | Information Technology | \$14,774,636 | 7.6%      | (1.19)% | 146.78  | 25.32      | 0.73%    | 15.00%     |
| Nike Inc CI B                     | Consumer Discretionary | \$14,016,144 | 7.2%      | (1.38)% | 82.98   | 25.47      | 1.04%    | 13.75%     |
| Starbucks Corp                    | Consumer Discretionary | \$12,371,273 | 6.4%      | (0.21)% | 88.24   | 29.28      | 1.34%    | 19.10%     |
| Alphabet Inc CI C                 | Information Technology | \$12,330,410 | 6.3%      | (1.83)% | 257.41  | 20.67      | 0.00%    | 16.00%     |
| Tjx Cos                           | Consumer Discretionary | \$10,496,706 | 5.4%      | 10.83%  | 51.91   | 22.22      | 1.33%    | 10.00%     |
| Priceline Grp Inc                 | Consumer Discretionary | \$10,430,264 | 5.4%      | 1.10%   | 63.95   | 17.84      | 0.00%    | 15.00%     |
| Accenture Plc Ireland Shs Class A | Information Technology | \$10,133,043 | 5.2%      | 10.43%  | 71.99   | 20.49      | 1.91%    | 9.70%      |
| Oracle Corp                       | Information Technology | \$9,562,794  | 4.9%      | 12.46%  | 169.77  | 14.74      | 1.47%    | 6.50%      |
| Automatic Data Processing In      | Information Technology | \$9,329,481  | 4.8%      | 6.54%   | 41.04   | 25.07      | 2.36%    | 10.00%     |
| Adobe Systems                     | Information Technology | \$8,627,724  | 4.4%      | (0.14)% | 46.92   | 29.73      | 0.00%    | 29.30%     |

#### **10 Best Performers**

|                                   |                        |              |           |        |         | Price/     |          |            |
|-----------------------------------|------------------------|--------------|-----------|--------|---------|------------|----------|------------|
|                                   |                        | Ending       | Percent   |        |         | Forecasted |          | Forecasted |
|                                   |                        | Market       | of        | Qtrly  | Market  | Earnings   | Dividend | Growth in  |
| Stock                             | Sector                 | Value        | Portfolio | Return | Capital | Ratio      | Yield    | Earnings   |
| Fastenal Co                       | Industrials            | \$8,364,545  | 4.3%      | 20.99% | 14.14   | 26.15      | 2.45%    | 6.00%      |
| Oracle Corp                       | Information Technology | \$9,562,794  | 4.9%      | 12.46% | 169.77  | 14.74      | 1.47%    | 6.50%      |
| Tjx Cos                           | Consumer Discretionary | \$10,496,706 | 5.4%      | 10.83% | 51.91   | 22.22      | 1.33%    | 10.00%     |
| Accenture Plc Ireland Shs Class A | Information Technology | \$10,133,043 | 5.2%      | 10.43% | 71.99   | 20.49      | 1.91%    | 9.70%      |
| Facebook Inc CI A                 | Information Technology | \$7,793,372  | 4.0%      | 9.03%  | 261.85  | 33.67      | 0.00%    | 35.00%     |
| O Reilly Automotive Inc New       | Consumer Discretionary | \$8,192,286  | 4.2%      | 7.98%  | 26.55   | 24.91      | 0.00%    | 15.70%     |
| Align Technology Inc              | Health Care            | \$3,047,892  | 1.6%      | 6.68%  | 5.83    | 32.14      | 0.00%    | 22.00%     |
| Automatic Data Processing In      | Information Technology | \$9,329,481  | 4.8%      | 6.54%  | 41.04   | 25.07      | 2.36%    | 10.00%     |
| Apple Inc                         | Information Technology | \$7,535,786  | 3.9%      | 4.12%  | 604.30  | 11.42      | 1.91%    | 10.00%     |
| Priceline Grp Inc                 | Consumer Discretionary | \$10,430,264 | 5.4%      | 1.10%  | 63.95   | 17.84      | 0.00%    | 15.00%     |

## **10 Worst Performers**

|                          |                        | Ending       | Percent   |          | Price/<br>Forecasted |          |          |           |
|--------------------------|------------------------|--------------|-----------|----------|----------------------|----------|----------|-----------|
|                          |                        | Market       | of        | Qtrly    | Market               | Earnings | Dividend | Growth in |
| Stock                    | Sector                 | Value        | Portfolio | Return   | Capital              | Ratio    | Yield    | Earnings  |
| Regeneron Pharmaceutical | Health Care            | \$6,673,186  | 3.4%      | (33.58)% | 37.08                | 27.75    | 0.00%    | 19.00%    |
| Celgene Corp             | Health Care            | \$7,980,676  | 4.1%      | (16.39)% | 78.24                | 16.43    | 0.00%    | 23.00%    |
| Abbott Laboratories      | Health Care            | \$5,286,350  | 2.7%      | (6.44)%  | 61.63                | 18.83    | 2.49%    | 9.50%     |
| Mastercard Inc CI A      | Information Technology | \$3,722,638  | 1.9%      | (2.73)%  | 102.96               | 25.70    | 0.80%    | 15.00%    |
| Alphabet Inc CI A        | Information Technology | \$4,932,149  | 2.5%      | (1.93)%  | 223.21               | 21.21    | 0.00%    | 15.60%    |
| Alphabet Inc CI C        | Information Technology | \$12,330,410 | 6.3%      | (1.83)%  | 257.41               | 20.67    | 0.00%    | 16.00%    |
| Cdk Global Inc           | Information Technology | \$0          | 0.0%      | (1.64)%  | 7.23                 | 22.91    | 1.16%    | 15.00%    |
| Gartner Inc              | Information Technology | \$6,599,659  | 3.4%      | (1.48)%  | 7.36                 | 32.43    | 0.00%    | 15.10%    |
| Nike Inc CI B            | Consumer Discretionary | \$14,016,144 | 7.2%      | (1.38)%  | 82.98                | 25.47    | 1.04%    | 13.75%    |
| Visa Inc Com CI A        | Information Technology | \$14,774,636 | 7.6%      | (1.19)%  | 146.78               | 25.32    | 0.73%    | 15.00%    |

## Current Holdings Based Style Analysis Polen Capital Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



#### Style Map vs CAI Lrg Cap Growth Style Holdings as of March 31, 2016

#### Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## Current Holdings Based Style Analysis Polen Capital Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



#### Style Map vs CAI Lrg Cap Growth Style Holdings as of March 31, 2016

#### Combined Z-Score Style Distribution Holdings as of March 31, 2016





#### Sector Weights Distribution Holdings as of March 31, 2016
## **Polen Capital Management** Active Share Analysis as of March 31, 2016 vs. S&P 500 Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.







Total Active Share: 86.99%

|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 86.43%                                 | 0.00%                                      | 86.43%                                 | 12.90%          | 29.12%            | 19.26%                                             |
| Consumer Staples       | 50.00%                                 | 50.00%                                     | 100.00%                                | 10.40%          | 4.43%             | 7.41%                                              |
| Energy                 | 100.00%                                | 0.00%                                      | 100.00%                                | 6.76%           | -                 | 3.38%                                              |
| Financials             | 100.00%                                | 0.00%                                      | 100.00%                                | 15.64%          | -                 | 7.82%                                              |
| Health Care            | 86.81%                                 | 6.63%                                      | 93.44%                                 | 14.26%          | 12.06%            | 12.23%                                             |
| Industrials            | 99.22%                                 | 0.00%                                      | 99.22%                                 | 10.13%          | 4.39%             | 7.18%                                              |
| Information Technology | 56.42%                                 | 3.46%                                      | 59.88%                                 | 20.84%          | 50.01%            | 25.18%                                             |
| Materials              | 100.00%                                | 0.00%                                      | 100.00%                                | 2.83%           | -                 | 1.41%                                              |
| Telecommunications     | 100.00%                                | 0.00%                                      | 100.00%                                | 2.79%           | -                 | 1.39%                                              |
| Utilities              | 100.00%                                | 0.00%                                      | 100.00%                                | 3.45%           | -                 | 1.72%                                              |
| Total                  | 82.25%                                 | 4.74%                                      | 86.99%                                 | 100.00%         | 100.00%           | 86.99%                                             |

## Active Share vs. CAI Lrg Cap Growth Style



## Earnest Partners LLC Period Ended March 31, 2016

#### **Investment Philosophy**

EARNEST Partners is a fundamental, bottom-up investment manager. The Firms investment objective is to outperform the benchmark while controlling volatility and risk. EARNEST Partners implements this philosophy using a screen developed in-house called Return Pattern Recognition, thorough fundamental analysis, and risk management that minimizes the likelihood of meaningfully underperforming the benchmark.

## **Quarterly Summary and Highlights**

- Earnest Partners LLC's portfolio posted a 0.96% return for the quarter placing it in the 43 percentile of the CAI Mid Capitalization Style group for the quarter and in the 13 percentile for the last year.
- Earnest Partners LLC's portfolio underperformed the Russell MidCap Index by 1.29% for the quarter and outperformed the Russell MidCap Index for the year by 2.46%.

Performance vs CAI Mid Capitalization Style (Gross)

#### **Quarterly Asset Growth**

| Beginning Market Value    | \$119,976,557 |
|---------------------------|---------------|
| Net New Investment        | \$0           |
| Investment Gains/(Losses) | \$1,147,191   |
| Ending Market Value       | \$121,123,747 |

## Percent Cash: 3.3%



**Relative Return vs Russell MidCap Index** 



## CAI Mid Capitalization Style (Gross) Annualized Ten Year Risk vs Return



# **Earnest Partners LLC Return Analysis Summary**

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

### Performance vs CAI Mid Capitalization Style (Gross)



Cumulative and Quarterly Relative Return vs Russell MidCap Index



**Risk Adjusted Return Measures vs Russell MidCap Index Rankings Against CAI Mid Capitalization Style (Gross)** Five Years Ended March 31, 2016



# **Earnest Partners LLC Risk Analysis Summary**

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

**Risk Analysis vs CAI Mid Capitalization Style (Gross)** Five Years Ended March 31, 2016











# Earnest Partners LLC Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Mid Capitalization Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# Earnest Partners LLC vs Russell Mid-Cap Index Domestic Equity Top 10 Contribution Holdings One Quarter Ended March 31, 2016

| anager Holdings with Larg       | est (+ or -) Contribution to Performance |                   |              |                 |                   |                 |                 | Contrib          |
|---------------------------------|------------------------------------------|-------------------|--------------|-----------------|-------------------|-----------------|-----------------|------------------|
| Issue                           | Sector                                   | Manager<br>Eff Wt | Days<br>Held | Index<br>Eff Wt | Manager<br>Return | Index<br>Return | Manager<br>Perf | Excess<br>Return |
| Valspar Corp                    | Materials                                | 2.68%             | 91           | 0.11%           | 29.54%            | 29.54%          | 0.84%           | 0.74%            |
| Express Scripts Hldg Co         | Health Care                              | 2.01%             | 91           | -               | (21.44)%          | -               | (0.47)%         | (0.51)%          |
| Stifel Finl Cap                 | Financials                               | 1.27%             | 91           | -               | (30.12)%          | -               | (0.45)%         | (0.46)%          |
| Cb Richard Ellis Group Inc CI A | Financials                               | 2.31%             | 91           | 0.15%           | (16.66)%          | (16.66)%        | (0.43)%         | (0.43)%          |
| Amerisourcebergen               | Health Care                              | 2.26%             | 91           | 0.34%           | (16.22)%          | (16.22)%        | (0.39)%         | (0.37)%          |
| Cummins                         | Industrials                              | 1.54%             | 91           | -               | 26.17%            | -               | 0.39%           | 0.33%            |
| Tjx Cos                         | Consumer Discretionary                   | 3.71%             | 91           | -               | 10.81%            | -               | 0.39%           | 0.29%            |
| Raymond James Financial Inc     | Financials                               | 1.89%             | 91           | 0.11%           | (17.53)%          | (17.53)%        | (0.37)%         | (0.37)%          |
| Activision Blizzard Inc         | Information Technology                   | 2.86%             | 91           | 0.31%           | (11.87)%          | (11.87)%        | (0.37)%         | (0.37)%          |
| Snap-On                         | Industrials                              | 3.70%             | 91           | 0.16%           | (8.04)%           | (8.04)%         | (0.32)%         | (0.38)%          |

#### Index Holdings with Largest (+ or -) Contribution to Performance

| ex Holdings with Largest        | (+ or -) Contribution to Performance |         |      |        |         |          |         | Contrib |
|---------------------------------|--------------------------------------|---------|------|--------|---------|----------|---------|---------|
|                                 |                                      | Manager | Days | Index  | Manager | Index    | Index   | Excess  |
| Issue                           | Sector                               | Eff Wt  | Held | Eff Wt | Return  | Return   | Perf    | Return  |
| Linkedin Corp Com Cl A          | Information Technology               | -       | -    | 0.35%  | -       | (49.20)% | (0.22)% | 0.21%   |
| Endo Intl Plc Shs               | Health Care                          | -       | -    | 0.21%  | -       | (54.02)% | (0.13)% | 0.14%   |
| Alkermes Plc Shs                | Health Care                          | -       | -    | 0.12%  | -       | (56.93)% | (0.11)% | 0.11%   |
| Incyte Corp                     | Health Care                          | -       | -    | 0.23%  | -       | (33.18)% | (0.09)% | 0.10%   |
| Newmont Mining Hldg             | Materials                            | -       | -    | 0.20%  | -       | 47.89%   | 0.08%   | (0.07)% |
| Public Svc Enterprise Group Inc | Utilities                            | -       | -    | 0.37%  | -       | 22.95%   | 0.08%   | (0.06)% |
| Edison International            | Utilities                            | -       | -    | 0.36%  | -       | 22.22%   | 0.08%   | (0.06)% |
| Freeport-Mcmoran Inc CI B       | Materials                            | -       | -    | 0.13%  | -       | 52.73%   | 0.08%   | (0.07)% |
| Dollar Gen Corp New             | Consumer Discretionary               | -       | -    | 0.40%  | -       | 19.46%   | 0.08%   | (0.06)% |
| Centurylink Inc                 | Telecommunications                   | -       | -    | 0.27%  | -       | 29.23%   | 0.07%   | (0.06)% |

#### Positions with Largest Positive Contribution to Excess Return

| Issue                      | Sector                 | Manager<br>Eff Wt | Days<br>Held | Index<br>Eff Wt | Manager<br>Return | Index<br>Return | Contrib<br>Manager<br>Perf | Contrib<br>Excess<br>Return |
|----------------------------|------------------------|-------------------|--------------|-----------------|-------------------|-----------------|----------------------------|-----------------------------|
| Valspar Corp               | Materials              | 2.68%             | 91           | 0.11%           | 29.54%            | 29.54%          | 0.84%                      | 0.74%                       |
| Cummins                    | Industrials            | 1.54%             | 91           | -               | 26.17%            | -               | 0.39%                      | 0.33%                       |
| Tjx Cos                    | Consumer Discretionary | 3.71%             | 91           | -               | 10.81%            | -               | 0.39%                      | 0.29%                       |
| Linkedin Corp Com CI A     | Information Technology | -                 | -            | 0.35%           | -                 | (49.20)%        | -                          | 0.21%                       |
| Allegheny Technologies Inc | Materials              | 0.45%             | 91           | 0.02%           | 45.62%            | 45.62%          | 0.21%                      | 0.18%                       |
| Masco Corp                 | Industrials            | 2.14%             | 91           | 0.17%           | 11.52%            | 11.52%          | 0.27%                      | 0.18%                       |
| Sealed Air Corp            | Materials              | 2.90%             | 91           | 0.15%           | 7.87%             | 7.95%           | 0.25%                      | 0.17%                       |
| Wec Energy Group Inc Com   | Utilities              | 1.55%             | 91           | 0.30%           | 18.10%            | 18.10%          | 0.26%                      | 0.16%                       |
| Reinsurance Group Amer Inc | Financials             | 1.72%             | 91           | 0.10%           | 13.00%            | 13.00%          | 0.23%                      | 0.15%                       |
| Intuit                     | Information Technology | 3.39%             | 91           | 0.47%           | 8.08%             | 8.12%           | 0.26%                      | 0.15%                       |

## Positions with Largest Negative Contribution to Excess Return

| sitions with Largest Nega       | tive Contribution to Excess Return |         |      |        |          |          |         | Contrib |
|---------------------------------|------------------------------------|---------|------|--------|----------|----------|---------|---------|
|                                 |                                    | Manager | Days | Index  | Manager  | Index    | Manager | Excess  |
| Issue                           | Sector                             | Eff Wt  | Held | Eff Wt | Return   | Return   | Perf    | Return  |
| Express Scripts Hldg Co         | Health Care                        | 2.01%   | 91   | -      | (21.44)% | -        | (0.47)% | (0.51)% |
| Stifel Finl Cap                 | Financials                         | 1.27%   | 91   | -      | (30.12)% | -        | (0.45)% | (0.46)% |
| Cb Richard Ellis Group Inc CI A | Financials                         | 2.31%   | 91   | 0.15%  | (16.66)% | (16.66)% | (0.43)% | (0.43)% |
| Snap-On                         | Industrials                        | 3.70%   | 91   | 0.16%  | (8.04)%  | (8.04)%  | (0.32)% | (0.38)% |
| Activision Blizzard Inc         | Information Technology             | 2.86%   | 91   | 0.31%  | (11.87)% | (11.87)% | (0.37)% | (0.37)% |
| Amerisourcebergen               | Health Care                        | 2.26%   | 91   | 0.34%  | (16.22)% | (16.22)% | (0.39)% | (0.37)% |
| Raymond James Financial Inc     | Financials                         | 1.89%   | 91   | 0.11%  | (17.53)% | (17.53)% | (0.37)% | (0.37)% |
| Intercontinental Exchange In    | Financials                         | 2.87%   | 91   | 0.51%  | (7.91)%  | (7.91)%  | (0.24)% | (0.26)% |
| Keycorp                         | Financials                         | 1.40%   | 91   | 0.17%  | (15.71)% | (15.71)% | (0.24)% | (0.23)% |
| D.R. Horton                     | Consumer Discretionary             | 3.26%   | 91   | 0.17%  | (5.33)%  | (5.33)%  | (0.17)% | (0.22)% |

# Current Holdings Based Style Analysis Earnest Partners LLC As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



#### Style Map vs CAI Mid Cap Style Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# **Current Holdings Based Style Analysis Earnest Partners LLC** As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



## Style Map vs CAI Mid Cap Style Holdings as of March 31, 2016

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2016





## **Sector Weights Distribution** Holdings as of March 31, 2016

## **Earnest Partners LLC** Active Share Analysis as of March 31, 2016 vs. Russell Mid-Cap Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.







|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 81.24%                                 | 16.06%                                     | 97.30%                                 | 16.70%          | 9.68%             | 12.74%                                             |
| Consumer Staples       | 100.00%                                | 0.00%                                      | 100.00%                                | 6.36%           | -                 | 3.18%                                              |
| Energy                 | 93.53%                                 | 0.00%                                      | 93.53%                                 | 4.58%           | 4.13%             | 4.00%                                              |
| Financials             | 81.02%                                 | 9.34%                                      | 90.36%                                 | 22.76%          | 22.40%            | 20.38%                                             |
| Health Care            | 82.16%                                 | 2.74%                                      | 84.90%                                 | 9.05%           | 11.47%            | 8.89%                                              |
| Industrials            | 75.74%                                 | 18.40%                                     | 94.14%                                 | 13.02%          | 18.44%            | 14.97%                                             |
| Information Technology | 86.85%                                 | 0.00%                                      | 86.85%                                 | 14.28%          | 19.60%            | 15.06%                                             |
| Materials              | 87.19%                                 | 0.00%                                      | 87.19%                                 | 5.61%           | 12.61%            | 8.39%                                              |
| Telecommunications     | 100.00%                                | 0.00%                                      | 100.00%                                | 1.04%           | -                 | 0.52%                                              |
| Utilities              | 95.28%                                 | 0.00%                                      | 95.28%                                 | 6.60%           | 1.68%             | 3.88%                                              |
| Total                  | 84.67%                                 | 7.35%                                      | 92.02%                                 | 100.00%         | 100.00%           | 92.02%                                             |

## Active Share vs. CAI Mid Cap Style



## Earnest Partners LLC vs Russell Mid-Cap Index Domestic Equity Daily Performance Attribution One Quarter Ended March 31, 2016

## **Sector Exposures and Performance**

Differences in sector exposures and sector returns between a manager and index are important factors in understanding relative performance. The first two charts below show detailed sector exposures through time for both the manager and index. The third chart summarizes these exposures. The fourth chart compares the perfomance between the manager and index within individual sectors.

## **Manager Historical Sector Allocation**



## **Benchmark Historical Sector Allocation**









## Sector Returns

## Earnest Partners LLC vs Russell Mid-Cap Index Domestic Equity Daily Performance Attribution One Quarter Ended March 31, 2016

## **Return Sources and Timing**

The charts below illustrate the timing and cumulative paths of the manager's performance, as well as attributing relative performance to three sources: Sector Concentration, Security Selection, and Asset Allocation. The first chart shows the cumulative absolute return paths for the manager and index. The second chart shows the cumulative relative return path of the manager and the attributed sources of that value-added. The bottom table breaks the annualized attribution factors down to the sector level for more insight into sources of return.





**Cumulative Attribution Effects vs. Russell Mid-Cap Index** 



#### Attribution Effects by Sector vs. Russell Mid-Cap Index One Quarter Ended March 31, 2016

| Sector                 | Manager<br>Eff Weight | Index<br>Eff Weight                 | Manager<br>Return | Index<br>Return | Sector<br>Concentration | Security<br>Selection | Asset<br>Allocation |
|------------------------|-----------------------|-------------------------------------|-------------------|-----------------|-------------------------|-----------------------|---------------------|
| Consumer Discretionary | 10.36%                | 16.54%                              | 1.07%             | 4.41%           | (0.13)%                 | (0.34)%               |                     |
| Consumer Staples       | 0.00%                 | 6.51%                               | 0.00%             | 5.39%           | (0.20)%                 | 0.00%                 | -                   |
| Energy                 | 2.60%                 | 4.34%                               | 3.30%             | 3.62%           | (0.14)%                 | (0.01)%               | -                   |
| Financials             | 21.84%                | 23.15%                              | (4.68)%           | (0.66)%         | 0.05%                   | (0.89)%               | -                   |
| Health Care            | 13.54%                | 9.57%                               | (7.64)%           | (7.90)%         | (0.42)%                 | 0.06%                 | -                   |
| Industrials            | 18.17%                | 12.69%                              | 4.81%             | 5.51%           | 0.19%                   | (0.13)%               | -                   |
| Information Technology | 20.09%                | 14.55%                              | 0.83%             | (1.47)%         | (0.21)%                 | 0.45%                 | -                   |
| Materials              | 11.79%                | 5.27%                               | 14.73%            | 8.55%           | 0.41%                   | 0.67%                 | -                   |
| Telecommunications     | 0.00%                 | 1.01%                               | 0.00%             | 7.38%           | (0.06)%                 | 0.00%                 | -                   |
| Utilities              | 1.60%                 | 6.37%                               | 18.10%            | 15.41%          | (0.59)%                 | 0.04%                 | -                   |
| Non Equity             | 3.00%                 | 0.00%                               | -                 | -               | -                       | -                     | (0.02)%             |
| Total                  | -                     | -                                   | 0.96%             | 2.24%           | (1.11)%                 | (0.16)%               | (0.02)%             |
|                        |                       |                                     |                   |                 |                         |                       |                     |
| Manager Return         | _ Index Ret           | <u>urn</u> <sub>+</sub> <u>Sect</u> | or Concentration  | + Sec           | urity Selection         | + Asset All           | ocation             |
| 0.96%                  | 2.24%                 |                                     | (1.11%)           | •               | (0.16%)                 | (0.02                 | !%)                 |

## Dimensional Fund Advisors Inc. Period Ended March 31, 2016

#### **Investment Philosophy**

DFA's investment philosophy stems from academic research conducted by Professors Eugene Fama and Kenneth French that finds that high book/market value stocks have higher expected returns than growth stocks. DFA's quantitative investment strategy in highly diversified portfolios of small companies with "deep" value characteristics is designed to capture the returns of small value stocks

### **Quarterly Summary and Highlights**

- Dimensional Fund Advisors Inc.'s portfolio posted a 2.54% return for the quarter placing it in the 46 percentile of the CAI Small Cap Value Style group for the quarter and in the 67 percentile for the last year.
- Dimensional Fund Advisors Inc.'s portfolio outperformed the Russell 2000 Value Index by 0.83% for the quarter and outperformed the Russell 2000 Value Index for the year by 1.62%.

## **Quarterly Asset Growth**

| Beginning Market Value    | \$159,991,956 |
|---------------------------|---------------|
| Net New Investment        | \$22,000,000  |
| Investment Gains/(Losses) | \$6,580,319   |
| Ending Market Value       | \$188,572,275 |







**Relative Return vs Russell 2000 Value Index** 





# Dimensional Fund Advisors Inc. Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.



Performance vs CAI Small Cap Value Style (Gross)

Cumulative and Quarterly Relative Return vs Russell 2000 Value Index







## Dimensional Fund Advisors Inc. Risk Analysis Summary

## **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

## Risk Analysis vs CAI Small Cap Value Style (Gross) Five Years Ended March 31, 2016







Risk Statistics Rankings vs Russell 2000 Value Index Rankings Against CAI Small Cap Value Style (Gross) Five Years Ended March 31, 2016





# Dimensional Fund Advisors Inc. Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Small Cap Value Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.





# Dimensional Fund Advisors Inc. Top 10 Portfolio Holdings Characteristics as of March 31, 2016

## **10 Largest Holdings**

|                                  |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |  |  |
|----------------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|--|--|
|                                  |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |  |  |
| Stock                            | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |  |  |
| Endurance Specialty Hldgs Lt Shs | Financials             | \$2,111,987 | 1.1%      | 2.71%   | 4.36    | 10.02      | 2.33%    | 9.00%      |  |  |
| Seaboard Corp                    | Consumer Staples       | \$1,992,801 | 1.1%      | 3.74%   | 3.52    | 25.45      | 0.10%    | -          |  |  |
| Selective Insurance Grp          | Financials             | \$1,983,838 | 1.1%      | 9.52%   | 2.11    | 14.06      | 1.64%    | 51.94%     |  |  |
| Amerco                           | Industrials            | \$1,971,235 | 1.0%      | (8.26)% | 7.01    | 12.88      | 0.00%    | 36.09%     |  |  |
| Synnex Corp                      | Information Technology | \$1,785,454 | 0.9%      | 3.21%   | 3.67    | 14.52      | 0.86%    | 10.85%     |  |  |
| Convergys Corp                   | Information Technology | \$1,748,116 | 0.9%      | 11.91%  | 2.68    | 14.46      | 1.15%    | 10.00%     |  |  |
| Caci Intl Inc CI A               | Information Technology | \$1,700,297 | 0.9%      | 15.00%  | 2.59    | 16.86      | 0.00%    | 10.00%     |  |  |
| Cno Finl Group Inc               | Financials             | \$1,698,034 | 0.9%      | (5.76)% | 3.21    | 11.69      | 1.56%    | 10.55%     |  |  |
| Fbl Finl Group Inc               | Financials             | \$1,664,335 | 0.9%      | 0.69%   | 1.53    | 14.65      | 2.73%    | 6.10%      |  |  |
| Hanover Ins Group Inc            | Financials             | \$1,634,942 | 0.9%      | 11.52%  | 3.86    | 14.06      | 2.04%    | (1.10)%    |  |  |

#### **10 Best Performers**

|                            |                        |           |           |         |         | Price/     |          |            |
|----------------------------|------------------------|-----------|-----------|---------|---------|------------|----------|------------|
|                            |                        | Ending    | Percent   |         |         | Forecasted |          | Forecasted |
|                            |                        | Market    | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                      | Sector                 | Value     | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Skyline Corp               | Consumer Discretionary | \$1,831   | 0.0%      | 160.40% | 0.08    | (10.39)    | 0.00%    | -          |
| American Independence Corp | Financials             | \$10,618  | 0.0%      | 133.84% | 0.16    | 63.78      | 0.00%    | -          |
| Suncoke Energy Inc         | Materials              | \$77,767  | 0.0%      | 87.32%  | 0.42    | 30.23      | 6.67%    | 8.00%      |
| Contango Oil & Gas Company | Energy                 | \$80,500  | 0.0%      | 83.93%  | 0.23    | (5.68)     | 0.00%    | (20.06)%   |
| Lsb Inds Inc               | Materials              | \$19,484  | 0.0%      | 75.86%  | 0.30    | 398.44     | 0.00%    | 12.00%     |
| New York & Co Inc          | Consumer Discretionary | \$10,778  | 0.0%      | 72.93%  | 0.26    | 13.38      | 0.00%    | (15.89)%   |
| Tronox Ltd Shs CI A        | Materials              | \$83,202  | 0.0%      | 70.99%  | 0.41    | (12.36)    | 15.65%   | -          |
| Qumu Corp                  | Information Technology | \$4,220   | 0.0%      | 70.11%  | 0.04    | (5.15)     | 14.75%   | 15.00%     |
| Castle A M & Co            | Materials              | \$21,191  | 0.0%      | 69.81%  | 0.06    | (0.34)     | 0.00%    | -          |
| Penney J C Inc             | Consumer Discretionary | \$632,887 | 0.3%      | 66.07%  | 3.39    | 116.42     | 0.00%    | 9.37%      |

## **10 Worst Performers**

|                             |                        |          |           |          |         | Price/     |          |            |
|-----------------------------|------------------------|----------|-----------|----------|---------|------------|----------|------------|
|                             |                        | Ending   | Percent   |          |         | Forecasted |          | Forecasted |
|                             |                        | Market   | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                       | Sector                 | Value    | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Here Media Inc              | Information Technology | \$0      | 0.0%      | (99.50)% | 0.00    | -          | 0.00%    | -          |
| Here Media Inc              | Information Technology | \$0      | 0.0%      | (99.33)% | 0.00    | -          | 0.00%    | -          |
| Internet Patents Corp Com   | Information Technology | \$103    | 0.0%      | (70.90)% | 0.00    | (0.25)     | 0.00%    | -          |
| C&j Energy Svcs Inc         | Energy                 | \$2,057  | 0.0%      | (70.38)% | 0.17    | (0.63)     | 0.00%    | 19.00%     |
| Williams Clayton Energy Inc | Energy                 | \$10,260 | 0.0%      | (69.83)% | 0.11    | (1.01)     | 0.00%    | (22.54)%   |
| Intrepid Potash Inc         | Materials              | \$591    | 0.0%      | (62.37)% | 0.08    | (2.76)     | 0.00%    | (59.52)%   |
| Hanger Inc                  | Health Care            | \$27,527 | 0.0%      | (60.49)% | 0.23    | 4.11       | 0.00%    | 7.77%      |
| Republic Awys Hldgs Inc     | Industrials            | \$2,990  | 0.0%      | (50.38)% | 0.10    | 4.33       | 0.00%    | (21.02)%   |
| Interpace Diagnostics Group | Health Care            | \$2,756  | 0.0%      | (49.80)% | 0.01    | (0.36)     | 0.00%    | (23.06)%   |
| Everi Hldgs Inc             | Information Technology | \$5,354  | 0.0%      | (47.84)% | 0.15    | 3.29       | 0.00%    | 20.85%     |

# Current Holdings Based Style Analysis Dimensional Fund Advisors Inc. As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



## Style Map vs CAI Small Cap Value Style Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



Sector Weights Distribution Holdings as of March 31, 2016



# Current Holdings Based Style Analysis Dimensional Fund Advisors Inc. As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



## Style Map vs CAI Small Cap Value Style Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## **Dimensional Fund Advisors Inc.** Active Share Analysis as of March 31, 2016 vs. Russell 2000 Value Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.



#### **Sector Exposure Active Share**



## Total Active Share: 63.13%

|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 43.35%                                 | 11.80%                                     | 55.15%                                 | 10.08%          | 15.22%            | 7.58%                                              |
| Consumer Staples       | 53.69%                                 | 2.34%                                      | 56.02%                                 | 3.67%           | 4.94%             | 2.48%                                              |
| Energy                 | 32.99%                                 | 17.34%                                     | 50.33%                                 | 4.07%           | 7.96%             | 3.71%                                              |
| Financials             | 64.27%                                 | 8.43%                                      | 72.69%                                 | 42.90%          | 25.47%            | 23.64%                                             |
| Health Care            | 44.12%                                 | 18.52%                                     | 62.64%                                 | 4.06%           | 4.99%             | 2.98%                                              |
| Industrials            | 35.85%                                 | 14.55%                                     | 50.41%                                 | 12.01%          | 19.92%            | 8.76%                                              |
| Information Technology | 36.91%                                 | 6.26%                                      | 43.17%                                 | 10.53%          | 16.17%            | 6.91%                                              |
| Materials              | 43.90%                                 | 12.87%                                     | 56.78%                                 | 3.34%           | 4.34%             | 2.27%                                              |
| Telecommunications     | 43.25%                                 | 27.11%                                     | 70.37%                                 | 0.87%           | 0.85%             | 0.60%                                              |
| Utilities              | 98.38%                                 | 0.00%                                      | 98.38%                                 | 8.46%           | 0.14%             | 4.18%                                              |
| Total                  | 52.06%                                 | 11.06%                                     | 63.13%                                 | 100.00%         | 100.00%           | 63.13%                                             |

## Active Share vs. CAI Small Cap Value Style



## CastleArk Management Period Ended March 31, 2016

#### **Investment Philosophy**

CastleArk believes that excess returns can be achieved by investing in companies with improving business fundamentals, superior earnings and revenue growth rates where the direction of growth is more important than the absolute level of growth. First full quarter of performance is fourth quarter 2013. Prior history represents manager composite returns.

#### **Quarterly Summary and Highlights**

- CastleArk Management's portfolio posted a (5.49)% return for the quarter placing it in the 53 percentile of the CAI Small Cap Growth Style group for the quarter and in the 51 percentile for the last year.
- CastleArk Management's portfolio underperformed the Russell 2000 Growth Index by 0.81% for the quarter and underperformed the Russell 2000 Growth Index for the year by 1.42%.

| Quarterly Asset Growth    |              |  |  |  |  |
|---------------------------|--------------|--|--|--|--|
| Beginning Market Value    | \$90,867,600 |  |  |  |  |
| Net New Investment        | \$0          |  |  |  |  |
| Investment Gains/(Losses) | \$-4,987,332 |  |  |  |  |
| Ending Market Value       | \$85,880,268 |  |  |  |  |

## Performance vs CAI Small Cap Growth Style (Gross)





#### **Relative Return vs Russell 2000 Growth Index**

## CAI Small Cap Growth Style (Gross) Annualized Five Year Risk vs Return



# CastleArk Management Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





## Risk Adjusted Return Measures vs Russell 2000 Growth Index Rankings Against CAI Small Cap Growth Style (Gross) Five Years Ended March 31, 2016





## CastleArk Management Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

## Risk Analysis vs CAI Small Cap Growth Style (Gross) Five Years Ended March 31, 2016















# CastleArk Management Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Small Cap Growth Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# CastleArk Management Top 10 Portfolio Holdings Characteristics as of March 31, 2016

# 10 Largest Holdings

|                            |                        |             |           |         |         | Price/     |          |            |
|----------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|
|                            |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |
|                            |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                      | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Ligand Pharmaceuticals Inc | Health Care            | \$1,799,112 | 2.1%      | (1.23)% | 2.22    | 28.31      | 0.00%    | 40.00%     |
| Steris Plc Shs Usd         | Health Care            | \$1,505,194 | 1.7%      | (4.99)% | 6.10    | 17.91      | 1.41%    | 10.72%     |
| Beacon Roofing Supply Inc  | Industrials            | \$1,358,456 | 1.6%      | (0.14)% | 2.43    | 19.53      | 0.00%    | 15.00%     |
| Nuance Communications Inc  | Information Technology | \$1,244,006 | 1.4%      | (6.03)% | 5.69    | 11.90      | 0.00%    | (3.18)%    |
| Burlington Stores Inc      | Consumer Discretionary | \$1,225,470 | 1.4%      | 20.85%  | 4.01    | 20.11      | 0.00%    | 16.30%     |
| Inphi Corp                 | Information Technology | \$1,217,577 | 1.4%      | 23.39%  | 1.33    | 24.46      | 0.00%    | 20.45%     |
| Exlservice Holdings Inc    | Information Technology | \$1,216,782 | 1.4%      | 15.31%  | 1.72    | 21.39      | 0.00%    | 15.00%     |
| Post Hldgs Inc             | Consumer Staples       | \$1,207,945 | 1.4%      | 11.44%  | 4.41    | 37.19      | 0.00%    | 9.00%      |
| Cantel Medical Corp        | Health Care            | \$1,181,365 | 1.4%      | 15.06%  | 2.98    | 58.40      | 0.17%    | 21.55%     |
| Amedisys                   | Health Care            | \$1,124,147 | 1.3%      | 22.94%  | 1.61    | 26.26      | 0.00%    | (10.01)%   |

#### **10 Best Performers**

|                              |                        |             |           |        |         | Price/     |          |            |
|------------------------------|------------------------|-------------|-----------|--------|---------|------------|----------|------------|
|                              |                        | Ending      | Percent   |        |         | Forecasted |          | Forecasted |
|                              |                        | Market      | of        | Qtrly  | Market  | Earnings   | Dividend | Growth in  |
| Stock                        | Sector                 | Value       | Portfolio | Return | Capital | Ratio      | Yield    | Earnings   |
| Fabrinet Shs                 | Information Technology | \$1,014,819 | 1.2%      | 35.81% | 1.16    | 14.37      | 0.00%    | 1.19%      |
| Cray Inc                     | Information Technology | \$520,941   | 0.6%      | 28.96% | 1.71    | 23.73      | 0.00%    | 20.00%     |
| Powersecure Intl Inc         | Industrials            | \$822,640   | 0.9%      | 24.28% | 0.42    | 27.13      | 0.00%    | 27.50%     |
| Inphi Corp                   | Information Technology | \$1,217,577 | 1.4%      | 23.39% | 1.33    | 24.46      | 0.00%    | 20.45%     |
| Amedisys                     | Health Care            | \$1,124,147 | 1.3%      | 22.94% | 1.61    | 26.26      | 0.00%    | (10.01)%   |
| duPont Fabros Technology Inc | Financials             | \$822,354   | 0.9%      | 21.57% | 2.98    | 28.26      | 4.64%    | 25.26%     |
| Burlington Stores Inc        | Consumer Discretionary | \$1,225,470 | 1.4%      | 20.85% | 4.01    | 20.11      | 0.00%    | 16.30%     |
| Ma Com Technology Solutions  | Information Technology | \$643,713   | 0.7%      | 19.43% | 2.33    | 19.44      | 0.00%    | 21.20%     |
| Rubicon Proj Inc             | Information Technology | \$740,888   | 0.9%      | 18.91% | 0.86    | 22.46      | 0.00%    | 20.00%     |
| Bruker Corp                  | Health Care            | \$819,420   | 0.9%      | 18.82% | 4.58    | 27.11      | 0.57%    | 14.00%     |

## **10 Worst Performers**

|                        |                        |           |           |          |         | Price/     |          |            |
|------------------------|------------------------|-----------|-----------|----------|---------|------------|----------|------------|
|                        |                        | Ending    | Percent   |          |         | Forecasted |          | Forecasted |
|                        |                        | Market    | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                  | Sector                 | Value     | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Iradimed Corp          | Health Care            | \$543,282 | 0.6%      | (31.51)% | 0.21    | 23.08      | 0.00%    | -          |
| Zendesk Inc            | Information Technology | \$618,063 | 0.7%      | (20.91)% | 1.89    | (71.19)    | 0.00%    | 25.00%     |
| Natus Med Inc Del      | Health Care            | \$838,158 | 1.0%      | (20.02)% | 1.27    | 21.49      | 0.00%    | 22.00%     |
| Xura Inc               | Information Technology | \$389,368 | 0.4%      | (19.69)% | 0.49    | 7.52       | 0.00%    | 20.00%     |
| Paylocity Hldg Corp    | Information Technology | \$969,268 | 1.1%      | (19.30)% | 1.67    | 129.41     | 0.00%    | 20.00%     |
| Channeladvisor Corp    | Information Technology | \$433,912 | 0.5%      | (19.14)% | 0.29    | (37.88)    | 0.00%    | -          |
| Nevro Corp             | Health Care            | \$464,145 | 0.5%      | (17.35)% | 1.59    | (29.44)    | 0.00%    | -          |
| Proofpoint Inc         | Information Technology | \$572,757 | 0.7%      | (17.27)% | 2.21    | (488.91)   | 0.00%    | 29.00%     |
| Bank of The Ozarks Inc | Financials             | \$934,042 | 1.1%      | (14.86)% | 3.81    | 16.03      | 1.43%    | 13.22%     |
| Neogenomics Inc        | Health Care            | \$789,524 | 0.9%      | (14.04)% | 0.51    | (32.72)    | 0.00%    | 20.00%     |

# Current Holdings Based Style Analysis CastleArk Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



#### Style Map vs CAI Sm Cap Growth Style Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# Current Holdings Based Style Analysis CastleArk Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Sm Cap Growth Style Holdings as of March 31, 2016

## Style Exposure Matrix Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## **CastleArk Management** Active Share Analysis as of March 31, 2016 vs. Russell 2000 Growth Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.







## Total Active Share: 86.71%

|                        | Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|-----------------|-------------------|----------------------------------------------------|
| Consumer Discretionary | 74.11%                                 | 13.21%                                     | 87.32%                                 | 18.19%          | 19.21%            | 16.40%                                             |
| Consumer Staples       | 50.00%                                 | 50.00%                                     | 100.00%                                | 3.59%           | 3.67%             | 3.62%                                              |
| Energy                 | 83.00%                                 | 0.00%                                      | 83.00%                                 | 0.98%           | 1.47%             | 1.05%                                              |
| Financials             | 72.66%                                 | 18.43%                                     | 91.08%                                 | 8.36%           | 4.74%             | 5.81%                                              |
| Health Care            | 73.92%                                 | 10.87%                                     | 84.79%                                 | 23.78%          | 17.68%            | 17.11%                                             |
| Industrials            | 67.71%                                 | 28.08%                                     | 95.79%                                 | 14.07%          | 14.78%            | 13.85%                                             |
| Information Technology | 63.22%                                 | 16.51%                                     | 79.73%                                 | 25.51%          | 33.19%            | 24.18%                                             |
| Materials              | 71.58%                                 | 18.73%                                     | 90.31%                                 | 4.45%           | 3.20%             | 3.39%                                              |
| Telecommunications     | 72.28%                                 | 0.00%                                      | 72.28%                                 | 0.95%           | 2.06%             | 1.24%                                              |
| Utilities              | 100.00%                                | 0.00%                                      | 100.00%                                | 0.12%           | -                 | 0.06%                                              |
| Total                  | 69.31%                                 | 17.40%                                     | 86.71%                                 | 100.00%         | 100.00%           | 86.71%                                             |





Global Equity

## Global Equity Period Ended March 31, 2016

## **Quarterly Summary and Highlights**

- Global Equity's portfolio posted a 3.08% return for the quarter placing it in the 11 percentile of the CAI Global Equity Broad Style group for the quarter and in the 22 percentile for the last year.
- Global Equity's portfolio outperformed the MSCI World by 3.43% for the quarter and outperformed the MSCI World for the year by 2.48%.

## Quarterly Asset Growth

| Beginning Market Value    | \$331,029,212 |
|---------------------------|---------------|
| Net New Investment        | \$163,920,315 |
| Investment Gains/(Losses) | \$23,858,576  |
| Ending Market Value       | \$518,808,103 |





## **Relative Return vs MSCI World**

## CAI Global Equity Broad Style (Gross) Annualized Five Year Risk vs Return



## MFS Investment Management Period Ended March 31, 2016

#### **Investment Philosophy**

MFS believes earnings growth drives share price performance over the long term. They conduct proprietary fundamental and quantitative research to identify companies with the following characteristics: (1) higher sustainable earnings growth rates and returns than the company's industry, (2) improving fundamentals leading to multiple expansion and (3) stock valuations not fully reflecting the company's long-term growth prospects. First full quarter of performance is first quarter 2013. Prior history represents manager composite returns.

#### **Quarterly Summary and Highlights**

- MFS Investment Management's portfolio posted a 3.86% return for the quarter placing it in the 5 percentile of the CAI Global Equity Broad Style group for the quarter and in the 13 percentile for the last year.
- MFS Investment Management's portfolio outperformed the MSCI ACWI Gross by 3.48% for the quarter and outperformed the MSCI ACWI Gross for the year by 4.85%.

| Performance | vs CAL | Global | Fouity Broad | Style (Gr | oss) |
|-------------|--------|--------|--------------|-----------|------|

| Quarterly Asset G         | rowth         |
|---------------------------|---------------|
| Beginning Market Value    | \$239,366,190 |
| Net New Investment        | \$-8,000,000  |
| Investment Gains/(Losses) | \$9,201,750   |
| Ending Market Value       | \$240,567,941 |



**Relative Return vs MSCI ACWI Gross** 



CAI Global Equity Broad Style (Gross) Annualized Ten Year Risk vs Return



## MFS Investment Management Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Global Equity Broad Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# MFS Investment Management Top 10 Portfolio Holdings Characteristics as of March 31, 2016

# 10 Largest Holdings

|                                      |                        |             |           |         |         | Price/     |          |            |
|--------------------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|
|                                      |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |
|                                      |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                                | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Accenture Plc Ireland Shs Class A    | Information Technology | \$8,069,114 | 3.4%      | 10.43%  | 71.99   | 20.49      | 1.91%    | 9.70%      |
| Alphabet Inc CI A                    | Information Technology | \$8,053,935 | 3.4%      | (1.94)% | 223.21  | 21.21      | 0.00%    | 15.60%     |
| Taiwan Semiconductor Mfg Co Ltd Spon | Information Technology | \$5,826,120 | 2.4%      | 15.16%  | 130.52  | 13.00      | 2.78%    | 10.38%     |
| Thermo Fisher Scientific Inc         | Health Care            | \$5,395,004 | 2.2%      | (0.08)% | 56.11   | 17.39      | 0.42%    | 9.20%      |
| Lvmh Moet Hennessy Lou Vuitt Ord     | Consumer Discretionary | \$5,153,472 | 2.1%      | 8.95%   | 86.95   | 17.76      | 2.36%    | 9.92%      |
| Nestle S A Shs Nom New               | Consumer Staples       | \$5,014,982 | 2.1%      | 0.75%   | 239.23  | 20.78      | 3.13%    | 5.60%      |
| Visa Inc Com CI A                    | Information Technology | \$4,872,694 | 2.0%      | (1.19)% | 146.78  | 25.32      | 0.73%    | 15.00%     |
| Cognizant Tech Solutions             | Information Technology | \$4,653,030 | 1.9%      | 4.47%   | 38.19   | 17.91      | 0.00%    | 15.04%     |
| Mead Johnson Nutrition Co            | Consumer Staples       | \$4,601,805 | 1.9%      | 8.21%   | 15.84   | 23.75      | 1.94%    | 8.00%      |
| Abbott Laboratories                  | Health Care            | \$4,374,205 | 1.8%      | (6.26)% | 61.63   | 18.83      | 2.49%    | 9.50%      |

#### **10 Best Performers**

|                                      |                        |             |           |        |         | Price/     |          |            |
|--------------------------------------|------------------------|-------------|-----------|--------|---------|------------|----------|------------|
|                                      |                        | Ending      | Percent   |        |         | Forecasted |          | Forecasted |
|                                      |                        | Market      | of        | Qtrly  | Market  | Earnings   | Dividend | Growth in  |
| Stock                                | Sector                 | Value       | Portfolio | Return | Capital | Ratio      | Yield    | Earnings   |
| Lojas Renner Sa Com Npv              | Consumer Discretionary | \$1,242,179 | 0.5%      | 36.14% | 3.75    | 19.50      | 1.87%    | 20.00%     |
| Credicorp (Usd)                      | Financials             | \$2,216,296 | 0.9%      | 34.62% | 12.37   | 10.27      | 1.77%    | 14.91%     |
| Dollarama Inc                        | Consumer Discretionary | \$1,178,613 | 0.5%      | 22.92% | 8.64    | 26.35      | 0.44%    | 15.14%     |
| Colfax Corp                          | Industrials            | \$1,696,045 | 0.7%      | 22.44% | 3.51    | 19.19      | 0.00%    | 9.15%      |
| Fastenal Co                          | Industrials            | \$1,486,121 | 0.6%      | 20.99% | 14.14   | 26.15      | 2.45%    | 6.00%      |
| Ambev Sa Sponsored Adr               | Consumer Staples       | \$2,524,784 | 1.1%      | 16.97% | 81.13   | 20.64      | 3.12%    | 12.63%     |
| Grainger W W Inc                     | Industrials            | \$3,352,055 | 1.4%      | 15.87% | 14.37   | 19.45      | 2.00%    | 2.40%      |
| Sundrug Co                           | Consumer Staples       | \$1,775,470 | 0.7%      | 15.80% | 5.03    | 21.55      | 0.83%    | 15.70%     |
| Rolls Royce Holdings Plc Lon Shs     | Industrials            | \$3,153,202 | 1.3%      | 15.66% | 18.02   | 24.50      | 0.00%    | (16.27)%   |
| Taiwan Semiconductor Mfg Co Ltd Spon | Information Technology | \$5,826,120 | 2.4%      | 15.16% | 130.52  | 13.00      | 2.78%    | 10.38%     |

## **10 Worst Performers**

|                                      |                        |             |           |          |         | Price/     |          |            |
|--------------------------------------|------------------------|-------------|-----------|----------|---------|------------|----------|------------|
|                                      |                        | Ending      | Percent   |          |         | Forecasted |          | Forecasted |
|                                      |                        | Market      | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                                | Sector                 | Value       | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Express Scripts Hldg Co              | Health Care            | \$1,693,483 | 0.7%      | (21.42)% | 43.47   | 10.90      | 0.00%    | 12.78%     |
| Schwab Charles Corp New              | Financials             | \$1,217,945 | 0.5%      | (14.69)% | 37.03   | 21.18      | 0.86%    | 21.15%     |
| Lilly (Eli) & Co                     | Health Care            | \$2,590,128 | 1.1%      | (13.94)% | 79.53   | 19.73      | 2.83%    | 14.60%     |
| Whitbread                            | Consumer Discretionary | \$3,705,928 | 1.5%      | (12.25)% | 10.40   | 15.36      | 2.16%    | 9.15%      |
| Julius Baer Gruppe Ag Zueric Namen - | Financials             | \$2,222,950 | 0.9%      | (11.28)% | 9.65    | 12.17      | 2.66%    | 7.16%      |
| Monsanto Co                          | Materials              | \$3,190,665 | 1.3%      | (10.44)% | 38.64   | 16.80      | 2.46%    | 9.00%      |
| Nippon Paint Hldgs Co Ltd Shs        | Materials              | \$1,348,529 | 0.6%      | (9.14)%  | 7.23    | 22.54      | 1.08%    | 8.00%      |
| Cie Financiere Richemont Ag Units    | Consumer Discretionary | \$961,562   | 0.4%      | (8.75)%  | 34.64   | 16.45      | 2.52%    | 11.40%     |
| Hengan International Grp Co Shs New  | Consumer Staples       | \$1,652,880 | 0.7%      | (8.14)%  | 10.54   | 18.34      | 3.12%    | 12.94%     |
| Roche Hldgs Ag Basel Div Rts Ctf     | Health Care            | \$3,712,457 | 1.5%      | (7.60)%  | 173.66  | 15.67      | 3.42%    | 8.40%      |

# Current Holdings Based Style Analysis MFS Investment Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Global Eq Broad Style Holdings as of March 31, 2016

## Style Exposure Matrix Holdings as of March 31, 2016

|       | Value       | Core        | Growth      | Total         |
|-------|-------------|-------------|-------------|---------------|
|       | 33.9% (808) | 31.5% (770) | 34.7% (873) | 100.0% (2451) |
| Total | 4.9% (7)    | 36.0% (32)  | 59.0% (53)  | 100.0% (92)   |
|       | 0.0% (1)    | 0.0% (0)    | 0.0% (0)    | 0.0% (1)      |
| Micro |             |             |             |               |
|       | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
| oman  | 0.6% (157)  | 0.4% (98)   | 0.3% (86)   | 1.4% (341)    |
| Small | 0.0% (0)    | 0.0% (0)    | 0.3% (1)    | 0.3% (1)      |
|       | 5.3% (371)  | 6.0% (409)  | 6.6% (474)  | 17.9% (1254)  |
| Mid   | 1.3 % (2)   | 4.0% (5)    | 13.0% (10)  | 19.5% (23)    |
|       | 1.3% (2)    | 4.6% (5)    | 13.6% (16)  | 10 5% (22)    |
| _arge | 27.9% (279) | 25 1% (263) | 27 7% (313) | 80.7% (855)   |
|       | 3.6% (5)    | 31.5% (27)  | 45.1% (36)  | 80.2% (68)    |

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# Current Holdings Based Style Analysis MFS Investment Management As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Global Eq Broad Style Holdings as of March 31, 2016

## Style Exposure Matrix Holdings as of March 31, 2016

|            | 33.9% (808) | 31.5% (770) | 34.7% (873)       | 100.0% (2451)      |
|------------|-------------|-------------|-------------------|--------------------|
| Total      | 4.9% (7)    | 36.0% (32)  | <b>59.0%</b> (53) | 100.0% (92)        |
|            | 3.5% (293)  | 3.4% (254)  | 3.6% (259)        | 10.5% (806)        |
| Emerging   | 0.070 (0)   | 0.070 (0)   | 0.070 (7)         | 1110 /0 (10)       |
|            | 0.0% (0)    | 5.3% (6)    | 6.6% (7)          | 11.9% (13)         |
| Facilic    | 4.0% (145)  | 3.3% (141)  | 4.3% (183)        | 11.7% (469)        |
| Docific    | 0.0% (0)    | 0.9% (1)    | 1.3% (2)          | 2.2% (3)           |
|            | 19.0% (241) | 19.5% (247) | 17.5% (231)       | <b>56.0%</b> (719) |
| I. America |             |             |                   |                    |
|            | 3.6% (5)    | 23.3% (20)  | 31.7% (25)        | 58.6% (50)         |
| Mid East   | 7.3% (129)  | 5.3% (128)  | 9.2% (200)        | 21.9% (457)        |
| Europo/    | 1.3% (2)    | 6.6% (5)    | 19.5% (19)        | 27.3% (26)         |

## Combined Z-Score Style Distribution Holdings as of March 31, 2016







## **Country Allocation** MFS Investment Management VS MSCI ACWI Index (USD Gross Div)

### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 2016. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent guarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.


# International Equity Period Ended March 31, 2016

## **Quarterly Summary and Highlights**

- International Equity's portfolio posted a 0.28% return for the quarter placing it in the 28 percentile of the Pub Pln-International Equity group for the quarter and in the 8 percentile for the last year.
- International Equity's portfolio outperformed the MSCI EAFE by 3.28% for the quarter and outperformed the MSCI EAFE for the year by 3.16%.

## Quarterly Asset Growth

| Beginning Market Value    | \$1,008,195,083 |
|---------------------------|-----------------|
| Net New Investment        | \$-84,466,653   |
| Investment Gains/(Losses) | \$-3,570,799    |
| Ending Market Value       | \$920,157,631   |





## **Relative Return vs MSCI EAFE**

#### Pub PIn- International Equity (Gross) Annualized Ten Year Risk vs Return



# International Equity **Return Analysis Summary**

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs Pub PIn- International Equity (Gross)



**Cumulative and Quarterly Relative Return vs MSCI EAFE** 



**Risk Adjusted Return Measures vs MSCI EAFE** Rankings Against Pub PIn- International Equity (Gross) Five Years Ended March 31, 2016



# International Equity **Risk Analysis Summary**

## **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

## Risk Analysis vs Pub PIn- International Equity (Gross) Five Years Ended March 31, 2016











# Brandes Investment Partners Period Ended March 31, 2016

#### **Investment Philosophy**

Brandes employs a bottom-up approach to building international equity portfolios. The core goal of the investment process is to build portfolios with high overall average margin of safety ("MOS") which the firm believes offer attractive long-term appreciation potential. A focus is given to stocks that are selling at a discount to the firm's estimates of their intrinsic business value, seen as an opportunity for competitive performance. The firm utilizes fundamental research to select undervalued companies in the developed and emerging markets.

#### **Quarterly Summary and Highlights**

- Brandes Investment Partners's portfolio posted a 1.11% return for the quarter placing it in the 6 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 45 percentile for the last year.
- Brandes Investment Partners's portfolio outperformed the MSCI EAFE by 4.12% for the quarter and outperformed the MSCI EAFE for the year by 2.29%.

| Quarterly Asset Growth    |               |  |  |  |  |  |
|---------------------------|---------------|--|--|--|--|--|
| Beginning Market Value    | \$398,380,002 |  |  |  |  |  |
| Net New Investment        | \$0           |  |  |  |  |  |
| Investment Gains/(Losses) | \$4,422,386   |  |  |  |  |  |
| Ending Market Value       | \$402,802,388 |  |  |  |  |  |







**Relative Return vs MSCI EAFE** 

CAI Non-U.S. Equity Style (Gross) Annualized Ten Year Risk vs Return



# Brandes Investment Partners Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.



#### **Cumulative and Quarterly Relative Return vs MSCI EAFE**



Risk Adjusted Return Measures vs MSCI EAFE Rankings Against CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016



# **Brandes Investment Partners Risk Analysis Summary**

## **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016











City of Milwaukee Employes' Retirement System 111

# Brandes Investment Partners Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Non-U.S. Equity Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.





# Brandes Investment Partners Top 10 Portfolio Holdings Characteristics as of March 31, 2016

# **10 Largest Holdings**

|                                  | Price/                 |              |           |          |         |            |          |            |
|----------------------------------|------------------------|--------------|-----------|----------|---------|------------|----------|------------|
|                                  |                        | Ending       | Percent   |          |         | Forecasted |          | Forecasted |
|                                  |                        | Market       | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                            | Sector                 | Value        | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Glaxosmithkline Plc Ord          | Health Care            | \$15,815,174 | 4.0%      | 3.41%    | 98.85   | 16.34      | 5.67%    | 1.78%      |
| Wm Morrison Supermarkets Plc Shs | Consumer Staples       | \$12,723,878 | 3.2%      | 30.75%   | 6.67    | 18.45      | 5.60%    | 5.93%      |
| Gdf Suez Shs                     | Utilities              | \$12,083,083 | 3.0%      | (12.36)% | 37.85   | 12.43      | 7.33%    | (0.18)%    |
| Sanofi Shs                       | Health Care            | \$11,243,503 | 2.8%      | (5.43)%  | 105.43  | 12.64      | 4.13%    | 5.20%      |
| Eni Spa Roma Az                  | Energy                 | \$10,573,760 | 2.6%      | 1.10%    | 55.08   | 47.96      | 6.02%    | 5.00%      |
| Hyundai Mobis Shs                | Consumer Discretionary | \$10,331,453 | 2.6%      | 4.95%    | 21.19   | 6.99       | 1.41%    | 2.04%      |
| Bp Plc Shs                       | Energy                 | \$10,143,046 | 2.5%      | (1.36)%  | 93.82   | 20.70      | 7.63%    | 24.35%     |
| Nissan Motor Co                  | Consumer Discretionary | \$10,118,011 | 2.5%      | (11.19)% | 41.65   | 7.36       | 3.60%    | 13.09%     |
| Tesco Plc Ord                    | Consumer Staples       | \$10,090,619 | 2.5%      | 25.11%   | 22.44   | 21.40      | 0.00%    | 9.15%      |
| Pjsc Lukoil Sponsored Adr        | Energy                 | \$10,058,894 | 2.5%      | 21.29%   | 33.36   | 11.31      | 6.06%    | 0.10%      |

#### **10 Best Performers**

|                                      |                    |              |           |        |            | Price/   |          |            |
|--------------------------------------|--------------------|--------------|-----------|--------|------------|----------|----------|------------|
|                                      |                    | Ending       | Percent   |        | Forecasted |          |          | Forecasted |
|                                      |                    | Market       | of        | Qtrly  | Market     | Earnings | Dividend | Growth in  |
| Stock                                | Sector             | Value        | Portfolio | Return | Capital    | Ratio    | Yield    | Earnings   |
| Telesp Pn 1000                       | Telecommunications | \$4,623,710  | 1.2%      | 42.44% | 14.29      | 15.35    | 5.03%    | 20.35%     |
| Cia Saneamento Basico Do Est Shs     | Utilities          | \$3,436,637  | 0.9%      | 41.42% | 4.62       | 9.78     | 0.91%    | 28.56%     |
| Posco Shs                            | Materials          | \$7,572,712  | 1.9%      | 39.71% | 16.73      | 15.42    | 3.64%    | 37.60%     |
| Telecomunicacoes De Sao Paul Spon Ad | Telecommunications | \$2,376,610  | 0.6%      | 39.49% | 14.29      | 15.35    | 5.03%    | 20.35%     |
| Petroleo Brasileiro Sa Petro Pfd Shs | Energy             | \$2,583,222  | 0.6%      | 39.12% | 13.20      | 29.14    | 0.00%    | 46.49%     |
| Petroleo Brasileiro Sa Petro Sp Adr  | Energy             | \$4,674,530  | 1.2%      | 33.24% | 13.20      | 29.14    | 0.00%    | 46.49%     |
| Centrais Eletricas Brasileir Sponsor | Utilities          | \$1,827,526  | 0.5%      | 30.88% | 2.03       | 3.82     | 6.02%    | 329.14%    |
| Wm Morrison Supermarkets Plc Shs     | Consumer Staples   | \$12,723,878 | 3.2%      | 30.75% | 6.67       | 18.45    | 5.60%    | 5.93%      |
| Cemex Sab De Cv Spon Adr New         | Materials          | \$7,613,322  | 1.9%      | 30.70% | 9.86       | 19.21    | 0.00%    | (53.44)%   |
| Tim Participacoes S A Sponsored Adr  | Telecommunications | \$2,521,094  | 0.6%      | 30.42% | 5.47       | 18.52    | 2.42%    | (16.69)%   |

# **10 Worst Performers**

|                                  |                        |             |           |          |         | Price/     |          |            |
|----------------------------------|------------------------|-------------|-----------|----------|---------|------------|----------|------------|
|                                  |                        | Ending      | Percent   |          |         | Forecasted |          | Forecasted |
|                                  |                        | Market      | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                            | Sector                 | Value       | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Credit Suisse Group Ord CI D     | Financials             | \$6,259,790 | 1.6%      | (34.41)% | 27.82   | 10.49      | 5.14%    | 58.59%     |
| Barclays Plc Shs                 | Financials             | \$4,758,496 | 1.2%      | (31.71)% | 36.40   | 8.44       | 4.33%    | 13.90%     |
| Mitsubishi Ufj Finl Group In Shs | Financials             | \$5,330,301 | 1.3%      | (25.76)% | 65.74   | 6.75       | 3.45%    | 2.30%      |
| Sumitomo Mitsui Trust Hldg I Shs | Financials             | \$5,595,238 | 1.4%      | (22.22)% | 11.45   | 7.18       | 3.94%    | 1.16%      |
| Hsbc Holdings (Gb)               | Financials             | \$5,679,087 | 1.4%      | (18.49)% | 123.22  | 9.30       | 8.01%    | (2.14)%    |
| G4s Plc Shs                      | Industrials            | \$5,095,658 | 1.3%      | (17.58)% | 4.25    | 12.29      | 4.94%    | 7.30%      |
| Ubs Ag Shs New                   | Financials             | \$5,984,948 | 1.5%      | (17.05)% | 62.28   | 10.86      | 5.49%    | 8.42%      |
| Telecom Italia Rnc               | Telecommunications     | \$7,252,679 | 1.8%      | (15.07)% | 5.29    | 16.25      | 3.51%    | 6.65%      |
| Honda Motor Co Ltd Shs           | Consumer Discretionary | \$9,450,609 | 2.4%      | (14.95)% | 49.74   | 9.30       | 2.85%    | 11.00%     |
| Marks & Spencer Group            | Consumer Discretionary | \$6,826,248 | 1.7%      | (12.44)% | 9.47    | 11.34      | 4.53%    | 8.90%      |

# Current Holdings Based Style Analysis Brandes Investment Partners As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Non-U.S. Eq. Style Holdings as of March 31, 2016

# Style Exposure Matrix Holdings as of March 31, 2016

|       | Value       | Core        | Growth      | Total        |
|-------|-------------|-------------|-------------|--------------|
|       | 32.9% (264) | 27.0% (280) | 40.1% (382) | 100.0% (926) |
| Total | 55.1% (30)  | 37.9% (25)  | 7.0% (5)    | 100.0% (60)  |
|       | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
| Micro | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
|       | 0.9% (51)   | 0.5% (28)   | 0.5% (27)   | 1.9% (106)   |
| Small | 1.6% (1)    | 0.5% (1)    | 0.0% (0)    | 2.1% (2)     |
|       | 5.0% (114)  | 8.4% (178)  | 10.4% (220) | 23.8% (512)  |
| Mid   | 13.0% (9)   | 18.6% (12)  | 1.7% (2)    | 33.3% (23)   |
|       | 27.0% (99)  | 18.1% (74)  | 29.1% (135) | 74.3% (308)  |
| Large | 40.5% (20)  | 18.8% (12)  | 5.3% (3)    | 64.6% (35)   |

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# Current Holdings Based Style Analysis Brandes Investment Partners As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



Style Map vs CAI Non-U.S. Eq. Style

Holdings as of March 31, 2016

# Style Exposure Matrix Holdings as of March 31, 2016

|           | Value       | Core               | Growth      | Total              |
|-----------|-------------|--------------------|-------------|--------------------|
|           | 32.9% (264) | <b>27.0%</b> (280) | 40.1% (382) | 100.0% (926)       |
| Total     |             |                    |             |                    |
|           | 55.1% (30)  | 37.9% (25)         | 7.0% (5)    | 100.0% (60)        |
|           | 0.0% (0)    | 0.0% (0)           | 0.0% (0)    | 0.0% (0)           |
| merging   |             |                    |             |                    |
|           | 11.1% (8)   | 10.9% (9)          | 0.9% (1)    | 22.8% (18)         |
|           | 11.5% (139) | 10.7% (148)        | 12.5% (182) | 34.8% (469)        |
| Pacific   |             |                    |             |                    |
|           | 14.8% (8)   | 6.3% (4)           | 0.0% (0)    | 21.1% (12)         |
|           | 0.0% (0)    | 0.0% (0)           | 0.0% (0)    | 0.0% (0)           |
| America   |             |                    |             |                    |
|           | 0.0% (0)    | 0.0% (0)           | 0.0% (0)    | 0.0% (0)           |
| /lid East | 21.3% (125) | 16.3% (132)        | 27.6% (200) | <b>65.2%</b> (457) |
| Europe/   | 29.3% (14)  | 20.7% (12)         | 6.1% (4)    | 56.0% (30)         |

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# **Country Allocation** Brandes Investment Partners VS MSCI EAFE Index (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 2016. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent guarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



# Brandes Investment Partners vs MSCI EAFE Attribution for Quarter Ended March 31, 2016

#### International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.







Index Returns by Country

# Beginning Relative Weights (Portfolio - Index)

# William Blair & Company Period Ended March 31, 2016

#### **Investment Philosophy**

William Blair & Company focuses on companies with above-average growth prospects where growth can be sustained through leading or franchise positions in terms of proprietary products, marketing dominance, or cost/asset base advantage.

#### **Quarterly Summary and Highlights**

- William Blair & Company's portfolio posted a (2.21)% return for the quarter placing it in the 46 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 54 percentile for the last year.
- William Blair & Company's portfolio underperformed the MSCI ACWIxUS Gross by 1.95% for the quarter and outperformed the MSCI ACWIxUS Gross for the year by 2.16%.

## Performance vs CAI Non-U.S. Equity Style (Gross)



**Relative Return vs MSCI ACWIxUS Gross** 



CAI Non-U.S. Equity Style (Gross) Annualized Ten Year Risk vs Return



# William Blair & Company Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





Cumulative and Quarterly Relative Return vs MSCI ACWIxUS Gross



Risk Adjusted Return Measures vs MSCI ACWIxUS Gross Rankings Against CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016





# William Blair & Company Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

## Risk Analysis vs CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016











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City of Milwaukee Employes' Retirement System 120

# William Blair & Company Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI Non-U.S. Equity Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.





# William Blair & Company Top 10 Portfolio Holdings Characteristics as of March 31, 2016

# 10 Largest Holdings

|                                     |                        |             |           |         | Price/  |            |          |            |  |
|-------------------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|--|
|                                     |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |  |
|                                     |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |  |
| Stock                               | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |  |
| Unilever Plc Shs                    | Consumer Staples       | \$5,220,946 | 1.9%      | 5.87%   | 58.15   | 21.00      | 2.81%    | 8.60%      |  |
| Total Sa Act                        | Energy                 | \$5,067,785 | 1.8%      | 3.34%   | 112.03  | 14.51      | 6.09%    | 0.62%      |  |
| Royal Dutch Shell A Shs             | Energy                 | \$4,115,942 | 1.5%      | 8.30%   | 103.97  | 20.91      | 7.99%    | 20.40%     |  |
| Toronto Dominion Bk Ont             | Financials             | \$3,970,987 | 1.4%      | 12.08%  | 80.24   | 11.47      | 3.71%    | 7.18%      |  |
| Orix Corp Ord                       | Financials             | \$3,701,099 | 1.3%      | 1.58%   | 18.91   | 7.91       | 2.49%    | 4.70%      |  |
| Check Point Softw. (Usd)            | Information Technology | \$3,510,346 | 1.3%      | 7.48%   | 15.82   | 18.77      | 0.00%    | 10.55%     |  |
| Vinci Sa Act                        | Industrials            | \$3,381,308 | 1.2%      | 16.13%  | 43.97   | 15.65      | 2.81%    | 7.45%      |  |
| Sap Se Shs                          | Information Technology | \$3,376,025 | 1.2%      | 0.77%   | 99.37   | 17.38      | 1.62%    | 8.95%      |  |
| Continental                         | Consumer Discretionary | \$3,244,755 | 1.2%      | (6.85)% | 45.54   | 12.80      | 1.88%    | 8.10%      |  |
| Partners Grp Hldg Zug Namen Akt Shs | Financials             | \$3,215,822 | 1.2%      | 11.84%  | 10.78   | 23.25      | 2.72%    | 16.25%     |  |

#### **10 Best Performers**

|                                  |                        |             |           |        | Price/     |          |            |           |
|----------------------------------|------------------------|-------------|-----------|--------|------------|----------|------------|-----------|
|                                  |                        | Ending      | Percent   |        | Forecasted |          | Forecasted |           |
|                                  |                        | Market      | of        | Qtrly  | Market     | Earnings | Dividend   | Growth in |
| Stock                            | Sector                 | Value       | Portfolio | Return | Capital    | Ratio    | Yield      | Earnings  |
| Jb Hi-Fi                         | Consumer Discretionary | \$277,344   | 0.1%      | 31.38% | 1.79       | 15.13    | 3.99%      | 7.04%     |
| Jeronimo Martins Sgps Sa Lis Shs | Consumer Staples       | \$1,037,018 | 0.4%      | 26.68% | 10.31      | 23.38    | 2.61%      | 8.25%     |
| Canadian Nat Res Ltd             | Energy                 | \$687,499   | 0.2%      | 25.64% | 29.73      | (45.96)  | 2.62%      | 74.00%    |
| Pola Orbis Holdings              | Consumer Staples       | \$713,893   | 0.3%      | 24.59% | 4.76       | 30.57    | 1.61%      | 10.66%    |
| Daito Trust Construction         | Financials             | \$696,668   | 0.2%      | 23.84% | 11.10      | 16.03    | 2.31%      | 14.22%    |
| Nippon Prologis Reit Inc         | Financials             | \$461,688   | 0.2%      | 23.49% | 3.88       | 35.63    | 2.70%      | 27.77%    |
| Dollarama Inc                    | Consumer Discretionary | \$1,228,566 | 0.4%      | 22.92% | 8.64       | 26.35    | 0.44%      | 15.14%    |
| Jardine Cycle & Carriage         | Consumer Discretionary | \$713,441   | 0.3%      | 21.00% | 11.75      | 14.47    | 2.42%      | (3.40)%   |
| So-Net M3                        | Health Care            | \$750,866   | 0.3%      | 20.60% | 8.15       | 59.29    | 0.28%      | 24.50%    |
| Enbridge Inc                     | Energy                 | \$2,381,591 | 0.9%      | 19.50% | 36.13      | 21.55    | 4.19%      | 12.20%    |

## **10 Worst Performers**

|                                  |                        |             |           |          |         | Price/     |          |            |
|----------------------------------|------------------------|-------------|-----------|----------|---------|------------|----------|------------|
|                                  |                        | Ending      | Percent   |          |         | Forecasted |          | Forecasted |
|                                  |                        | Market      | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                            | Sector                 | Value       | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Alps Elec Ltd Shs                | Information Technology | \$417,205   | 0.1%      | (36.18)% | 3.41    | 8.78       | 1.02%    | 11.44%     |
| Next Group Plc Shs               | Consumer Discretionary | \$1,444,944 | 0.5%      | (27.12)% | 11.68   | 12.00      | 2.93%    | 4.30%      |
| Tadano                           | Industrials            | \$446,283   | 0.2%      | (23.32)% | 1.20    | 7.11       | 2.39%    | 85.03%     |
| Technicolor Shs Prov De Re       | Consumer Discretionary | \$357,763   | 0.1%      | (23.04)% | 2.58    | 10.79      | 1.09%    | 13.56%     |
| Yoox                             | Consumer Discretionary | \$443,794   | 0.2%      | (18.12)% | 2.62    | 55.58      | 0.00%    | 32.10%     |
| Teva Pharmaceutical Inds Ltd Adr | Health Care            | \$2,547,558 | 0.9%      | (18.00)% | 55.07   | 9.50       | 2.66%    | 0.80%      |
| Kbc Group Sa NV Shs              | Financials             | \$1,979,720 | 0.7%      | (17.54)% | 21.60   | 9.44       | 0.00%    | (3.95)%    |
| Shire Plc Shs                    | Health Care            | \$2,748,401 | 1.0%      | (17.49)% | 33.76   | 12.66      | 0.45%    | 12.70%     |
| Intesa Sanpaolo Spa Shs          | Financials             | \$2,163,747 | 0.8%      | (17.32)% | 43.99   | 10.67      | 5.75%    | 17.84%     |
| Murata Manufacturing Co Ltd Shs  | Information Technology | \$3,078,740 | 1.1%      | (16.70)% | 27.20   | 13.29      | 1.47%    | 32.20%     |

# Current Holdings Based Style Analysis William Blair & Company As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Non-U.S. Eq. Style Holdings as of March 31, 2016

# Style Exposure Matrix Holdings as of March 31, 2016

|       | Value              | Core               | Growth             | Total                |
|-------|--------------------|--------------------|--------------------|----------------------|
|       | <b>32.9%</b> (585) | <b>29.1%</b> (571) | <b>38.0%</b> (669) | <b>100.0%</b> (1825) |
| Total | 10.5% (12)         | 20.7% (41)         | 68.8% (110)        | 100.0% (163)         |
|       | 0.1% (1)           | 0.0% (0)           | 0.0% (0)           | 0.1% (1)             |
| Micro |                    |                    |                    |                      |
|       | 0.0% (0)           | 0.1% (1)           | 0.0% (0)           | 0.1% (1)             |
|       | 1.8% (192)         | 1.2% (129)         | 1.2% (117)         | <b>4.2%</b> (438)    |
| Small | 0.078 (0)          | 1.978 (10)         | 2.370 (13)         | 4.376 (23)           |
|       | 0.0% (0)           | 1.9% (10)          | 2.5% (13)          | A 5% (22)            |
| Mid   | 6.6% (242)         | 9 5% (321)         | 10.9% (377)        | 27.0% (940)          |
|       | 1.0% (3)           | 6.1% (16)          | 21.8% (48)         | 28.9% (67)           |
| Laigo | 24.4% (150)        | 18.4% (121)        | 25.9% (175)        | <b>68.7%</b> (446)   |
| arge  | 9.6% (9)           | 12.6% (14)         | 44.4% (49)         | 66.6% (72)           |

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# **Current Holdings Based Style Analysis** William Blair & Company As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

**Style Exposure Matrix** 



## Style Map vs CAI Non-U.S. Eq. Style Holdings as of March 31, 2016

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2016





**Sector Weights Distribution** Holdings as of March 31, 2016

# Country Allocation William Blair & Company VS MSCI ACWI ex US Index (USD Gross Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 2016. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



# William Blair & Company vs MSCI ACWIxUS Gross Attribution for Quarter Ended March 31, 2016

#### **International Attribution**

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.





# Dimensional Fund Advisors Inc. Period Ended March 31, 2016

## **Investment Philosophy**

Dimensional's philosophy of investing is based on empirical and academic research and over thirty years' experience structuring and implementing investment solutions to address global investors' needs. Their philosophy follows three beliefs: (1) Public capital markets work - In liquid and competitive markets, market prices reflect available information about fundamental values and the aggregate risk and return expectations of all market participants. As a result, Dimensional uses information in market prices to identify reliable dimensions of expected returns market, size, relative price, and expected profitability and to structure and implement strategies along those dimensions. (2) Diversification is essential - Diversification helps reduce uncertainty, manage risk, and increase the reliability of outcomes. (3) Managing trade-offs adds value - Investing involves trading off risks and costs with expected returns.

#### **Quarterly Summary and Highlights**

- Dimensional Fund Advisors Inc.'s portfolio posted a (0.81)% return for the quarter placing it in the 46 percentile of the CAI International Small Cap Style group for the quarter and in the 87 percentile for the last year.
- Dimensional Fund Advisors Inc.'s portfolio underperformed the Blended Benchmark by 0.21% for the quarter and underperformed the Blended Benchmark for the year by 4.66%.



## Performance vs CAI International Small Cap Style (Gross)





CAI International Small Cap Style (Gross) Annualized Nine and Three-Quarter Year Risk vs Return



# **Dimensional Fund Advisors Inc. Return Analysis Summary**

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





**Cumulative and Quarterly Relative Return vs Blended Benchmark** 



**Risk Adjusted Return Measures vs Blended Benchmark** Rankings Against CAI International Small Cap Style (Gross) Five Years Ended March 31, 2016



# Dimensional Fund Advisors Inc. Risk Analysis Summary

## **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI International Small Cap Style (Gross) Five Years Ended March 31, 2016













# Dimensional Fund Advisors Inc. Equity Characteristics Analysis Summary

## **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against CAI International Small Cap Style as of March 31, 2016



## **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# Dimensional Fund Advisors Inc. Top 10 Portfolio Holdings Characteristics as of March 31, 2016

# **10 Largest Holdings**

|                                  |                        |             |           | Price/   |         |            |          |            |
|----------------------------------|------------------------|-------------|-----------|----------|---------|------------|----------|------------|
|                                  |                        | Ending      | Percent   |          |         | Forecasted |          | Forecasted |
|                                  |                        | Market      | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                            | Sector                 | Value       | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Bellway Plc Ord                  | Consumer Discretionary | \$1,816,963 | 1.0%      | (9.81)%  | 4.63    | 8.54       | 3.28%    | 12.05%     |
| Hiscox Ltd Shs Par Value 6       | Financials             | \$1,507,264 | 0.8%      | (7.22)%  | 3.97    | 16.31      | 2.48%    | 2.00%      |
| Helvetia Patria Holding          | Financials             | \$1,493,090 | 0.8%      | 1.58%    | 5.71    | 12.19      | 3.45%    | 2.95%      |
| Banca Popolare Di Milano Ord     | Financials             | \$1,409,474 | 0.8%      | (30.01)% | 3.08    | 10.94      | 4.39%    | 12.80%     |
| Rheinmetall Ag Ord               | Industrials            | \$1,306,732 | 0.7%      | 19.54%   | 3.47    | 14.94      | 0.43%    | 101.35%    |
| Greene King Plc Ord              | Consumer Discretionary | \$1,245,945 | 0.7%      | (8.62)%  | 3.87    | 11.78      | 3.47%    | 9.70%      |
| Gamesa Corporacion Tecnologi Shs | Industrials            | \$1,158,327 | 0.7%      | 15.14%   | 5.58    | 19.46      | 0.48%    | 27.18%     |
| Inchcape Plc Shs                 | Consumer Discretionary | \$1,143,953 | 0.6%      | (10.12)% | 4.49    | 12.86      | 0.00%    | 5.60%      |
| Arkema                           | Materials              | \$1,079,969 | 0.6%      | 7.16%    | 5.60    | 12.94      | 2.88%    | 17.53%     |
| Aperam (Lux)                     | Materials              | \$1,065,188 | 0.6%      | 8.02%    | 2.98    | 13.68      | 1.86%    | 29.32%     |

#### **10 Best Performers**

|                                      |                        |          |           |         |         | Price/     |          |            |
|--------------------------------------|------------------------|----------|-----------|---------|---------|------------|----------|------------|
|                                      |                        | Ending   | Percent   |         |         | Forecasted |          | Forecasted |
|                                      |                        | Market   | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                                | Sector                 | Value    | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Rb Energy Inc                        | Materials              | \$12     | 0.0%      | 466.67% | 0.00    | -          | 0.00%    | -          |
| Kampa-Haus                           | Consumer Discretionary | \$13     | 0.0%      | 278.95% | 0.00    | -          | 0.00%    | -          |
| Sniace                               | Materials              | \$3,382  | 0.0%      | 194.29% | 0.05    | (12.05)    | 0.00%    | -          |
| Troy Resources Limited Shs           | Materials              | \$19,471 | 0.0%      | 181.08% | 0.14    | 9.32       | 0.00%    | (34.95)%   |
| Golden Star Res Ltd Cda              | Materials              | \$8,550  | 0.0%      | 174.70% | 0.12    | (13.82)    | 0.00%    | 19.38%     |
| Platinum Group Metals Ltd Com No Par | Materials              | \$2,137  | 0.0%      | 171.00% | 0.30    | (77.55)    | 0.00%    | -          |
| Nrw Holdings                         | Industrials            | \$7,113  | 0.0%      | 163.98% | 0.05    | 7.52       | 0.00%    | (17.85)%   |
| Senex Energy Ltd Ord                 | Energy                 | \$15,773 | 0.0%      | 130.32% | 0.27    | 46.92      | 0.00%    | 1.66%      |
| Medusa Mining                        | Materials              | \$24,459 | 0.0%      | 129.08% | 0.12    | 2.16       | 0.00%    | (18.73)%   |
| Resolute Mining                      | Materials              | \$42,284 | 0.0%      | 128.37% | 0.27    | 6.39       | 0.00%    | 17.00%     |

# **10 Worst Performers**

|                                     |             |           |           |          |         | Price/     |          |            |
|-------------------------------------|-------------|-----------|-----------|----------|---------|------------|----------|------------|
|                                     |             | Ending    | Percent   |          |         | Forecasted |          | Forecasted |
|                                     |             | Market    | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                               | Sector      | Value     | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Prosafe Se Shs                      | Energy      | \$14,178  | 0.0%      | (75.13)% | 0.15    | 1.80       | 22.95%   | (6.46)%    |
| Mongolian Mining                    | Materials   | \$1,818   | 0.0%      | (73.33)% | 0.05    | (1.20)     | 0.00%    | -          |
| Hillgrove Resources Limited Shs New | Materials   | \$728     | 0.0%      | (66.67)% | 0.01    | (2.35)     | 0.00%    | (49.59)%   |
| Songa Offshore                      | Energy      | \$2,270   | 0.0%      | (63.64)% | 0.03    | 1.00       | 0.00%    | (42.28)%   |
| Saipem Ord                          | Energy      | \$215,439 | 0.1%      | (60.83)% | 4.06    | 12.94      | 0.00%    | (50.80)%   |
| Arrium Ltd Shs                      | Materials   | \$9,877   | 0.0%      | (59.94)% | 0.05    | 2.82       | 0.00%    | (45.30)%   |
| Bca Mps Shs New                     | Financials  | \$50,892  | 0.0%      | (57.19)% | 1.68    | 10.24      | 0.00%    | 5.20%      |
| Cambian Group                       | Health Care | \$1,080   | 0.0%      | (57.09)% | 0.16    | 6.47       | 4.90%    | 8.35%      |
| Capitol Health                      | Health Care | \$522     | 0.0%      | (56.58)% | 0.05    | 4.92       | 10.87%   | 11.14%     |
| Bca.Carige Spa                      | Financials  | \$24,611  | 0.0%      | (52.62)% | 0.54    | (9.99)     | 0.00%    | (28.20)%   |

# Current Holdings Based Style Analysis Dimensional Fund Advisors Inc. As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Int'l Small Cap Style Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



## Style Exposure Matrix Holdings as of March 31, 2016

# Current Holdings Based Style Analysis Dimensional Fund Advisors Inc. As of March 31, 2016

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



## Style Map vs CAI Int'l Small Cap Style Holdings as of March 31, 2016

## Style Exposure Matrix Holdings as of March 31, 2016

## Combined Z-Score Style Distribution Holdings as of March 31, 2016



## Sector Weights Distribution Holdings as of March 31, 2016



# Country Allocation Dimensional Fund Advisors Inc. VS MSCI EAFE Small Cap Index (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 2016. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



Country Weights as of March 31, 2016



# Dimensional Fund Advisors Inc. vs MSCI EAFE Small Cap Attribution for Quarter Ended March 31, 2016

### **International Attribution**

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.





## Beginning Relative Weights (Portfolio - Index)



Fixed Income

# Fixed Income Period Ended March 31, 2016

### **Quarterly Summary and Highlights**

- Fixed Income's portfolio posted a 4.37% return for the quarter placing it in the 3 percentile of the Pub Pln-Domestic Fixed group for the quarter and in the 57 percentile for the last year.
- Fixed Income's portfolio outperformed the Barclays Aggregate Index by 1.33% for the quarter and underperformed the Barclays Aggregate Index for the year by 0.60%.

## Performance vs Pub Pln- Domestic Fixed (Gross)

#### Quarterly Asset Growth

| Beginning Market Value    | \$1,137,635,159 |
|---------------------------|-----------------|
| Net New Investment        | \$-72,000,000   |
| Investment Gains/(Losses) | \$47,043,678    |
| Ending Market Value       | \$1,112,678,837 |





#### **Relative Return vs Barclays Aggregate Index**

Pub Pln- Domestic Fixed (Gross) Annualized Ten Year Risk vs Return



# Fixed Income Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





Cumulative and Quarterly Relative Return vs Barclays Aggregate Index









# Fixed Income Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

## Risk Analysis vs Pub Pln- Domestic Fixed (Gross) Five Years Ended March 31, 2016













# BlackRock Intermediate Agg Period Ended March 31, 2016

#### **Investment Philosophy**

BlackRock applies the same controlled duration, relative value sector rotation and security selection style to the management of all its fixed income mandates, including Intermediate Agg Duration. The distinguishing feature of BlackRock's investment management style has been the ability to generate alpha within a risk-controlled framework. Real-time analysis of a vast array of risk measures allows them to assess the potential impact of various sector and security strategies on total return. As a result, BlackRock believes consistent value is added and performance volatility is controlled.

#### **Quarterly Summary and Highlights**

- BlackRock Intermediate Agg's portfolio posted a 2.33% return for the quarter placing it in the 54 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 29 percentile for the last year.
- BlackRock Intermediate Agg's portfolio outperformed the Barclays Inter Aggregate by 0.02% for the quarter and outperformed the Barclays Inter Aggregate for the year by 0.08%.

#### Quarterly Asset Growth

| Beginning Market Value    | \$262,202,157 |
|---------------------------|---------------|
| Net New Investment        | \$-25,000,000 |
| Investment Gains/(Losses) | \$5,860,215   |
| Ending Market Value       | \$243,062,372 |

Percent Cash: 0.0%





**Relative Return vs Barclays Inter Aggregate** 

## CAI Intermediate Fixed-Inc Style (Gross) Annualized Ten Year Risk vs Return



# BlackRock Intermediate Agg Return Analysis Summary

## **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

## Performance vs CAI Intermediate Fixed-Inc Style (Gross)



Cumulative and Quarterly Relative Return vs Barclays Inter Aggregate



## Risk Adjusted Return Measures vs Barclays Inter Aggregate Rankings Against CAI Intermediate Fixed-Inc Style (Gross) Five Years Ended March 31, 2016


#### BlackRock Intermediate Agg **Risk Analysis Summary**

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Intermediate Fixed-Inc Style (Gross) Five Years Ended March 31, 2016











(36)

#### Reams Asset Management Period Ended March 31, 2016

#### **Investment Philosophy**

The investment process combines active duration and yield-curve management with bottom-up issue selection, focusing on undervalued sectors of the fixed income market.

#### **Quarterly Summary and Highlights**

- Reams Asset Management's portfolio posted a 4.25% return for the quarter placing it in the 3 percentile of the CAI Core Bond Plus Style group for the quarter and in the 3 percentile for the last year.
- Reams Asset Management's portfolio outperformed the Barclays Aggregate Index by 1.22% for the quarter and outperformed the Barclays Aggregate Index for the year by 1.25%.

# Quarterly Asset GrowthBeginning Market Value\$266,260,558Net New Investment\$-20,000,000Investment Gains/(Losses)\$10,744,390

Ending Market Value

\$257,004,948

Performance vs CAI Core Bond Plus Style (Gross)





#### **Relative Return vs Barclays Aggregate Index**





#### Reams Asset Management Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.





Cumulative and Quarterly Relative Return vs Barclays Aggregate Index



#### Risk Adjusted Return Measures vs Barclays Aggregate Index Rankings Against CAI Core Bond Plus Style (Gross) Five Years Ended March 31, 2016





#### Reams Asset Management Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

Risk Analysis vs CAI Core Bond Plus Style (Gross) Five Years Ended March 31, 2016













#### Reams Asset Management Bond Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Fixed Income Portfolio Characteristics Rankings Against CAI Core Bond Plus Style as of March 31, 2016



#### Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



# Quality Ratings vs CAI Core Bond Plus Style



#### Reams Asset Management Portfolio Characteristics Summary As of March 31, 2016

#### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



Gov Related 8% CMBS 2% Corp (incl 144A) 25% ABS 1%

#### **Reams Asset Management**

#### Barclays Aggregate Index





#### Loomis, Sayles & Company, L.P. Period Ended March 31, 2016

#### **Investment Philosophy**

The fixed income investment process at Loomis Sayles seeks to capture market anomalies or inefficiencies by uncovering mispriced bonds which they believe have the potential to be upgraded. They focus on economic, political, and financial market forces that influence the general direction of interest rates as an overlay and enhancement to their bottom-up, sector and issue selection construction of portfolios.

#### **Quarterly Summary and Highlights**

- Loomis, Sayles & Company, L.P.'s portfolio posted a 4.20% return for the quarter placing it in the 3 percentile of the CAI Core Bond Plus Style group for the quarter and in the 99 percentile for the last year.
- Loomis, Sayles & Company, L.P.'s portfolio outperformed the Barclays Aggregate Index by 1.16% for the quarter and underperformed the Barclays Aggregate Index for the year by 4.59%.

#### **Quarterly Asset Growth**

| Beginning Market Value    | \$411,594,313 |
|---------------------------|---------------|
| Net New Investment        | \$-16,000,000 |
| Investment Gains/(Losses) | \$16,435,259  |
| Ending Market Value       | \$412,029,572 |







#### **Relative Return vs Barclays Aggregate Index**

#### CAI Core Bond Plus Style (Gross) Annualized Ten Year Risk vs Return



#### Loomis, Sayles & Company, L.P. Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs CAI Core Bond Plus Style (Gross)



Cumulative and Quarterly Relative Return vs Barclays Aggregate Index



#### Risk Adjusted Return Measures vs Barclays Aggregate Index Rankings Against CAI Core Bond Plus Style (Gross) Five Years Ended March 31, 2016





#### Loomis, Sayles & Company, L.P. Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.









Risk Statistics Rankings vs Barclays Aggregate Index Rankings Against CAI Core Bond Plus Style (Gross) Five Years Ended March 31, 2016





#### Loomis, Sayles & Company, L.P. Bond Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Fixed Income Portfolio Characteristics Rankings Against CAI Core Bond Plus Style as of March 31, 2016



#### Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.





#### Loomis, Sayles & Company, L.P. Portfolio Characteristics Summary As of March 31, 2016

#### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



Loomis, Sayles & Company, L.P.

#### **Barclays Aggregate Index**





#### Wellington Management Company Period Ended March 31, 2016

#### **Investment Philosophy**

The Global Bond approach seeks to provide consistent excess returns of 1% 1.5% over the Citigroup World Government Bond Index. Wellington Management's global fixed income investment philosophy is based upon proprietary fundamental and quantitative research, combining local market knowledge with global expertise, and diversified sources of alpha within an active risk management framework.

#### **Quarterly Summary and Highlights**

- Wellington Management Company's portfolio posted a 7.33% return for the quarter placing it in the 14 percentile of the CAI Global Fixed-Inc Style group for the quarter and in the 4 percentile for the last year.
- Wellington Management Company's portfolio outperformed the CG WGBI Index by 0.25% for the quarter and outperformed the CG WGBI Index for the year by 0.38%.

#### Quarterly Asset Growth

| Beginning Market Value    | \$197,578,131 |
|---------------------------|---------------|
| Net New Investment        | \$-11,000,000 |
| Investment Gains/(Losses) | \$14,003,814  |
| Ending Market Value       | \$200,581,945 |







#### **Relative Return vs CG WGBI Index**

#### **Cumulative Returns vs CG WGBI Index**



#### Wellington Management Company Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs CAI Global Fixed-Inc Style (Gross)



**Cumulative and Quarterly Relative Return vs World Govt Bond** 







#### Wellington Management Company **Risk Analysis Summary**

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs CAI Global Fixed-Inc Style (Gross) Five Years Ended March 31, 2016











City of Milwaukee Employes' Retirement System 155

#### Wellington Management Company Bond Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Fixed Income Portfolio Characteristics Rankings Against CAI Global Fixed-Inc Style as of March 31, 2016



#### Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



#### Wellington Management Company Portfolio Characteristics Summary As of March 31, 2016

#### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



Absolute Return

#### Allianz SA 1000 Period Ended March 31, 2016

#### **Quarterly Summary and Highlights**

- Allianz SA 1000's portfolio posted a 2.41% return for the quarter placing it in the 1 percentile of the Absolute Return Hedge FoFs Style group for the quarter and in the 1 percentile for the last year.
- Allianz SA 1000's portfolio underperformed the T-Bills + 10% by 0.07% for the quarter and underperformed the T-Bills + 10% for the year by 2.21%.

#### **Quarterly Asset Growth**

| Beginning Market Value    | \$72,619,327 |
|---------------------------|--------------|
| Net New Investment        | \$0          |
| Investment Gains/(Losses) | \$1,746,744  |
| Ending Market Value       | \$74,366,071 |

#### Percent Cash: 0.0%





#### Relative Return vs T-Bills + 10%

Absolute Return Hedge FoFs Style (Net) Annualized Four and One-Half Year Risk vs Return



#### Allianz SA 1000 Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.



### Performance vs Absolute Return Hedge FoFs Style (Net)





Risk Adjusted Return Measures vs 1-month LIBOR + 4% Rankings Against Absolute Return Hedge FoFs Style (Net) Four and One-Half Years Ended March 31, 2016





#### Allianz SA 1000 Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs Absolute Return Hedge FoFs Style (Net) Four and One-Half Years Ended March 31, 2016













#### Newton Period Ended March 31, 2016

#### **Quarterly Summary and Highlights**

- Newton's portfolio posted a 3.61% return for the quarter placing it in the 1 percentile of the Absolute Return Hedge FoFs Style group for the quarter and in the 6 percentile for the last year.
- Newton's portfolio outperformed the 1-month LIBOR + 4% by 2.51% for the quarter and underperformed the 1-month LIBOR + 4% for the year by 2.24%.

#### Quarterly Asset Growth

| Beginning Market Value    | \$64,238,428 |
|---------------------------|--------------|
| Net New Investment        | \$-3,000,000 |
| Investment Gains/(Losses) | \$2,316,796  |
| Ending Market Value       | \$63,555,224 |

Percent Cash: 0.0%



Relative Return vs 1-month LIBOR + 4%



Absolute Return Hedge FoFs Style (Net) Annualized Six and Three-Quarter Year Risk vs Return



#### Newton Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.



Performance vs Absolute Return Hedge FoFs Style (Net)

Cumulative and Quarterly Relative Return vs 1-month LIBOR + 4%



Risk Adjusted Return Measures vs 1-month LIBOR + 4% Rankings Against Absolute Return Hedge FoFs Style (Net) Five Years Ended March 31, 2016





#### Newton Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs Absolute Return Hedge FoFs Style (Net) Five Years Ended March 31, 2016













#### UBS A & Q Period Ended March 31, 2016

#### **Quarterly Summary and Highlights**

- UBS A & Q's portfolio posted a (1.76)% return for the quarter placing it in the 40 percentile of the Absolute Return Hedge FoFs Style group for the quarter and in the 12 percentile for the last year.
- UBS A & Q's portfolio underperformed the 1-month LIBOR + 4% by 2.85% for the quarter and underperformed the 1-month LIBOR + 4% for the year by 4.46%.

#### **Quarterly Asset Growth**

| Beginning Market Value    | \$130,112,238 |
|---------------------------|---------------|
| Net New Investment        | \$0           |
| Investment Gains/(Losses) | \$-2,291,700  |
| Ending Market Value       | \$127,820,538 |

#### Percent Cash: 0.0%



Relative Return vs 1-month LIBOR + 4%



#### Absolute Return Hedge FoFs Style (Net) Annualized Ten Year Risk vs Return



#### UBS A & Q Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

#### Performance vs Absolute Return Hedge FoFs Style (Net)



Cumulative and Quarterly Relative Return vs 1-month LIBOR + 4%









#### UBS A & Q Risk Analysis Summary

#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

#### Risk Analysis vs Absolute Return Hedge FoFs Style (Net) Five Years Ended March 31, 2016













Callan Research/Education

# Callan



#### 1st Quarter 2016

## Education

## **Research and Educational Programs**

The Callan Investments Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

#### **Recent Research**



**2016 DC Survey & Key Findings** Callan's 2016 DC Trends Survey highlights plan sponsors' key themes from 2015 and expectations for 2016; the Key Findings summarize the Survey.

**Periodic Table & Periodic Table Collection** Depicts annual investment returns for 10 major asset classes, ranked from best to worst. The Collection includes 10 additional variations.

**Spotlight: Six Key Themes** Callan reflects on some of the ongoing trends within institutional investing and considers how they may develop in the coming year.

**Inside Callan's Database, 4th Quarter 2015** This report graphs performance and risk data from Callan's proprietary database alongside relevant market indices.

Capital Market Review, 4th Quarter 2015 Insights on the economy and recent performance in equities, fixed income, alternatives, real estate, and more.

**Market Pulse Flipbook, 4th Quarter 2015** A quarterly reference guide covering investment and fund sponsor trends in the U.S. economy, the capital markets, and defined contribution.

**October Regional Workshop Summary** We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

**Capital Market Projections** This charticle summarizes key figures from Callan's 2016 capital market projections.

**Global Equity Benchmark Review** This annual report examines FTSE, MSCI, Russell, and S&P indices alongside Callan Active Manager Style Groups.

Hedge Fund Monitor, 4th Quarter 2015 Our cover story, "David versus Goliath: Sizing Up the Odds," compares the respective advantages and challenges of smaller and larger hedge funds.

**The Renaissance of Stable Value** In this paper, we seek to answer questions about stable value funds, and how they have evolved since the financial crisis.



**Real Assets Reporter, Winter/Spring 2016** In this issue, we look at implementing diversified real asset portfolios, focusing on a process that helps evaluate financial and operational risks.

**U.S. Equity Benchmark Review** This annual report compares CRSP, Russell, and S&P index metrics alongside Callan Active Manager Style Groups.

**DC Observer, 4th Quarter 2015** Cover story: In-Plan Annuities: The Stuff That Dreams Are Made Of?

The Costs of Closing: Nuclear Decommissioning Trusts In this video, Julia Moriarty discusses hedging costs, the impact of license extension, and more.

**Private Markets Trends, Winter 2016** Gary Robertson summarizes the market environment, recent events, performance, and other issues involving private equity.

#### **Events**

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: https://www.callan.com/education/CII/

Our next **Regional Workshop**, June 28 in Atlanta and June 29 in San Francisco, will consist of two separate one-hour presentations given by our specialists. This year, we look at the impact the Pension Protection Act has had on defined benefit and defined contribution retirement plans a decade after its enactment, and look ahead to the next 10 years.

*Save the date* for our fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

#### For more information about events, please contact Barb Gerraty: 415.974.5060 / institute@callan.com

#### The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the "Callan College," provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next session is:

#### Introduction to Investments

San Francisco, CA, July 19–20, 2016 Chicago, IL, October 18–19, 2016

This session familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with assetmanagement oversight and/or support responsibilities. Tuition for the Introductory "Callan College" session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

#### **Customized Sessions**

The "Callan College" is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at https://www.callan.com/education/college/ or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

#### **Education: By the Numbers**

| 500   | Attendees (on average) of the<br>Institute's annual National Conference | 50+  | Unique pieces of research the<br>Institute generates each year |
|-------|-------------------------------------------------------------------------|------|----------------------------------------------------------------|
| 3,300 | Total attendees of the "Callan<br>College" since 1994                   | 1980 | Year the Callan Investments<br>Institute was founded           |



"We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years."

Ron Peyton, Chairman and CEO

in Callan Associates

Disclosures

#### List of Callan's Investment Manager Clients

Confidential - For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

| Manager Name                                    | Manager Name                                 |
|-------------------------------------------------|----------------------------------------------|
| 13D Management                                  | Brown Brothers Harriman & Company            |
| 1607 Capital Partners, LLC                      | Cambiar Investors, LLC                       |
| Aberdeen Asset Management PLC                   | Capital Group                                |
| Acadian Asset Management LLC                    | CastleArk Management, LLC                    |
| AEGON USA Investment Management                 | Causeway Capital Management                  |
| Affiliated Managers Group, Inc.                 | Charles Schwab Investment Management         |
| AllianceBernstein                               | Chartwell Investment Partners                |
| Allianz Global Investors                        | ClearBridge Investments, LLC                 |
| Allianz Life Insurance Company of North America | Cohen & Steers Capital Management, Inc.      |
| AlphaOne Investment Services                    | Columbia Management Investment Advisers, LLC |
| American Century Investment Management          | Columbus Circle Investors                    |
| Amundi Smith Breeden LLC                        | Corbin Capital Partners, L.P.                |
| Analytic Investors                              | Cornerstone Capital Management               |
| Angelo, Gordon & Co.                            | Cramer Rosenthal McGlynn, LLC                |
| Apollo Global Management                        | Crawford Investment Counsel, Inc.            |
| AQR Capital Management                          | Credit Suisse Asset Management               |
| Ares Management LLC                             | Crestline Investors, Inc.                    |
| Ariel Investments, LLC                          | DE Shaw Investment Management, LLC           |
| Aristotle Capital Management, LLC               | Delaware Investments                         |
| Artisan Holdings                                | DePrince, Race & Zollo, Inc.                 |
| Atlanta Capital Management Co., LLC             | Deutsche Asset Management                    |
| Aviva Investors Americas                        | Diamond Hill Investments                     |
| AXA Investment Managers                         | Duff & Phelps Investment Mgmt. Co.           |
| Babson Capital Management                       | Eagle Asset Management, Inc.                 |
| Baillie Gifford Overseas Limited                | EARNEST Partners, LLC                        |
| Baird Advisors                                  | Eaton Vance Management                       |
| Bank of America                                 | Epoch Investment Partners, Inc.              |
| Baring Asset Management                         | Fayez Sarofim & Company                      |
| Baron Capital Management, Inc.                  | Federated Investors                          |
| Barrow, Hanley, Mewhinney & Strauss, LLC        | Fidelity Institutional Asset Management      |
| BlackRock                                       | Fiera Capital Global Asset Management        |
| BMO Asset Management, Corp.                     | First Eagle Investment Management, LLC       |
| BNP Paribas Investment Partners                 | First Hawaiian Bank                          |
| BNY Mellon Asset Management                     | Fisher Investments                           |
| Boston Partners                                 | Fort Washington Investment Advisors, Inc.    |
| Brandes Investment Partners, L.P.               | Franklin Templeton Institutional             |
| Brandywine Global Investment Management, LLC    | Fred Alger Management, Inc.                  |

| Manager Name                                  |            |
|-----------------------------------------------|------------|
| Fuller & Thaler Asset Management, Inc.        | Ορι        |
| GAM (USA) Inc.                                | Pac        |
| GE Asset Management                           | Par        |
| GMO                                           | Per        |
| Goldman Sachs Asset Management                | PGI        |
| Grand-Jean Capital Management                 | Pine       |
| Guggenheim Investments                        | Pini       |
| Guggenheim Real Estate LLC                    | Pior       |
| GW&K Investment Management                    | PN         |
| Harbor Capital Group Trust                    | Pole       |
| Hartford Funds                                | Prin       |
| Hartford Investment Management Co.            | Priv       |
| Henderson Global Investors                    | Put        |
| Hotchkis & Wiley Capital Management, LLC      | QM         |
| HSBC Global Asset Management                  | RB         |
| Income Research + Management, Inc.            | Rec        |
| Insight Investment Management Limited         | Ride       |
| Institutional Capital LLC                     | Roc        |
| INTECH Investment Management, LLC             | Rot        |
| Invesco                                       | Rus        |
| Investec Asset Management                     | San        |
| Janus Capital Management, LLC                 | Sch        |
| Jensen Investment Management                  | Sco        |
| J.P. Morgan Asset Management                  | SEL        |
| KeyCorp                                       | Sen        |
| Lazard Asset Management                       | Smi        |
| Legal & General Investment Management America | Smi        |
| Lincoln National Corporation                  | Sta        |
| LMCG Investments, LLC                         | Sta        |
| Longview Partners                             | Stat       |
| Loomis, Sayles & Company, L.P.                | Sta        |
| Lord Abbett & Company                         | Sve        |
| Los Angeles Capital Management                | Jys<br>T C |
| LSV Asset Management                          | Tan        |
| MacKay Shields LLC                            | Tap        |
| Man Investments Inc.                          | The        |
| Manulife Asset Management                     | The        |
| Martin Currie Inc.                            | The        |
| Mellon Capital Management                     | Tri        |
| MFS Investment Management                     |            |
| MidFirst Bank                                 | Van        |
| Mondrian Investment Partners Limited          | Var        |
| Montag & Caldwell, LLC                        | Vict       |
| Morgan Stanley Investment Management          | Vict       |
| Mountain Lake Investment Management LLC       | Vor        |
| MUFG Union Bank, N.A.                         | V Oy       |
| Neuberger Berman                              | Wat        |
| Newton Capital Management                     |            |
| Nicholas Investment Partners                  |            |
| Nikko Asset Management Co., Ltd.              | vve        |
| Northern Trust Asset Management               | vve        |
| Nuveen Investments, Inc.                      | vve        |
| OFI Global Asset Management                   | vviii      |
| Old Mutual Asset Management                   |            |
| 3                                             |            |

| Manager Name                                      |
|---------------------------------------------------|
| Opus Capital Management Inc.                      |
| Pacific Investment Management Company             |
| Parametric Portfolio Associates                   |
| Peregrine Capital Management, Inc.                |
| PGIM                                              |
| PineBridge Investments                            |
| Pinnacle Asset Management L.P.                    |
| Pioneer Investments                               |
| PNC Capital Advisors, LLC                         |
| Polen Capital Management                          |
| Principal Global Investors                        |
| Private Advisors, LLC                             |
| Putnam Investments, LLC                           |
| QMA (Quantitative Management Associates)          |
| RBC Global Asset Management                       |
| Regions Financial Corporation                     |
| RidgeWorth Capital Management, Inc.               |
| Rockefeller & Co., Inc.                           |
| Rothschild Asset Management, Inc.                 |
| Russell Investments                               |
| Santander Global Facilities                       |
| Schroder Investment Management North America Inc. |
| Scout Investments                                 |
| Servinale Advisory Convisor LLC                   |
| Settimole Advisory Services, LLC                  |
| Smith, Grandin & CO. Investment Auvisors, L.F.    |
| Standard Life Investments Limited                 |
| Standish                                          |
| State Street Global Advisors                      |
| Stone Harbor Investment Partners, L.P.            |
| Systematic Financial Management                   |
| T. Rowe Price Associates, Inc.                    |
| Taplin, Canida & Habacht                          |
| The Boston Company Asset Management, LLC          |
| The Hartford                                      |
| The London Company                                |
| The TCW Group, Inc.                               |
| Tri-Star Trust Bank                               |
| UBS Asset Management                              |
| Van Eck Global                                    |
| Versus Capital Group                              |
| Victory Capital Management Inc.                   |
| Vontobel Asset Management, Inc.                   |
| Voya Investment Management (fka ING)              |
| Waddell & Reed Asset Management Group             |
| WCM Investment Management                         |
| WEDGE Capital Management                          |
| Wellington Management Company, LLP                |
| Wells Capital Management                          |
| Western Asset Management Company                  |
| William Blair & Company                           |