



Investment Performance Analysis for the period ending December 31, 2014

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| | Page |
|---|------|
| Market Environment Update and Outlook | 2 |
| Total Fund Performance | 16 |
| Manager Due Diligence | 48 |
| Appendix: Market Environment; Performance Disclosures | 54 |



Market Environment Update and Outlook



Ventura County Employees' Retirement Association Economic Environment

- Fourth quarter "advanced" estimate of GDP growth remained positive, but decreased to an annual rate of +2.6%.
 - Retail sales (ended December) rose to 1.9% on a year-over-year growth rate basis.
 - The inventory-to-sales ratio has remained mostly flat since early 2010 and closed at 1.3 in November.
 - Corporate profits as a percent of GDP increased, ending the fourth quarter at 12.2% and remain elevated relative to historical levels.
 - The U.S. trade deficit increased slightly in December.
- The unemployment rate fell to 5.8% in December; U-6, a broader measure of unemployment, fell to 11.2% the fourth quarter.
- The Case-Schiller Home Price Index (as of 12/31) declined slightly to 167.11 from third quarter levels and is at levels higher than that of pre-financial crisis levels of 150.92.
- Rolling 12-month CPI decreased to 0.8% at the end of December; Capacity Utilization declined slightly to 79.7% in December.
- Fed Funds rate remains at 0.25%, while the 10-year Treasury Yield finished Q4 at 2.17%.
- The Fed balance sheet continued to grow in 2014, while the European Central Bank balance sheet decreased in 2014.
 - ECB announced it will be embarking on an asset purchasing stimulus plan.
- S&P valuations decreased in December, remaining above the 10-year and long-term averages, which are nearly equal at 16.4x, using current price/earnings ratios.
 - Cyclically-adjusted Shiller PE ratio is above the long-term average of 17.6x and above the 10-year average of 22.9x.
- The U.S. Dollar continues to strengthen against a basket of major currencies as the Fed ends its quantitative easing program.



Market Environment – Q4 2014 Overview

| | | Qtr. | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> | | | | | | | |
|---------------------------------|-------------------------|-------------|--------------|--------------|--------------|---------------|------------------------------|---------|---------|-----|-----|---------|-----|
| World Equity Benchmarks | | | | | | | MSCI World | | | | | | |
| MSCI World | World | 1.0% | 4.9% | 15.5% | 10.2% | 6.0% | C ⁰ D E00 | | - | | | | |
| | | Qtr. | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> | 30P 300 | | _ | | | | |
| Domestic Equity Benchmarks | | | | | | | Russell 1000 | | | | | | |
| S&P 500 | Large Core | 4.9% | 13.7% | 20.4% | 15.5% | 7.7% | Russell 1000 Growth | | | | | | |
| Russell 1000 | Large Core | 4.9% | 13.2% | 20.6% | 15.6% | 8.0% | Russell 1000 Value | | | | | | |
| Russell 1000 Growth | Large Growth | 4.8% | 13.1% | 20.3% | 15.8% | 8.5% | Durrell 2000 | | - | | | | |
| Russell 1000 Value | Large Value | 5.0% | 13.5% | 20.9% | 15.4% | 7.3% | Russell 2000 | | | | | | |
| Russell 2000 | Small Core | 9.7% | 4.9% | 19.2% | 15.6% | 7.8% | Russell 2000 Growth | | | | | | |
| Russell 2000 Growth | Small Growth | 10.1% | 5.6% | 20.1% | 16.8% | 8.5% | Russell 2000 Value | | | | | | |
| Russell 2000 Value | Small Value | 9.4% | 4.2% | 18.3% | 14.3% | 6.9% | MSCLEAFE | | | | | | |
| | | <u>Qtr.</u> | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> | | | | | | | |
| International Equity Benchmarks | | | | | | | IVISCI EIVI | | | | | | |
| MSCI EAFE | International Developed | -3.6% | -4.9% | 11.1% | 5.3% | 4.4% | S&P EPAC SmallCap | | | | | | |
| MSCI EM | Emerging Equity | -4.5% | -2.2% | 4.0% | 1.8% | 8.4% | MSCI ACWI ex-US | | | | | | |
| S&P EPAC SmallCap | Small Cap Int'l | -1.9% | -3.1% | 14.4% | 8.9% | 6.9% | Barclays Aggregate | | | | | | |
| MSCI ACWI ex-US | World ex-US | -3.9% | -3.9% | 9.0% | 4.4% | 5.1% | Developer UC UI of Mind | | | | | | |
| Demostic Freddrawn Demokra | | <u>Qtr.</u> | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> | Barclays US High Yield | | | | | | |
| Domestic Fixed income Benchma | arks Care Danda | 4.0% | C 0% | 0.7% | 4.5% | 4 70/ | BofA ML US HY BB/B | | | | | | |
| Barclays Aggregate | Line Vield | 1.8% | 0.0% | 2.1% | 4.5% | 4.7% | CSFB Levered Loans | | | | | | |
| | High Yield | -1.0% | 2.5% | 0.4% | 9.0% | 7.1% | BofA MLUS 3-Month T-Bill | | 1 | | | | |
| CSER Lovered Leans | Bank Loans | -0.4% | 3.3 /0 | 5.8% | 5.8% | 1.2% | | | - | | | | |
| BofA MLUS 3-Month T-Bill | Cash | -0.4 % | 0.0% | 0.1% | 0.1% | 4.7 % | Barciays US TIPS 1-10 Yr | | 3 | | | | |
| Barclays US TIPS 1-10 Yr | Inflation | -1.0% | 0.9% | 0.0% | 2.8% | 3.8% | Citigroup WGBI | | 1 | | | | |
| | initiation | Qtr. | 1 Yr. | 3 Yr. | 5 Yr. | 10 Yr. | BC Global Credit | | | | | | |
| Global Fixed Income Benchmarks | 5 | | | <u></u> | <u> </u> | | JPM GBI-EM Glob. Diversified | | | | | | |
| Citigroup WGBI | World Gov. Bonds | -1.5% | -0.5% | -1.0% | 1.7% | 3.1% | | | - | | | | |
| BC Global Credit | Global Bonds | -0.5% | 2.4% | 5.1% | 5.3% | 4.8% | JPIVI EIVIDI+ | | _ | | | | |
| JPM GBI-EM Glob. Diversified | Em. Mkt. Bonds (Local) | -5.7% | -5.7% | 0.1% | 2.6% | 6.7% | DJ UBS Commodity Index | | | | | | |
| JPM EMBI+ | Em. Mkt. Bonds | -0.9% | 6.2% | 4.7% | 7.0% | 7.7% | DJCS HF Composite | | | | | Quarter | ר ר |
| | | Qtr. | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> | HFRI FoF Conservative | | | | | ■1Yr | |
| Alternative Benchmarks | | | | | | | Combridge DE Logge d* | | | | | | |
| DJ UBS Commodity Index | Commodity | -12.1% | -17.0% | -9.4% | -5.5% | -1.9% | | | | ; | | | |
| DJCS HF Composite | Hedge Fund | 0.7% | 4.1% | 7.2% | 5.9% | 5.8% | NCREIF Property Index* | | | | | | |
| HFRI FoF Conservative | Fund of Funds | 0.5% | 3.4% | 5.1% | 3.3% | 2.5% | Wilshire REIT Index | | - | | } | | |
| Cambridge PE Lagged* | Private Equity | 1.7% | 18.1% | 17.1% | 16.6% | 15.1% | CPI + 2% | | | | | | |
| NCREIF Property Index* | Real Estate | 2.6% | 11.3% | 11.1% | 11.0% | 8.1% | | i | | i | i | i | |
| Wilshire REIT Index | REIT | 15.1% | 31.8% | 16.4% | 17.3% | 8.3% | -2 | 0% -10% | 0% | 10% | 20% | 30% | 40% |
| CPI + 2% | Inflation/Real Assets | 1.4% | 2.7% | 3.3% | 3.7% | 4.3% | | | | | | | |

* As of 9/30/2014



Fourth Quarter 2014 Market Review

<u>Positives</u>

- Fed asset purchases come to an end
 - Divergence in monetary policies signaling different investment environments globally
- Q4 GDP growth estimated at 2.6%
 - U.S. employment continues to gain
- ECB announces further monetary easing through asset purchases in addition to negative short dated interest rates

• Developed world inflation is low

 In U.S., CPI for all Urban Consumers was negative in Q4 driven by lower energy

<u>Negatives</u>

- Geopolitical instability drives volatility
 - Instability in the Mid-East, Eastern Europe, Greece
- Europe continues to see ongoing political and economic growth challenges
- U.S. Dollar strength continues to translate into negative dollar denominated returns in international markets
- Valuations remain above 10 year and long-term averages
 - Developed Equity P/Es above median
 - Credit spreads near historically low levels
- Volatility re-emerges; the VIX spiked substantially toward the end of the fourth quarter
 - VIX spiked approximately 100% in mid-December



Ventura County Employees' Retirement Association Market Environment

Global Equity

- U.S. equities advanced in the fourth quarter amid increasing volatility.
- Small cap stocks outperformed large cap stocks during the quarter, with the Russell 2000 Index returning 9.7% and the S&P 500 Index returning 4.9%.
- International equities underperformed U.S. markets during the quarter, returning -3.9%, as measured by the MSCI ACWI ex-U.S. Index.
 - Developed markets returned -3.6% as measured by the MSCI EAFE Index. Europe was the worst performing region returning -4.6%.
 - Emerging markets returned -4.5% as measured by the MSCI Emerging Markets Index in U.S. dollar terms. In local currency terms emerging markets were up 0.1%. Emerging countries in Europe (-6.45%) and Latin America (-6.13%) were the largest detractors in local currency terms.

Private Equity

- New private equity commitments totaled \$83 billion in Q4 2014, bringing total new commitments to \$348 billion for the year, making 2014 the fifth straight year of increasing commitments.
 - 2014 global PE fundraising pace increased 7% over 2013; U.S. fundraising exceeded 2013 totals by 4% or \$9.4 billion.
- Buyout and growth equity fund deal volume in both the U.S. and Europe gradually declined throughout 2014.
 - Buyout and growth equity deals totaled \$181 billion, approximately \$3.0 billion less than 2013.
- Venture capital commitments totaled \$44.9 billion, outpacing total 2013 commitments by 33%.
 - At 13% of total private equity raised, commitments are just below the 10-year historic relative average.
- Mezzanine funds continue to face strong headwinds from a robust high yield market and an expanding supply of private debt.
 - Mezzanine funds raised \$16.5 billion or 5% of total private equity funds raised, \$8.8 billion less than in 2013.
- Asian private equity commitments accelerated in 2014 to \$38.1 billion.
 - Represents 11% of the 2014 total across all geographies. Asian funds raised \$27.5 billion in 2013, with 70% by China-based firms.



Ventura County Employees' Retirement Association Market Environment

Fixed Income

- Risk aversion permeated fixed income markets in the fourth quarter amid growing concerns around global economic growth and geopolitical events.
- 2 and 3 year Treasury yields increased by 20 basis points while the 10-year Treasury yield fell 33 basis points during the quarter, finishing at 2.17%.
- The Treasury yield curve flattened with the spread between two- and ten-year rates falling to 1.50%.
- Treasury Inflation-Protected Securities, or TIPS, underperformed nominal Treasuries due to lower inflation (expectations and actual), with the Barclays U.S. TIPS Index posting a loss of 1.0% during the quarter.
- Investment grade credit spreads continued to widen, ending December at 125 basis points.
- High yield bonds returned -1.0% as spreads increased to 483 basis points, up from 424 basis points, nearly 59 basis points wider than September 2014 levels.
 - High yield markets were most significantly impacted by the decline of oil prices as energy makes up approximately 14% of the Barclays U.S. High Yield Bond Index.
- Emerging markets debt continued to slow in the fourth quarter after a strong first half of the year.
 - Concerns over geopolitical events, economic growth and a Fed rate increase caused local currency (JP Morgan GBI-EM Global Diversified – Unhedged) to fare worse than external currency (JP Morgan EMBI+) emerging markets debt, resulting in losses of 5.7% and 0.9%, respectively.



Market Environment

Commodities

- Commodities sold off in the fourth quarter with the Bloomberg Commodity Index losing 12.1%.
 - Oil continued to be the headline story with a decline of approximately 40% in the quarter on negative supply pressure from OPEC and on lower demand growth expectations.

Real Estate

- NEPC continues to be neutral on core real estate in the U.S. and remains positive on non-core real estate, that is, value-add and opportunistic strategies.
- Within U.S. core real estate, strong fundamentals continue to be the story along with attractive income spreads relative to interest rates.
 - The concerns for U.S. core real estate (and U.S. real estate, broadly) continues to be plentiful capital that is driving up
 pricing; and the market's expectation for higher future interest rates and their impact on capitalization rates and capital
 values.
- U.S. REITs traded up relative to net asset values ending Q4 at a slight premium to NAV (long-term average is 2.4% above NAV).
 - The Wilshire REIT Index ended the quarter up 15.1% and ended the year with a gain of 31.8%.
 - FFO multiples are up to approximately 18x remaining above the average of 12.5x since 2000.
- Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.
- Europe is viewed as the best place for a marginal dollar of non-core real estate investment.
 - Europe is emerging from multi-year recession, but recovery is slow.
 - Banks in EU are still overleveraged and have significant real estate exposure (banks in Europe hold 90%+ of real estate debt or €2,300B; in the U.S. banks hold 49% of real estate debt).



Market Environment

Real Assets/Inflation-Linked Assets

- Massive energy market dislocation.
 - Private equity and private debt opportunities attractive.
 - Potential for public stressed/distressed credit, equity and commodity plays.
- OPEC and Saudi Arabia have indicated a willingness to allow lower oil prices to persist in efforts to cement market share and reduce marginal supply.
- Select infrastructure opportunities are attractive.
 - Target opportunistic strategies in niche sub-sectors to take advantage of market dislocations.
- NEPC continues to believe in the long-term demand drivers in agriculture.
 - Long-term commodity prices driven by growing emerging market demand.
- · Timber opportunity set limited but warrants further review
 - 45% increase in housing starts forecasted; timber prices highly correlated



Ventura County Employees' Retirement Association What's Happened: Historical Crude Oil Prices

- Crude oil prices have dropped by over 50% since June 2014
- The recent decline represents the second largest decline since 2000



Source: Bloomberg; data as of January 5, 2015.



Fed Rate Hikes Expected in 2015; Timing and Pace Are Uncertain

- Fed governors (blue dots) project higher rates over the next few years
 - Market expectations (green dots) are less ambitious with reality likely in-between
 - Upside surprise to pace or level of interest rates supportive of higher USD; negative for U.S. risk assets
- Low real rates suppressed by central banks, squeeze expectations for future returns
 - UK, Europe & Japan all with negative 10 year real yields
 - U.S. bonds look relatively attractive in this context
 - Real rates moving lower toward peers is bullish for risk assets
 - Long-term normalized monetary policy could reverse the trend





Source: Bloomberg and Federal Open Market Committee as of 11/30

Source: Bloomberg as of 11/30



Central bank stimulus has been a key driver of market returns

- Post crisis monetary policy was first highly stimulative, waned in 2010-2011, then resumed unevenly
- Greater stimulus led to strong *local* market returns
- Continued stimulus in Japan and Europe should be incorporated into outlook but hedging developed market currency exposure is prudent
- Policy responses have been key driver of capital market results
 - Distinct economic environments across countries leads to differentiation in market returns
 - Evolving monetary policies continue to diverge and likely lead to more independent capital market outcomes among countries





Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30 - Local indices consist of Australia, Europe, UK, Emerging Markets, Japan, New Zealand, US, and Canada

Strength in the U.S. Dollar has Implications for Non-U.S. Markets

- Currency has been a detractor for U.S. investors allocating abroad over last 2-3 years
 - Half of recent underperformance is driven by currency
- Hedging a portion of develop market currency risk a key theme in coming years
 - Yen and Euro denominated issues make up roughly 50% of MSCI EAFE
- Dollar strength not necessarily relegated to the recent past
 - History shows the dollar tends to rally two years after Fed Funds hikes





Source: Bloomberg, NEPC as of 11/30

Source: Bloomberg 11/30

• Be judicious with risk

- Avoid chasing risk for only marginal return enhancements
- Less liquid opportunities may provide the best risk-adjusted approach, but liquidity needs should be incorporated (e.g., substituting direct lending for high yield)

Question the "traditional" approach; different investment environments require different perspectives of risk and return

- A low-return environment may require a fresh perspective
- Continue to remove traditional portfolio constraints by adding active managers with skill to exploit inefficiencies within and across asset classes (e.g., flexible global equity, global asset allocation, absolute return fixed income)

Rethink fixed income portfolio structure in light of current market environment

- Use of an unconstrained/multi-sector fixed income portfolio may provide sound diversification and enhanced liquidity
- Examine if alternatives are available to traditional portfolio positions (e.g., combining cash and long treasuries vs. holding core bond portfolio)

Review inflation hedging allocations in light of recent market action

- Some areas have likely sold off more than is warranted

Consider market weight or slightly over-weighted target allocation to developed non-U.S. equity

 Consider reducing the risk of the position by allocating to a currency hedged portfolio or implementing a currency hedge overlay





Highlights of Fourth Quarter Happenings at NEPC

NEPC Research Recent White Papers Posted

- Improving Asset Allocation with Factor Analysis (November 2014) – Mark Cintolo, CAIA, Research Consultant
- Improving Governance Under an OCIO Structure (October 2014) – Steven Charlton, CFA, Director of Consulting Services
- NEPC 2014 Defined Contribution Plan & Fee Survey: What Plan Sponsors Are Doing Now (October 2014) – Ross Bremen, CFA, Partner; Dan Beaton, Senior Analyst

Professional Staff Updates

- New Partner: Sean Ruhmann, Partner, Director of Real Assets Research
- New Principals: Jeffrey Mitchell, CFA, CAIA, Principal, Senior Consultant ; Terri Sacramone, SPHR, Principal, Senior Human Resources Manager; and Michael Sullivan, Principal, Senior Consultant
- We are also pleased to announce that Daniel Hennessy has joined NEPC as a Senior Consultant located in our Redwood City, CA office. Daniel will be focusing on Taft-Hartley and Public Funds in the West.



Recent/Upcoming Events

- 2015 Market Outlook Webinar January 22, 2015 at 3:00 PM EST.
- NEPC's 20th Annual Client Conference May 19-20, 2015 in Boston at the Boston Convention & Exhibition Center (BCEC)

NEPC Gives Back

A team of NEPC employees participated in Movember once again this year. Movember is a global men's health charity requiring each 'Mo Bro' to sport a well-groomed mustache during the entire month of November to raise funds and awareness for men's prostate cancer, testicular cancer, and mental health. The team raised about \$20,000 this year and ranked #49 nationally! Additionally, NEPC employees participated in Lee National Denim Day once again this year and raised \$1,745. Lee National Denim Day is a fundraiser that takes place in October and was created by Lee Jeans to support the American Cancer Society's breast cancer programs.

NEPC Client Recognitions

Several of NEPC's clients were recognized by CIO Magazine recently. First, the October 2014 issue of CIO Magazine ranked the Power 100 CIOs, which included Tim Barrett, CIO of Texas Tech University System (#59), and Don Pierce, CIO of San Bernardino County Employees' Retirement Association (#61). Next, several NEPC clients were nominated for the CIO 2014 Industry Innovation Awards. Additionally, NEPC's client SBCERA was nominated for an Investor Intelligence Award in 'Portfolio Design'.



Total Fund Performance

Note: All of the data shown on the following pages is as of December 31, 2014 and reflects the deduction of investment manager fees, unless otherwise noted.



Total Fund Performance Summary (Net)

| | Market Value | 3 Mo | Rank | Fiscal YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank | Return | Since |
|---|-----------------|------|------|---------------|------|------|------|-------|------|-------|------|--------|------|--------|--------|
| Total Fund | \$4,328,232,756 | 1.0% | 59 | -0.2% | 58 | 6.4% | 31 | 12.7% | 23 | 10.6% | 15 | 6.5% | 52 | 8.3% | Apr-94 |
| Policy Index | | 1.8% | 35 | 1.0% | 21 | 6.9% | 18 | 12.3% | 32 | 10.0% | 40 | 6.6% | 44 | 8.2% | Apr-94 |
| Allocation Index | | 1.5% | 45 | 0.6% | 35 | 7.0% | 15 | 11.6% | 44 | 9.5% | 54 | 6.3% | 65 | | Apr-94 |
| InvestorForce Public DB > \$1B Gross Median | | 1.3% | | 0.1% | | 5.6% | | 11.4% | | 9.7% | | 6.5% | | 8.1% | Apr-94 |

For the one-year period ending December 31, 2014, the Fund produced a net investment gain of \$275.0 million, which includes a net investment gain of \$47.5 million in the 4th calendar quarter. Assets increased from \$4.09 billion one year ago to \$4.33 billion on December 31, 2014, with \$39.2 million in net distributions during the year.

For the one-year period ending December 31, 2014, the Fund returned 6.4%, trailing the policy index by 0.5% and ranking in the 15^{th} percentile of the InvestorForce Public Funds > \$1 Billion Universe (Net of Fees).

For the three-year period ending December 31, 2014, the Fund returned 12.7%, outperforming the policy index by 0.4% and ranking in the 10% percentile of its peers. The Fund's volatility, as measured by standard deviation, ranked in the 69th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 30th percentile. This means that the Fund has earned more return per unit of risk taken than 70% of its peers.

For the five-year period ending December 31, 2014, the Fund returned 10.6%, outperforming the policy index by 0.6% and ranking in the 2nd percentile of its peers. The Fund's volatility ranks in the bottom quartile of its peers over this period, but the Fund's Sharpe Ratio is slightly above the median Fund in the universe.

Please see the appendix for additional performance disclosures.



Quarterly and Cumulative Excess Performance



3 Years Ending December 31, 2014

| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
|--|-----------|------|------------------|------|-----------------|------|---------------------|------|
| Total Fund | 12.7% | 23 | 6.6% | 69 | 1.9 | 43 | 2.7 | 37 |
| Policy Index | 12.3% | 32 | 6.6% | 67 | 1.9 | 51 | 2.5 | 62 |
| InvestorForce Public DB > \$1B Gross Median | 11.4% | | 6.1% | | 1.9 | | 2.6 | |

5 Years Ending December 31, 2014

| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
|--|-----------|------|------------------|------|-----------------|------|---------------------|------|
| Total Fund | 10.6% | 15 | 9.3% | 86 | 1.1 | 61 | 1.7 | 65 |
| Policy Index | 10.0% | 40 | 9.0% | 77 | 1.1 | 76 | 1.7 | 67 |
| InvestorForce Public DB > \$1B Gross Median | 9.7% | | 8.1% | | 1.2 | | 1.8 | |

Total Fund Asset Growth Summary



Market Value History



Total Fund Asset Allocation vs. Policy Targets





December 31, 2014

Total Fund Allocation History



Asset Allocation History 5 Years Ending December 31, 2014

Total Fund Risk/Return



Universe Median

68% Confidence Interval

• InvestorForce Public DB > \$1B Net

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| 1 | Years | Ending | Decembe | er 31. | . 2014 |
|---|-------|--------|---------|--------|--------|
|---|-------|--------|---------|--------|--------|

| 1 Years Ending December 31, 2014 | | | | | | |
|---|-----------|------|---------------|------|--|--|
| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | | |
| Total Fund | 6.4% | 15 | 5.7% | 67 | | |
| Policy Index | 6.9% | 8 | 5.3% | 51 | | |
| InvestorForce Public DB > \$1B Net Median | 5.2% | | 5.2% | | | |

| 1 Years | Ending | December | 31, | 2014 | |
|---------|--------|----------|-----|------|--|
|---------|--------|----------|-----|------|--|

| | Sharpe Ratio | Rank | Sortino Ratio | Rank |
|---|--------------|------|---------------|------|
| Total Fund | 1.1 | 22 | 3.6 | 6 |
| Policy Index | 1.3 | 8 | 3.3 | 11 |
| InvestorForce Public DB > \$1B Net Median | 1.0 | | 2.0 | |



Total Fund Risk/Return



3 Years Ending December 31, 2014

| 3 Years Ending December 31, 2014 | | | | | | |
|---|-----------|------|---------------|------|--|--|
| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | | |
| Total Fund | 12.7% | 10 | 6.6% | 69 | | |
| Policy Index | 12.3% | 17 | 6.6% | 66 | | |
| InvestorForce Public DB > \$1B Net Median | 10.9% | | 6.2% | | | |

| 3 Years | Ending | December | 31, | 2014 |
|---------|--------|----------|-----|------|
|---------|--------|----------|-----|------|

| | Sharpe Ratio | Rank | Sortino Ratio | Rank |
|---|--------------|------|---------------|------|
| Total Fund | 1.9 | 30 | 2.7 | 29 |
| Policy Index | 1.9 | 41 | 2.5 | 55 |
| InvestorForce Public DB > \$1B Net Median | 1.8 | | 2.5 | |

Policy Index

- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net



Total Fund Risk/Return



68% Confidence Interval

• InvestorForce Public DB > \$1B Net

5 Years Ending December 31, 2014

Anlzd Ret Rank AnIzd Std Dev Rank Total Fund 10.6% 2 9.3% 88 Policy Index 10.0% 23 9.0% 77 InvestorForce Public DB > \$1B Net Median 9.2% 8.1% -----

5 Years Ending December 31, 2014

| 5 Years Ending December 31, 2014 | | | | | | | | | | | |
|---|--------------|------|---------------|------|--|--|--|--|--|--|--|
| | Sharpe Ratio | Rank | Sortino Ratio | Rank | | | | | | | |
| Total Fund | 1.1 | 39 | 1.7 | 44 | | | | | | | |
| Policy Index | 1.1 | 55 | 1.7 | 46 | | | | | | | |
| InvestorForce Public DB > \$1B Net Median | 1.1 | | 1.7 | | | | | | | | |

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Total Fund Risk/Return



10 Years Ending December 31, 2014

| 10 Years Ending December 31, 2014 | | | | | | | | | | | |
|---|-----------|------|---------------|------|--|--|--|--|--|--|--|
| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | | | | | | | |
| Total Fund | 6.5% | 27 | 10.9% | 90 | | | | | | | |
| Policy Index | 6.6% | 25 | 10.5% | 83 | | | | | | | |
| InvestorForce Public DB > \$1B Net Median | 6.1% | | 9.7% | | | | | | | | |

| 10 Years Ending December 31, 2014 | | | | | | | | | | | |
|---|--------------|------|---------------|------|--|--|--|--|--|--|--|
| | Sharpe Ratio | Rank | Sortino Ratio | Rank | | | | | | | |
| Total Fund | 0.5 | 65 | 0.7 | 64 | | | | | | | |
| Policy Index | 0.5 | 44 | 0.7 | 47 | | | | | | | |
| InvestorForce Public DB > \$1B Net Median | 0.5 | | 0.7 | | | | | | | | |

Policy Index

▲ Universe Median

- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net



Total Fund Risk Statistics vs. Peer Universe

Total Fund vs. InvestorForce Public DB > \$1B Net 1 Year





Total Fund Risk Statistics vs. Peer Universe

Total Fund vs. InvestorForce Public DB > \$1B Net 3 Years





Total Fund Risk Statistics vs. Peer Universe

Total Fund vs. InvestorForce Public DB > \$1B Net 5 Years





Total Fund Risk Statistics vs. Peer Universe



Total Fund vs. InvestorForce Public DB > \$1B Net 10 Years



Rolling 5 Year Excess Returns - Net of Fees



Attribution Effects

Total Fund Attribution Analysis



Attribution Summary 3 Months Ending December 31, 2014

| Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction Effects | Total Effects |
|--------------------------|---|--|---|--|---|---|
| 5.2% | 5.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| -3.3% | -3.9% | 0.6% | 0.1% | 0.0% | 0.0% | 0.1% |
| -0.9% | 0.4% | -1.3% | -0.1% | 0.0% | 0.0% | -0.1% |
| 0.1% | 1.8% | -1.7% | -0.3% | 0.0% | 0.0% | -0.3% |
| -0.5% | -1.0% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% |
| 3.1% | 3.3% | -0.2% | 0.0% | 0.0% | 0.0% | 0.0% |
| 0.2% | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% |
| -3.0% | -0.4% | -2.6% | -0.3% | 0.0% | 0.0% | -0.3% |
| 1.5% | 6.0% | -4.5% | -0.2% | -0.1% | 0.1% | -0.2% |
| 1.0% | 1.8% | -0.8% | -0.8% | -0.1% | 0.2% | -0.8% |
| | Wtd. Actual Return 5.2% -3.3% -0.9% 0.1% -0.5% 3.1% 0.2% -3.0% 1.5% 1.0% | Wtd. Actual Return Wtd. Index Return 5.2% 5.2% -3.3% -3.9% -0.9% 0.4% 0.1% 1.8% -0.5% -1.0% 3.1% 3.3% 0.2% 0.0% -3.0% -0.4% 1.5% 6.0% 1.0% 1.8% | Wtd. Actual Return Wtd. Index Return Excess Return 5.2% 5.2% 0.0% -3.3% -3.9% 0.6% -0.9% 0.4% -1.3% 0.1% 1.8% -1.7% -0.5% -1.0% 0.5% 3.1% 3.3% -0.2% 0.2% 0.0% 0.2% -3.0% -0.4% -2.6% 1.5% 6.0% -4.5% 1.0% 1.8% -0.8% | Wtd. Actual Return Wtd. Index Return Excess Return Selection Effect 5.2% 5.2% 0.0% 0.0% -3.3% -3.9% 0.6% 0.1% -0.9% 0.4% -1.3% -0.1% 0.1% 1.8% -1.7% -0.3% -0.5% -1.0% 0.5% 0.0% 3.1% 3.3% -0.2% 0.0% 0.2% 0.0% 0.2% 0.0% -3.0% -0.4% -2.6% -0.3% 1.5% 6.0% -4.5% -0.2% 1.0% 1.8% -0.8% -0.8% | Wtd. Actual Return Wtd. Return Index Return Excess Return Selection Effect Allocation Effect 5.2% 5.2% 0.0% 0.0% 0.0% -3.3% -3.9% 0.6% 0.1% 0.0% -0.9% 0.4% -1.3% -0.1% 0.0% 0.1% 1.8% -1.7% -0.3% 0.0% -0.5% -1.0% 0.5% 0.0% 0.0% -0.5% -1.0% 0.5% 0.0% 0.0% -0.2% 0.0% 0.2% 0.0% 0.0% -3.0% -0.4% -2.6% -0.3% 0.0% 1.5% 6.0% -4.5% -0.2% -0.1% | Wtd. Actual Return Wtd. Index Return Excess Return Selection Effect Allocation Effect Interaction Effect 5.2% 5.2% 0.0% 0.0% 0.0% 0.0% -3.3% -3.9% 0.6% 0.1% 0.0% 0.0% -0.9% 0.4% -1.3% -0.1% 0.0% 0.0% 0.1% 1.8% -1.7% -0.3% 0.0% 0.0% -0.5% -1.0% 0.5% 0.0% 0.0% 0.0% -0.5% -1.0% 0.5% 0.0% 0.0% 0.0% -0.2% 0.0% 0.2% 0.0% 0.0% 0.0% -3.0% -0.4% -2.6% -0.3% 0.0% 0.0% -3.0% -0.4% -2.6% -0.2% -0.1% 0.1% 1.5% 6.0% -4.5% -0.2% -0.1% 0.2% |



Attribution Effects

Total Fund Attribution Analysis



Attribution Summary 6 Months Ending December 31, 2014

| | | | - | | | | |
|---------------------------|--------------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction Effects | Total Effects |
| Total US Equity | 5.1% | 5.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total Non-US Equity | -8.3% | -8.9% | 0.6% | 0.1% | 0.0% | 0.0% | 0.0% |
| Total Global Equity | -4.5% | -1.9% | -2.6% | -0.3% | 0.0% | 0.0% | -0.3% |
| Total US Fixed Income | 0.0% | 2.0% | -2.0% | -0.4% | 0.0% | 0.0% | -0.4% |
| Total Global Fixed Income | -2.9% | -4.1% | 1.2% | 0.1% | -0.1% | 0.0% | 0.0% |
| Total Real Estate | 6.2% | 6.6% | -0.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Overlay | 1.7% | 0.0% | 1.7% | 0.0% | 0.0% | 0.0% | -0.1% |
| Total Liquid Alternatives | -4.2% | 0.5% | -4.6% | -0.5% | 0.0% | 0.0% | -0.5% |
| Total Private Equity | 7.5% | 6.7% | 0.8% | 0.0% | -0.2% | 0.0% | -0.2% |
| Total | -0.2% | 1.0% | -1.3% | -0.9% | -0.3% | 0.0% | -1.3% |
| | | | | | | | |



Total Fund Attribution Analysis



Attribution Summary 1 Year Ending December 31, 2014

| Total US Equity 12.5% 12.4% 0.1% 0.0% 0.0% 0.1% Total Non-US Equity -3.6% -3.9% 0.2% 0.0% -0.1% 0.0% 0.0% Total Global Equity 1.9% 4.2% -2.3% -0.2% 0.0% 0.0% -0.2% Total Global Equity 1.9% 4.2% -2.3% -0.2% 0.0% 0.0% -0.2% Total US Fixed Income 3.0% 6.0% -2.9% -0.6% 0.0% 0.1% -0.5% Total Global Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% -0.1% Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.4% -0.6% | | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction Effects | Total Effects |
|---|---------------------------|--------------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
| Total Non-US Equity -3.6% -3.9% 0.2% 0.0% -0.1% 0.0% 0.0% Total Global Equity 1.9% 4.2% -2.3% -0.2% 0.0% 0.0% -0.2% Total Global Equity 1.9% 4.2% -2.3% -0.2% 0.0% 0.0% -0.2% Total US Fixed Income 3.0% 6.0% -2.9% -0.6% 0.0% 0.1% -0.5% Total Global Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% -0.1% Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% <td>Total US Equity</td> <td>12.5%</td> <td>12.4%</td> <td>0.1%</td> <td>0.0%</td> <td>0.0%</td> <td>0.0%</td> <td>0.1%</td> | Total US Equity | 12.5% | 12.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Total Global Equity 1.9% 4.2% -2.3% -0.2% 0.0% 0.0% -0.29 Total US Fixed Income 3.0% 6.0% -2.9% -0.6% 0.0% 0.1% -0.5% Total US Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Global Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% -0.1% 0.0% 0.0% 0.5% -0.1% 0.0% 0.5% -0.1% -0.1% -0.1% -0.2% 1.5% 3.1% 0.1% -0.3% -0.1% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.1% -0.1% < | Total Non-US Equity | -3.6% | -3.9% | 0.2% | 0.0% | -0.1% | 0.0% | 0.0% |
| Total US Fixed Income 3.0% 6.0% -2.9% -0.6% 0.0% 0.1% -0.5% Total Global Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% -0.1% Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.6% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.4% -0.1% -0.1% -0.4% -0.1 | Total Global Equity | 1.9% | 4.2% | -2.3% | -0.2% | 0.0% | 0.0% | -0.2% |
| Total Global Fixed Income 1.5% 0.6% 0.9% 0.0% -0.1% 0.0% 0.0% Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% 0.0% -0.1% Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.2% Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.4% | Total US Fixed Income | 3.0% | 6.0% | -2.9% | -0.6% | 0.0% | 0.1% | -0.5% |
| Total Real Estate 11.6% 12.5% -0.8% -0.1% 0.0% 0.0% -0.1% Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.2% Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.6% | Total Global Fixed Income | 1.5% | 0.6% | 0.9% | 0.0% | -0.1% | 0.0% | 0.0% |
| Overlay 7.1% 0.0% 7.1% 0.0% -0.1% 0.0% -0.1% Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.2% Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.6% | Total Real Estate | 11.6% | 12.5% | -0.8% | -0.1% | 0.0% | 0.0% | -0.1% |
| Total Liquid Alternatives 10.2% 4.8% 5.4% 0.6% 0.0% 0.0% 0.5% Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.2% Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.6% | Overlay | 7.1% | 0.0% | 7.1% | 0.0% | -0.1% | 0.0% | -0.1% |
| Total Private Equity 19.0% 15.8% 3.1% 0.1% -0.3% -0.1% -0.2% Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.6% | Total Liquid Alternatives | 10.2% | 4.8% | 5.4% | 0.6% | 0.0% | 0.0% | 0.5% |
| Total 6.4% 6.9% -0.6% -0.1% -0.4% -0.1% -0.6% | Total Private Equity | 19.0% | 15.8% | 3.1% | 0.1% | -0.3% | -0.1% | -0.2% |
| | Total | 6.4% | 6.9% | -0.6% | -0.1% | -0.4% | -0.1% | -0.6% |



Total Fund Risk Statistics

| 1 Year Ending December 31, 2014 | | | | | | | | | | | | | |
|----------------------------------|----------|-----------|------|------------------|------|-------------------|------|------------|------|----------|------|------|-----------------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta | Sharpe Ratio |
| Total Fund | 100.0% | 6.4% | 15 | 5.7% | 67 | 0.8% | 25 | -0.6 | 58 | -0.9% | 56 | 1.1 | 1.1 |
| Policy Index | | 6.9% | 8 | 5.3% | 51 | 0.0% | 1 | | | 0.0% | 27 | 1.0 | 1.3 |
| Total Equity | 56.0% | 6.2% | 35 | 8.6% | 37 | 1.3% | 4 | 1.6 | 15 | 2.1% | 34 | 1.0 | 0.7 |
| MSCI ACWI | | 4.2% | 54 | 8.8% | 42 | 0.0% | 1 | | | 0.0% | 55 | 1.0 | 0.5 |
| Total US Equity | 32.3% | 12.5% | 33 | 8.8% | 31 | 0.1% | 1 | 1.6 | 6 | 0.1% | 34 | 1.0 | 1.4 |
| Total U.S. Equity Benchmark | | 12.4% | 34 | 8.8% | 31 | 0.0% | 1 | | | 0.0% | 35 | 1.0 | 1.4 |
| Total Non-US Equity | 13.8% | -3.6% | 42 | 9.5% | 52 | 1.2% | 1 | 0.2 | 33 | 0.0% | 40 | 0.9 | -0.4 |
| Total Non-US Equity Benchmark | | -3.9% | 45 | 10.0% | 73 | 0.0% | 1 | | | 0.0% | 40 | 1.0 | -0.4 |
| Total Global Equity | 9.9% | 1.9% | 70 | 9.1% | 52 | 1.3% | 3 | -1.8 | 95 | -2.4% | 69 | 1.0 | 0.2 |
| MSCI ACWI | | 4.2% | 48 | 8.8% | 45 | 0.0% | 1 | | | 0.0% | 49 | 1.0 | 0.5 |
| Total Fixed Income | 23.6% | 2.6% | 43 | 1.8% | 11 | 2.4% | 47 | 0.9 | 45 | 2.4% | 38 | 0.4 | 1.5 |
| Barclays Global Aggregate | | 0.6% | 76 | 4.0% | 54 | 0.0% | 1 | | | 0.0% | 75 | 1.0 | 0.1 |
| Total US Fixed Income | 17.6% | 3.0% | 61 | 1.3% | 24 | 1.6% | 49 | -1.8 | 58 | 0.5% | 26 | 0.4 | 2.3 |
| Barclays Aggregate | | 6.0% | 28 | 2.3% | 63 | 0.0% | 1 | | | 0.0% | 42 | 1.0 | 2.6 |
| Total Global Fixed Income | 6.0% | 1.5% | 61 | 3.4% | 33 | 1.0% | 14 | 0.9 | 45 | 1.0% | 62 | 0.8 | 0.4 |
| Barclays Global Aggregate | | 0.6% | 76 | 4.0% | 54 | 0.0% | 1 | | | 0.0% | 75 | 1.0 | 0.1 |
| Total Real Estate | 7.4% | 11.6% | | 4.8% | | 0.3% | | -2.5 | | -0.1% | | 0.9 | 2.4 |
| Total Real Estate Benchmark | | 12.5% | | 5.1% | | 0.0% | | | | 0.0% | | 1.0 | 2.4 |
| Total Liquid Alternatives | 9.6% | 10.2% | | 8.6% | | 8.1% | | 0.7 | | -3.7% | | 2.9 | 1.2 |
| CPI + 4% (Unadjusted) | | 4.8% | | 1.3% | | 0.0% | | | | 0.0% | | 1.0 | 3.6 |



Total Fund Risk Statistics

| 3 Years Ending December 31, 2014 | | | | | | | | | | | | | |
|----------------------------------|----------|-----------|------|------------------|------|-------------------|------|------------|------|----------|------|------|-----------------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta | Sharpe Ratio |
| Total Fund | 100.0% | 12.7% | 10 | 6.6% | 69 | 0.7% | 11 | 0.6 | 25 | 0.4% | 26 | 1.0 | 1.9 |
| Policy Index | | 12.3% | 17 | 6.6% | 66 | 0.0% | 1 | | | 0.0% | 46 | 1.0 | 1.9 |
| Total Equity | 56.0% | | | | | | | | | | | | |
| MSCI ACWI | | 14.1% | 72 | 10.6% | 34 | 0.0% | 1 | | | 0.0% | 76 | 1.0 | 1.3 |
| Total US Equity | 32.3% | 20.8% | 42 | 9.5% | 22 | 0.3% | 1 | 1.1 | 5 | 0.3% | 35 | 1.0 | 2.2 |
| Total U.S. Equity Benchmark | | 20.4% | 48 | 9.5% | 21 | 0.0% | 1 | | | 0.0% | 39 | 1.0 | 2.2 |
| Total Non-US Equity | 13.8% | 9.7% | 82 | 12.1% | 24 | 1.4% | 1 | 0.5 | 65 | 1.4% | 81 | 0.9 | 0.8 |
| Total Non-US Equity Benchmark | | 9.0% | 89 | 13.0% | 61 | 0.0% | 1 | | | 0.0% | 92 | 1.0 | 0.7 |
| Total Global Equity | 9.9% | 12.4% | 76 | 10.1% | 23 | 1.5% | 3 | -1.1 | 92 | -0.8% | 77 | 0.9 | 1.2 |
| MSCI ACWI | | 14.1% | 64 | 10.6% | 37 | 0.0% | 1 | | | 0.0% | 72 | 1.0 | 1.3 |
| Total Fixed Income | 23.6% | 3.9% | 56 | 2.7% | 9 | 2.3% | 25 | 1.4 | 37 | 3.4% | 54 | 0.6 | 1.4 |
| Barclays Global Aggregate | | 0.7% | 85 | 4.0% | 29 | 0.0% | 1 | | | 0.0% | 86 | 1.0 | 0.2 |
| Total US Fixed Income | 17.6% | 4.1% | 43 | 2.5% | 45 | 1.7% | 41 | 0.8 | 43 | 2.1% | 31 | 0.7 | 1.6 |
| Barclays Aggregate | | 2.7% | 62 | 2.7% | 50 | 0.0% | 1 | | | 0.0% | 82 | 1.0 | 1.0 |
| Total Global Fixed Income | 6.0% | | | | | | | | | | | | |
| Barclays Global Aggregate | | 0.7% | 85 | 4.0% | 29 | 0.0% | 1 | | | 0.0% | 86 | 1.0 | 0.2 |
| Total Real Estate | 7.4% | 10.4% | | 4.3% | | 1.0% | | -2.0 | | -0.1% | | 0.8 | 2.4 |
| Total Real Estate Benchmark | | 12.4% | | 5.0% | | 0.0% | | | | 0.0% | | 1.0 | 2.5 |
| Total Liquid Alternatives | 9.6% | | | | | | | | | | | | |
| CPI + 4% (Unadjusted) | | 5.4% | | 1.2% | | 0.0% | | | | 0.0% | | 1.0 | 4.4 |



Total Fund Risk Statistics

| 5 Years Ending December 31, 2014 | | | | | | | | | | | | | |
|----------------------------------|----------|-----------|------|------------------|------|-------------------|------|------------|------|----------|------|------|-----------------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta | Sharpe Ratio |
| Total Fund | 100.0% | 10.6% | 2 | 9.3% | 88 | 0.8% | 14 | 0.7 | 19 | 0.3% | 39 | 1.0 | 1.1 |
| Policy Index | | 10.0% | 23 | 9.0% | 77 | 0.0% | 1 | | | 0.0% | 50 | 1.0 | 1.1 |
| Total Equity | 56.0% | | | | | | | | | | | | |
| MSCI ACWI | | 9.2% | 75 | 14.6% | 37 | 0.0% | 1 | | | 0.0% | 76 | 1.0 | 0.6 |
| Total US Equity | 32.3% | 16.1% | 48 | 13.6% | 30 | 0.3% | 1 | 1.2 | 1 | 0.3% | 39 | 1.0 | 1.2 |
| Total U.S. Equity Benchmark | | 15.7% | 56 | 13.5% | 29 | 0.0% | 1 | | | 0.0% | 44 | 1.0 | 1.2 |
| Total Non-US Equity | 13.8% | 5.3% | 77 | 15.8% | 28 | 1.4% | 1 | 0.6 | 52 | 1.1% | 77 | 1.0 | 0.3 |
| Total Non-US Equity Benchmark | | 4.4% | 87 | 16.5% | 54 | 0.0% | 1 | | | 0.0% | 87 | 1.0 | 0.3 |
| Total Global Equity | 9.9% | 8.7% | 74 | 13.5% | 23 | 2.3% | 6 | -0.2 | 77 | 0.4% | 67 | 0.9 | 0.6 |
| MSCI ACWI | | 9.2% | 70 | 14.6% | 42 | 0.0% | 1 | | | 0.0% | 71 | 1.0 | 0.6 |
| Total Fixed Income | 23.6% | 5.9% | 40 | 2.8% | 11 | 3.3% | 37 | 1.0 | 26 | 4.7% | 30 | 0.4 | 2.1 |
| Barclays Global Aggregate | | 2.6% | 85 | 4.8% | 29 | 0.0% | 1 | | | 0.0% | 81 | 1.0 | 0.5 |
| Total US Fixed Income | 17.6% | 6.0% | 35 | 2.8% | 51 | 1.9% | 41 | 0.8 | 25 | 2.5% | 26 | 0.8 | 2.2 |
| Barclays Aggregate | | 4.4% | 57 | 2.7% | 46 | 0.0% | 1 | | | 0.0% | 81 | 1.0 | 1.6 |
| Total Global Fixed Income | 6.0% | | | | | | | | | | | | |
| Barclays Global Aggregate | | 2.6% | 85 | 4.8% | 29 | 0.0% | 1 | | | 0.0% | 81 | 1.0 | 0.5 |
| Total Real Estate | 7.4% | 12.2% | | 5.3% | | 1.1% | | -1.6 | | -0.3% | | 0.9 | 2.3 |
| Total Real Estate Benchmark | | 13.9% | | 5.8% | | 0.0% | | | | 0.0% | | 1.0 | 2.4 |
| Total Liquid Alternatives | 9.6% | | | | | | | | | | | | |
| CPI + 4% (Unadjusted) | | 5.8% | | 1.1% | | 0.0% | | | | 0.0% | | 1.0 | 5.1 |


Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) I | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|--|----------------------|-------------------|----------|-------------|-----------|----------------------|------------------|---------------|------|--------------|-----------------|--------------|-----------------|---------------|-----------------|---------------|--------|
| Total Fund | 4,328,232,756 | 100.0 | 100.0 | 1.0 | 49 | -0.2 | 41 | 6.4 | 15 | 12.7 | 10 | 10.6 | 2 | 6.5 | 27 | 8.3 | Apr-94 |
| Policy Index | | | | <u>1.8</u> | 27 | <u>1.0</u> | 13 | <u>6.9</u> | 8 | <u>12.3</u> | 17 | <u>10.0</u> | 23 | <u>6.6</u> | 25 | <u>8.2</u> | Apr-94 |
| Over/Under | | | | -0.8 | | -1.2 | | -0.5 | | 0.4 | | 0.6 | | -0.1 | | 0.1 | |
| Allocation Index | | | | 1.5 | 35 | 0.6 | 22 | 7.0 | 7 | 11.6 | 30 | 9.5 | 38 | 6.3 | 42 | | Apr-94 |
| InvestorForce Public DB > \$1B Net Median | | | | 0.8 | | -0.3 | | 5.2 | | 10.9 | | 9.2 | | 6.1 | | 7.8 | Apr-94 |
| Total Fund ex Clifton | 4,294,053,246 | 99.2 | - | 1.0 | | -0.1 | | 6.5 | | 12.5 | | 10.4 | | 6.4 | | 8.2 | Apr-94 |
| Total Fund ex Private Equity | 4,218,144,336 | 97.5 | | 1.0 | 49 | -0.3 | 49 | 6.1 | 25 | 11.8 | <mark>29</mark> | | | | | 11.8 | Jan-12 |
| Policy Index | | | | <u>1.8</u> | 27 | <u>1.0</u> | 13 | <u>6.9</u> | 8 | <u>12.3</u> | 17 | <u>10.0</u> | 23 | <u>6.6</u> | 25 | <u>12.3</u> | Jan-12 |
| Over/Under | | | | -0.8 | | -1.3 | | -0.8 | | -0.5 | | | | | | -0.5 | |
| InvestorForce Public DB > \$1B Net Median | | | | 0.8 | | -0.3 | | 5.2 | _ | 10.9 | | 9.2 | | 6.1 | | 10.9 | Jan-12 |
| Total US Equity | 1,396,193,063 | 32.3 | 30.0 | 5.2 | 55 | 5.1 | 37 | 12.5 | 33 | 20.8 | 42 | 16.1 | 48 | 7.5 | 86 | 9.2 | Dec-93 |
| Total U.S. Equity Benchmark | | | | <u>5.2</u> | 55 | <u>5.1</u> | 37 | <u>12.4</u> | 34 | <u>20.4</u> | 48 | <u>15.7</u> | 56 | <u>8.0</u> | 75 | <u>9.5</u> | Dec-93 |
| Over/Under | | | | 0.0 | | 0.0 | | 0.1 | | 0.4 | | 0.4 | | -0.5 | | -0.3 | |
| eA All US Equity Gross Median | | | | 5.5 | | 4.0 | | 10.3 | | 20.3 | | 16.0 | | 9.0 | | 11.0 | Dec-93 |
| BlackRock Equity Market Fund | 1,210,549,570 | 28.0 | | 5.3 | 52 | 5.2 | 31 | 12.5 | 25 | 20.5 | 35 | 15.7 | <mark>41</mark> | | | 7.7 | Dec-07 |
| Dow Jones U.S. Total Stock Market | | | | <u>5.2</u> | 52 | <u>5.2</u> | 32 | <u>12.5</u> | 25 | <u>20.4</u> | 35 | <u>15.7</u> | 41 | <u>8.1</u> | 58 | <u>7.6</u> | Dec-07 |
| Over/Under | | | | 0.1 | | 0.0 | | 0.0 | | 0.1 | | 0.0 | | | | 0.1 | |
| eA All US Equity Net Median | | | | 5.3 | | 3.6 | | 9.1 | | 19.3 | | 15.3 | | 8.4 | | 7.7 | Dec-07 |
| Western U.S. Index Plus | 139,063,476 | 3.2 | | 4.7 | 61 | 6.0 | 22 | 14.2 | 14 | 22.4 | 15 | 18.2 | 10 | | | 3.6 | May-07 |
| S&P 500 | | | | <u>4.9</u> | 57 | <u>6.1</u> | 21 | <u>13.7</u> | 16 | <u>20.4</u> | 36 | <u>15.5</u> | 47 | <u>7.7</u> | 70 | <u>6.3</u> | May-07 |
| Over/Under | | | | -0.2 | | -0.1 | | 0.5 | | 2.0 | | 2.7 | | | | -2.7 | |
| eA All US Equity Net Median | | | | 5.3 | | 3.6 | | 9.1 | | 19.3 | | 15.3 | | 8.4 | | 6.7 | May-07 |
| BlackRock Extended Equity Index | 46,580,017 | 1.1 | | 6.4 | 47 | 1.3 | 52 <mark></mark> | 7.5 | 33 | 20.7 | 19 | 17.0 | 23 | 9.4 | <mark>38</mark> | 12.6 | Oct-02 |
| Dow Jones U.S. Completion Total Stock Market | | | | <u>6.4</u> | 46 | <u>1.3</u> | 51 | <u>7.6</u> | 32 | <u>20.5</u> | 21 | <u>16.7</u> | 27 | <u>9.3</u> | 39 | <u>12.6</u> | Oct-02 |
| Over/Under | | | | 0.0 | | 0.0 | | -0.1 | | 0.2 | | 0.3 | | 0.1 | | 0.0 | |
| eA US Small-Mid Cap Equity Net Median | | | | 6.3 | | 1.6 | | 5.2 | | 18.1 | | 15.4 | | 8.8 | | 11.8 | Oct-02 |

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance / Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result

Policy Index: Currently, 30% Total U.S. Equity Benchmark, 19% Barclays Aggregate, 14% MSCI ACWI ex U.S., 10% MSCI ACWI, 5% Barclays Global Aggregate, 5% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index

Total U.S. Equity Benchmark: The Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) F | Rank | Return (%) | Since |
|---|----------------------|-------------------|----------|-------------|-----------------|----------------------|-----------------|-------------|-----------------|--------------|------|--------------|------|-----------------|-----------------|---------------|--------|
| Total Non-US Equity | 597,996,832 | 13.8 | 14.0 | -3.3 | 62 | -8.3 | 47 | -3.6 | 42 | 9.7 | 82 | 5.3 | 77 | 5.2 | 52 | 6.5 | Mar-94 |
| Total Non-US Equity Benchmark | | | | <u>-3.9</u> | 73 | <u>-8.9</u> | 58 | <u>-3.9</u> | 45 | <u>9.0</u> | 89 | <u>4.4</u> | 87 | <u>5.1</u> | 55 | <u>5.3</u> | Mar-94 |
| Over/Under | | | | 0.6 | | 0.6 | | 0.3 | | 0.7 | | 0.9 | | 0.1 | | 1.2 | |
| eA All EAFE Equity Net Median | | | | -2.8 | | -8.4 | | -4.3 | | 12.7 | | 7.0 | | 5.3 | | 6.3 | Mar-94 |
| BlackRock ACWI ex-U.S. Index | 249,106,026 | 5.8 | | -3.9 | 89 | -9.1 | 79 | -3.8 | 64 | 9.4 | 71 | 4.9 | 80 | | | 1.4 | Mar-07 |
| MSCI ACWI ex USA | | | | <u>-3.9</u> | 89 | <u>-8.9</u> | 77 | <u>-3.9</u> | 64 | <u>9.0</u> | 72 | <u>4.4</u> | 82 | <u>5.1</u> | 87 | <u>0.9</u> | Mar-07 |
| Over/Under | | | | 0.0 | | -0.2 | | 0.1 | | 0.4 | | 0.5 | | | | 0.5 | |
| eA ACWI ex-US All Cap Equity Net Median | | | | -1.6 | | -7.0 | | -2.3 | | 11.0 | | 6.7 | | 5.8 | | 2.1 | Mar-07 |
| Sprucegrove | 180,309,142 | 4.2 | | -2.8 | <mark>50</mark> | -8.7 | 54 | -3.2 | <mark>39</mark> | 9.9 | 76 | 7.1 | 41 | 5.7 | <mark>35</mark> | 8.0 | Mar-02 |
| MSCI EAFE | | | | <u>-3.6</u> | 75 | <u>-9.2</u> | 63 | <u>-4.9</u> | 62 | <u>11.1</u> | 60 | <u>5.3</u> | 69 | <u>4.4</u> | 71 | <u>6.2</u> | Mar-02 |
| Over/Under | | | | 0.8 | | 0.5 | | 1.7 | | -1.2 | | 1.8 | | 1.3 | | 1.8 | |
| MSCI ACWI ex USA | | | | -3.9 | 78 | -8.9 | 60 | -3.9 | 49 | 9.0 | 85 | 4.4 | 81 | 5.1 | 50 | 6.9 | Mar-02 |
| eA EAFE All Cap Equity Net Median | | | | -2.8 | | -8.2 | | -4.0 | | 12.5 | | 6.3 | | 5.1 | | 7.5 | Mar-02 |
| Hexavest | 77,396,658 | 1.8 | | -4.1 | 79 | -7.7 | 47 | -4.3 | 54 | 9.3 | 80 | | | | | 4.3 | Dec-10 |
| MSCI EAFE | | | | <u>-3.6</u> | 75 | <u>-9.2</u> | 63 | -4.9 | 62 | <u>11.1</u> | 60 | <u>5.3</u> | 69 | <u>4.4</u> | 71 | <u>4.7</u> | Dec-10 |
| Over/Under | | | | -0.5 | | 1.5 | | 0.6 | | -1.8 | | | | | | -0.4 | |
| eA EAFE All Cap Equity Net Median | | | | -2.8 | | -8.2 | | -4.0 | | 12.5 | | 6.3 | | 5.1 | | 5.7 | Dec-10 |
| Walter Scott | 91,185,006 | 2.1 | | -2.1 | 57 | -5.8 | <mark>32</mark> | -3.5 | 62 | 9.1 | 72 | | | | | 4.2 | Dec-10 |
| MSCI ACWI ex USA | | | | <u>-3.9</u> | 89 | <u>-8.9</u> | 77 | <u>-3.9</u> | 64 | <u>9.0</u> | 72 | <u>4.4</u> | 82 | <u>5.1</u> | 87 | <u>2.8</u> | Dec-10 |
| Over/Under | | | | 1.8 | | 3.1 | | 0.4 | | 0.1 | | | | | | 1.4 | |
| eA ACWI ex-US All Cap Equity Net Median | | | | -1.6 | | -7.0 | | -2.3 | | 11.0 | | 6.7 | | 5.8 | | 4.9 | Dec-10 |

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|----------------------------------|----------------------|-------------------|----------|-------------|------|----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Global Equity | 430,311,722 | 9.9 | 10.0 | -0.9 | 77 | -4.5 | 78 | 1.9 | 70 | 12.4 | 76 | 8.7 | 74 | | | 5.5 | May-05 |
| MSCI ACWI | | | | <u>0.4</u> | 65 | <u>-1.9</u> | 57 | <u>4.2</u> | 48 | <u>14.1</u> | 64 | <u>9.2</u> | 70 | <u>6.1</u> | 67 | <u>6.7</u> | May-05 |
| Over/Under | | | | -1.3 | | -2.6 | | -2.3 | | -1.7 | | -0.5 | | | | -1.2 | |
| eA All Global Equity Net Median | | | | 1.2 | | -1.4 | | 4.0 | | 15.3 | | 10.6 | | 7.0 | | 7.7 | May-05 |
| BlackRock MSCI ACWI Equity Index | 222,413,451 | 5.1 | | 0.5 | 63 | -1.8 | 54 | 4.6 | 45 | | | | | | | | May-12 |
| MSCI ACWI | | | | <u>0.4</u> | 65 | <u>-1.9</u> | 57 | <u>4.2</u> | 48 | <u>14.1</u> | 64 | <u>9.2</u> | 70 | <u>6.1</u> | 67 | <u>16.2</u> | May-12 |
| Over/Under | | | | 0.1 | | 0.1 | | 0.4 | | | | | | | | | |
| eA All Global Equity Net Median | | | | 1.2 | | -1.4 | | 4.0 | | 15.3 | | 10.6 | | 7.0 | | 16.6 | May-12 |
| GMO Global Equity | 207,898,270 | 4.8 | | -2.3 | 86 | -7.3 | 88 | -0.9 | 85 | 11.3 | 85 | 8.3 | 76 | | | 6.6 | Apr-05 |
| MSCI ACWI | | | | <u>0.4</u> | 65 | <u>-1.9</u> | 57 | <u>4.2</u> | 48 | <u>14.1</u> | 64 | <u>9.2</u> | 70 | <u>6.1</u> | 67 | <u>6.7</u> | Apr-05 |
| Over/Under | | | | -2.7 | | -5.4 | | -5.1 | | -2.8 | | -0.9 | | | | -0.1 | |
| eA All Global Equity Net Median | | | | 1.2 | | -1.4 | | 4.0 | | 15.3 | | 10.6 | | 7.0 | | 7.7 | Apr-05 |



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|---------------------------------------|----------------------|-------------------|----------|-------------|------|----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Private Equity | 110,088,420 | 2.5 | 5.0 | 1.5 | | 7.5 | | 19.0 | | 15.7 | | | | | | | Jul-10 |
| DJ U.S. Total Stock Market Index + 3% | | | | <u>6.0</u> | | <u>6.7</u> | | <u>15.8</u> | | <u>24.0</u> | | | | | | | Jul-10 |
| Over/Under | | | | -4.5 | | 0.8 | | 3.2 | | -8.3 | | | | | | | |
| Adams Street Partners | 71,314,433 | 1.6 | | 2.8 | | 7.1 | | 19.6 | | 15.3 | | | | | | | Jul-10 |
| DJ U.S. Total Stock Market Index + 3% | | | | <u>6.0</u> | | <u>6.7</u> | | <u>15.8</u> | | <u>24.0</u> | | | | | | | Jul-10 |
| Over/Under | | | | -3.2 | | 0.4 | | 3.8 | | -8.7 | | | | | | | |
| Panteon Ventures | 8,083,286 | 0.2 | | -2.4 | | 3.3 | | 16.7 | | 10.6 | | | | | | | Aug-10 |
| DJ U.S. Total Stock Market Index + 3% | | | | <u>6.0</u> | | <u>6.7</u> | | <u>15.8</u> | | <u>24.0</u> | | | | | | | Aug-10 |
| Over/Under | | | | -8.4 | | -3.4 | | 0.9 | | -13.4 | | | | | | | |
| Harbourvest | 30,690,701 | 0.7 | | -0.3 | | 10.4 | | 18.5 | | | | | | | | | May-13 |
| DJ U.S. Total Stock Market Index + 3% | | | | <u>6.0</u> | | <u>6.7</u> | | <u>15.8</u> | | <u>24.0</u> | | | | | | <u>21.4</u> | May-13 |
| Over/Under | | | | -6.3 | | 3.7 | | 2.7 | | | | | | | | | |

Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current quarter cash flows.



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD F (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|--------------------------------|----------------------|-------------------|----------|-------------|-----------------|------------------------|------|-------------|------|--------------|-----------------|--------------|-----------------|---------------|-----------------|---------------|--------|
| Total US Fixed Income | 759,621,510 | 17.6 | 19.0 | 0.1 | 77 | 0.0 | 77 | 3.0 | 61 | 4.1 | 43 | 6.0 | 35 | 5.9 | 25 | 6.3 | Feb-94 |
| Barclays Aggregate | | | | <u>1.8</u> | 15 | <u>2.0</u> | 18 | <u>6.0</u> | 28 | <u>2.7</u> | 62 | <u>4.4</u> | 57 | <u>4.7</u> | 48 | <u>5.8</u> | Feb-94 |
| Over/Under | | | | -1.7 | | -2.0 | | -3.0 | | 1.4 | | 1.6 | | 1.2 | | 0.5 | |
| eA All US Fixed Inc Net Median | | | | 0.7 | | 0.7 | | 3.9 | | 3.5 | | 4.8 | | 4.6 | | 5.7 | Feb-94 |
| BlackRock U.S. Debt Fund | 139,244,770 | 3.2 | | 1.8 | 15 | 2.0 | 17 | 6.2 | 25 | 2.8 | 60 | 4.6 | 55 | 4.8 | 46 | 5.7 | Nov-95 |
| Barclays Aggregate | | | | <u>1.8</u> | 15 | <u>2.0</u> | 18 | <u>6.0</u> | 28 | <u>2.7</u> | 62 | <u>4.4</u> | 57 | <u>4.7</u> | 48 | <u>5.6</u> | Nov-95 |
| Over/Under | | | | 0.0 | | 0.0 | | 0.2 | | 0.1 | | 0.2 | | 0.1 | | 0.1 | |
| eA All US Fixed Inc Net Median | | | | 0.7 | | 0.7 | | 3.9 | | 3.5 | | 4.8 | _ | 4.6 | | 5.5 | Nov-95 |
| Western | 266,362,313 | 6.2 | | 1.4 | <mark>30</mark> | 1.7 | 27 | 7.4 | 16 | 5.2 | <mark>33</mark> | 6.8 | <mark>28</mark> | 5.5 | <mark>30</mark> | 6.6 | Dec-96 |
| Barclays Aggregate | | | | <u>1.8</u> | 15 | <u>2.0</u> | 18 | <u>6.0</u> | 28 | <u>2.7</u> | 62 | <u>4.4</u> | 57 | <u>4.7</u> | 48 | <u>5.7</u> | Dec-96 |
| Over/Under | | | | -0.4 | | -0.3 | | 1.4 | | 2.5 | | 2.4 | | 0.8 | | 0.9 | |
| eA All US Fixed Inc Net Median | | | | 0.7 | | 0.7 | | 3.9 | | 3.5 | | 4.8 | | 4.6 | | 5.6 | Dec-96 |
| Reams | 282,260,049 | 6.5 | | -2.0 | 97 | -2.4 | 91 | -3.6 | 99 | 2.8 | 59 | 5.3 | <mark>42</mark> | 6.1 | 22 | 5.9 | Sep-01 |
| Reams Custom Index | | | | <u>0.1</u> | 76 | <u>0.1</u> | 68 | <u>0.2</u> | 94 | <u>1.3</u> | 83 | <u>3.6</u> | 70 | <u>4.3</u> | 60 | <u>4.6</u> | Sep-01 |
| Over/Under | | | | -2.1 | | -2.5 | | -3.8 | | 1.5 | | 1.7 | | 1.8 | | 1.3 | |
| Barclays Aggregate | | | | 1.8 | 15 | 2.0 | 18 | 6.0 | 28 | 2.7 | 62 | 4.4 | 57 | 4.7 | 48 | 5.0 | Sep-01 |
| eA All US Fixed Inc Net Median | | | | 0.7 | | 0.7 | | 3.9 | | 3.5 | | 4.8 | _ | 4.6 | | 5.0 | Sep-01 |
| Loomis Sayles Multi Strategy | 71,754,377 | 1.7 | | 0.0 | 83 | -0.7 | 83 | 6.8 | 20 | 8.1 | 10 | 8.4 | 18 | | | 7.2 | Jul-05 |
| Loomis Custom Index | | | | <u>0.8</u> | 48 | <u>0.3</u> | 60 | <u>4.6</u> | 45 | <u>4.3</u> | 41 | <u>5.7</u> | 37 | | | <u>5.7</u> | Jul-05 |
| Over/Under | | | | -0.8 | | -1.0 | | 2.2 | | 3.8 | | 2.7 | | | | 1.5 | |
| Barclays Aggregate | | | | 1.8 | 15 | 2.0 | 18 | 6.0 | 28 | 2.7 | 62 | 4.4 | 57 | 4.7 | 48 | 4.8 | Jul-05 |
| eA All US Fixed Inc Net Median | | | | 0.7 | | 0.7 | | 3.9 | | 3.5 | | 4.8 | | 4.6 | | 4.8 | Jul-05 |

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index



Total Fund Performance Detail (Net)

| Market V | llue (\$) Port | % of tfolio | Policy % | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|--|-------------------|----------------|----------|-------------|-----------|----------------------|------|-------------|-----------------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Global Fixed Income 259,940 | 589 | 6.0 | 5.0 | -0.5 | <u>39</u> | -2.9 | 50 | 1.5 | 61 | | | | | | | 1.1 | Jun-12 |
| Barclays Global Aggregate | | | | <u>-1.0</u> | 55 | <u>-4.1</u> | 69 | <u>0.6</u> | 76 | <u>0.7</u> | 85 | <u>2.6</u> | 85 | <u>3.6</u> | 80 | <u>0.3</u> | Jun-12 |
| Over/Under | | | | 0.5 | | 1.2 | | 0.9 | | | | | | | | 0.8 | |
| eA All Global Fixed Inc Net Median | | | _ | -0.9 | | -3.0 | | 2.3 | | 4.4 | | 4.9 | | 4.9 | | 3.7 | Jun-12 |
| Loomis Sayles Global Fixed Income 92,140 | 718 | 2.1 | | -1.4 | 60 | -4.4 | 72 | 0.4 | 79 | | | | | | | 0.7 | Jun-12 |
| Barclays Global Aggregate | | | | <u>-1.0</u> | 51 | <u>-4.1</u> | 68 | <u>0.6</u> | 73 | <u>0.7</u> | 82 | <u>2.6</u> | 81 | <u>3.6</u> | 70 | <u>0.3</u> | Jun-12 |
| Over/Under | | | | -0.4 | | -0.3 | | -0.2 | | | | | | | | 0.4 | |
| eA Global Fixed Inc Unhedged Net Median | | | | -1.0 | | -3.4 | | 1.9 | | 4.1 | | 4.6 | | 4.2 | | 3.1 | Jun-12 |
| PIMCO Global Fixed Income 125,823 | 520 | 2.9 | | -0.1 | 18 | -2.9 | 39 | 2.1 | <mark>48</mark> | | | | | | | -0.7 | Sep-12 |
| Barclays Global Aggregate | | | | <u>-1.0</u> | 51 | -4.1 | 68 | <u>0.6</u> | 73 | <u>0.7</u> | 82 | <u>2.6</u> | 81 | <u>3.6</u> | 70 | -1.1 | Sep-12 |
| Over/Under | | | | 0.9 | | 1.2 | | 1.5 | | | | | | | | 0.4 | |
| eA Global Fixed Inc Unhedged Net Median | | | | -1.0 | | -3.4 | | 1.9 | | 4.1 | | 4.6 | | 4.2 | | 1.6 | Sep-12 |
| Loomis Strategic Alpha 41,976 | 351 | 1.0 | | 0.0 | 17 | 0.3 | 6 | 2.4 | 45 | | | | | | | 2.7 | Jul-13 |
| Barclays Global Aggregate | | | | <u>-1.0</u> | 51 | <u>-4.1</u> | 68 | <u>0.6</u> | 73 | <u>0.7</u> | 82 | <u>2.6</u> | 81 | <u>3.6</u> | 70 | <u>1.2</u> | Jul-13 |
| Over/Under | | | | 1.0 | | 4.4 | | 1.8 | | | | | | | | 1.5 | |
| eA Global Fixed Inc Unhedged Net Median | | | | -1.0 | | -3.4 | | 1.9 | | 4.1 | | 4.6 | | 4.2 | | 3.1 | Jul-13 |



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | ^{3 Mo} (%) Rar | Fi nk ` | iscal YTD F (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|-----------------------------|----------------------|-------------------|----------|-------------------------|------------|-----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Real Estate | 322,351,195 | 7.4 | 7.0 | 3.1 | | 6.2 | | 11.6 | | 10.4 | | 12.2 | | 5.4 | | 7.8 | Mar-94 |
| Total Real Estate Benchmark | | | | <u>3.3</u> | | <u>6.6</u> | | <u>12.5</u> | | <u>12.4</u> | | <u>13.9</u> | | <u>7.0</u> | | <u>8.8</u> | Mar-94 |
| Over/Under | | | | -0.2 | | -0.4 | | -0.9 | | -2.0 | | -1.7 | | -1.6 | | -1.0 | |
| Prudential Real Estate | 107,886,266 | 2.5 | | 3.8 | | 6.9 | | 12.7 | | 11.7 | | 14.0 | | 7.2 | | 5.2 | Jun-04 |
| NCREIF-ODCE | | | | <u>3.3</u> | | <u>6.6</u> | | <u>12.5</u> | | <u>12.4</u> | | <u>13.9</u> | | <u>7.1</u> | | <u>7.4</u> | Jun-04 |
| Over/Under | | | | 0.5 | | 0.3 | | 0.2 | | -0.7 | | 0.1 | | 0.1 | | -2.2 | |
| UBS Real Estate | 208,224,343 | 4.8 | | 2.8 | | 5.8 | | 10.6 | | 9.6 | | 11.4 | | 6.6 | | 7.3 | Mar-03 |
| NCREIF-ODCE | | | | <u>3.3</u> | | <u>6.6</u> | | <u>12.5</u> | | <u>12.4</u> | | <u>13.9</u> | | <u>7.1</u> | | <u>7.8</u> | Mar-03 |
| Over/Under | | | | -0.5 | | -0.8 | | -1.9 | | -2.8 | | -2.5 | | -0.5 | | -0.5 | |
| RREEF | 6,240,585 | 0.1 | | 1.9 | | 7.3 | | 25.9 | | 21.4 | | 24.2 | | | | -6.6 | Sep-07 |
| NCREIF-ODCE | | | | <u>3.3</u> | | <u>6.6</u> | | <u>12.5</u> | | <u>12.4</u> | | <u>13.9</u> | | <u>7.1</u> | | <u>3.0</u> | Sep-07 |
| Over/Under | | | | -1.4 | | 0.7 | | 13.4 | | 9.0 | | 10.3 | | | | -9.6 | |

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index



Total Fund Performance Detail (Net)

| | Market Value (\$) | % of Portfolio | Policy % | 3 Mo (%) F | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Return (%) | Since |
|--------------------------------|----------------------|-------------------|----------|---------------|------|----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Liquid Alternatives | 417,549,917 | 9.6 | 10.0 | -3.0 | | -4.2 | | 10.2 | | | | | | | | 12.8 | Apr-13 |
| CPI + 4% (Unadjusted) | | | | -0.4 | | <u>0.5</u> | | <u>4.8</u> | | <u>5.4</u> | | <u>5.8</u> | | <u>6.2</u> | | <u>4.6</u> | Apr-13 |
| Over/Under | | | | -2.6 | | -4.7 | | 5.4 | | | | | | | | 8.2 | |
| Bridgewater All Weather Fund | 274,286,699 | 6.3 | | 0.1 | | -1.7 | | 7.6 | | | | | | | | 8.3 | Aug-13 |
| CPI + 5% (Unadjusted) | | | | -0.1 | | <u>1.0</u> | | <u>5.8</u> | | | | | | | | <u>5.3</u> | Aug-13 |
| Over/Under | | | | 0.2 | | -2.7 | | 1.8 | | | | | | | | 3.0 | |
| Tortoise Energy Infrastructure | 143,263,217 | 3.3 | | -8.3 | | -8.5 | | 15.6 | | | | | | | | 17.1 | Apr-13 |
| Wells Fargo MLP Index | | | | <u>-11.9</u> | | <u>-9.9</u> | | <u>6.0</u> | | <u>13.3</u> | | | | | | <u>7.4</u> | Apr-13 |
| Over/Under | | | | 3.6 | | 1.4 | | 9.6 | | | | | | | | 9.7 | |



Total Fund Return Summary vs. Peer Universe (Trailing Periods)



Total Fund vs. InvestorForce Public DB > \$1B Net

| | Return (Rank) | | | | | | | |
|-----------------|---------------|----------|-----------|----------|-----------|-----------|----------|----------|
| 5th Percentile | 2.9 | 7.2 | 1.5 | 7.2 | 13.0 | 10.4 | 7.0 | 8.7 |
| 25th Percentile | 2.0 | 6.1 | 0.3 | 6.1 | 12.0 | 9.8 | 6.6 | 8.2 |
| Median | 0.8 | 5.2 | -0.3 | 5.2 | 10.9 | 9.2 | 6.1 | 7.8 |
| 75th Percentile | 0.4 | 4.3 | -1.1 | 4.3 | 10.1 | 8.6 | 5.6 | 7.0 |
| 95th Percentile | -0.7 | 2.9 | -1.8 | 2.9 | 8.0 | 7.1 | 4.7 | 4.6 |
| # of Portfolios | 51 | 51 | 51 | 51 | 51 | 49 | 46 | 31 |
| Total Fund | 1.0 (49) | 6.4 (15) | -0.2 (41) | 6.4 (15) | 12.7 (10) | 10.6 (2) | 6.5 (27) | 8.3 (23) |
| Policy Index | 1.8 (27) | 6.9 (8) | 1.0 (13) | 6.9 (8) | 12.3 (17) | 10.0 (23) | 6.6 (25) | 8.2 (24) |



Total Fund Return Summary vs. Peer Universe (Calendar Years)



Total Fund vs. InvestorForce Public DB > \$1B Net

| | Return (Rank) | | | | | | | | | | |
|--------------------------------|---------------|---------|-----------|----------|-----------|-----------|------------|----------|-----------|----------|------|
| 5th Percentile | 7.2 | 19.1 | 14.0 | 4.5 | 14.9 | 27.6 | -17.0 | 10.8 | 15.8 | 10.5 | |
| 25th Percentile | 6.1 | 15.9 | 13.4 | 1.7 | 13.8 | 22.3 | -25.4 | 9.8 | 14.6 | 9.1 | |
| Median | 5.2 | 14.3 | 12.8 | 0.6 | 13.2 | 20.4 | -26.7 | 8.1 | 13.9 | 7.8 | |
| 75th Percentile | 4.3 | 11.5 | 11.9 | -0.3 | 12.1 | 18.4 | -28.2 | 6.8 | 12.6 | 6.6 | |
| 95th Percentile | 2.9 | 8.4 | 9.7 | -1.4 | 9.6 | 13.8 | -30.3 | 5.1 | 3.9 | 1.2 | |
| # of Portfolios | 51 | 43 | 33 | 32 | 31 | 30 | 29 | 29 | 28 | 27 | |
| Total Fund | 6.4 (1 | 5) 18.0 | (9) 14.0 | (10) 0.3 | (60) 15.1 | (4) 24.2 | (20) -30.9 | (98) 7.0 | (74) 14.2 | (35) 7.8 | (50) |
| Policy Index | 6.9 (8 | 8) 17.4 | (12) 12.9 | (46) 0.5 | (53) 13.2 | (52) 21.0 | (38) -27.1 | (58) 8.5 | (46) 14.0 | (46) 7.6 | (62) |

Total Fund Return Summary vs. Peer Universe (Fiscal Years)



Total Fund vs. InvestorForce Public DB > \$1B Net

| | Return (Rank) | | | | | | | | |
|-----------------|---------------|-----------|------|------|------|---------|----------|------------|------|
| 5th Percentile | 18.5 | 15.2 | | 4.4 | | 24.9 | 16.7 | -11.7 | |
| 25th Percentile | 16.9 | 12.8 | | 1.5 | | 22.5 | 14.5 | -15.3 | |
| Median | 15.8 | 11.4 | | 0.5 | | 21.9 | 12.9 | -18.4 | |
| 75th Percentile | 14.6 | 10.2 | | -0.4 | | 18.8 | 11.4 | -19.8 | |
| 95th Percentile | 13.6 | 7.3 | | -0.8 | | 16.6 | 8.4 | -22.2 | |
| # of Portfolios | 40 | 43 | | 31 | | 32 | 31 | 30 | |
| Total Fund | 18.8 | (2) 13.2 | (21) | 1.5 | (25) | 24.4 (1 | 0) 15.0 | (18) -21.2 | (92) |
| Policy Index | 17.9 | (13) 12.4 | (33) | 1.4 | (27) | 22.5 (2 | .7) 11.9 | (72) -18.3 | (48) |



Total Fund Allocations vs. Peer Universe



Total Plan Allocation vs. InvestorForce Public DB > \$1B Net

| | Allocatio | on (Rank) |) | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-----------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|--|
| 5th Percentile | 67.8 | | 25.1 | | 50.2 | | 26.2 | | 33.9 | | 12.4 | | 32.0 | | 29.3 | | 12.4 | | 11.8 | | 6.4 | | |
| 25th Percentile | 57.1 | | 17.6 | | 33.6 | | 19.4 | | 26.2 | | 6.3 | | 22.3 | | 21.1 | | 8.3 | | 8.8 | | 2.2 | | |
| Median | 50.8 | | 10.0 | | 26.2 | | 15.6 | | 21.8 | | 4.6 | | 15.8 | | 13.9 | | 5.2 | | 6.9 | | 0.9 | | |
| 75th Percentile | 40.2 | | 3.7 | | 20.7 | | 11.5 | | 18.1 | | 3.1 | | 10.9 | | 6.9 | | 3.9 | | 3.6 | | 0.3 | | |
| 95th Percentile | 24.3 | | 1.4 | | 11.1 | | 3.0 | | 9.5 | | 1.6 | | 4.6 | | 4.0 | | 1.7 | | 0.8 | | 0.1 | | |
| # of Portfolios | 49 | | 23 | | 47 | | 46 | | 49 | | 28 | | 47 | | 42 | | 41 | | 40 | | 45 | | |
| Total Fund | 56.0 | (30) | 9.9 | (51) | 32.3 | (27) | 13.8 | (67) | 23.6 | (39) | 6.0 | (30) | 17.6 | (42) | 9.6 | (62) | 2.5 | (87) | 7.4 | (42) | 0.8 | (53) | |

Manager Due Diligence



Due Diligence Monitor

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

| Investment Options | Performance (Recent Quarter) | Changes/ Announcements (Recent Quarter) | NEPC Due Diligence Committee Recommendations | Plan Recommendation | Comments |
|--|------------------------------------|--|---|------------------------|---|
| BlackRock Equity Market Index | - | - | - | - | |
| Western U.S. Index Plus | - | - | - | - | |
| BlackRock Extended Equity Index | - | - | - | - | |
| BlackRock MSCI ACWI ex-U.S. Index | Bottom Quartile | - | - | - | |
| Sprucegrove | - | No | Hold | No Action | 3Q 2014 Departure |
| Hexavest | Bottom Quartile | - | - | - | |
| Walter Scott | - | - | - | - | |
| BlackRock MSCI ACWI Index | - | - | - | - | |
| GMO | Bottom Quartile | - | - | - | |
| Adams Street | N/A | - | - | - | |
| HarbourVest | N/A | - | - | - | |
| Pantheon | N/A | - | - | - | |
| BlackRock U.S. Debt Fund | Top Quartile | - | - | - | |
| Western | - | _ | - | - | |
| Reams Unconstrained Bond | Bottom Quartile | - | - | - | |
| Loomis Sayles Multi-Sector Full Discretion | Bottom Quartile | - | - | - | |
| Loomis Sayles Global Fixed Income | - | - | - | - | |
| PIMCO Global Fixed Income | Top Quartile | Yes | Client Review | Client Review | Continued organizational developments |
| Loomis Sayles Strategic Alpha | Top Quartile | - | - | - | |



December 31, 2014

Due Diligence Monitor Continued

| Investment Options | Performance (Recent Quarter) | Changes/ Announcements (Recent Quarter) | NEPC Due Diligence Committee Recommendations | Plan Recommendation | Comments |
|--------------------|------------------------------------|--|---|------------------------|----------|
| Prudential | N/A | - | - | - | |
| RREEF | N/A | - | - | - | |
| UBS | N/A | - | - | - | |
| Bridgewater | N/A | - | - | - | |
| Tortoise | N/A | - | - | - | |
| Parametric/Clifton | N/A | - | - | - | |

| NEPC Due Diligence Committee Recommendation Key | | | | | |
|---|---|--|--|--|--|
| No Action | Informational items have surfaced; no action is recommended. | | | | |
| Watch | Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues. | | | | |
| Hold | Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues. | | | | |
| Client Review | Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager. | | | | |
| Terminate | We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager. | | | | |

Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

Manager Changes/Announcements

Sprucegrove Investment Management Ltd.

On September 1, 2014, NEPC was notified that Co-President/Co-Portfolio Manager Peter Ellement resigned from the firm. Sprucegrove did not provide transparency into the exact reason for the departure other than there appears to be some level of conflict between Mr. Ellement and other members of the firm. Shirley Woo will be joined by Arjun Kumar as the Co-Portfolio Managers on the International Equity Fund going forward. Craig Merrigan will become the sole President of the firm.

NEPC recommends a due diligence status of HOLD for Sprucegrove. We do not recommend any action at this time as a result of Mr. Ellement's departure.

PIMCO

On September 26, 2014 PIMCO announced several changes to senior leadership and portfolio management in reaction to the sudden resignation of founder and CIO Bill Gross. The following changes were announced:

- Bill Gross resigned from the firm, effective immediately, and will join Janus Capital Group, Inc.
- Daniel Ivascyn was elected Global CIO, succeeding Bill Gross
- PIMCO appointed Andrew Balls, CIO Global; Mark Kiesel, CIO Global Credit; Virginie Maissoneuve, CIO Equities; Scott Mather CIO U.S. Core strategies; and Mihir Worah, CIO Real Return and Asset Allocation
- Scott Mather and Mark Mihir were appointed Portfolio Managers for the Total Return Fund
- Saumil Parikh, Mohsen Fahmi, and Dan Ivascyn will serve as Portfolio Managers for the Unconstrained Bond Fund.
- PIMCO also announced Chris Dialynas will return from sabbatical in the fourth quarter of 2014

The news comes on the heels of a number of organizational related developments at PIMCO, including the departures of co-CIO and CEO Mohammed El-Erian and Managing Director Marc Seidner, the appointment of six deputy CIOs, as well as numerous unfavorable media profiles of Mr. Gross and his at times erratic behavior. At that time NEPC believed that many of the announcements were disconcerting and a potential risk to the overall health of the organization; however because Mr. Gross remained with the firm, the investment process was unaltered, and the enactment of a Deputy CIO structure tempered succession concerns, NEPC did not believe PIMCO's investment capabilities would suffer. NEPC conducted many meetings, phone calls, and e-mail correspondence with senior personnel at PIMCO, including Bill Gross and the then Deputy CIOs in response to aforementioned developments. We felt that while the situation was transient at the time, the placement of the six Deputy CIOs had cleared some uncertainty regarding leadership transition after the heir-apparent, Mohammed El-Erian, resigned from PIMCO.



Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

Manager Changes/Announcements

PIMCO (continued)

Organizational and Business Risk

Risk of additional turnover at senior ranks within the organization is a concern to NEPC in the near term. During NEPC's onsite meeting with PIMCO they expressed that they are doing all they can to structure incentive plans and compensation arrangements to mitigate turnover risk in the intermediate term. On a positive note, we view the appointment of a clear successor in Dan Ivascyn as constructive given the uncertainty surrounding leadership transition in recent months. After speaking with various members of the firm, including a member of the CIO selection committee, it is clear that Mr. Ivascyn was a leading candidate and is a very well-respected leader and investor at PIMCO. Longer-term business impact is another aspect we will be monitoring. PIMCO has to experienced significant outflows as a result of this announcement totaling approximately 7% (\$40 B) as at September 30, 2014. A reduction in assets will negatively impact the firm's revenue, which has broader implications on staffing, compensation, and growth in the mid to long term. This is an area that NEPC will investigate further in order to assess critical asset levels.

Cultural Impact

Bill Gross' resignation also brings about concerns regarding firm culture, and the potential for it to evolve. PIMCO is known as an incredibly competitive meritocracy, a culture championed by Bill Gross over the years. In a conversation with senior investment professionals at PIMCO, including Dan Ivascyn, Scott Mather (CIO of Core Strategies), and Saumil Parikh (Managing Director and Investment Committee member), all three separately refuted that culture would change significantly. On the margin, they expressed that investment discussions could become less centralized, creating a more collegial environment, which we would view as a positive.

Investment Impact

The All Asset funds are products that Bill Gross wasn't the lead portfolio manager on, nor was he an intricate part of the team for these products. PIMCO is a leading investment manager in the fixed income markets and has been successful in the management of a broad array of strategies for many years. Notwithstanding Mr. Gross' resignation, PIMCO maintains a talented and experienced team of investment staff, led by an impressive group of CIOs who have worked together for periods of 10 years and longer. Bill Gross' departure does not change this significantly, given that he was dedicated to a small number of strategies as lead portfolio manager (Total Return and Unconstrained Bond). PIMCO expressed to us that the investment process will largely remain the same with a few minor process enhancements that may take place over an extended period of time. PIMCO's top-down investment committee and secular and cyclical forum decision-making structure will remain in place and continue to drive portfolio positioning and implementation. We do, however, realize that Mr. Gross has been a key contributor and the most influential decision maker at the firm since its inception. NEPC believes this generates uncertainty regarding the potential for adverse impact on long-term investment process and performance.



Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

Manager Changes/Announcements

PIMCO (continued)

PIMCO recently announced three additions to the firm and one new appointment. Rejoining PIMCO will be Michael Spence, Jeremie Banet and Marc Seidner. You may remember that Jeremie Banet left the firm earlier in the year to pursue an entrepreneurial venture (there were also rumors that a strained relationship with Bill Gross drove him to resign). Mr. Banet will be returning to the Real Return team where he will focus on inflation-linked strategies. He will report to Mihir Worah, CIO of Real Return. Michael Spence, a Nobel Laureate and Professor at NYU Stern School of Business, will be rejoining the firm as a consultant similar to role he held until early 2014. He will focus on macroeconomic and global policy issues, and he will be contributing to the secular and cyclical forums and directly to the investment committee upon his return. Marc Seidner will rejoin PIMCO after spending only 8 months with GMO as the head of fixed income. Marc will be named CIO of Non-Traditional strategies, joining the five platform CIOs and Global CIO Dan Ivascyn. He will be working out of the New York offices and will act as Head of Portfolio Management in New York, a position previously held by Curtis Mewbourne.

Curtis will move to Newport Beach, where he will continue in his previous responsibilities, including as lead portfolio manager on the Diversified Income strategy. Marc will also be named a member of the Investment Committee and will take on some generalist portfolio management responsibilities. The third announcement is that Rahul Seksaria will become a member of the GMAF and the PIMCO Absolute Return Strategy (PARS) strategy teams. Mr. Seksaria is a member of the Real Return team and is the PM that took over for Mr. Banet's accounts following his departure this past June. He will remain on the Real Return team and continue to report to Mihir Worah.

NEPC views these additions to PIMCO as net positives for PIMCO as the individuals know and understand the culture and firm very well.

NEPC recommends a due diligence status of Client Review for all PIMCO strategies.



Appendix: Market Environment; Performance Disclosures



U.S. Economic Environment



Q4 GDP growth estimated to have increased at an annual rate of 2.6%



The Case-Shiller home price index (as of 12/31) dropped slightly to 167.11 by December end





Unemployment declined slightly to 5.8% in December; while the U-6, dropped to 11.2%



Source: Bloomberg as of 12/31



Ventura County Employees' Retirement Association Components of GDP



Third quarter corporate profits, as a percent of GDP, increased since the second guarter ending at 12.4%





The inventory-to-sales ratio remained at 1.3 through Novemeber continuing a fairly consistent level



The trade deficit decreased slightly in November

Source: Bloomberg as of 11/30



1.6



The rolling percentage change in the Leading Economic Indicators index decreased to 6.14% through November



U.S. GDP relative to potential has decreased through the first and second quarters; remaining near historic lows

Source: Bureau of Economic Analysis, Congressional Budget Office as of 6/30



The small business optimism index increased through December



Chicago Fed National Activity 3 Month moving average was positive through December; typically a positive indicator for growth. *Source: Bloomberg as of 12/31*





The Federal Reserve Bank balance sheet has increased in 2014 while the European Central Bank balance sheet has decreased *Source: Bloomberg as of 12/31*



The Japanese Yen has weakened 17.4% relative to the U.S. dollar in 2014; while the MSCI Japan TR Net Local Index returned 17.29% *Source: Bloomberg as of 12/31*



Central bank assets worldwide have risen significantly since $2008\,$



The Fed completed the taper as scheduled

Source: Bloomberg as of 12/31, Values after 11/30 based on market projections



Ventura County Employees' Retirement Association Looming Macro Uncertainties



Market Environment – U.S. Equity



S&P valuations decreased slightly through December remaining above the 10 year and long term averages



Source: Bloomberg as of 12/31



...The cyclically adjusted Shiller PE Ratio, is above the long term average of 17.66 and slightly above the 10 year average of 22.91



U.S. Stock Market Performance



The energy sector was the greatest detractor in the S&P 500 in 2014 with utilities and healthcare providing the highest returns



Large growth stocks have slightly outperformed large value in 2014 Source: Bloomberg as of 12/31



Large cap has outperformed small cap in 2014



Domestic equity has outperformed international equity in 2014 Source: Bloomberg as of 12/31



Non-U.S. Stock Performance

| Developed Market Equity Returns (U.S. Dollars) | | | | | |
|--|------------|-------------|--------------|-------------------|--|
| | <u>YTD</u> | <u>3-Mo</u> | <u>1 Yr.</u> | <u>3 Yr. Ann.</u> | |
| Europe ex UK | -8.5% | -4.5% | -8.5% | 10.3% | |
| United Kingdom | -8.7% | -4.8% | -8.7% | 5.5% | |
| Japan | -5.7% | -2.5% | -5.7% | 7.6% | |
| Pacific Ex Japan | -4.3% | -2.2% | -4.3% | 5.0% | |
| Canada | -0.6% | -5.3% | -0.6% | 3.1% | |
| USA | 11.1% | 4.3% | 11.1% | 17.9% | |

US Dollar Return vs. Major Foreign Currencies

(Negative = Dollar Depreciates, Positive = Dollar Appreciates)

| | <u>YTD</u> | <u>3-Mo</u> | <u>1 Yr.</u> | <u>3 Yr. Ann.</u> |
|---------------|------------|-------------|--------------|-------------------|
| Euro | 12.0% | 4.2% | 12.0% | 2.3% |
| Japanese Yen | 12.0% | 8.4% | 12.0% | 13.7% |
| British Pound | 5.9% | 3.9% | 5.9% | -0.1% |
| Canada | 8.6% | 3.6% | 8.6% | 4.2% |
| Australia | 8.4% | 6.6% | 8.4% | 7.1% |

| Currency Impact on Developed Mkt. Returns | | | | | |
|--|--------|-------------|--------------|-------------------|--|
| (Negative = Currency Hurt, Positive = Currency Helped) | | | | | |
| | YTD | <u>3-Mo</u> | <u>1 Yr.</u> | <u>3 Yr. Ann.</u> | |
| MSCI EAFE (Local) | 5.9% | 1.8% | 5.9% | 16.4% | |
| MSCI EAFE (USD) | -4.9% | -3.6% | -4.9% | 11.1% | |
| Currency Impact | -10.8% | -5.3% | -10.8% | -5.3% | |







Source: Bloomberg as of 12/31



Projected GDP growth rates have declined in emerging market countries Source: Bloomberg as of 12/31



The MSCI EM PE Ratio remains below its long term average





Balance of payment challenged countries have shown signs of improvement *Source: Bloomberg as of 9/30*



Source: Bloomberg as of 12/31



range

Ventura County Employees' Retirement Association **Emerging Markets**





| | | 8 | | | | |
|----------------------------|---------|-------------------|--|--|--|--|
| Emerging Markets Valuation | | | | | | |
| | MSCI EM | MSCI EM Small Cap | | | | |
| PE Ratio | 12.31 | 19.33 | | | | |
| PE Historical Avg | 14.44 | 18.34 | | | | |
| PB Ratio | 1.42 | 1.25 | | | | |
| Historical Avg | 1.53 | 1.28 | | | | |
| PS Ratio | 0.98 | 0.79 | | | | |
| Historical Avg | 1.11 | 0.72 | | | | |

- The MSCI EM index's PE, PB, and PS ended December below their historical averages.

- The MSCI EM Small Cap PE and PS ratios are above historical averages while the PB ratio is below its historical average Source: Bloomberg as of 12/31

NEPC, LLC

| US Dollar Return vs. Major EM Currencies | | | | | | | |
|--|--|-------------|----------------|-------------------|--|--|--|
| (Negative = Dollar Deprecia | (Negative = Dollar Depreciates, Positive = Dollar Appreciates) | | | | | | |
| | <u>YTD</u> | <u>3-Mo</u> | <u>1 Yr.</u> | <u>3 Yr. Ann.</u> | | | |
| Brazilian Real | 10.8% | 7.8% | 10.8% | 11.1% | | | |
| Russian Ruble | 43.3% | 31.8% | 43.3% | 17.9% | | | |
| Indian Rupee | 2.2% | 2.1% | 2.2% | 5.6% | | | |
| Chinese Renminbi | 2.4% | 1.1% | 2.4% | -0.5% | | | |
| Singapore Dollar | -0.9% | -0.2% | -0.9% | -0.9% | | | |
| Hungarian Forint | 17.3% | 5.9% | 17.3% | 2.4% | | | |
| Turkish Lira | 7.9% | 2.3% | 7.9% | 6.8% | | | |
| Mexican Peso | 11.7% | 9.0% | 11.7% | 1.8% | | | |
| So. African Rand | 9.1% | 2.4% | 9.1% | 11.3% | | | |
| So. Korean Won | 3.7% | 3.2% | 3.7% | -2.0% | | | |
| | | Sou | rce: Bloomherg | as of 12/31 | | | |





Source: Bloomberg as of 11/30

Market Environment – Interest Rates



Fixed Income Performance



Market Environment – Commodities



Gold prices finished December up at \$1,184.86 per ounce

Source: Bloomberg as of 12/31



Source: Bloomberg as of 12/31

expected future price will be lower than the current spot price.

Ventura County Employees' Retirement Association Reporting Methodology

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



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

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

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

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

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

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

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

Formula:

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

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

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

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

Formula:

Calculation Average (X-Y)/Downside Deviation (X-Y) * 2Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills) **Standard Deviation** - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:

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

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

Formula:

Tracking Error = Standard Deviation $(X-Y) * \sqrt{\#}$ of periods per year) Where X = periods portfolio return and Y = the period's benchmark return For monthly returns, the periods per year = 12 For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:

(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta

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

 $\label{eq:upsideCapture} UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) \ when \ Period Benchmark \ Return \ is \ > \ = \ 0$

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

Data Source: InvestorForce



Glossary of Investment Terminology

Of Portfolios/Observations¹ – The total number of data points that make up a specified universe

Allocation Index³ - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect² - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

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

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

Attribution³ - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity⁴ - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

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

Batting Average¹ - A measurement representing an investment manager's ability to meet or beat an index.

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

Brinson Fachler (BF) Attribution¹ - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution¹ - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

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

Correlation¹ - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net


Glossary of Investment Terminology

Coupon⁴ – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect¹ - Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument³ - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation¹ - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:

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

Duration³ - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio¹ – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

Foreign Bond³ - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark⁴ - The highest peak in value that an investment fund/ account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate⁴ - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects² - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median³ - The value (rate of return, market sensitivity, etc.) that exceeds onehalf of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration³ - The percentage change in the price of a fixed income security that results from a change in yield.

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

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

Net Investment Change¹ – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee⁴ - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



Glossary of Investment Terminology

Policy Index³ - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

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

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

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

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

Selection (or Manager) Effect² - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee¹ – A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

Total Effects² - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return¹ - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe³ - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation¹ – Standard Deviation of Positive Returns

Weighted Avg. Market Cap.⁴ - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield $(\%)^3$ - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity³ -The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net

