INVESTMENT PERFORMANCE ANALYSIS FOR PERIOD ENDING SEPTEMBER 30, 2018



NEW MEXICO EDUCATIONAL RETIREMENT BOARD

November 2018

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NEPC, LLC —

ECONOMIC ENVIRONMENT

- Real GDP (third quarter) increased at an annual rate of 3.5% (advance estimate).
 - Retail sales ended August at +4.0% on a YoY basis. In the same period last year the YoY growth rate was 3.6%.
 - Corporate profits (ended April) as a percent of GDP increased to 9.6% from 9.5% (in January) and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended August flat at 1.3 and has remained relatively constant since early 2010.
 - The U.S. trade deficit widened 6.4% as exports fell.
- The unemployment rate decreased to 3.7% from 4.0% ended Q3; U-6, a broader measure of unemployment, decreased to 7.5% from 7.8% during the third quarter.
- The Case-Shiller Home Price Index (ended July) increased to 205.4 from 200.9 and remains at levels higher than that of pre-financial crisis levels of 150.9.
- Rolling 12-month seasonally-adjusted CPI saw a down-tick to 2.3% from 2.9% ended September; Capacity Utilization increased to 78.1% from 78.0% in Q3.
- Fed Funds rate was increased 0.25% to a targeted range of 2.00% to 2.25%. The 10-year Treasury Yield (constant maturity) finished Q3 at 3.0% up from 2.9%.
- The Fed balance sheet decreased slightly during Q3 2018, while the European Central Bank balance sheet continues to increase.
 - ECB held its benchmark refinance rate at 0%, deposit rates -0.4% and reaffirmed that asset purchases may end in December.
- S&P valuations increased slightly in Q2, remaining above the 10-year and long-term averages.
 - Cyclically adjusted Shiller PE ratio (32.8x) is above the long-term average of 16.6x and above the 10-year average of 23.95x.



MARKET ENVIRONMENT - Q3 2018 OVERVIEW

| | | Qtr. | <u>1 Yr.</u> | 3 Yr. | <u>5 Yr.</u> | <u>10 Yr.</u> | |
|----------------------------------|----------------------------------|-------|--------------|-------|--------------|---------------|---------------------------------------|
| World Equity Benchmarks | | | | | | | |
| MSCI ACWI (Net) (USD) | World | 4.3% | 9.8% | 13.4% | 8.7% | 8.2% | MSCI ACWI (Net) (USD) |
| MSCI ACWI (Local) | World (Local Currency) | 4.7% | 11.2% | 13.3% | 10.4% | 8.9% | MSCI ACWI (Local) |
| Domestic Equity Benchmarks | | | | | | | S&P 500 |
| S&P 500 | Large Core | 7.7% | 17.9% | 17.3% | 14.0% | 12.0% | Russell 1000 |
| Russell 1000 | Large Core | 7.4% | 17.8% | 17.1% | 13.7% | 12.1% | Russell 1000 Growth |
| Russell 1000 Growth | Large Growth | 9.2% | 26.3% | 20.6% | 16.6% | 14.3% | Russell 1000 Value |
| Russell 1000 Value | Large Value | 5.7% | 9.5% | 13.6% | 10.7% | 9.8% | Russell 2000 |
| Russell 2000 | Small Core | 3.6% | 15.2% | 17.1% | 11.1% | 11.1% | Russell 2000 Growth |
| Russell 2000 Growth | Small Growth | 5.5% | 21.1% | 18.0% | 12.1% | 12.7% | Russell 2000 Value |
| Russell 2000 Value | Small Value | 1.6% | 9.3% | 16.1% | 9.9% | 9.5% | MSCI ACWI Ex USA |
| International Equity Benchmarks | | | | | | | |
| MSCI ACWI Ex USA | World ex-US | 0.7% | 1.8% | 10.0% | 4.1% | 5.2% | MSCI EAFE (Net) (USD) |
| MSCI EAFE (Net) (USD) | Int'l Developed | 1.4% | 2.7% | 9.2% | 4.4% | 5.4% | MSCI EAFE (Local) |
| MSCI EAFE (Local) | Int'l Developed (Local Currency) | 2.4% | 5.1% | 9.4% | 7.9% | 6.7% | S&P EPAC Small Cap |
| S&P EPAC Small Cap | Small Cap Int'l | -0.4% | 4.0% | 12.2% | 8.3% | 9.3% | MSCI EM |
| MSCI EM | Emerging Equity | -1.1% | -0.8% | 12.4% | 3.6% | 5.4% | Barclays Aggregate |
| Domestic Fixed Income Benchmarks | | | | | | | Barclays US High Yield |
| Barclays Aggregate | Core Bonds | 0.0% | -1.2% | 1.3% | 2.2% | 3.8% | BofA ML US HY BB/B |
| Barclays US High Yield | High Yield | 2.4% | 3.1% | 8.2% | 5.5% | 9.5% | CSFB Levered Loans |
| BofA ML US HY BB/B | High Yield | 2.4% | 2.3% | 7.3% | 5.4% | 8.6% | BofA ML US 3-Month T-Bill |
| CSFB Levered Loans | Bank Loans | 1.9% | 5.6% | 5.4% | 4.4% | 5.9% | Barclays US TIPS 1-10 Yr |
| BofA ML US 3-Month T-Bill | Cash | 0.5% | 1.6% | 0.8% | 0.5% | 0.3% | |
| Barclays US TIPS 1-10 Yr | Inflation | -0.4% | 0.3% | 1.7% | 0.9% | 2.5% | Citigroup WGBI |
| Global Fixed Income Benchmarks | | | | | | | Barclays Global Aggregate |
| Citigroup WGBI | World Gov. Bonds | -1.6% | -1.5% | 1.7% | 0.2% | 2.2% | BC Global Credit |
| Barclays Global Aggregate | Global Core Bonds | -0.9% | -1.3% | 2.0% | 0.8% | 2.9% | JPM GBI-EM Glob. Diversified |
| BC Global Credit | Global Bonds | 0.3% | -1.3% | 2.9% | 2.0% | 4.5% | JPM EMBI+ |
| JPM GBI-EM Glob. Diversified | Em. Mkt. Bonds (Local Currency) | -1.8% | -7.4% | 5.2% | -1.7% | 2.7% | Bloomberg Commodity Index |
| JPM EMBI+ | Em. Mkt. Bonds | 1.5% | -5.0% | 4.8% | 4.2% | 6.8% | Credit Suisse Hedge Fund Index ■ 1 Yr |
| Alternative Benchmarks | | | | | | | HFRI FoF Conservative |
| Bloomberg Commodity Index | Commodities | -2.0% | 2.6% | -0.1% | -7.2% | -6.2% | Cambridge PE Lagged* |
| Credit Suisse Hedge Fund Index | Hedge Fund | 0.6% | 3.5% | 3.1% | 3.4% | 4.5% | NCREIF ODCE Net Lagged* |
| HFRI FoF Conservative | Fund of Hedge Funds | 0.9% | 3.8% | 2.9% | 3.0% | 2.2% | Wilshire REIT Index |
| Cambridge PE Lagged* | Private Equity | 5.8% | 18.7% | 12.7% | 13.8% | 10.8% | |
| NCREIF ODCE Net Lagged* | Real Estate | 1.8% | 7.5% | 8.4% | 10.0% | 4.3% | CPI + 2% |
| Wilshire REIT Index | REIT | 0.7% | 4.0% | 7.1% | 9.3% | 7.4% | -10% -5% 0% 5% 10% 15% 20% 25% |
| CPI + 2% | Inflation/Real Assets | 1.0% | 4.3% | 4.0% | 3.6% | 3.5% | |

^{*} As of 6/30/2018



PERFORMANCE OVERVIEW

Q3 Market Summary

| | Macro | | | Equity | | | Credit | | Re | ets | |
|--------------|-------|-------------|------------|--------------|------------|------------|---------------|---------------|-------|-------|-------|
| US Dollar | VIX | US 10-Yr | S&P 500 | MSCI EAFE | MSCI EM | US Agg. | High Yield | Dollar EMD | Oil | Gold | REITS |
| 0.7% | -4.0 | 20 bps | 7.7% | 1.4% | -1.1% | 0.0% | 2.4% | 1.9% | -1.2% | -4.8% | 0.7% |

- US equities increased during the quarter, supported by strong macroeconomic data and a tight labor market
- Emerging market equities broadly declined with ongoing currency weakness and trade tensions weighing on sentiment
- The Federal Reserve hiked rates for the third time this year and is expected to hike rates again in December

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM Emerging Market Bond Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).



MACRO PERFORMANCE OVERVIEW

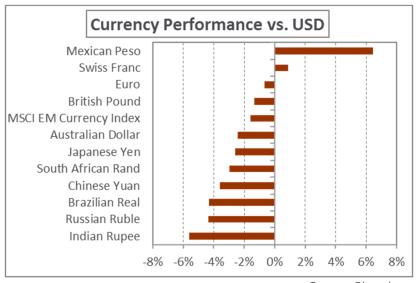
Q3 Macro Market Summary

- The global growth outlook remains in tact, despite trade policy issues
- Global bond yields increased as central banks transition toward tighter monetary policy
- Higher rates in the US supported the dollar – adding further pressure to emerging market currencies

| Central Banks | Current Rate | CPI YOY | Notes from the Quarter |
|-----------------------------|------------------|------------|---|
| Federal Reserve | 2.00% - 2.25% | 2.7% | The Fed increased its benchmark interest rate to 2.00% - 2.25% in September and is expected to hike rates one more time in 2018 |
| European Central Bank | 0.0% | 2.1% | The ECB maintained its current benchmark interest rate, but continues its plan to scale back its QE Program |
| Bank of Japan | -0.1% | 1.3% | The BoJ will continue its ultra-easy QE program with inflation remaining well below target |

| | Yield 06/30/18 | Yield 09/30/18 | Δ |
|---------------|-------------------|-------------------|-------|
| US 10-Yr | 2.86% | 3.06% | 0.20% |
| US 30-Yr | 2.99% | 3.21% | 0.22% |
| US Real 10-Yr | 0.74% | 0.92% | 0.18% |
| German 10-Yr | 0.30% | 0.47% | 0.17% |
| Japan 10-Yr | 0.04% | 0.13% | 0.09% |
| China 10-Yr | 3.48% | 3.63% | 0.15% |
| EM Local Debt | 6.59% | 6.62% | 0.03% |

Source: Bloomberg







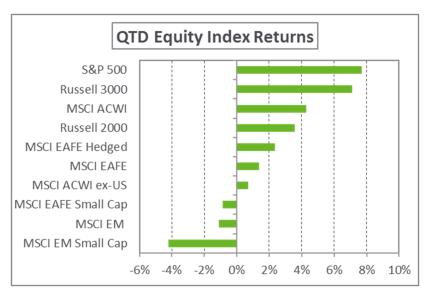
EQUITY PERFORMANCE OVERVIEW

Q3 Equity Market Summary

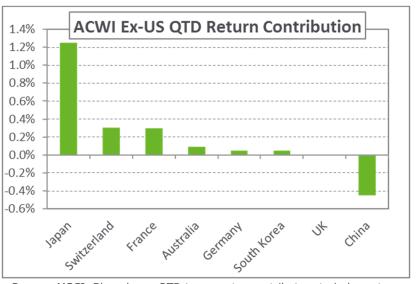
- Strong economic data and positive sentiment helped US equities to outperform global equities
- Trade-sensitive economies disproportionately declined as escalating trade tensions and currency weakness weighed on returns

| Russell 3000 QTD Sector Ret | turn Contribution |
|-----------------------------|-------------------|
| Information Technology | 1.7% |
| Consumer Discretionary | 0.3% |
| Financials | 0.5% |
| Industrials | 1.4% |
| Consumer Staples | 0.0% |
| Energy | 0.4% |
| Materials | 0.0% |
| Health Care | 0.5% |
| Real Estate | 0.6% |
| Communication Services | -1.0% |
| Utilities | 0.1% |





Source: MSCI, Russell, S&P, Bloomberg



Source: MSCI, Bloomberg. QTD top country contributors to index return

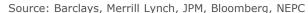


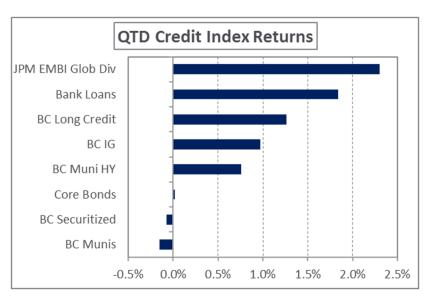
CREDIT PERFORMANCE OVERVIEW

Q3 Credit Market Summary

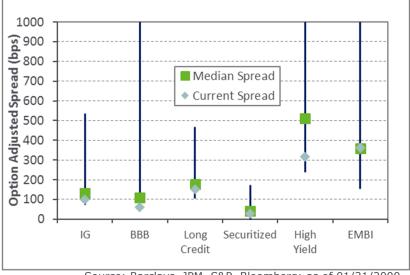
- Credit spreads broadly declined and remain below medians in most areas of the credit market
- Dollar-denominated emerging market debt increased by 2.3% as spreads tightened

| Credit Spread (Basis Points) | 06/30/18 | 09/30/18 | Δ |
|---------------------------------|----------|----------|-----|
| BC IG Credit | 116 | 100 | -16 |
| BC Long Credit | 174 | 153 | -21 |
| BC Securitized | 28 | 28 | 0 |
| BC High Yield | 363 | 316 | -47 |
| Muni HY | 253 | 198 | -55 |
| ЈРМ ЕМВІ | 388 | 362 | -26 |
| Bank Loans - Libor | 303 | 281 | -22 |





Source: Barclays, JPM, S&P, Bloomberg



Source: Barclays, JPM, S&P, Bloomberg; as of 01/31/2000

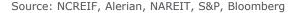


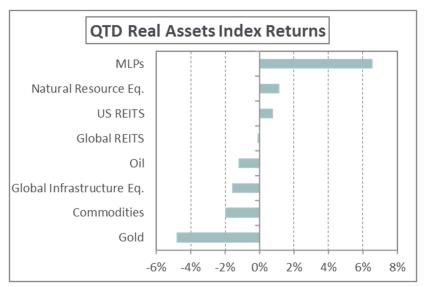
REAL ASSETS PERFORMANCE OVERVIEW

Q3 Real Assets Market Summary

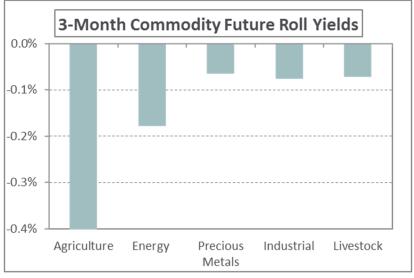
- Oil declined 1.2% for the quarter, but is up 41.8% for the year
- Agricultural commodities declined substantially due to robust supply and trade war-related concerns
- MLP's increased 6.6%, supported by rising commodity prices and ongoing industry simplification

| Real Asset Yields | 06/30/18 | 09/30/18 |
|--------------------------------|----------|----------|
| MLPs | 8.1% | 8.0% |
| Core Real Estate | 4.2% | 4.4% |
| US REITs | 4.4% | 4.2% |
| Global REITs | 3.7% | 3.7% |
| Global Infrastructure Equities | 4.4% | 4.5% |
| Natural Resource Equities | 3.5% | 3.5% |
| US 10-Yr Breakeven Inflation | 2.1% | 2.1% |
| Commodity Index Roll Yield | 0.1% | -1.2% |





Source: S&P, NAREIT, Alerian, Bloomberg



Source: Bloomberg, NEPC Calculated as of 09/28/2018



THE END OF FEDERAL RESERVE GRADUALISM

Key Market Themes Change

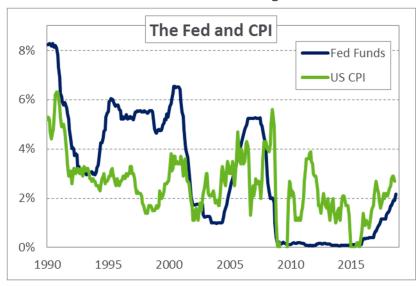
The end of Fed Gradualism: The Fed has shifted from a "lower for longer" policy to a more balanced posture of raising rates in-line with higher inflation

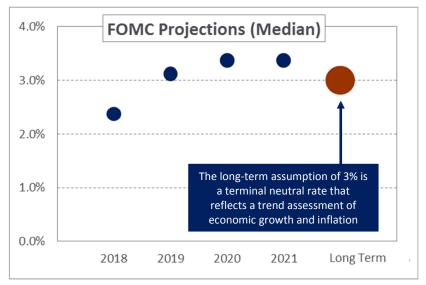
The Fed appears less willing to accept some inflation to repair the past deflationary impact of the 2008 financial crisis and is now looking to manage inflation closer to its target range

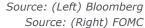
Based on the FOMC projections, the Fed is communicating a tightening path as their forecast for interest rate hikes moves beyond the long-term neutral rate

Markets are discounting a more muted pace of rate hikes relative to Fed projections, which increases the potential of a "Fed surprise" disrupting equity, fixed income, and currency markets

Fed is expected to be careful and data dependent when assessing the timing of interest rate increases relative to changes in inflation levels

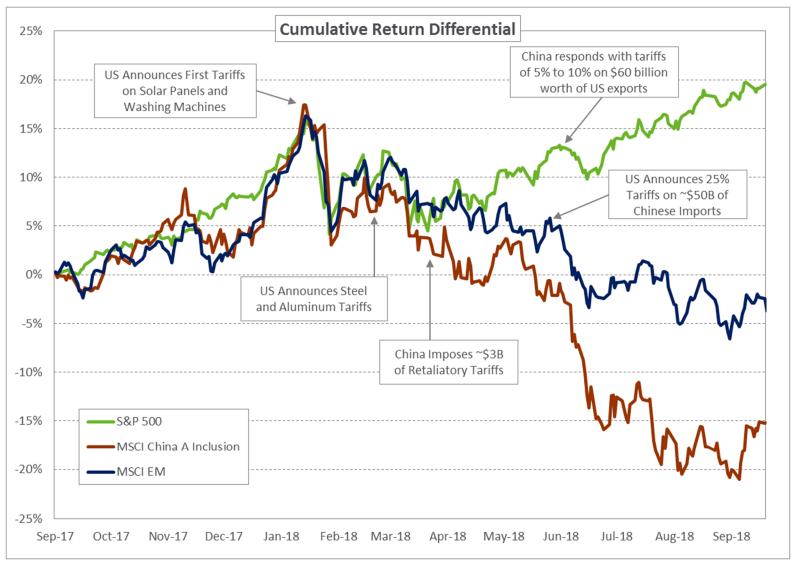








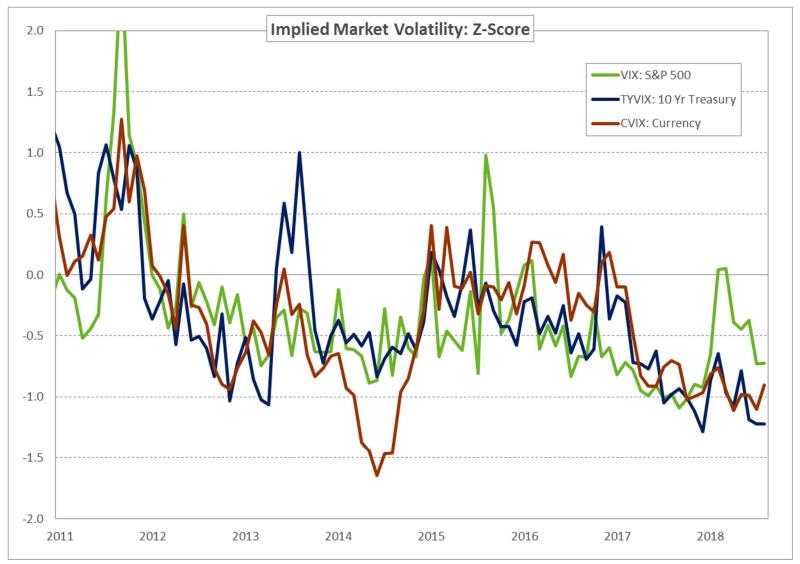
TRADE TENSIONS WEIGHED ON RETURNS







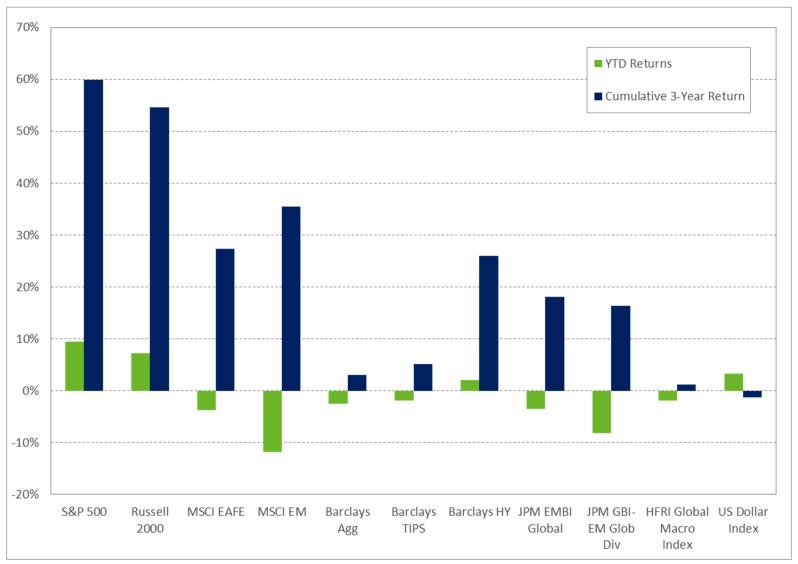
MARKET VOLATILITY IS WELL BELOW AVERAGE







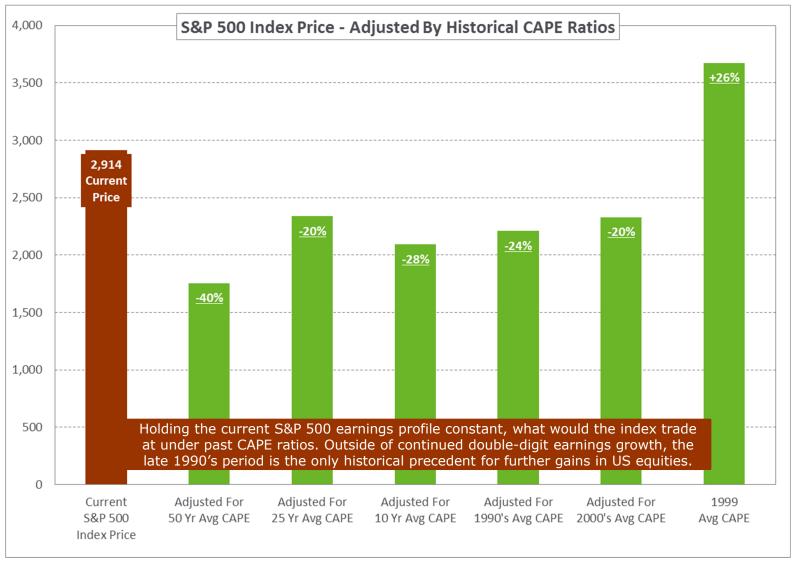
US EQUITIES ARE THE OUTLIER IN 2018

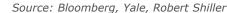






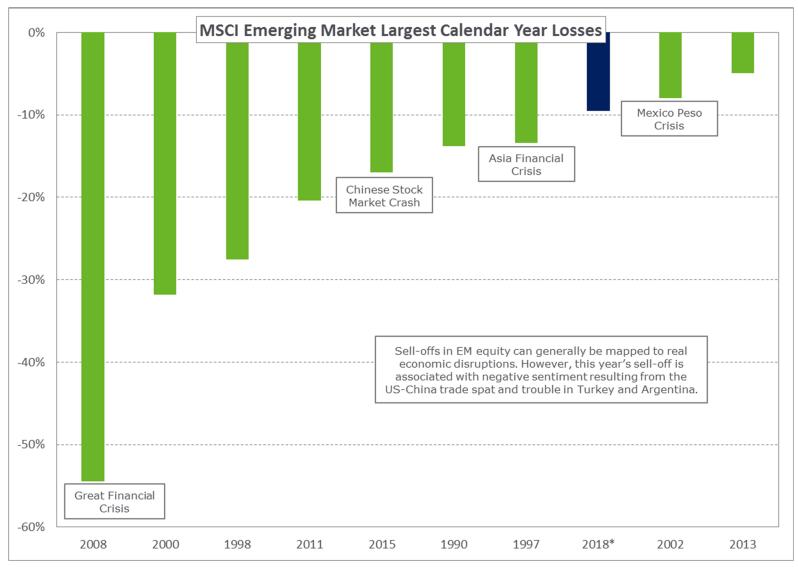
CAN VALUATIONS SUPPORT FURTHER GAINS?







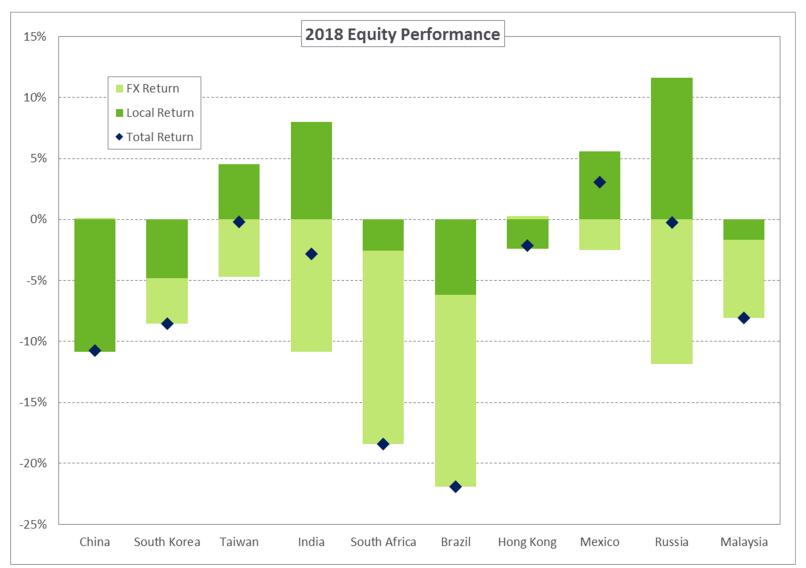
EM HAS DECLINED, BUT IT COULD BE WORSE





Data Source: MSCI, Bloomberg, NEPC 2018 represents returns for 12/29/2017-09/30/2018

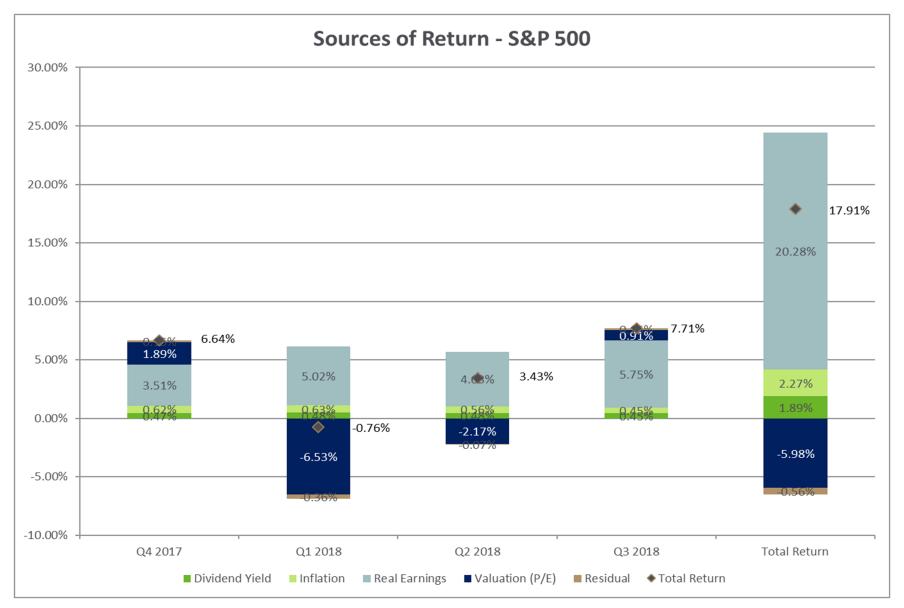
CURRENCY DETRACTED FROM TOTAL RETURNS





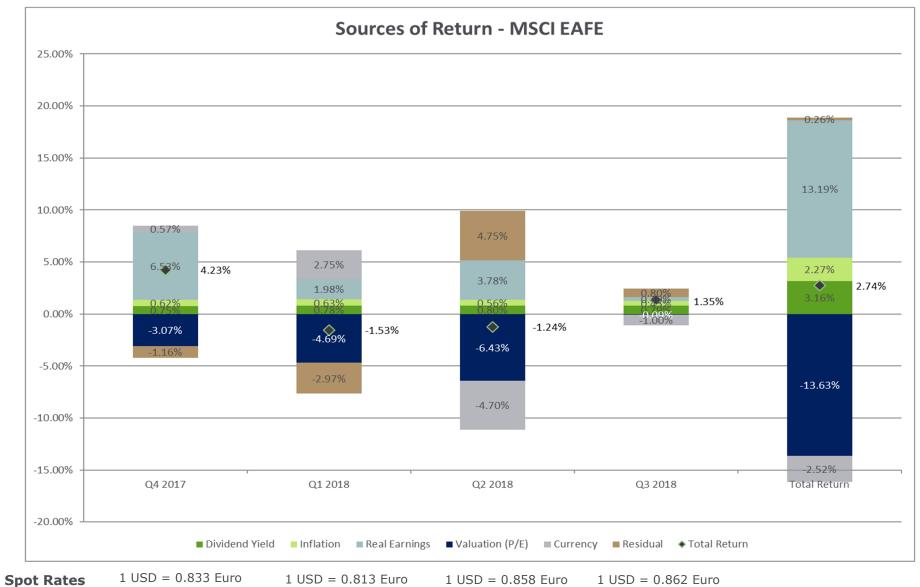


1 YEAR ATTRIBUTION OF S&P 500 RETURNS



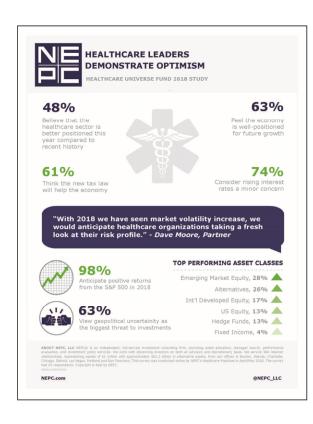


1 YEAR ATTRIBUTION OF MSCI EAFE RETURNS





HIGHLIGHTS OF THIRD QUARTER HAPPENINGS
AT NEPC



RECENT UPDATES

- **SAVE THE DATE!** NEPC will host our 10th annual Public Funds Workshop on January 31st and February 1st, 2019 at the Tempe Mission Palms in Tempe Arizona.
- **SAVE THE DATE!** NEPC will host our 24th Annual Investment Conference on May 7th and 8th, 2019 at the Boston Park Plaza. More details to come!

NEPC INSIGHTS

- Taking Stock: Is Technology Driving Low Inflation?
- Taking Stock: Increasing Pension Contributions and Improving Corporate Pension Funding Ratios: Now What?
- NEPC 2018 ESG Flash Poll Results and Infographic
- NEPC 2018 ESG Flash Poll Healthcare Highlights
- 2018 Second Quarter Market Thoughts
- The Evaluation of Tax Liabilities
- Healthcare Optimistic About Economy But Wary of Volatility and Geopolitical Risks (Healthcare Operating Fund Universe Results/ Infographic)
- Taking Stock: Trouble in Turkey Creates Opportunity in Emerging Markets
- State of the Union: A Look Back on 2018 and What to Expect Moving Forward
- · Opportunity Zones: Doing Good in a Tax-Advantaged Way
- Taking Stock: Globalization Backlash: US-China Tariffs are Here to Stay
- Taking Stock: Total Enterprise Management: a 360 View of Investment Strategy
- Market Chatter: Potential End Game for US-China Trade Spat: The Good, the Bad, the Ugly

WEBINAR REPLAYS

• NEPC's Second Quarter 2018 Quarterly Markets Call



To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights

THIRD PARTY PLACEMENT AGENT DISCLOSURE

The New Mexico Educational Retirement Board Policy Regarding Placement Agent Disclosures requires that quarterly performance reports to the Board include information regarding any third-party marketers that were used by recipients of investments including any fee, commission or retainer paid by the hired fund to the third-party marketer for services rendered. These fees are not paid by NMERB but are paid by the hired funds for marketing services to the third-party.

The following investments were approved by the NMERB Investment Committee during the quarter, with disclosures made under the policy:

Brevet

The investment was approved for a \$100 million commitment on August 23, 2018 as part of the Fund's allocation to Opportunistic Credit.

Brevet has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Brevet has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

Lone Star XI

The investment was approved for a \$50 million commitment on September 21, 2018 as part of the Fund's allocation to Opportunistic Credit and Real Estate.

Lone Star has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Lone Star has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.



TOTAL FUND PERFORMANCE SUMMARY (NET)

| | Market Value | 3 Mo F | Rank | YTD F | Rank | 1 Yr I | Rank | 3 Yrs F | Rank | 5 Yrs I | Rank | 10 Yrs I | Rank | 15 Yrs | Rank | 20 Yrs | Rank | 30 Yrs | Rank | Inception | Inception Date |
|---|------------------|--------|------|-------|------|--------|------|---------|------|---------|------|----------|------|--------|------|--------|------|--------|------|-----------|-------------------|
| Total Fund | \$13,058,397,827 | 2.3% | 36 | 4.1% | 21 | 7.5% | 25 | 9.6% | 38 | 7.9% | 23 | 7.9% | 27 | 7.6% | 20 | 6.3% | 53 | 8.7% | 19 | 9.1% | Jul-83 |
| Policy Index | | 2.8% | 16 | 4.5% | 12 | 8.0% | 16 | 9.8% | 27 | 7.5% | 37 | 7.2% | 57 | 7.1% | 38 | 6.1% | 65 | 7.8% | 74 | | Jul-83 |
| 60% MSCI ACWI (Net) / 40% FTSE WGBI | | 1.9% | 68 | 1.3% | 99 | 5.2% | 94 | 8.7% | 83 | 5.3% | 97 | 6.0% | 95 | 6.4% | 77 | 5.6% | 82 | | | | Jul-83 |
| InvestorForce Public DB > \$1B Net Median | | 2.1% | | 2.9% | | 6.5% | | 9.3% | | 7.1% | | 7.3% | | 7.1% | | 6.3% | | 8.0% | | 8.5% | Jul-83 |

Over the past five years, the Fund returned 7.9% per annum, outperforming the policy index by 41 basis points and ranking in the 23^{rd} percentile of the InvestorForce Public Funds > \$1 Billion universe and outperforming the actuarial assumed rate of 7.25%. The Fund's volatility was 4.5%, which ranks in the 9^{th} percentile of its peers over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the 7^{th} percentile of its peers.

Over the past three years, the Fund returned 9.6% per annum, underperforming the policy index by 17 basis points and ranking in the 38th percentile of its peer group. Over the same period, the Fund's volatility ranks in the 14th percentile of its peers, resulting in a three-year Sharpe Ratio of 2.1, which ranks in the 8th percentile.

For the year ending September 30, 2018, the Fund experienced a net investment gain of \$943.5 million, which includes a net investment gain of \$301.3 million during the quarter. Assets increased from \$12.6 billion twelve months ago to \$13.1 billion on September 30, 2018, with \$465 million in net distributions during the year. The Fund returned 7.5%, underperforming the policy index by 48 basis points and ranking in the 25th percentile of its peers.

All asset classes were within policy range as of September 30, 2018.

The InvestorForce Public Funds >\$1 Billion Net Universe contains 63 observations for the period ending March 31, 2018, with total assets of \$630 billion.

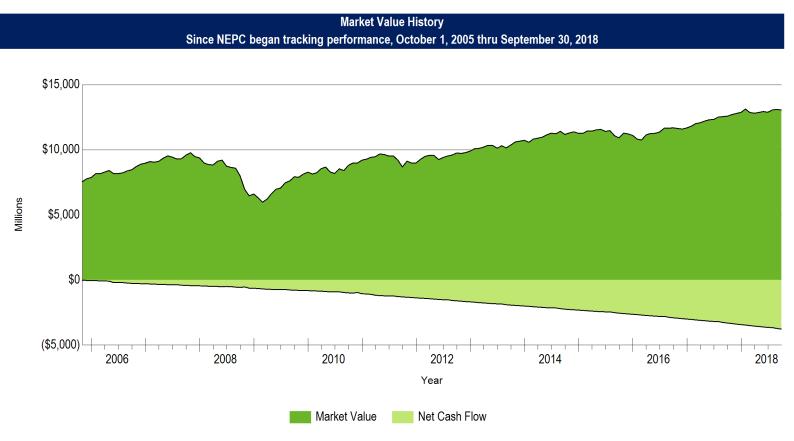


| 5 Years Ending September 30, 2018 | | | | | | | | | | | |
|--|-----------|------|------------------|------|-----------------|------|------------------|------|--|--|--|
| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank | Sortino Ratio | Rank | | | |
| Total Fund | 7.9% | 23 | 4.5% | 9 | 1.7 | 7 | 2.7 | 6 | | | |
| Policy Index | 7.5% | 37 | 4.6% | 11 | 1.5 | 14 | 2.4 | 12 | | | |
| InvestorForce Public DB > \$1B Net Median | 7.1% | | 5.4% | | 1.2 | | 1.9 | | | | |

| 3 Years Ending September 30, 2018 | | | | | | | | | | | | |
|--|-----------|------|------------------|------|-----------------|------|------------------|------|--|--|--|--|
| | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank | Sortino Ratio | Rank | | | | |
| Total Fund | 9.6% | 38 | 4.2% | 14 | 2.1 | 8 | 3.5 | 4 | | | | |
| Policy Index | 9.8% | 27 | 4.5% | 19 | 2.0 | 13 | 3.3 | 9 | | | | |
| InvestorForce Public DB > \$1B Net Median | 9.3% | | 5.0% | | 1.7 | | 2.5 | | | | | |



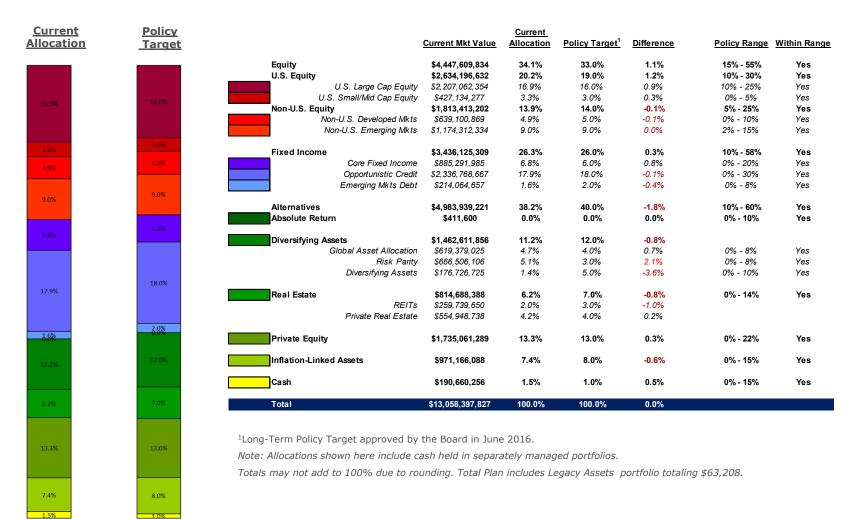
TOTAL FUND ASSET GROWTH SUMMARY



| | Last Three Months | Year-To-Date | One Year | Three Years | Five Years | Since 10/1/05 |
|------------------------|----------------------|------------------|------------------|------------------|------------------|------------------|
| Beginning Market Value | \$12,886,225,133 | \$12,873,637,262 | \$12,580,019,720 | \$10,920,403,085 | \$10,366,764,510 | \$7,694,652,364 |
| Net Cash Flow | -\$129,084,362 | -\$342,996,909 | -\$465,123,548 | -\$1,221,874,371 | -\$1,841,955,958 | -\$3,760,496,657 |
| Net Investment Change | \$301,257,056 | \$527,757,474 | \$943,501,656 | \$3,359,869,113 | \$4,533,589,276 | \$9,124,242,121 |
| Ending Market Value | \$13,058,397,827 | \$13,058,397,827 | \$13,058,397,827 | \$13,058,397,827 | \$13,058,397,827 | \$13,058,397,827 |

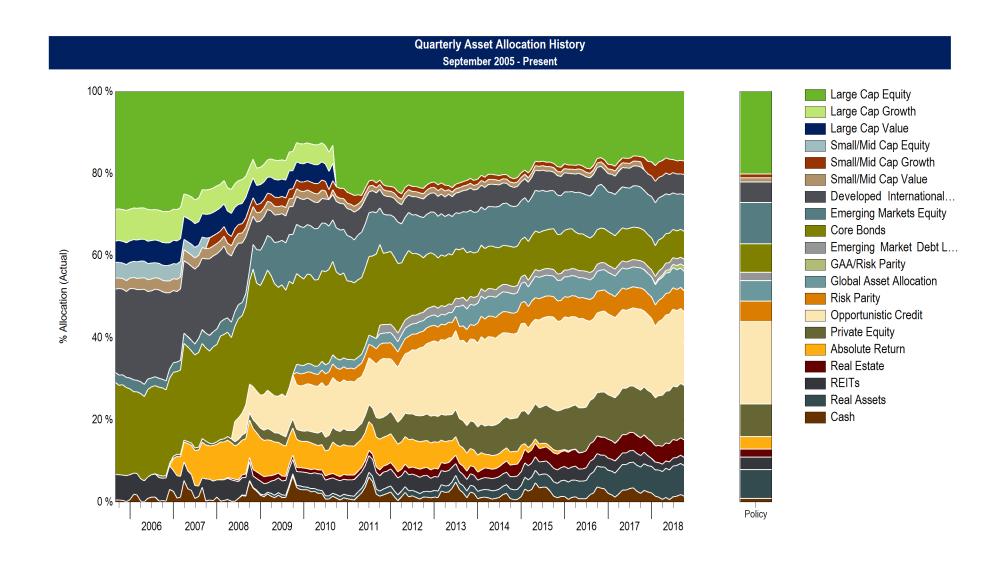


TOTAL FUND ASSET ALLOCATION VS. POLICY



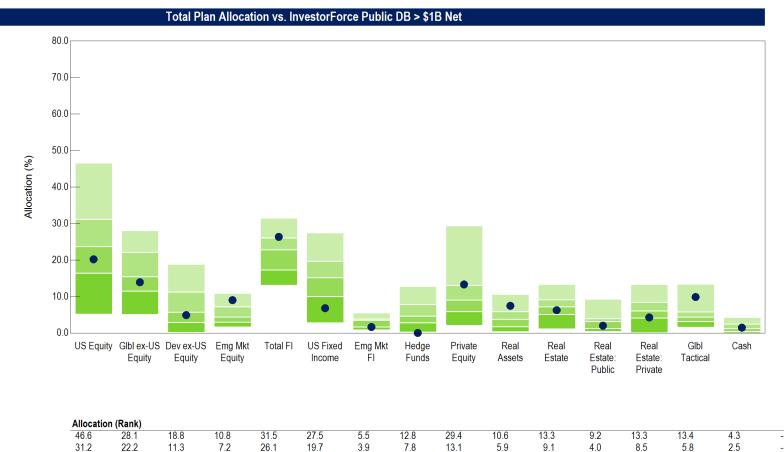


TOTAL FUND ASSET ALLOCATION HISTORY





TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE



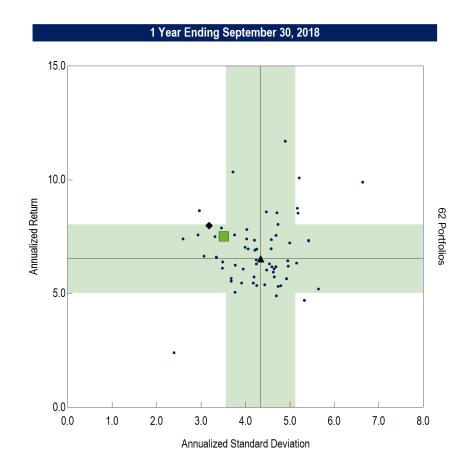
5th Percentile 25th Percentile Median 75th Percentile 95th Percentile # of Portfolios

Total Fund

| Allocation (Nank) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|-----------|------|-----|----------|--------|----------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|-----|------|--|
| 46.6 | 28.1 | 1 | 8.8 | 10.8 | 31 | .5 | 27.5 | | 5.5 | | 12.8 | | 29.4 | | 10.6 | | 13.3 | | 9.2 | | 13.3 | | 13.4 | | 4.3 | | |
| 31.2 | 22.2 | 1 | 1.3 | 7.2 | 26 | 6.1 | 19.7 | | 3.9 | | 7.8 | | 13.1 | | 5.9 | | 9.1 | | 4.0 | | 8.5 | | 5.8 | | 2.5 | | |
| 23.7 | 15.5 | | 5.7 | 4.5 | 22 | 2.9 | 15.2 | | 3.6 | | 4.7 | | 9.1 | | 3.9 | | 7.3 | | 3.2 | | 6.1 | | 4.5 | | 1.3 | | |
| 16.5 | 11.5 | | 2.9 | 3.0 | 17 | '.3 | 10.1 | | 1.7 | | 2.8 | | 5.9 | | 1.8 | | 5.1 | | 1.3 | | 4.2 | | 3.2 | | 0.5 | | |
| 5.2 | 5.1 | | 0.2 | 1.8 | 13 | 3.2 | 2.8 | | 0.9 | | 0.3 | | 2.2 | | 0.4 | | 1.2 | | 0.5 | | 0.2 | | 1.6 | | 0.1 | | |
| 48 | 53 | | 32 | 46 | | 59 | 49 | | 27 | | 37 | | 51 | | 31 | | 51 | | 18 | | 48 | | 15 | | 59 | | |
| 20.2 | (68) 13.9 | (64) | 4.9 | (59) 9.0 | (9) 26 | 6.3 (25) | 6.8 | (82) | 1.6 | (76) | 0.0 | (99) | 13.3 | (23) | 7.4 | (14) | 6.2 | (63) | 2.0 | (59) | 4.2 | (75) | 9.8 | (12) | 1.5 | (49) | |

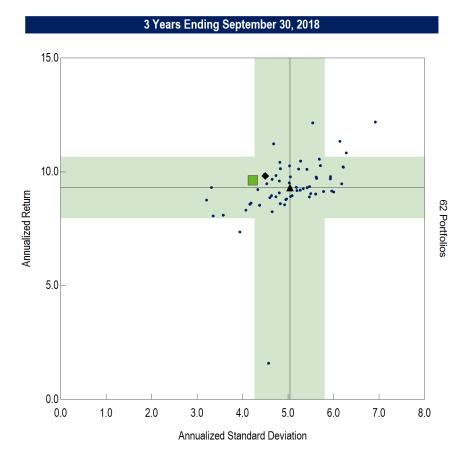


TOTAL FUND RISK/RETURN





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

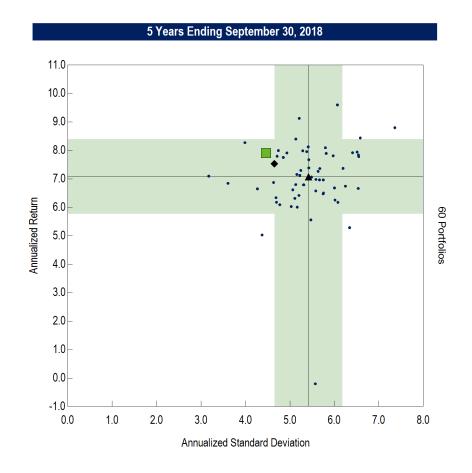


- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

Note: Ranks are based on net returns.

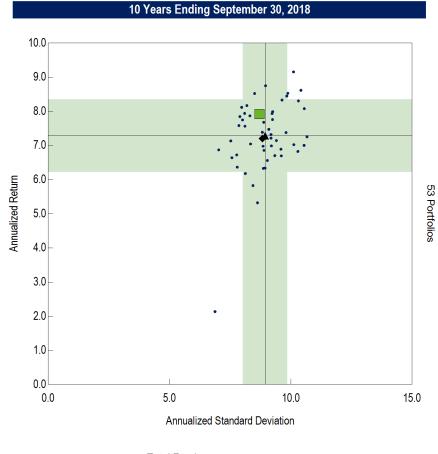


TOTAL FUND RISK/RETURN





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



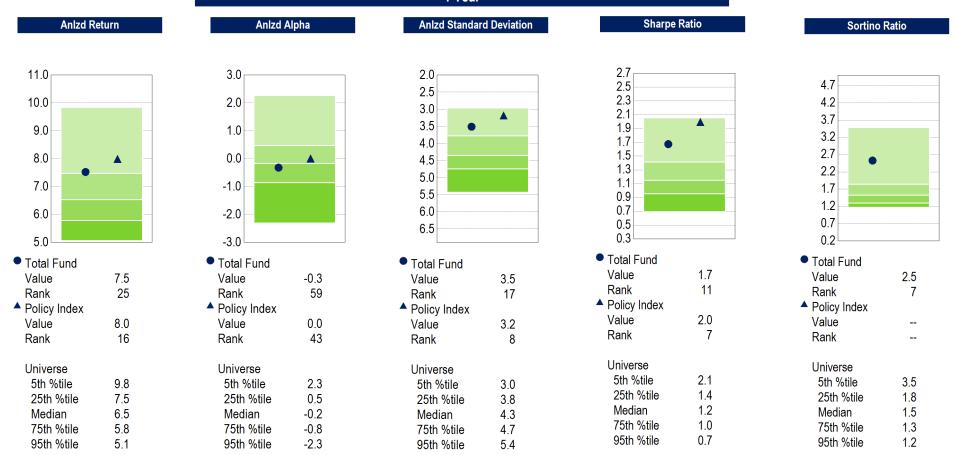
- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

Note: Ranks are based on net returns.



Total Fund vs. InvestorForce Public DB > \$1B Net (USD) (peer)

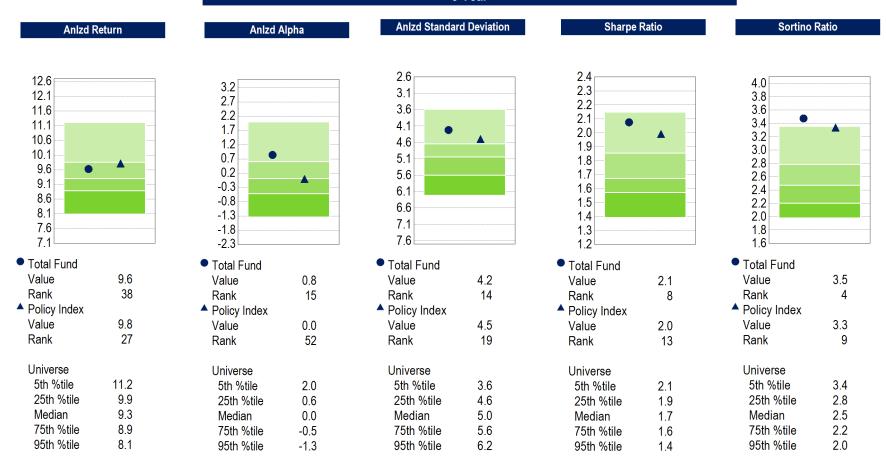
1 Year





Total Fund vs. InvestorForce Public DB > \$1B Net (USD) (peer)

3 Year



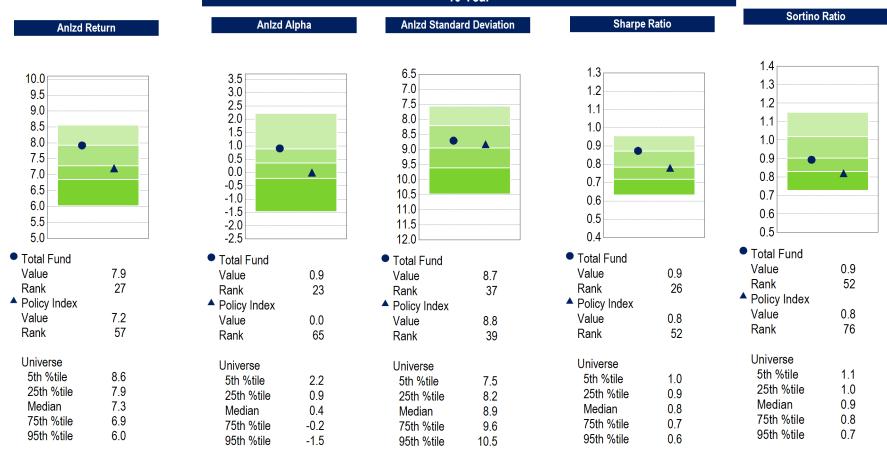


Total Fund vs. InvestorForce Public DB > \$1B Net (USD) (peer) 5 Year



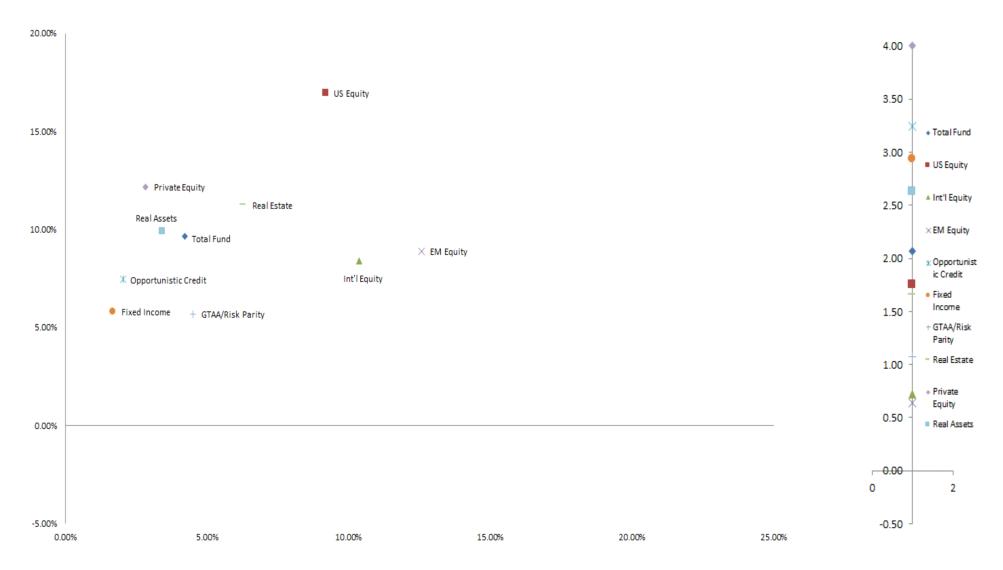


Total Fund vs. InvestorForce Public DB > \$1B Net (USD) (peer) 10 Year





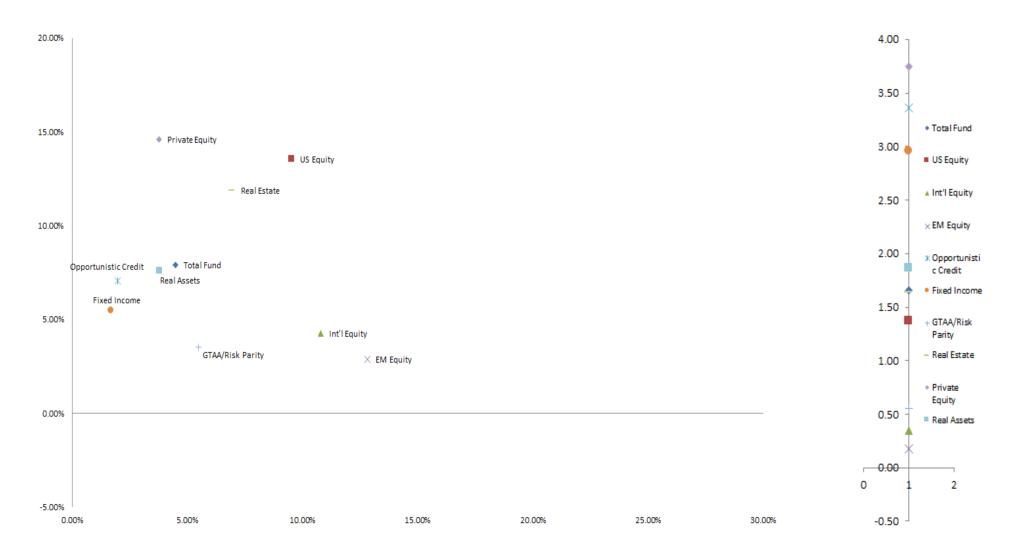
3 YEAR RISK/RETURN PROFILE



Note: Returns are net of fees. The graph on the right side shows composite level sharpe ratios.



5 YEAR RISK/RETURN PROFILE

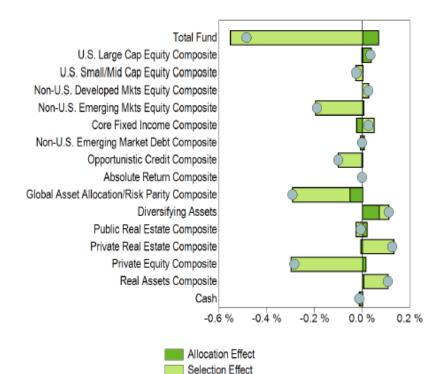


Note: Returns are net of fees. The graph on the right side shows composite level sharpe ratios.



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects 3 Months Ending September 30, 2018



Total Effect

3 Month Excess Return: -0.49%

- Allocation Effect: +0.07%
 - Diversifying Assets underweight (+0.07%)
 - Global Asset Allocation/Risk Parity overweight (-0.05%)
- Manager Selection Effect: -0.55%
 - Private Real Estate outperformed (+0.13%)
 - Real Assets outperformed (+0.10%)
 - Core Fixed Income outperformed (+0.05%)
 - Opportunistic Credit underperformed (-0.10%)
 - Non-U.S. Emerging Mkts Equity underperformed (-0.20%)
 - Global Asset Allocation/Risk Parity underperformed (-0.24%)
 - Private Equity underperformed (-0.30%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

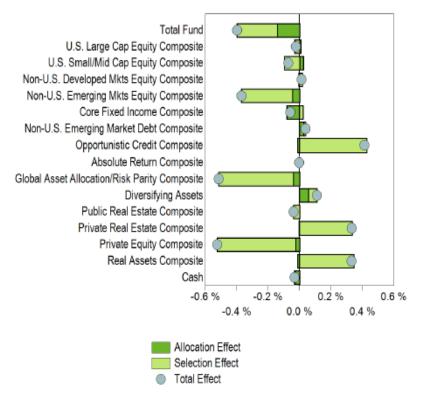
Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + **Interaction Effect:** Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))–(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asse

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects YTD Ending September 30, 2018



YTD Excess Return: -0.40%

- Allocation Effect: -0.14%
 - Diversifying Assets underweight (+0.06%)
 - Non-U.S. Emerging Markets Equity overweight (-0.05%)
 - Core Fixed Income overweight (-0.08%)
- Manager Selection Effect: -0.26%
 - Opportunistic Credit outperformed (+0.43%)
 - Real Assets outperformed (+0.34%)
 - Private Real Estate outperformed (+0.33%)
 - Diversifying Assets outperformed (+0.05%)
 - U.S. Small/Mid Cap Equity underperformed (-0.10%)
 - Non-U.S. Emerging Mkts Equity underperformed (-0.32%)
 - Global Asset Allocation/Risk Parity underperformed (-0.47%)
 - Private Equity underperformed (-0.50%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

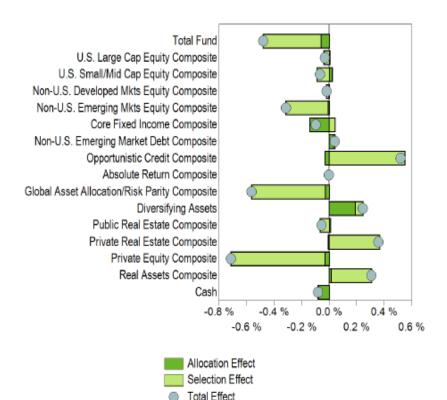
Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + **Interaction Effect:** Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))–(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asse

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



TOTAL FUND ATTRIBUTION ANALYSIS





1 Year Excess Return: -0.48%

- Allocation Effect: -0.06%
 - Diversifying Assets underweight (+0.19%)
 - Cash overweight (-0.08%)
 - Core Fixed Income overweight (-0.14%)
- Manager Selection Effect: -0.42%
 - Opportunistic Credit outperformed (+0.55%)
 - Private Real Estate outperformed (+0.37%)
 - Real Assets outperformed (+0.29%)
 - Diversifying Assets outperformed (+0.05%)
 - Public Real Estate underperformed (-0.06%)
 - U.S. Small/Mid Cap Equity underperformed (-0.09%)
 - Non-U.S. Emerging Mkts Equity underperformed (-.31%)
 - Global Asset Allocation/Risk Parity underperformed (-0.53%)
 - Private Equity underperformed (-0.68%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

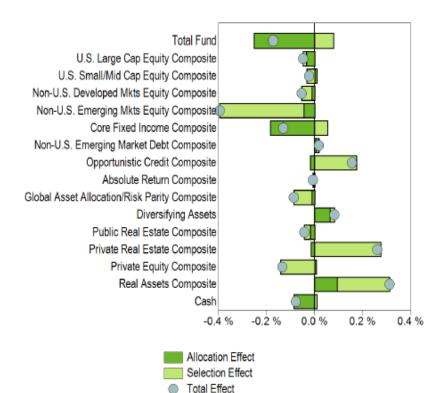
Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + **Interaction Effect:** Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))–(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Index)).

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects 3 Years Ending September 30, 2018



3 Year Excess Return: -0.17%

- Allocation Effect: -0.25%
 - Real Assets underweight (+0.09%)
 - Non U.S. Emerging Mkts Equity underweight (-0.05%)
 - Cash overweight (-0.09%)
 - Core Fixed Income overweight (-0.18%)
- Manager Selection Effect: +0.08%
 - Private Real Estate outperformed (+0.27%)
 - Real Assets outperformed (+0.22%)
 - Opportunistic Credit outperformed (+0.17%)
 - Core Fixed Income outperformed (+0.05%)
 - Global Asset Allocation/Risk Parity underperformed (-0.07%)
 - Private Equity underperformed (-0.14%)
 - Non U.S. Emerging Mkts Equity underperformed (-0.35%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + **Interaction Effect:** Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index)) – (Return Asset Class Index (Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Index)).

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.

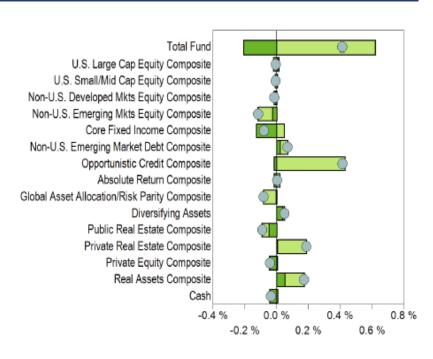


TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
5 Years Ending September 30, 2018



- Allocation Effect: -0.21%
 - Real Assets underweight (+0.05%)
 - Public Real Estate underweight (-0.05%)
 - Private Equity underweight (-0.05%)
 - Core Fixed Income overweight (-0.13%)
- Manager Selection Effect: +0.62%
 - Opportunistic Credit outperformed (+0.43%)
 - Private Real Estate outperformed (+0.18%)
 - Real Assets outperformed (+0.12%)
 - Core Fixed Income outperformed (+0.05%)
 - Non-U.S. Emerging Market Debt outperformed (+0.05%)
 - Global Asset Allocation/Risk Parity underperformed (-0.08%)
 - Non-U.S. Emerging Mkts Equity underperformed (-0.09%)
- Residual: 0.00%



Allocation Effect Selection Effect Total Effect

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + **Interaction Effect:** Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))–(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asse

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



TOTAL FUND RISK STATISTICS

| | | | | 3 Years | Ending Sept | ember 30, 2018 | | | | | | |
|---|----------|-----------|------|---------------|-------------|----------------|------|----------------|------|------------|------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Anlzd AJ | Rank | Tracking Error | Rank | Info Ratio | Rank | Beta |
| U.S. Large Cap Equity Composite | 16.9% | 17.2% | 17 | 9.2% | 30 | 0.0% | 27 | 0.1% | 1 | -0.5 | | 1.0 |
| S&P 500 | - | 17.3% | 16 | 9.2% | 31 | 0.0% | 26 | 0.0% | 1 | - | | 1.0 |
| U.S. Small/Mid Cap Equity Composite | 3.3% | 15.1% | 87 | 11.1% | 99 | 0.0% | 27 | 3.3% | 94 | -0.3 | | 0.9 |
| NMERB Small/Mid Cap Equity Blended Index | | 16.1% | 72 | 11.4% | 99 | 0.0% | 26 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Developed Mkts Equity Composite | 4.9% | 8.4% | 69 | 10.4% | 65 | -0.5% | 67 | 1.1% | 2 | -0.8 | | 1.0 |
| MSCI EAFE | - | 9.2% | 52 | 10.8% | 75 | 0.0% | 53 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Emerging Mkts Equity Composite | 9.0% | 8.9% | 75 | 12.6% | 29 | -1.9% | 63 | 3.0% | 42 | -1.2 | | 0.9 |
| MSCI Emerging Markets | - | 12.4% | 13 | 14.3% | 85 | 0.0% | 15 | 0.0% | 1 | | | 1.0 |
| Core Fixed Income Composite | 6.8% | 1.9% | 77 | 2.8% | 65 | 0.6% | 69 | 0.5% | 12 | 1.3 | 29 | 1.0 |
| BBgBarc US Aggregate TR | - | 1.3% | 99 | 2.7% | 56 | 0.0% | 99 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Emerging Market Debt Composite | 1.6% | 6.2% | 50 | 6.6% | 37 | 1.8% | 22 | 2.9% | 74 | 0.2 | 37 | 0.7 |
| Non-U.S. EMD Custom Benchmark | - | 5.6% | 61 | 8.4% | 55 | 0.0% | 61 | 0.0% | 1 | | | 1.0 |
| Opportunistic Credit Composite | 17.9% | 7.5% | | 2.0% | | 4.3% | | 2.4% | | 0.4 | | 0.4 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | 6.4% | | 3.2% | | 0.0% | | 0.0% | | | | 1.0 |
| Global Asset Allocation/Risk Parity Composite | 9.8% | 5.7% | 75 | 4.5% | 26 | 0.3% | 34 | 4.2% | 59 | -0.8 | - | 0.5 |
| GAA/Risk Parity Custom Index | | 9.1% | 1 | 5.4% | 55 | 0.0% | 60 | 0.0% | 1 | | - | 1.0 |

| | | 3 Years End | ng September 30, 20 | 18 | | | |
|--|----------|-------------|---------------------|---------------|------|----------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Anlzd AJ | Rank |
| Real Estate Composite | 6.2% | 11.3% | 4 | 6.3% | 90 | 7.7% | 8 |
| NCREIF Property Index | - | 7.8% | 76 | 3.2% | 31 | 0.0% | 83 |
| Private Equity Composite | 13.3% | 12.1% | 47 | 2.8% | 2 | 13.0% | 12 |
| Cambridge Associates US All PE (1 Qtr Lag) | - | 12.7% | 42 | 6.6% | 81 | 0.0% | 84 |
| Real Assets Composite | 7.4% | 9.9% | 27 | 3.4% | 21 | 3.0% | 50 |
| CPI + 4% (Seasonally Adjusted) | - | 6.1% | 47 | 0.6% | 1 | 0.0% | 90 |

^{1 -} Performance for Equity, Fixed Income, and Emerging Mkt Debt, Opportunistic Credit and GAA/Risk Parity composites are net of fees. Note: Percent of Total equals 97.1% because Absolute Return Composite, Diversifying Assets Composite and Cash Composite are not included.



TOTAL FUND RISK STATISTICS

| | | | | 5 Years | Ending Sept | ember 30, 2018 | | | | | | |
|---|----------|-----------|------|---------------|-------------|----------------|------|----------------|------|------------|------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Anlzd AJ | Rank | Tracking Error | Rank | Info Ratio | Rank | Beta |
| U.S. Large Cap Equity Composite | 16.9% | 13.9% | 4 | 9.5% | 19 | 0.0% | 16 | 0.2% | 1 | -0.6 | | 1.0 |
| S&P 500 | - | 13.9% | 4 | 9.6% | 23 | 0.0% | 15 | 0.0% | 1 | | | 1.0 |
| U.S. Small/Mid Cap Equity Composite | 3.3% | 11.2% | 92 | 11.2% | 98 | 0.6% | 3 | 3.2% | 94 | -0.1 | | 0.9 |
| NMERB Small/Mid Cap Equity Blended Index | | 11.4% | 91 | 11.7% | 99 | 0.0% | 15 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Developed Mkts Equity Composite | 4.9% | 4.3% | 57 | 10.8% | 64 | 0.0% | 57 | 1.1% | 3 | -0.1 | | 1.0 |
| MSCI EAFE | - | 4.4% | 55 | 11.0% | 77 | 0.0% | 55 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Emerging Mkts Equity Composite | 9.0% | 2.9% | 46 | 12.8% | 29 | -0.3% | 46 | 3.1% | 46 | -0.2 | | 0.9 |
| MSCI Emerging Markets | - | 3.6% | 15 | 14.7% | 90 | 0.0% | 26 | 0.0% | 1 | | | 1.0 |
| Core Fixed Income Composite | 6.8% | 2.7% | 53 | 2.8% | 58 | 0.5% | 63 | 0.5% | 26 | 1.1 | 9 | 1.0 |
| BBgBarc US Aggregate TR | - | 2.2% | 85 | 2.7% | 53 | 0.0% | 91 | 0.0% | 1 | | | 1.0 |
| Non-U.S. Emerging Market Debt Composite | 1.6% | 1.3% | 43 | 6.5% | 34 | 2.1% | 7 | 3.8% | 82 | 0.7 | 1 | 0.7 |
| Non-U.S. EMD Custom Benchmark | - | -1.5% | 64 | 9.3% | 63 | 0.0% | 42 | 0.0% | 1 | - | | 1.0 |
| Opportunistic Credit Composite | 17.9% | 7.1% | | 1.9% | | 4.8% | | 2.5% | | 0.9 | | 0.4 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | 4.9% | | 3.2% | - | 0.0% | - | 0.0% | - | | | 1.0 |
| Global Asset Allocation/Risk Parity Composite | 9.8% | 3.5% | 92 | 5.5% | 18 | -0.6% | 42 | 4.3% | 59 | -0.5 | | 0.7 |
| GAA/Risk Parity Custom Index | - | 5.9% | 1 | 5.9% | 51 | 0.0% | 31 | 0.0% | 1 | - | - | 1.0 |

| | | 5 Years Endi | ng September 30, 201 | 18 | | | |
|--|----------|--------------|----------------------|---------------|------|----------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Anlzd AJ | Rank |
| Real Estate Composite | 6.2% | 11.9% | 9 | 6.9% | 96 | 12.9% | 1 |
| NCREIF Property Index | | 9.6% | 73 | 4.0% | 37 | 0.0% | 85 |
| Private Equity Composite | 13.3% | 14.6% | 41 | 3.8% | 1 | 15.1% | 17 |
| Cambridge Associates US All PE (1 Qtr Lag) | - | 13.8% | 44 | 6.8% | 78 | 0.0% | 92 |
| Real Assets Composite | 7.4% | 7.6% | 8 | 3.8% | 15 | 3.8% | 46 |
| CPI + 4% (Seasonally Adjusted) | - | 5.6% | 45 | 0.7% | 1 | 0.0% | 89 |

^{1 -} Performance for Equity, Fixed Income, and Emerging Mkt Debt, Opportunistic Credit and GAA/Risk Parity composites are net of fees. Note: Percent of Total equals 97.1% because Absolute Return Composite, Diversifying Assets Composite and Cash Composite are not included.



PERFORMANCE DETAIL - TOTAL FUND & U.S. EQUITY

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|-------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Total Fund | 13,058,397,827 | 100.0 | 2.3 | 36 | 4.1 | 21 | 7.5 | 25 | 9.6 | 38 | 7.9 | 23 | 7.9 | 27 | 9.1 | Jul-83 |
| Policy Index | | | <u>2.8</u> | 16 | <u>4.5</u> | 12 | <u>8.0</u> | 16 | <u>9.8</u> | 27 | <u>7.5</u> | 37 | <u>7.2</u> | 57 | | Jul-83 |
| Over/Under | | | -0.5 | | -0.4 | | -0.5 | | -0.2 | | 0.4 | | 0.7 | | | |
| 60% MSCI ACWI (Net) / 40% FTSE WGBI | | | 1.9 | 68 | 1.3 | 99 | 5.2 | 94 | 8.7 | 83 | 5.3 | 97 | 6.0 | 95 | | Jul-83 |
| InvestorForce Public DB > \$1B Net Median | | | 2.1 | | 2.9 | | 6.5 | | 9.3 | | 7.1 | | 7.3 | | 8.5 | Jul-83 |
| U.S. Equity Composite | 2,634,196,632 | 20.2 | 7.1 | 19 | 10.0 | 64 | 17.1 | 54 | 17.0 | 32 | 13.5 | 12 | 11.6 | 57 | 11.5 | Jan-85 |
| Russell 3000 | | | <u>7.1</u> | 18 | <u>10.6</u> | 42 | <u>17.6</u> | 38 | <u>17.1</u> | 21 | <u>13.5</u> | 17 | <u>12.0</u> | 28 | <u>11.3</u> | Jan-85 |
| Over/Under | | | 0.0 | | -0.6 | | -0.5 | | -0.1 | | 0.0 | | -0.4 | | 0.2 | |
| InvestorForce Public DB > \$1 Billion US Equity Net Median | | | 6.7 | | 10.4 | | 17.1 | | 16.6 | | 13.1 | | 11.8 | | 11.5 | Jan-85 |
| U.S. Large Cap Equity Composite | 2,207,062,354 | 16.9 | 7.7 | 2 | 10.4 | 52 | 17.7 | 35 | 17.2 | 17 | 13.9 | 4 | 11.7 | 52 | 6.8 | Aug-99 |
| S&P 500 | | | <u>7.7</u> | 2 | <u>10.6</u> | 43 | <u>17.9</u> | 30 | <u>17.3</u> | 16 | <u>13.9</u> | 4 | <u>12.0</u> | 30 | <u>6.2</u> | Aug-99 |
| Over/Under | | | 0.0 | | -0.2 | | -0.2 | | -0.1 | | 0.0 | | -0.3 | | 0.6 | |
| InvestorForce Public DB > \$1 Billion US Equity Net Median | | | 6.7 | | 10.4 | | 17.1 | | 16.6 | | 13.1 | | 11.8 | | 6.9 | Aug-99 |
| S&P 500 Index Fund | 2,207,062,354 | 16.9 | 7.7 | 29 | 10.4 | 26 | 17.7 | 32 | 17.2 | 16 | 13.9 | 20 | 11.6 | 38 | 5.6 | Jan-00 |
| S&P 500 | | | <u>7.7</u> | 29 | <u>10.6</u> | 24 | <u>17.9</u> | 28 | <u>17.3</u> | 15 | <u>13.9</u> | 15 | <u>12.0</u> | 26 | <u>5.7</u> | Jan-00 |
| Over/Under | | | 0.0 | | -0.2 | | -0.2 | | -0.1 | | 0.0 | | -0.4 | | -0.1 | |
| eV US Large Cap Core Equity Net Median | | | 6.9 | | 8.7 | | 15.7 | | 15.1 | | 12.5 | | 11.1 | | 6.9 | Jan-00 |
| U.S. Small/Mid Cap Equity Composite | 427,134,277 | 3.3 | 3.9 | 99 | 7.6 | 94 | 13.7 | 97 | 15.1 | 87 | 11.2 | 92 | 10.6 | 99 | 7.8 | Aug-99 |
| NMERB Small/Mid Cap Equity Blended Index | | | 4.7 | 97 | <u>10.4</u> | 47 | <u>16.2</u> | 75 | <u>16.1</u> | 72 | <u>11.4</u> | 91 | <u>11.2</u> | 85 | <u>8.7</u> | Aug-99 |
| Over/Under | | | -0.8 | | -2.8 | | -2.5 | | -1.0 | | -0.2 | | -0.6 | | -0.9 | |
| InvestorForce Public DB > \$1 Billion US Equity Net Median | | | 6.7 | | 10.4 | | 17.1 | | 16.6 | | 13.1 | | 11.8 | | 6.9 | Aug-99 |
| S&P 400 Mid-Cap | 427,131,719 | 3.3 | 3.9 | 61 | 7.6 | 47 | | | | | | | | | 11.8 | Nov-17 |
| Russell 2500 | | | <u>4.7</u> | 49 | <u>10.4</u> | 35 | <u>16.2</u> | 37 | <u>16.1</u> | 23 | <u>11.4</u> | 44 | <u>12.0</u> | 49 | <u>14.4</u> | Nov-17 |
| Over/Under | | | -0.8 | | -2.8 | | | | | | | | | | -2.6 | |
| eV US Mid Cap Equity Net Median | | | 4.6 | | 6.8 | | 13.6 | | 14.2 | | 11.1 | | 11.9 | | 11.9 | Nov-17 |



^{1 -} U.S. Small/Mid Cap Equity Composite includes the performance history of the U.S. Small Cap Equity Composite through November 2011.

^{2 -} NMERB Small/Mid Cap Equity Blended Benchmark is the Russell 2000 Index through November 2011 and the Russell 2500 Index from December 2011 - forward.

^{3 -} Total Fund market value includes \$63,207 from Legacy Assets.

^{4 -} U.S. Small/Mid Cap Equity Composite includes \$2,343 from Pinnacle and \$216 from Lord Abbett.

PERFORMANCE DETAIL - NON-U.S. EQUITY

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|-------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Non-U.S. Equity Composite | 1,813,413,202 | 13.9 | -1.5 | 98 | -7.3 | 99 | -1.5 | 99 | 8.8 | 95 | 3.4 | 95 | 4.0 | 94 | 6.3 | Jul-95 |
| MSCI ACWI ex USA | | | <u>0.7</u> | 40 | <u>-3.1</u> | 53 | <u>1.8</u> | 55 | <u>10.0</u> | 70 | <u>4.1</u> | 83 | <u>5.2</u> | 82 | | Jul-95 |
| Over/Under | | | -2.2 | | -4.2 | | -3.3 | | -1.2 | | -0.7 | | -1.2 | | | |
| InvestorForce Public DB > \$1 Billion Global ex-US Equity Net Median | | | 0.5 | | -2.9 | | 1.9 | | 10.3 | | 4.8 | | 5.8 | | 6.1 | Jul-95 |
| Non-U.S. Developed Mkts Equity Composite | 639,100,869 | 4.9 | 1.9 | 12 | -1.1 | 35 | 2.5 | 42 | 8.4 | 69 | 4.3 | 57 | 4.5 | 90 | 6.2 | Sep-95 |
| MSCI EAFE | | | <u>1.4</u> | 23 | <u>-1.4</u> | 42 | <u>2.7</u> | 40 | <u>9.2</u> | 52 | <u>4.4</u> | 55 | <u>5.4</u> | 73 | <u>5.1</u> | Sep-95 |
| Over/Under | | | 0.5 | | 0.3 | | -0.2 | | -0.8 | | -0.1 | | -0.9 | | 1.1 | |
| InvestorForce Public DB Dev Mkt ex-US Eq Net Median | | | 1.0 | | -2.0 | | 2.1 | | 9.6 | | 4.7 | | 6.0 | | 6.4 | Sep-95 |
| Pyramis | 308,318,368 | 2.4 | 2.4 | 12 | -1.1 | 41 | 1.8 | 55 | 7.0 | 90 | 3.7 | 87 | 4.8 | 90 | 7.5 | Jun-03 |
| MSCI EAFE | | | <u>1.4</u> | 35 | <u>-1.4</u> | 44 | <u>2.7</u> | 46 | <u>9.2</u> | 56 | <u>4.4</u> | 71 | <u>5.4</u> | 82 | <u>7.4</u> | Jun-03 |
| Over/Under | | | 1.0 | | 0.3 | | -0.9 | | -2.2 | | -0.7 | | -0.6 | | 0.1 | |
| eV All EAFE Equity Net Median | | | 0.8 | | -2.1 | | 2.4 | | 9.5 | | 5.4 | | 6.5 | | 8.0 | Jun-03 |
| BlackRock MSCI EAFE | 330,782,501 | 2.5 | 1.4 | 33 | -1.1 | 40 | 3.1 | 43 | 9.6 | 48 | 4.8 | 65 | | | 5.8 | Aug-13 |
| MSCI EAFE | | | <u>1.4</u> | 35 | <u>-1.4</u> | 44 | <u>2.7</u> | 46 | <u>9.2</u> | 56 | <u>4.4</u> | 71 | <u>5.4</u> | 82 | <u>5.4</u> | Aug-13 |
| Over/Under | | | 0.0 | | 0.3 | | 0.4 | | 0.4 | | 0.4 | | | | 0.4 | |
| eV All EAFE Equity Net Median | | | 0.8 | | -2.1 | | 2.4 | | 9.5 | | 5.4 | | 6.5 | | 6.2 | Aug-13 |

¹ - InvestorForce Public DB > \$1B Dev Mkt ex-US Eq Net is unavailable, universe includes all public funds. Note: Performance shown is net of fees. Fiscal year ends June 30.



PERFORMANCE DETAIL - EMERGING MARKET EQUITY

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|---------------------|------|---------------------|------|---------------------|------|---------------------|------|--------------|------|--------------------|------|--------------------|-------------------|
| Non-U.S. Emerging Mkts Equity Composite | 1,174,312,334 | 9.0 | -3.3 | 74 | -10.6 | 60 | -3.7 | 44 | 8.9 | 75 | 2.9 | 46 | 3.9 | 76 | 6.4 | Sep-00 |
| MSCI Emerging Markets Over/Under | | | <u>-1.1</u> -2.2 | 46 | <u>-7.7</u> -2.9 | 12 | <u>-0.8</u> -2.9 | 8 | <u>12.4</u> -3.5 | 13 | 3.6 -0.7 | 15 | <u>5.4</u> -1.5 | 23 | <u>7.7</u> -1.3 | Sep-00 |
| InvestorForce Public DB > \$1 Billion Emg Mkt Eq Net Median | | | -1.4 | | -9.8 | | -3.7 | | 10.1 | | 2.9 | | 4.8 | | 6.9 | Sep-00 |
| Robeco | 334,832,562 | 2.6 | -0.1 | 20 | -9.6 | 51 | -2.6 | 43 | 12.8 | 28 | 3.9 | 41 | | | 8.7 | Nov-08 |
| MSCI Emerging Markets | | | <u>-1.1</u> | 29 | <u>-7.7</u> | 24 | <u>-0.8</u> | 26 | <u>12.4</u> | 34 | <u>3.6</u> | 52 | <u>5.4</u> | 63 | <u>8.9</u> | Nov-08 |
| Over/Under | | | 1.0 | | -1.9 | | -1.8 | | 0.4 | | 0.3 | | | | -0.2 | |
| eV Emg Mkts Equity Net Median | | | -2.8 | | -9.5 | | -3.2 | | 11.2 | | 3.7 | | 6.0 | | 9.6 | Nov-08 |
| Neuberger Berman Emerging Markets | 339,292,077 | 2.6 | -5.4 | 83 | -12.7 | 83 | -6.2 | 76 | 12.4 | 34 | 4.0 | 40 | | | 4.5 | Aug-13 |
| MSCI Emerging Markets | | | <u>-1.1</u> | 29 | <u>-7.7</u> | 24 | <u>-0.8</u> | 26 | <u>12.4</u> | 34 | <u>3.6</u> | 52 | <u>5.4</u> | 63 | <u>4.4</u> | Aug-13 |
| Over/Under | | | -4.3 | | -5.0 | | -5.4 | | 0.0 | | 0.4 | | | | 0.1 | |
| eV Emg Mkts Equity Net Median | | | -2.8 | | -9.5 | | -3.2 | | 11.2 | | 3.7 | | 6.0 | | 4.3 | Aug-13 |
| Mondrian Emerging Markets Small Cap | 238,304,080 | 1.8 | -6.8 | 62 | -12.1 | 48 | -2.2 | 24 | 1.8 | 98 | 0.6 | 87 | | | 0.4 | Aug-13 |
| MSCI Emerging Markets Small Cap | | | <u>-4.2</u> | 37 | <u>-12.3</u> | 50 | <u>-4.2</u> | 41 | <u>7.4</u> | 71 | <u>2.7</u> | 72 | <u>7.4</u> | 99 | <u>3.2</u> | Aug-13 |
| Over/Under | | | -2.6 | | 0.2 | | 2.0 | | -5.6 | | -2.1 | | | | -2.8 | |
| eV Emg Mkts Small Cap Equity Net Median | | | -5.2 | | -12.4 | | -5.2 | | 8.7 | | 4.2 | | 9.0 | | 4.7 | Aug-13 |
| Parametric Emerging Markets Equity | 261,883,614 | 2.0 | -0.8 | 25 | -7.9 | 30 | -3.2 | 51 | 9.7 | 71 | | | | | 2.8 | Jun-15 |
| MSCI Emerging Markets | | | <u>-1.1</u> | 29 | <u>-7.7</u> | 24 | <u>-0.8</u> | 26 | <u>12.4</u> | 34 | <u>3.6</u> | 52 | <u>5.4</u> | 63 | <u>3.9</u> | Jun-15 |
| Over/Under | | | 0.3 | | -0.2 | | -2.4 | | -2.7 | | | | | | -1.1 | |
| eV Emg Mkts Equity Net Median | | | -2.8 | | -9.5 | | -3.2 | | 11.2 | | 3.7 | | 6.0 | | 3.3 | Jun-15 |



PERFORMANCE DETAIL - TOTAL FI AND CORE FI

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|-------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Fixed Income Composite | 3,436,125,309 | 26.3 | 1.3 | 4 | 3.0 | 7 | 4.1 | 7 | 5.8 | 7 | 5.5 | 7 | 7.6 | 1 | 3.1 | Jan-85 |
| BBgBarc US Aggregate TR | | | <u>0.0</u> | 91 | <u>-1.6</u> | 85 | <u>-1.2</u> | 90 | <u>1.3</u> | 99 | <u>2.2</u> | 88 | <u>3.8</u> | 97 | <u>6.7</u> | Jan-85 |
| Over/Under | | | 1.3 | | 4.6 | | 5.3 | | 4.5 | | 3.3 | | 3.8 | | -3.6 | |
| InvestorForce Public DB > \$1 Billion Fixed Income Net Median | | | 0.3 | | -0.9 | | -0.4 | | 3.8 | | 2.9 | | 5.5 | | 7.3 | Jan-85 |
| Core Fixed Income Composite | 885,291,985 | 6.8 | 0.7 | 19 | -1.3 | 62 | -0.7 | 47 | 1.9 | 77 | 2.7 | 53 | 5.0 | 43 | 5.1 | Dec-99 |
| BBgBarc US Aggregate TR | | | <u>0.0</u> | 70 | <u>-1.6</u> | 79 | <u>-1.2</u> | 84 | <u>1.3</u> | 99 | <u>2.2</u> | 85 | <u>3.8</u> | 95 | <u>4.8</u> | Dec-99 |
| Over/Under | | | 0.7 | | 0.3 | | 0.5 | | 0.6 | | 0.5 | | 1.2 | | 0.3 | |
| InvestorForce Public DB > \$1 Billion US Fixed Income Net Median | | | 0.2 | | -1.2 | | -0.7 | | 2.5 | | 2.7 | | 4.9 | | 5.3 | Dec-99 |
| Core Fixed Income | 885,291,985 | 6.8 | 0.7 | 1 | -1.3 | 30 | -0.7 | 20 | 1.9 | 24 | | | | | 1.4 | Apr-15 |
| BBgBarc US Aggregate TR | | | <u>0.0</u> | 77 | <u>-1.6</u> | 64 | <u>-1.2</u> | 67 | <u>1.3</u> | 69 | <u>2.2</u> | 67 | <u>3.8</u> | 80 | <u>1.0</u> | Apr-15 |
| Over/Under | | | 0.7 | | 0.3 | | 0.5 | | 0.6 | | | | | | 0.4 | |
| eV US Core Fixed Inc Net Median | | | 0.1 | | -1.5 | | -1.1 | | 1.6 | | 2.3 | | 4.3 | | 1.2 | Apr-15 |



PERFORMANCE DETAIL - EMERGING MARKET DEBT

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|-------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Non-U.S. Emerging Market Debt Composite | 214,064,657 | 1.6 | -0.2 | 51 | -5.0 | 36 | -4.2 | 38 | 6.2 | 50 | 1.3 | 43 | | | 1.2 | Sep-11 |
| Non-U.S. EMD Custom Benchmark | | | <u>0.2</u> | 49 | <u>-5.6</u> | 55 | <u>-4.6</u> | 52 | <u>5.6</u> | 61 | <u>-1.5</u> | 64 | | | <u>-1.3</u> | Sep-11 |
| Over/Under | | | -0.4 | | 0.6 | | 0.4 | | 0.6 | | 2.8 | | | | 2.5 | |
| InvestorForce All DB Emg Mkt Fix Inc Net Median | | | -0.2 | | -5.3 | | -4.5 | | 6.2 | | 0.4 | | | | 1.7 | Sep-11 |
| EMSO | 101,298,205 | 0.8 | -0.5 | 68 | -3.0 | 22 | -2.4 | 31 | 6.2 | 35 | 4.1 | 36 | | | 4.3 | Sep-11 |
| JP Morgan GBI - EM Global Diversified Index | | | <u>-1.8</u> | 80 | <u>-8.1</u> | 77 | <u>-7.4</u> | 76 | <u>5.2</u> | 68 | <u>-1.7</u> | 84 | <u>2.7</u> | 77 | <u>-1.5</u> | Sep-11 |
| Over/Under | | | 1.3 | | 5.1 | | 5.0 | | 1.0 | | 5.8 | | | | 5.8 | |
| eV All Emg Mkts Fixed Inc Net Median | | | 1.0 | | -5.3 | | -4.4 | | 5.6 | | 3.3 | | 6.5 | | 3.3 | Sep-11 |
| Prudential | 112,748,333 | 0.9 | 0.1 | 59 | -6.6 | 67 | -5.8 | 68 | | | | | | | 7.1 | Feb-16 |
| 50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified | | | <u>0.2</u> | 58 | <u>-5.6</u> | 54 | <u>-4.6</u> | 53 | <u>5.7</u> | 47 | <u>1.9</u> | 60 | <u>5.2</u> | 63 | <u>6.1</u> | Feb-16 |
| Over/Under | | | -0.1 | | -1.0 | | -1.2 | | | | | | | | 1.0 | |
| eV All Emg Mkts Fixed Inc Net Median | | | 1.0 | | -5.3 | | -4.4 | | 5.6 | | 3.3 | | 6.5 | | 6.4 | Feb-16 |

^{3 -} Non-U.S. EMD Custom Benchmark Composition from 9/1/2011-1/31/2016: JP Morgan GBI-EM Diversified. 2/1/2016 - Current: 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified. Note: Performance shown is net of fees. Fiscal year ends June 30.



^{1 -} Non-U.S. Emerging Market Debt Composite market value includes \$18,118 in terminated manager account.

^{2 -} InvestorForce Public DB > \$1B Emerging Mkt Fixed Income unavailable, universe includes all DB plans.

PERFORMANCE DETAIL - OPPORTUNISTIC FI

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Opportunistic Credit Composite | 2,336,768,667 | 17.9 | 1.6 | | 5.5 | - | 6.9 | - | 7.5 | | 7.1 | | 9.2 | | 8.7 | May-08 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.1</u> | May-08 |
| Over/Under | | | -0.6 | | 2.4 | | 3.0 | | 1.1 | | 2.2 | | 2.0 | | 2.6 | |
| ICE BofAML BB-B US High Yield Constrained TR | | | 2.4 | | 1.9 | | 2.3 | | 7.3 | | 5.4 | | 8.5 | | 7.1 | May-08 |
| Beachpoint Combined | 565,672,043 | 4.3 | 1.7 | - | 4.3 | - | 6.6 | | 7.4 | | 5.9 | | 8.4 | | 6.9 | Mar-04 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | 2.2 | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>5.8</u> | Mar-04 |
| Over/Under | | | -0.5 | | 1.2 | | 2.7 | | 1.0 | | 1.0 | | 1.2 | | 1.1 | |
| Beachpoint Total Return | 565,672,043 | 4.3 | 1.7 | | 4.3 | | 6.6 | | 7.4 | | 5.9 | | 8.4 | | 7.3 | Jun-08 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.1</u> | Jun-08 |
| Over/Under | | | -0.5 | | 1.2 | | 2.7 | | 1.0 | | 1.0 | | 1.2 | | 1.2 | |
| Pimco Disco Combined | 112,261,226 | 0.9 | 1.7 | - | 5.9 | - | 7.3 | | 10.7 | | 9.3 | | 12.0 | | 12.0 | Jul-08 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.3</u> | Jul-08 |
| Over/Under | | | -0.5 | | 2.8 | | 3.4 | | 4.3 | | 4.4 | | 4.8 | | 5.7 | |
| Pimco Disco II | 112,261,226 | 0.9 | 1.7 | | 5.9 | | 7.3 | | 10.7 | | 9.3 | | | | 13.7 | Oct-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.3</u> | Oct-11 |
| Over/Under | | | -0.5 | | 2.8 | | 3.4 | | 4.3 | | 4.4 | | | | 7.4 | |
| GoldenTree Combined | 189,746,268 | 1.5 | 1.3 | | 5.6 | | 6.6 | | 6.1 | | 6.4 | | | | 9.1 | Oct-09 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.6</u> | Oct-09 |
| Over/Under | | | -0.9 | | 2.5 | | 2.7 | | -0.3 | | 1.5 | | | | 2.5 | |
| Goldentree II | 189,746,268 | 1.5 | 1.3 | | 5.6 | | 6.6 | | 6.1 | | 6.4 | | | | 8.7 | Sep-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.0</u> | Sep-11 |
| Over/Under | | | -0.9 | | 2.5 | | 2.7 | | -0.3 | | 1.5 | | | | 2.7 | |
| Medley Capital | 83,392,078 | 0.6 | -1.3 | | -6.6 | | -8.7 | | 0.5 | | 3.2 | | | | 5.0 | Aug-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>5.4</u> | Aug-11 |
| Over/Under | | | -3.5 | | -9.7 | | -12.6 | | -5.9 | | -1.7 | | | | -0.4 | |



PERFORMANCE DETAIL - OPPORTUNISTIC FI

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|------------|------|-------------|------|-------------------|------|-------------------|------|---------------|------|-------------------|-------------------|
| Waterfall - Eden | 293,091,865 | 2.2 | 0.8 | | 5.4 | | 7.6 | | 6.4 | | 7.7 | | | | 9.8 | Aug-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index Over/Under | | | 2.2 -1.4 | | 3.1 2.3 | | 3.9 3.7 | | <u>6.4</u> 0.0 | | <u>4.9</u> 2.8 | | <u>7.2</u> | | <u>5.4</u> 4.4 | Aug-11 |
| Waterfall - Victoria | 84,909,458 | 0.7 | 1.3 | | 9.1 | | 11.1 | | 12.2 | | 10.4 | | | | 10.6 | Aug-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | 04,303,430 | 0.1 | 2.2 | | <u>3.1</u> | - | 3.9 | | <u>6.4</u> | | 4.9 | | <u>7.2</u> | | <u>5.4</u> | Aug-11 |
| Over/Under | | | -0.9 | | 6.0 | | 7.2 | | 5.8 | | 5.5 | | | | 5.2 | |
| Elegantree Fund | 27,106,021 | 0.2 | 1.1 | | 5.2 | | 6.2 | | 8.4 | | 8.7 | | | | 9.9 | Mar-12 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>5.5</u> | Mar-12 |
| Over/Under | | | -1.1 | | 2.1 | | 2.3 | | 2.0 | | 3.8 | | | | 4.4 | |
| Gramercy Distressed Opp II | 104,650,440 | 0.8 | -1.5 | | -4.2 | | -7.7 | | -0.9 | | 1.7 | | | | 2.8 | Jul-12 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>5.5</u> | Jul-12 |
| Over/Under | | | -3.7 | | -7.3 | | -11.6 | | -7.3 | | -3.2 | | | | -2.7 | |
| ICE Canyon | 62,219,482 | 0.5 | -3.8 | | -6.9 | | -6.4 | - | 5.5 | | 1.2 | | | | 2.1 | Jun-12 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | - | <u>5.6</u> | Jun-12 |
| Over/Under | | | -6.0 | | -10.0 | | -10.3 | | -0.9 | | -3.7 | | | | -3.5 | |
| Lone Star VIII | 23,758,439 | 0.2 | 1.5 | | 2.9 | | -3.8 | | -2.8 | | 9.6 | | | | 9.6 | Oct-13 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.9</u> | Oct-13 |
| Over/Under | | | -0.7 | | -0.2 | | -7.7 | | -9.2 | | 4.7 | | | | 4.7 | |
| Marathon European Credit Opportunity I | 17,146,719 | 0.1 | 12.4 | | 18.6 | | 25.3 | | 12.4 | | 10.3 | | | | 10.2 | Oct-11 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>6.3</u> | Oct-11 |
| Over/Under | | | 10.2 | | 15.5 | | 21.4 | | 6.0 | | 5.4 | | | | 3.9 | |
| Marathon European Credit Opportunity II | 89,224,032 | 0.7 | 3.8 | | 12.5 | | 18.7 | | 11.3 | | | | | | 9.0 | Mar-14 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.3</u> | Mar-14 |
| Over/Under | | | 1.6 | | 9.4 | | 14.8 | | 4.9 | | | | | | 4.7 | |



PERFORMANCE DETAIL - OPPORTUNISTIC FI

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Lone Star IX | 53,381,796 | 0.4 | 6.5 | | 16.9 | | 18.8 | | 22.3 | | | | | | -15.2 | Apr-15 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.7</u> | Apr-15 |
| Over/Under | | | 4.3 | | 13.8 | | 14.9 | | 15.9 | | | | | | -19.9 | |
| Kildare European Partners I LP | 30,346,593 | 0.2 | 6.6 | | 17.7 | | 20.7 | | 17.6 | | | | | | 12.7 | May-14 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.3</u> | May-14 |
| Over/Under | | | 4.4 | | 14.6 | | 16.8 | | 11.2 | | | | | | 8.4 | |
| Black Forest | 54,811,140 | 0.4 | 1.5 | | 5.3 | | 6.1 | | 9.4 | | | | | | 7.6 | Aug-14 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.4</u> | Aug-14 |
| Over/Under | | | -0.7 | | 2.2 | | 2.2 | | 3.0 | | | | | | 3.2 | |
| Gramercy Distressed Opp III | 97,941,800 | 0.8 | -0.3 | | -1.6 | | -2.4 | | | | | | | | -1.1 | Jan-16 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>7.6</u> | Jan-16 |
| Over/Under | | | -2.5 | | -4.7 | | -6.3 | | | | | | | | -8.7 | |
| GSO Capital Opp III | 43,688,941 | 0.3 | 2.7 | | 9.6 | | 13.9 | | | | | | | | 8.2 | Oct-16 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>5.3</u> | Oct-16 |
| Over/Under | | | 0.5 | | 6.5 | | 10.0 | | | | | | | | 2.9 | |



PERFORMANCE DETAIL - OPPORTUNISTIC FI

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Cross Ocean ESS II | 77,177,442 | 0.6 | 1.5 | | 6.0 | | 8.3 | | | | - | | | | 16.4 | May-17 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.3</u> | May-17 |
| Over/Under | | | -0.7 | | 2.9 | | 4.4 | | | | | | | | 12.1 | |
| OWS CREDIT OPPORTUNITY FD | 114,016,900 | 0.9 | 2.3 | | 8.9 | | 12.9 | | | | | | | | 11.1 | Jul-17 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.4</u> | Jul-17 |
| Over/Under | | | 0.1 | | 5.8 | | 9.0 | | | | | | | | 6.7 | |
| TAIGA SPECIAL OPP DAC LP | 86,620,580 | 0.7 | 1.6 | | 8.5 | | 12.9 | | | | | | | | 14.7 | Aug-17 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>3.9</u> | Aug-17 |
| Over/Under | | | -0.6 | | 5.4 | | 9.0 | | | | | | | | 10.8 | |
| Sutherland Asset Management | 71,117,494 | 0.5 | 4.9 | | 18.3 | | 17.0 | | | | | | | | 5.9 | Jul-17 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>4.4</u> | Jul-17 |
| Over/Under | | | 2.7 | | 15.2 | | 13.1 | | | | | | | | 1.5 | |
| OHA Strategic Credit II | 6,533,750 | 0.1 | 14.9 | | 43.8 | | | | | | | | | | 38.7 | Dec-17 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>3.4</u> | Dec-17 |
| Over/Under | | | 12.7 | | 40.7 | | | | | | | | | | 35.3 | |
| Lone Star X | 47,954,162 | 0.4 | 3.1 | | -42.9 | | | | | | | | | | -42.9 | Jan-18 |
| 50% CS Leveraged Loan / 50% ICE BofA ML US HY BB-B Rated Constrained Index | | | <u>2.2</u> | | <u>3.1</u> | | <u>3.9</u> | | <u>6.4</u> | | <u>4.9</u> | | <u>7.2</u> | | <u>3.1</u> | Jan-18 |
| Over/Under | | | 0.9 | | -46.0 | | | | | | | | | | -46.0 | |



PERFORMANCE DETAIL - GAA/RISK PARITY

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|---------------------|------|--------------------|------|--------------------|------|-------------------|------|--------------------|------|---------------|------|--------------------|-------------------|
| Absolute Return Composite | 411,600 | 0.0 | | | | | | | | | | | | | | |
| Global Asset Allocation/Risk Parity Composite | 1,285,885,131 | 9.8 | -1.3 | 79 | -1.4 | 54 | 1.8 | 54 | 5.7 | 75 | 3.5 | 92 | | | 6.9 | Oct-09 |
| GAA/Risk Parity Custom Index | | | <u>1.1</u> | 16 | <u>3.2</u> | 6 | <u>7.0</u> | 8 | <u>9.1</u> | 1 | <u>5.9</u> | 1 | <u>6.4</u> | 1 | <u>6.7</u> | Oct-09 |
| Over/Under | | | -2.4 | | -4.6 | | -5.2 | | -3.4 | | -2.4 | | | | 0.2 | |
| InvestorForce Public DB > \$1 Billion Global Tactical Net Median | | | -0.6 | | -1.3 | | 1.9 | | 6.2 | | 4.0 | | 6.1 | | 6.9 | Oct-09 |
| Global Asset Allocation Composite | 619,379,025 | 4.7 | -1.7 | 88 | -1.3 | 50 | 0.9 | 78 | 4.5 | 87 | 1.8 | 99 | | | 1.9 | Nov-12 |
| Credit Suisse Hedge Global Macro Over/Under | | | <u>-0.2</u> -1.5 | 38 | <u>1.7</u> -3.0 | 14 | <u>3.6</u> -2.7 | 35 | <u>2.6</u> 1.9 | 93 | <u>2.2</u> -0.4 | 99 | <u>4.5</u> | 99 | <u>2.4</u> -0.5 | Nov-12 |
| InvestorForce Public DB > \$1 Billion Global Tactical | | | | | | | | | | | | | | | | |
| Net Median | | | -0.6 | | -1.3 | | 1.9 | | 6.2 | | 4.0 | | 6.1 | | 3.8 | Nov-12 |
| Bridgewater Pure Alpha | 291,938,148 | 2.2 | -2.0 | 94 | 2.3 | 20 | 4.9 | 32 | 2.5 | 87 | 2.7 | 75 | | | 6.2 | Oct-09 |
| Credit Suisse Hedge Global Macro | | | <u>-0.2</u> | 78 | <u>1.7</u> | 26 | <u>3.6</u> | 48 | <u>2.6</u> | 86 | <u>2.2</u> | 80 | <u>4.5</u> | 82 | <u>4.3</u> | Oct-09 |
| Over/Under | | | -1.8 | | 0.6 | | 1.3 | | -0.1 | | 0.5 | | | | 1.9 | |
| eV Global TAA Net Median | | | 1.3 | | -0.1 | | 3.4 | | 6.5 | | 4.0 | | 5.9 | | 6.1 | Oct-09 |
| PIMCO All Asset All Authority | 327,440,877 | 2.5 | -1.3 | 91 | -4.4 | 92 | -2.4 | 90 | 6.3 | 52 | 8.0 | 90 | | | 1.0 | Jul-13 |
| Credit Suisse Hedge Global Macro | | | <u>-0.2</u> | 78 | <u>1.7</u> | 26 | <u>3.6</u> | 48 | <u>2.6</u> | 86 | <u>2.2</u> | 80 | <u>4.5</u> | 82 | <u>2.1</u> | Jul-13 |
| Over/Under | | | -1.1 | | -6.1 | | -6.0 | | 3.7 | | -1.4 | | | | -1.1 | |
| eV Global TAA Net Median | | | 1.3 | | -0.1 | | 3.4 | | 6.5 | | 4.0 | | 5.9 | | 4.6 | Jul-13 |
| Risk Parity | 666,506,106 | 5.1 | -0.9 | 60 | -1.5 | 58 | 2.6 | 43 | 6.9 | 18 | 5.2 | 5 | | | 3.9 | Nov-12 |
| GAA/Risk Parity Custom Index | | | <u>1.1</u> | 16 | <u>3.2</u> | 6 | <u>7.0</u> | 8 | <u>9.1</u> | 1 | <u>5.9</u> | 1 | <u>6.4</u> | 1 | <u>7.0</u> | Nov-12 |
| Over/Under | | | -2.0 | | -4.7 | | -4.4 | | -2.2 | | -0.7 | | | | -3.1 | |
| InvestorForce Public DB > \$1 Billion Global Tactical Net Median | | | -0.6 | | -1.3 | | 1.9 | | 6.2 | | 4.0 | | 6.1 | | 3.8 | Nov-12 |
| Bridgewater All Weather | 451,558,302 | 3.5 | -0.3 | 81 | -0.5 | 56 | 3.6 | 48 | 6.6 | 50 | 4.4 | 46 | | | 7.7 | Oct-09 |
| 60% MSCI World (Gross) / 40% FTSE WGBI | | | <u>2.4</u> | 31 | <u>2.5</u> | 18 | <u>6.4</u> | 20 | <u>9.2</u> | 20 | <u>6.1</u> | 23 | <u>6.6</u> | 43 | <u>6.8</u> | Oct-09 |
| Over/Under | | | -2.7 | | -3.0 | | -2.8 | | -2.6 | | -1.7 | | | | 0.9 | |
| eV Global TAA Net Median | | | 1.3 | | -0.1 | | 3.4 | | 6.5 | | 4.0 | | 5.9 | | 6.1 | Oct-09 |
| PanAgora | 214,947,804 | 1.6 | -2.1 | 94 | -3.6 | 83 | 0.6 | 71 | 7.3 | 38 | | | | | 7.1 | Dec-13 |
| GAA/Risk Parity Custom Index | | | <u>1.1</u> | 55 | <u>3.2</u> | 12 | <u>7.0</u> | 17 | <u>9.1</u> | 20 | <u>5.9</u> | 24 | <u>6.4</u> | 46 | <u>5.3</u> | Dec-13 |
| Over/Under | | | -3.2 | | -6.8 | | -6.4 | | -1.8 | | | | | | 1.8 | |
| eV Global TAA Net Median | | | 1.3 | | -0.1 | | 3.4 | | 6.5 | | 4.0 | | 5.9 | | 3.5 | Dec-13 |

^{2 -} GAA/Risk Parity Custom Index: 60% MSCI World Half Hedged/ 40% CITI WGBI Half Hedged Inception - 6/30/2014; 60% MSCI World/ 40% CITI WGBI from 7/1/2014 - present. Note: Performance shown is net of fees. Fiscal year ends June 30.



^{1 -} Absolute Return Composite includes \$411,600 in liquidating assets.

PERFORMANCE DETAIL - GAA/RISK PARITY

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|------------------------------|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Diversifying Assets | 176,726,725 | 1.4 | 5.3 | - | | - | | - | | | | | | | 9.6 | Feb-18 |
| 3-Month LIBOR + 2% | | | <u>1.1</u> | | <u>3.2</u> | | <u>4.1</u> | | <u>3.3</u> | | 2.9 | | <u>2.7</u> | | <u>2.9</u> | Feb-18 |
| Over/Under | | | 4.2 | | | | | | | | | | | | 6.7 | |
| EIG Energy Fund XVII | 28,143,505 | 0.2 | 3.9 | | | | | | | | | | | | 3.0 | Apr-18 |
| 3-Month LIBOR + 2% | | | <u>1.1</u> | | <u>3.2</u> | | <u>4.1</u> | | <u>3.3</u> | | <u>2.9</u> | | <u>2.7</u> | | <u>2.2</u> | Apr-18 |
| Over/Under | | | 2.8 | | | | | | | | | | | | 0.8 | |
| The 1609 Fund LTD. | 110,333,220 | 0.8 | 6.1 | | | | | | | | | | | | 11.7 | Feb-18 |
| 3-Month LIBOR + 2% | | | <u>1.1</u> | | <u>3.2</u> | | <u>4.1</u> | | <u>3.3</u> | | <u>2.9</u> | | 2.7 | | <u>2.9</u> | Feb-18 |
| Over/Under | | | 5.0 | | | | | | | | | | | | 8.8 | |
| OLEA SPECIAL OPPS OFFSHORE I | 38,250,000 | 0.3 | | | | | | | | | | | | | | |



PERFORMANCE DETAIL - REAL ESTATE

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Real Estate Composite | 814,688,388 | 6.2 | 3.0 | 1 | 8.9 | 5 | 10.8 | 4 | 11.3 | 4 | 11.9 | 9 | 9.1 | 6 | 10.2 | Dec-03 |
| NCREIF Property Index | | | <u>1.7</u> | 55 | <u>5.3</u> | 64 | <u>7.2</u> | 74 | <u>7.8</u> | 76 | <u>9.6</u> | 73 | <u>6.4</u> | 23 | <u>9.1</u> | Dec-03 |
| Over/Under | | | 1.3 | | 3.6 | | 3.6 | | 3.5 | | 2.3 | | 2.7 | | 1.1 | |
| Wilshire REIT | | | 0.7 | 70 | 2.2 | 97 | 4.0 | 95 | 7.1 | 89 | 9.2 | 79 | 7.4 | 14 | 9.0 | Dec-03 |
| InvestorForce Public DB > \$1 Billion Real Estate Net Median | | | 1.7 | | 6.2 | | 8.1 | | 8.6 | | 10.1 | | 5.6 | | 7.9 | Dec-03 |
| Public Real Estate Composite | 259,739,650 | 2.0 | -0.5 | 99 | 0.2 | 98 | 1.1 | 97 | 5.9 | 92 | 7.7 | 88 | 6.9 | 17 | 8.7 | Dec-03 |
| Wilshire REIT | | | <u>0.7</u> | 70 | <u>2.2</u> | 97 | <u>4.0</u> | 95 | <u>7.1</u> | 89 | <u>9.2</u> | 79 | <u>7.4</u> | 14 | <u>9.0</u> | Dec-03 |
| Over/Under | | | -1.2 | | -2.0 | | -2.9 | | -1.2 | | -1.5 | | -0.5 | | -0.3 | |
| InvestorForce Public DB > \$1 Billion Real Estate Net Median | | | 1.7 | | 6.2 | | 8.1 | | 8.6 | | 10.1 | | 5.6 | | 7.9 | Dec-03 |
| Brookfield | 259,739,650 | 2.0 | -0.5 | 88 | 0.2 | 81 | 1.0 | 88 | 5.7 | 92 | 7.2 | 90 | | | 8.6 | Jul-11 |
| MSCI US REIT | | | <u>0.8</u> | 51 | <u>1.3</u> | 50 | <u>2.4</u> | 84 | <u>6.3</u> | 77 | <u>7.8</u> | 88 | <u>6.1</u> | 91 | <u>7.6</u> | Jul-11 |
| Over/Under | | | -1.3 | | -1.1 | | -1.4 | | -0.6 | | -0.6 | | | | 1.0 | |
| eV US REIT Net Median | | | 0.8 | | 1.3 | | 3.8 | | 7.3 | | 9.4 | | 7.8 | | 8.9 | Jul-11 |
| Private Real Estate Composite | 554,948,738 | 4.2 | 4.6 | 2 | 13.3 | 3 | 15.8 | 3 | 14.3 | 3 | 14.4 | 1 | 9.4 | 1 | 8.7 | Jan-08 |
| NCREIF Property Index | | | <u>1.7</u> | 59 | <u>5.3</u> | 82 | <u>7.2</u> | 66 | <u>7.8</u> | 73 | <u>9.6</u> | 69 | <u>6.4</u> | 14 | <u>6.2</u> | Jan-08 |
| Over/Under | | | 2.9 | | 8.0 | | 8.6 | | 6.5 | | 4.8 | | 3.0 | | 2.5 | |
| InvestorForce Public DB Real Estate Priv Net Median | | | 1.9 | | 6.3 | | 8.3 | | 8.7 | | 10.0 | | 5.0 | | 4.5 | Jan-08 |
| U.S. Private Real Estate | 554,948,738 | 4.2 | 4.6 | | 13.3 | | 15.8 | | 14.3 | | 14.5 | | 9.9 | | 9.3 | Jan-08 |
| NCREIF Property Index | | | <u>1.7</u> | | <u>5.3</u> | | <u>7.2</u> | | <u>7.8</u> | | <u>9.6</u> | | <u>6.4</u> | | <u>6.2</u> | Jan-08 |
| Over/Under | | | 2.9 | | 8.0 | | 8.6 | | 6.5 | | 4.9 | | 3.5 | | 3.1 | |

¹ - InvestorForce Public DB > \$1B Real Estate Private is unavailable, universe includes all public funds. Note: Performance is shown net of fees. Fiscal year ends June 30.



PERFORMANCE DETAIL - PE & RA

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|--------------------|------|---------------------|------|---------------------|------|---------------------|------|--------------------|------|--------------------|------|---------------------|-------------------|
| Private Equity Composite | 1,735,061,289 | 13.3 | 3.7 | 54 | 10.5 | 68 | 13.4 | 72 | 12.1 | 47 | 14.6 | 41 | 11.3 | 34 | 7.0 | Jun-06 |
| Cambridge Associates US All PE (1 Qtr Lag) Over/Under | | | <u>5.8</u> -2.1 | 8 | <u>14.2</u> -3.7 | 22 | <u>18.7</u> -5.3 | 20 | <u>12.7</u> -0.6 | 42 | <u>13.8</u> 0.8 | 44 | <u>10.8</u> 0.5 | 37 | <u>12.5</u> -5.5 | Jun-06 |
| InvestorForce Public DB > \$1 Billion Private Equity Net Median | | | 3.7 | | 11.8 | | 15.7 | | 11.6 | | 12.4 | | 9.9 | | 10.1 | Jun-06 |
| Real Assets Composite | 971,166,088 | 7.4 | 2.8 | 30 | 9.6 | 13 | 10.4 | 19 | 9.9 | 27 | 7.6 | 8 | 3.2 | 40 | 2.7 | Jul-08 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | 46 | <u>4.7</u> | 31 | <u>6.4</u> | 32 | <u>6.1</u> | 47 | <u>5.6</u> | 45 | <u>5.5</u> | 16 | <u>5.5</u> | Jul-08 |
| Over/Under | | | 1.4 | | 4.9 | | 4.0 | | 3.8 | | 2.0 | | -2.3 | | -2.8 | |
| InvestorForce Public DB > \$1 Billion Real Assets/Commodities Net Median | | | 0.9 | | 2.7 | | 5.2 | | 5.9 | | 4.9 | | 3.0 | | 2.7 | Jul-08 |
| Infrastructure Composite | 389,269,947 | 3.0 | 2.2 | | 5.2 | | 6.0 | | 9.4 | | 7.7 | | 3.1 | | 3.1 | Jul-08 |
| Infrastructure | 358,985,828 | 2.7 | 1.9 | | 5.1 | | 5.7 | | 6.9 | | 6.6 | | 2.7 | | 2.6 | Jul-08 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | | <u>4.7</u> | | <u>6.4</u> | | <u>6.1</u> | | <u>5.6</u> | | <u>5.5</u> | | <u>5.5</u> | Jul-08 |
| Over/Under | | | 0.5 | | 0.4 | | -0.7 | | 8.0 | | 1.0 | | -2.8 | | -2.9 | |
| International Infrastructure | 30,284,119 | 0.2 | 6.2 | | 5.0 | | 8.2 | | 49.0 | | 22.9 | | | | -0.8 | Jan-13 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | | <u>4.7</u> | | <u>6.4</u> | | <u>6.1</u> | | <u>5.6</u> | | <u>5.5</u> | | <u>5.6</u> | Jan-13 |
| Over/Under | | | 4.8 | | 0.3 | | 1.8 | | 42.9 | | 17.3 | | | | -6.4 | |
| Natural Resources | 581,896,141 | 4.5 | 3.2 | | 13.0 | | 13.6 | | 10.1 | | 7.2 | | | | 4.2 | Mar-09 |
| Harvest Fund | 54,423,214 | 0.4 | 6.2 | | 9.4 | | 9.0 | | | | | | | | 3.8 | Aug-16 |
| Alerian MLP Index | | | <u>6.6</u> | | <u>5.9</u> | | <u>4.9</u> | | <u>4.4</u> | | <u>-2.7</u> | | <u>9.2</u> | | <u>0.7</u> | Aug-16 |
| Over/Under | | | -0.4 | | 3.5 | | 4.1 | | | | | | | | 3.1 | |
| Energy | 212,782,858 | 1.6 | 5.3 | | 29.7 | | 33.0 | | 20.5 | | | | | | 1.9 | Jan-14 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | | <u>4.7</u> | | <u>6.4</u> | | <u>6.1</u> | | <u>5.6</u> | | <u>5.5</u> | | <u>5.6</u> | Jan-14 |
| Over/Under | | | 3.9 | | 25.0 | | 26.6 | | 14.4 | | | | | | -3.7 | |
| Agriculture Composite | 113,620,073 | 0.9 | 1.6 | | 4.0 | | 2.1 | | 4.4 | | 4.9 | | | | 4.1 | Aug-12 |
| NCREIF Farmland | | | <u>1.3</u> | | <u>3.8</u> | | <u>6.8</u> | | <u>7.2</u> | | <u>9.9</u> | | <u>11.6</u> | | <u>11.7</u> | Aug-12 |
| Over/Under | | | 0.3 | | 0.2 | | -4.7 | | -2.8 | | -5.0 | | | | -7.6 | |
| Timber Composite | 94,877,024 | 0.7 | 0.5 | | 5.9 | | 6.3 | | 5.2 | | 5.8 | | | | 3.9 | Mar-09 |
| NCREIF Timberland Index | | | <u>1.0</u> | | <u>2.4</u> | | <u>4.0</u> | | <u>3.6</u> | | <u>6.0</u> | | <u>4.0</u> | | <u>3.9</u> | Mar-09 |
| Over/Under | | | -0.5 | | 3.5 | | 2.3 | | 1.6 | | -0.2 | | | | 0.0 | |

^{3 -} Timber Composite contains Brookfield Brazil Timber, Conservation Forestry II, Conservation Forestry IV, and ETO II Operating Partnership. Note: Performance shown is net of fees. Fiscal year ends June 30.



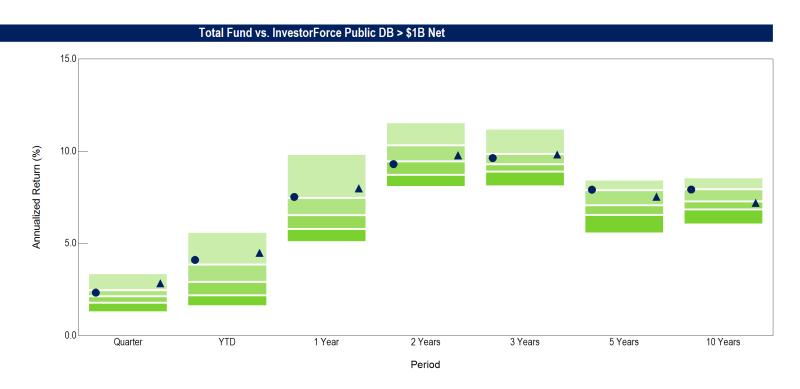
Energy composite includes Five Point Cap, Lime Rock, Enervest, BP Natural Gas, and Bluescape Energy.
 Agriculture Composite contains Halderman Farm Mgmt Services, Hancock Agriculture, and Blue Road Capital L.P.

PERFORMANCE DETAIL - CASH

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|-------------|------|------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Mitigation Banking | 57,835,570 | 0.4 | 2.5 | | 1.0 | | 1.4 | - | 10.9 | | 10.5 | | | | 1.3 | Mar-11 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | | <u>4.7</u> | | <u>6.4</u> | | <u>6.1</u> | | <u>5.6</u> | | <u>5.5</u> | | <u>5.8</u> | Mar-11 |
| Over/Under | | | 1.1 | | -3.7 | | -5.0 | | 4.8 | | 4.9 | | | | -4.5 | |
| Water Property Investor, L.P. | 48,357,403 | 0.4 | 0.4 | | 1.1 | | 0.5 | | 0.1 | | | | | | 3.6 | Jan-15 |
| CPI + 4% (Seasonally Adjusted) | | | <u>1.4</u> | | <u>4.7</u> | | <u>6.4</u> | | <u>6.1</u> | | <u>5.6</u> | | <u>5.5</u> | | <u>5.8</u> | Jan-15 |
| Over/Under | | | -1.0 | | -3.6 | | -5.9 | | -6.0 | | | | | | -2.2 | |
| Cash | 190,660,256 | 1.5 | | | | | | | | | | | | | | |
| Cash | 188,587,747 | 1.4 | 0.5 | | 1.4 | | 1.7 | | 1.4 | | 1.0 | | 0.9 | | 1.1 | Dec-99 |
| 91 Day T-Bills | | | <u>0.5</u> | | <u>1.3</u> | | <u>1.6</u> | | <u>0.9</u> | | <u>0.5</u> | | <u>0.3</u> | | <u>1.6</u> | Dec-99 |
| Over/Under | | | 0.0 | | 0.1 | | 0.1 | | 0.5 | | 0.5 | | 0.6 | | -0.5 | |
| NM ERB Cash | 1,969,803 | 0.0 | -0.2 | | -0.1 | | -0.2 | | 0.0 | | 0.0 | | 0.4 | | 0.9 | Jun-00 |
| 91 Day T-Bills | | | <u>0.5</u> | | <u>1.3</u> | | <u>1.6</u> | | <u>0.9</u> | | <u>0.5</u> | | <u>0.3</u> | | <u>1.5</u> | Jun-00 |
| Over/Under | | | -0.7 | | -1.4 | | -1.8 | | -0.9 | | -0.5 | | 0.1 | | -0.6 | |
| Local Government Investment Pool (LGIP) at STO | 102,706 | 0.0 | 0.5 | | 1.2 | | 1.4 | | 0.7 | | | | | | 0.6 | Jul-15 |
| 91 Day T-Bills | | | <u>0.5</u> | | <u>1.3</u> | | <u>1.6</u> | | <u>0.9</u> | | <u>0.5</u> | | <u>0.3</u> | | <u>0.8</u> | Jul-15 |
| Over/Under | | | 0.0 | | -0.1 | | -0.2 | | -0.2 | | | | | | -0.2 | |



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

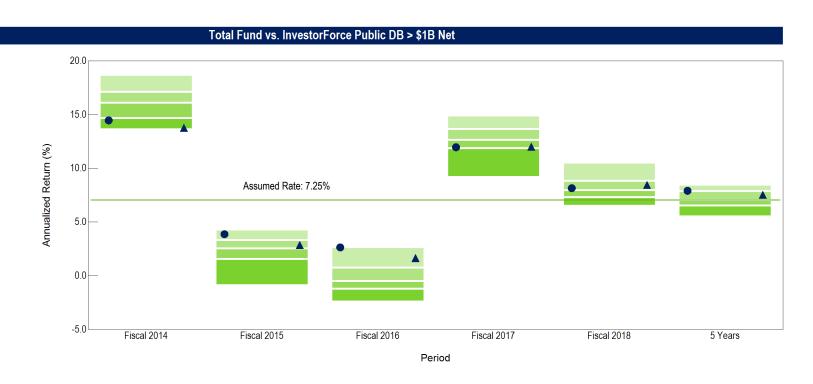


| | Return (Rank) | | | | | | | | | | |
|-----------------|---------------|----------|------|--------|---------|------|-------|---------|------|-----|------|
| 5th Percentile | 3.4 | 5.6 | | 9.8 | 11.6 | | 11.2 | 8.5 | | 8.6 | |
| 25th Percentile | 2.5 | 3.9 | | 7.5 | 10.3 | | 9.9 | 7.9 | | 7.9 | |
| Median | 2.1 | 2.9 | | 6.5 | 9.5 | | 9.3 | 7.1 | | 7.3 | |
| 75th Percentile | 1.8 | 2.2 | | 5.8 | 8.7 | | 8.9 | 6.6 | | 6.9 | |
| 95th Percentile | 1.3 | 1.6 | | 5.1 | 8.1 | | 8.1 | 5.5 | | 6.0 | |
| # of Portfolios | 63 | 62 | | 62 | 62 | | 62 | 60 | | 53 | |
| Total Fund | 2.3 | (36) 4.1 | (21) | 7.5 (2 | 25) 9.3 | (56) | 9.6 | 38) 7.9 | (23) | 7.9 | (27) |
| Policy Index | 2.8 | (16) 4.5 | (12) | 8.0 (* | 16) 9.8 | (37) | 9.8 (| 27) 7.5 | (37) | 7.2 | (57) |

Note: Ranks are based on net returns.



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE



| | Return (Rank) | | | | | | | | | | |
|-----------------|---------------|------|------|------|------|-----|---------|---------|------|-----|------|
| 5th Percentile | 18.7 | | 4.3 | | 2.7 | | 14.9 | 10.5 | | 8.5 | |
| 25th Percentile | 17.2 | | 3.3 | | 0.8 | | 13.7 | 8.8 | | 7.9 | |
| Median | 16.1 | | 2.6 | | -0.5 | | 12.7 | 8.0 | | 7.1 | |
| 75th Percentile | 14.7 | | 1.6 | | -1.2 | | 11.9 | 7.3 | | 6.6 | |
| 95th Percentile | 13.6 | | -0.9 | | -2.4 | | 9.2 | 6.5 | | 5.5 | |
| # of Portfolios | 43 | | 53 | | 55 | | 65 | 51 | | 60 | |
| Total Fund | 14.5 | (79) | 3.9 | (16) | 2.6 | (6) | 12.0 (7 | 71) 8.2 | (45) | 7.9 | (23) |
| Policy Index | 13.8 | (91) | 2.9 | (47) | 1.7 | (9) | 12.0 | 8.5 | (33) | 7.5 | (37) |

Note: Ranks are based on net returns.



TOTAL FUND ATTRIBUTION ANALYSIS

| | 3 Month | Attribution | _ | , 2018 | | |
|---|-----------------------|-------------|------------------|---------------------|----------------------|------------------|
| | Wtd. Actual Return | | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Large Cap Equity Composite | 7.7% | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| U.S. Small/Mid Cap Equity Composite | 3.9% | 4.7% | -0.8% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Developed Mkts Equity Composite | 1.9% | 1.4% | 0.5% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Emerging Mkts Equity Composite | -3.3% | -1.1% | -2.2% | -0.2% | 0.0% | -0.2% |
| Core Fixed Income Composite | 0.7% | 0.0% | 0.7% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Emerging Market Debt Composite | -0.2% | 0.2% | -0.4% | 0.0% | 0.0% | 0.0% |
| Opportunistic Credit Composite | 1.6% | 2.2% | -0.5% | -0.1% | 0.0% | -0.1% |
| Absolute Return Composite | -0.3% | 1.0% | -1.3% | 0.0% | 0.0% | 0.0% |
| Global Asset Allocation/Risk Parity Composite | -1.3% | 1.1% | -2.4% | -0.2% | -0.1% | -0.3% |
| Diversifying Assets | 5.3% | 1.1% | 4.2% | 0.0% | 0.1% | 0.1% |
| Public Real Estate Composite | -0.5% | 0.7% | -1.2% | 0.0% | 0.0% | 0.0% |
| Private Real Estate Composite | 4.6% | 1.7% | 3.0% | 0.1% | 0.0% | 0.1% |
| Private Equity Composite | 3.7% | 5.8% | -2.1% | -0.3% | 0.0% | -0.3% |
| Real Assets Composite | 2.8% | 1.4% | 1.3% | 0.1% | 0.0% | 0.1% |
| Cash | 0.5% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total | 2.4% | 2.8% | -0.5% | -0.6% | 0.1% | -0.5% |

| | | Attuibution | C | | | |
|---|-----------------------|----------------------------|-------------------------|---------------------|----------------------|------------------|
| | YTD | Attribution Ending Sept | Summary tember 30, 2 | 018 | | |
| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Large Cap Equity Composite | 10.4% | 10.6% | -0.2% | 0.0% | 0.0% | 0.0% |
| U.S. Small/Mid Cap Equity Composite | 7.6% | 10.4% | -2.8% | -0.1% | 0.0% | -0.1% |
| Non-U.S. Developed Mkts Equity Composite | -1.1% | -1.4% | 0.3% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Emerging Mkts Equity Composite | -10.6% | -7.7% | -2.9% | -0.3% | 0.0% | -0.4% |
| Core Fixed Income Composite | -1.3% | -1.6% | 0.3% | 0.0% | -0.1% | -0.1% |
| Non-U.S. Emerging Market Debt Composite | -5.0% | -5.6% | 0.6% | 0.0% | 0.0% | 0.0% |
| Opportunistic Credit Composite | 5.5% | 3.1% | 2.4% | 0.4% | 0.0% | 0.4% |
| Absolute Return Composite | -0.4% | 2.8% | -3.2% | 0.0% | 0.0% | 0.0% |
| Global Asset Allocation/Risk Parity Composite | -1.4% | 3.2% | -4.6% | -0.5% | 0.0% | -0.5% |
| Diversifying Assets | 11.2% | 3.2% | 8.0% | 0.1% | 0.1% | 0.1% |
| Public Real Estate Composite | 0.2% | 2.2% | -2.0% | 0.0% | 0.0% | 0.0% |
| Private Real Estate Composite | 13.3% | 5.3% | 8.1% | 0.3% | 0.0% | 0.3% |
| Private Equity Composite | 10.5% | 14.2% | -3.7% | -0.5% | 0.0% | -0.5% |
| Real Assets Composite | 9.6% | 4.7% | 5.0% | 0.3% | 0.0% | 0.3% |
| Cash | 1.2% | 1.3% | -0.1% | 0.0% | 0.0% | 0.0% |
| Total | 4.1% | 4.5% | -0.4% | -0.3% | -0.1% | -0.4% |



TOTAL FUND ATTRIBUTION ANALYSIS

| | 1 Y <u>ear</u> | Attribution : Ending Sep | _ | 2018 | | |
|---|-----------------------|-----------------------------|------------------|---------------------|----------------------|------------------|
| | Wtd. Actual Return | | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Large Cap Equity Composite | 17.7% | 17.9% | -0.2% | 0.0% | 0.0% | 0.0% |
| U.S. Small/Mid Cap Equity Composite | 13.7% | 16.2% | -2.5% | -0.1% | 0.0% | -0.1% |
| Non-U.S. Developed Mkts Equity Composite | 2.5% | 2.7% | -0.2% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Emerging Mkts Equity Composite | -3.7% | -0.8% | -2.9% | -0.3% | 0.0% | -0.3% |
| Core Fixed Income Composite | -0.7% | -1.2% | 0.6% | 0.0% | -0.1% | -0.1% |
| Non-U.S. Emerging Market Debt Composite | -4.2% | -4.6% | 0.4% | 0.0% | 0.0% | 0.0% |
| Opportunistic Credit Composite | 6.9% | 3.9% | 3.0% | 0.5% | 0.0% | 0.5% |
| Absolute Return Composite | -0.6% | 3.6% | -4.2% | 0.0% | 0.0% | 0.0% |
| Global Asset Allocation/Risk Parity Composite | 1.8% | 7.0% | -5.2% | -0.5% | 0.0% | -0.6% |
| Diversifying Assets | | 3.2% | | 0.1% | 0.2% | 0.2% |
| Public Real Estate Composite | 1.1% | 4.0% | -2.9% | -0.1% | 0.0% | -0.1% |
| Private Real Estate Composite | 15.8% | 7.2% | 8.7% | 0.4% | 0.0% | 0.4% |
| Private Equity Composite | 13.4% | 18.7% | -5.3% | -0.7% | 0.0% | -0.7% |
| Real Assets Composite | 10.4% | 6.4% | 4.0% | 0.3% | 0.0% | 0.3% |
| Cash | 1.5% | 1.6% | -0.1% | 0.0% | -0.1% | -0.1% |
| Total | 7.5% | 8.0% | -0.5% | -0.4% | -0.1% | -0.5% |

| | | Attribution | Summary | | | |
|---|-----------------------|----------------------|------------------------|---------------------|----------------------|------------------|
| | 3 Year | | oummary ptember 30, | 2018 | | |
| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Large Cap Equity Composite | 17.2% | 17.3% | -0.1% | 0.0% | 0.0% | 0.0% |
| U.S. Small/Mid Cap Equity Composite | 15.1% | 16.1% | -1.0% | 0.0% | 0.0% | 0.0% |
| Non-U.S. Developed Mkts Equity Composite | 8.4% | 9.2% | -0.9% | 0.0% | 0.0% | -0.1% |
| Non-U.S. Emerging Mkts Equity Composite | 8.9% | 12.4% | -3.5% | -0.3% | 0.0% | -0.4% |
| Core Fixed Income Composite | 1.9% | 1.3% | 0.6% | 0.1% | -0.2% | -0.1% |
| Non-U.S. Emerging Market Debt Composite | 6.2% | 5.6% | 0.6% | 0.0% | 0.0% | 0.0% |
| Opportunistic Credit Composite | 7.5% | 6.4% | 1.1% | 0.2% | 0.0% | 0.2% |
| Absolute Return Composite | 0.0% | 2.8% | -2.9% | 0.0% | 0.0% | 0.0% |
| Global Asset Allocation/Risk Parity Composite | 5.7% | 6.4% | -0.7% | -0.1% | 0.0% | -0.1% |
| Diversifying Assets | | | | 0.0% | 0.1% | 0.1% |
| Public Real Estate Composite | 5.9% | 7.1% | -1.1% | 0.0% | 0.0% | 0.0% |
| Private Real Estate Composite | 14.3% | 7.8% | 6.5% | 0.3% | 0.0% | 0.3% |
| Private Equity Composite | 12.1% | 12.7% | -0.6% | -0.1% | 0.0% | -0.1% |
| Real Assets Composite | 9.9% | 6.1% | 3.8% | 0.2% | 0.1% | 0.3% |
| Cash | 1.1% | 0.9% | 0.3% | 0.0% | -0.1% | -0.1% |
| Total | 9.6% | 9.8% | -0.2% | 0.1% | -0.3% | -0.2% |



TOTAL FUND ATTRIBUTION ANALYSIS

| Attribution Summary 5 Years Ending September 30, 2018 | | | | | | | | |
|---|-----------------------|-------|------------------|---------------------|----------------------|------------------|--|--|
| | Wtd. Actual Return | | Excess Return | Selection Effect | Allocation Effect | Total Effects | | |
| U.S. Large Cap Equity Composite | 13.9% | 13.9% | -0.1% | 0.0% | 0.0% | 0.0% | | |
| U.S. Small/Mid Cap Equity Composite | 11.2% | 11.4% | -0.2% | 0.0% | 0.0% | 0.0% | | |
| Non-U.S. Developed Mkts Equity Composite | 4.3% | 4.4% | -0.2% | 0.0% | 0.0% | 0.0% | | |
| Non-U.S. Emerging Mkts Equity Composite | 2.9% | 3.6% | -0.7% | -0.1% | 0.0% | -0.1% | | |
| Core Fixed Income Composite | 2.7% | 2.2% | 0.5% | 0.0% | -0.1% | -0.1% | | |
| Non-U.S. Emerging Market Debt Composite | 1.3% | -1.5% | 2.7% | 0.0% | 0.0% | 0.1% | | |
| Opportunistic Credit Composite | 7.1% | 4.9% | 2.2% | 0.4% | 0.0% | 0.4% | | |
| Absolute Return Composite | 1.8% | 2.5% | -0.7% | 0.0% | 0.0% | 0.0% | | |
| Global Asset Allocation/Risk Parity Composite | 3.5% | 4.4% | -0.9% | -0.1% | 0.0% | -0.1% | | |
| Diversifying Assets | | | | 0.0% | 0.0% | 0.0% | | |
| Public Real Estate Composite | 7.7% | 9.2% | -1.5% | 0.0% | 0.0% | -0.1% | | |
| Private Real Estate Composite | 14.4% | 9.6% | 4.8% | 0.2% | 0.0% | 0.2% | | |
| Private Equity Composite | 14.6% | 13.8% | 0.8% | 0.0% | 0.0% | 0.0% | | |
| Real Assets Composite | 7.6% | 5.6% | 2.0% | 0.1% | 0.0% | 0.2% | | |
| Cash | 0.8% | 0.5% | 0.3% | 0.0% | -0.1% | -0.1% | | |
| Total | 7.9% | 7.5% | 0.4% | 0.6% | -0.2% | 0.4% | | |

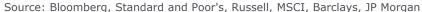


APPENDIX: MARKET ENVIRONMENT

NEPC, LLC —

LONG-TERM PERFORMANCE SUMMARY







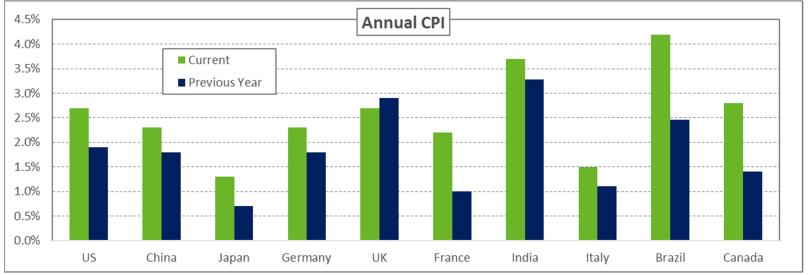
MACRO

NEPC, LLC —

INFLATION



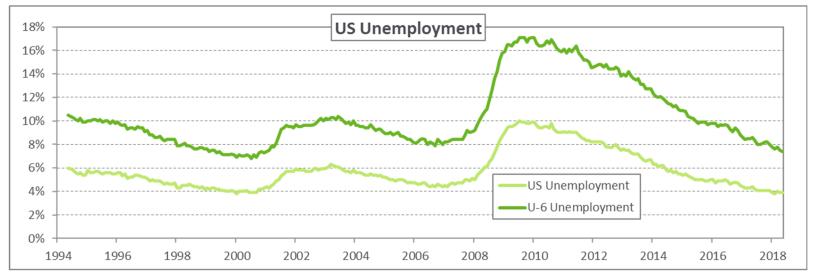
Source: Bureau of Labor Statistics, Bloomberg, NEPC



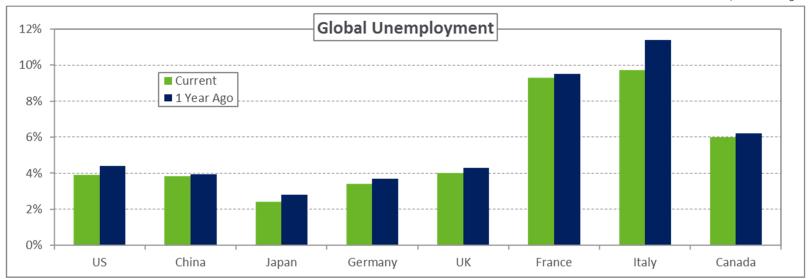
Source: Bureau of Labor Statistics, National Bureau of Statistics of China, Ministry of Internal Affairs and Communications (Japan), German Federal Statistics Office, UK Office for National Statistics, National Statistics Office of France, India Central Statistical Organization, ISTAT, IBGE, STCA, Bloomberg



UNEMPLOYMENT



Source: Bureau of Labor Statistics, Bloomberg



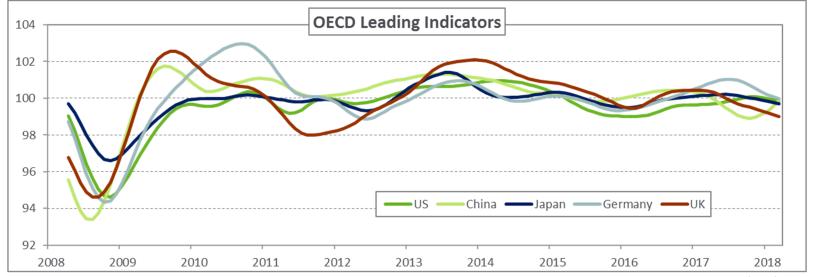
Source: Bureau of Labor Statistics, STA, National Bureau of Statistics of China, Ministry of Internal Affairs and Communications (Japan), German Federal Statistics Office, UK Office for National Statistics, National Statistics Office of France, ISTAT, IBGE, Bloomberg



ECONOMIC INDICATORS



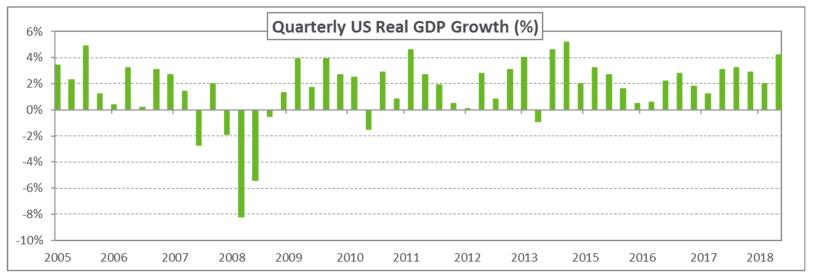
Source: IMF



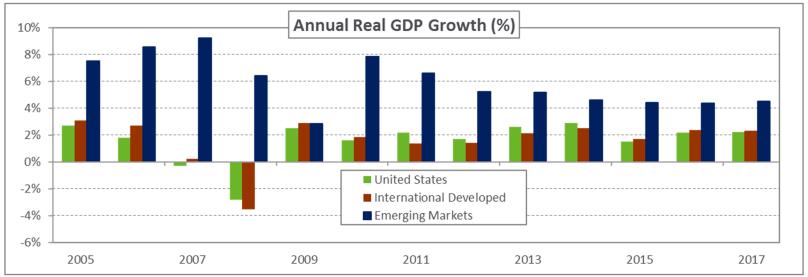
Source: OECD, Bloomberg



GROSS DOMESTIC PRODUCT



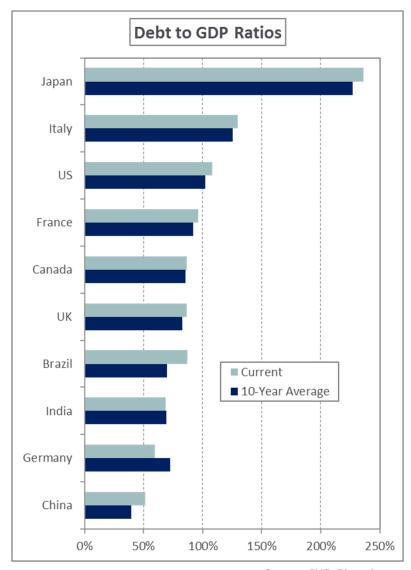
Source: Bloomberg

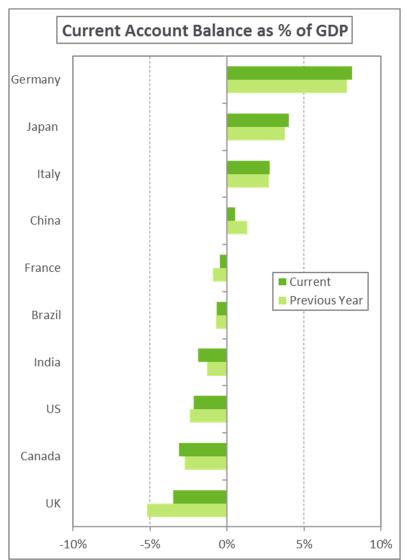


Source: Bloomberg



GROSS DOMESTIC PRODUCT METRICS



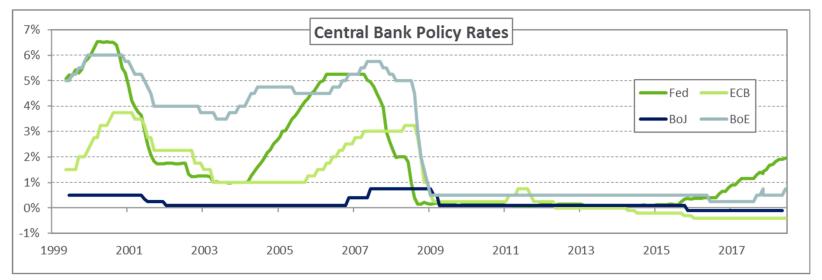




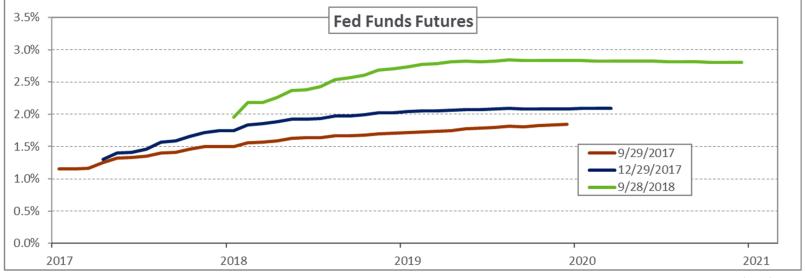


Source: Bloomberg

CENTRAL BANK RATES



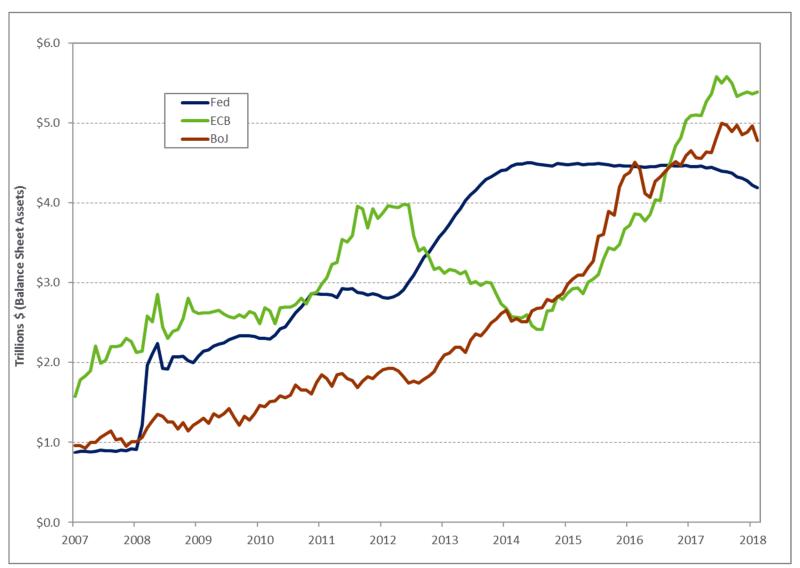
Source: Federal Reserve, ECB, Bank of Japan, Bank of England, Bloomberg







CENTRAL BANK BALANCE SHEETS



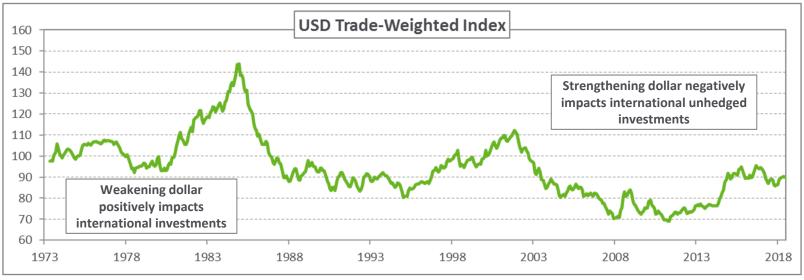




CURRENCIES

| | | % Change Relative to USD | | | | | |
|--------------------|--------|--------------------------|--------|--------|--|--|--|
| Currencies | Spot | 1 Month | YTD | 1 Year | | | |
| Euro | 1.16 | 0.0% | -3.9% | -1.8% | | | |
| British Pound | 1.30 | 0.5% | -5.3% | -2.8% | | | |
| Japanese Yen | 113.70 | -2.4% | -3.8% | -1.0% | | | |
| Swiss Franc | 0.98 | -1.3% | 0.9% | -1.3% | | | |
| Australian Dollar | 0.72 | 0.4% | -4.1% | -7.8% | | | |
| Chinese Yuan | 6.87 | -0.5% | -7.8% | -3.4% | | | |
| Brazilian Real | 4.05 | 0.1% | -13.5% | -21.9% | | | |
| Russian Ruble | 65.61 | 2.8% | -4.0% | -12.3% | | | |
| Indian Rupee | 72.54 | -2.4% | -8.4% | -9.9% | | | |
| Mexican Peso | 18.72 | 1.9% | 0.0% | -2.5% | | | |
| South African Rand | 14.15 | 3.8% | -12.0% | -4.1% | | | |

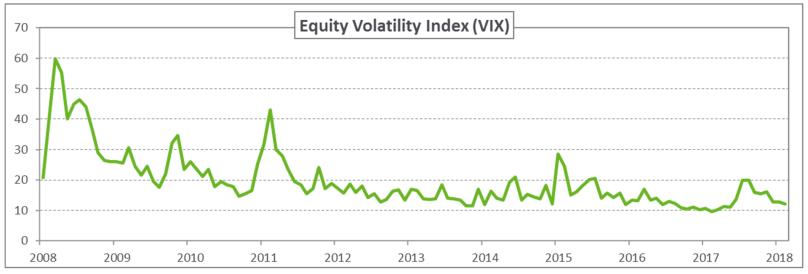
Source: Bloomberg



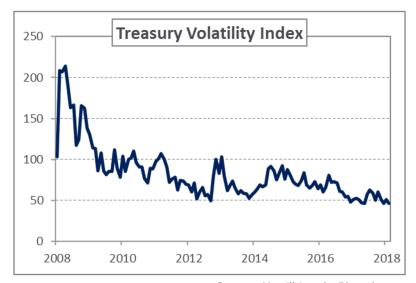
Source: Bloomberg

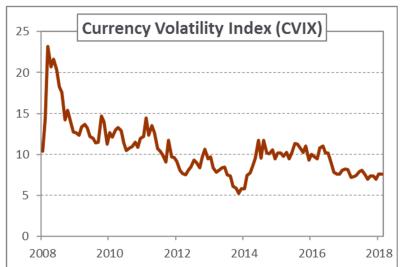


VOLATILITY



Source: CBOE, Bloomberg





Source: Merrill Lynch, Bloomberg

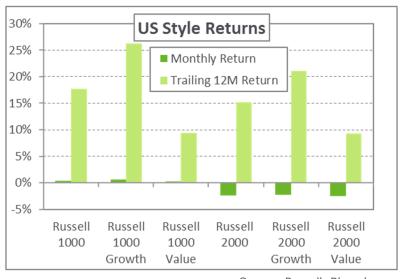
Source: Deutsche Bank, Bloomberg



EQUITY

NEPC, LLC —

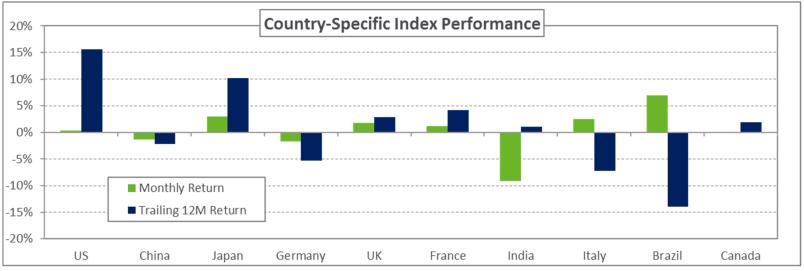
EQUITY INDEX PERFORMANCE





Source: Russell, Bloomberg





Source: MSCI, Bloomberg Represents returns in USD

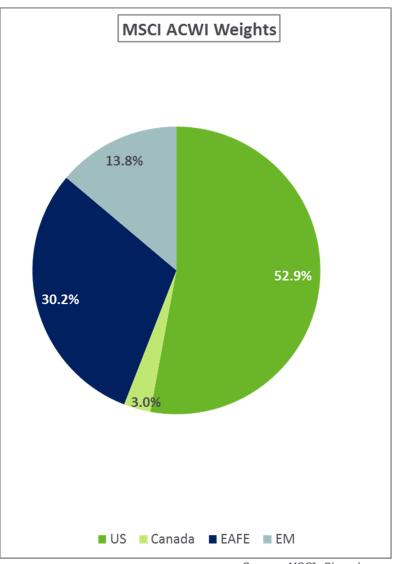


INDEX COMPOSITION

| | MTD | QTD | YTD | Index Weight |
|--------------|-------|-------|-------|-----------------|
| S&P 500 | 0.6% | 7.7% | 10.6% | 100% |
| Cons Disc | 1.0% | 8.1% | 20.3% | 10.4% |
| Cons Staples | 0.9% | 5.5% | -4.0% | 6.8% |
| Energy | 2.5% | 0.4% | 6.8% | 6.1% |
| Financials | -2.3% | 4.2% | -0.3% | 12.8% |
| Health Care | 2.9% | 14.4% | 16.2% | 15.3% |
| Industrials | 2.1% | 9.8% | 4.4% | 9.8% |
| Info Tech | -0.4% | 8.7% | 20.3% | 20.8% |
| Materials | -2.1% | 0.2% | -3.2% | 2.5% |
| Real Estate | -2.8% | 0.6% | 0.9% | 2.7% |
| Telecom | 4.3% | 9.5% | -0.5% | 10.1% |
| Utilities | -0.7% | 2.1% | 1.9% | 2.9% |

| | MTD | QTD | YTD | Index Weight |
|--------------|-------|-------|-------|-----------------|
| MSCI ACWI | 0.5% | 4.4% | 4.2% | 100% |
| Cons Disc | 0.1% | 3.0% | 7.1% | 12.0% |
| Cons Staples | 0.3% | 2.1% | -4.2% | 7.9% |
| Energy | 3.5% | 2.4% | 8.6% | 6.6% |
| Financials | -0.4% | 2.5% | -4.3% | 17.6% |
| Health Care | 1.8% | 10.9% | 12.5% | 11.6% |
| Industrials | 1.6% | 6.0% | 1.4% | 11.0% |
| Info Tech | -0.8% | 6.0% | 13.6% | 19.6% |
| Materials | 0.8% | 0.2% | -3.1% | 5.1% |
| Real Estate | -2.6% | -1.6% | -3.9% | 2.9% |
| Telecom | 2.0% | 4.9% | -5.0% | 2.9% |
| Utilities | -0.4% | 0.6% | 0.6% | 2.9% |

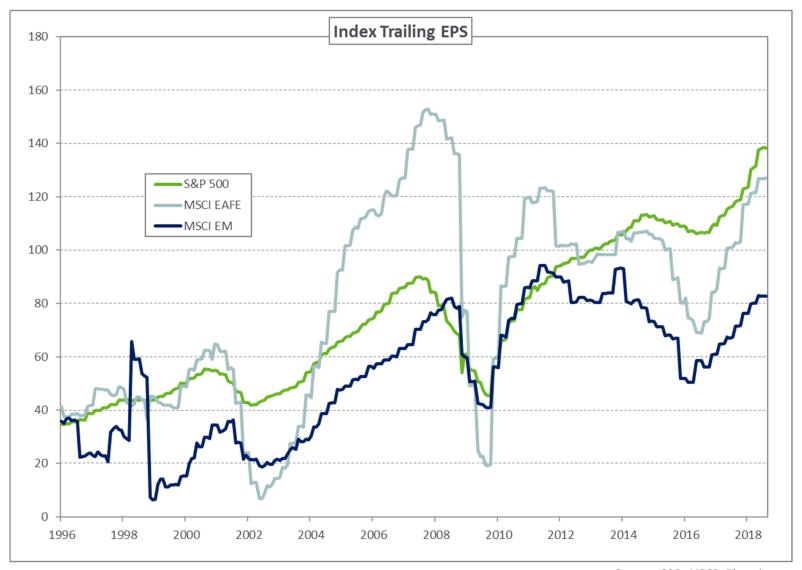








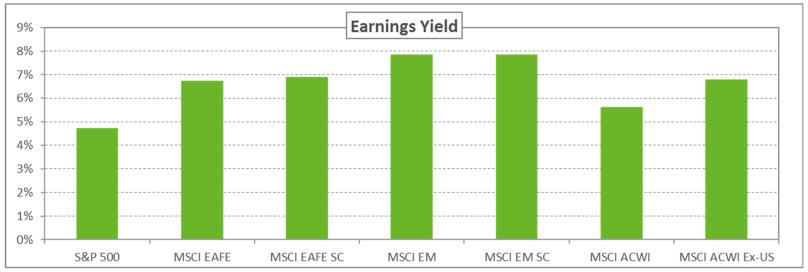
EARNINGS



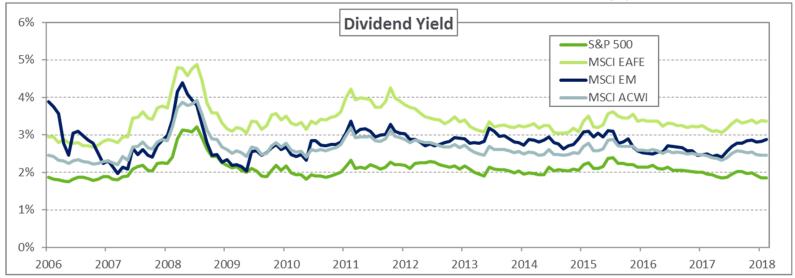




YIELDS



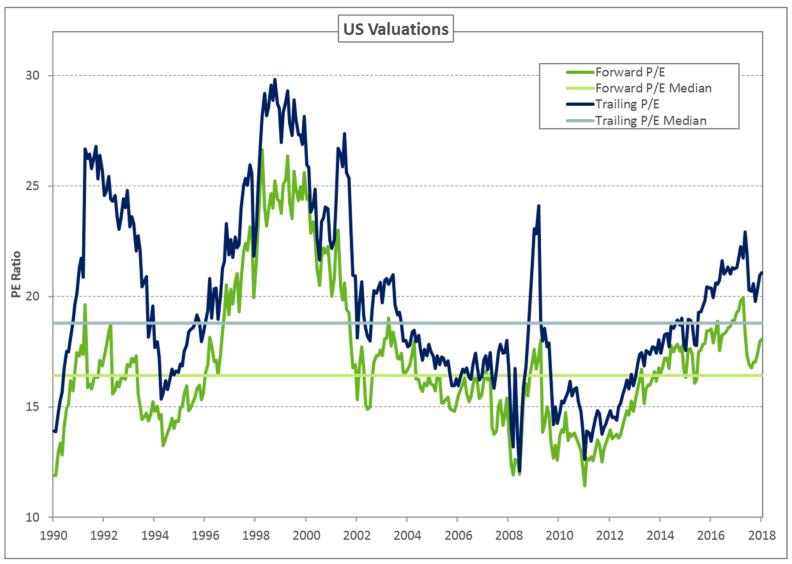
Source: S&P, MSCI, Bloomberg Earnings yield calculated as 1/PE Ratio



Source: S&P, MSCI, Bloomberg



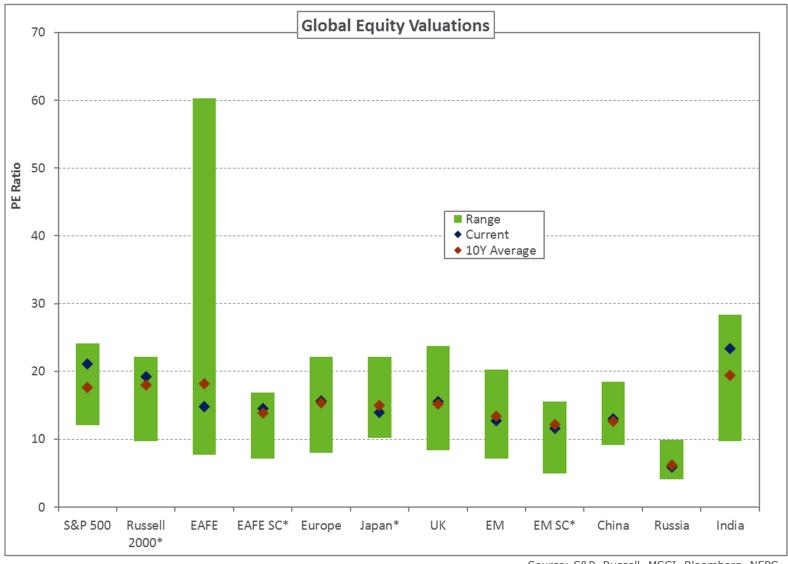
US EQUITY VALUATIONS





Source: S&P, Bloomberg Medians calculated as of 01/31/1990

GLOBAL EQUITY VALUATIONS





Source: S&P, Russell, MSCI, Bloomberg, NEPC *Denotes the use of index-adjusted positive PE ratio Ranges calculated using trailing 10-year figures

CREDIT

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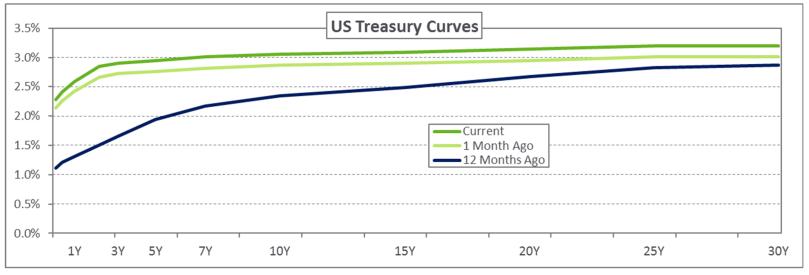
FIXED INCOME CHARACTERISTICS

| | Averages | | | Total Returns (%) | | | |
|---------------------|----------------|--------------|---------------------|-------------------|-------|--------|--|
| | Yield to Worst | Spread (bps) | Duration (Years) | 1-Month | YTD | 1-Year | |
| Barclays Aggregate | 3.5% | 39 | 6.0 | -0.6% | 0.0% | -1.2% | |
| Barclays Treasury | 3.0% | - | 6.0 | -0.9% | -0.6% | -1.6% | |
| Barclays Agency | 3.0% | 12 | 3.9 | -0.4% | 0.0% | -0.6% | |
| Barclays MBS | 3.6% | 28 | 5.3 | -0.6% | -0.1% | -0.9% | |
| Barclays ABS | 3.2% | 33 | 2.3 | -0.1% | 0.5% | 0.2% | |
| Barclays CMBS | 3.6% | 60 | 5.3 | -0.5% | 0.5% | -0.6% | |
| Barclays Corp IG | 4.1% | 106 | 7.2 | -0.4% | 1.0% | -1.2% | |
| Barclays Muni | 2.9% | - | 6.2 | -0.6% | -0.2% | 0.3% | |
| Barclays HY Muni | 4.9% | - | 8.0 | -0.4% | 0.8% | 6.4% | |
| Barclays TIPS | 3.2% | - | 5.4 | -1.1% | -0.8% | 0.4% | |
| Barclays HY | 6.2% | 316 | 3.8 | 0.6% | 2.4% | 3.0% | |
| Barclays Global Agg | 2.2% | 45 | 7.0 | -0.9% | -0.9% | -1.3% | |
| JPM EMBI Glob Div | 6.5% | 361.73 | 7.2 | 1.5% | 2.3% | -1.9% | |
| JPM CEMBI Broad | 5.3% | 286.26 | 4.5 | 0.9% | 1.3% | -0.9% | |
| JPM GBI - EM | 6.6% | - | 5.1 | 2.6% | -1.8% | -7.4% | |

Source: Barclays, JPM, Bloomberg



TREASURIES



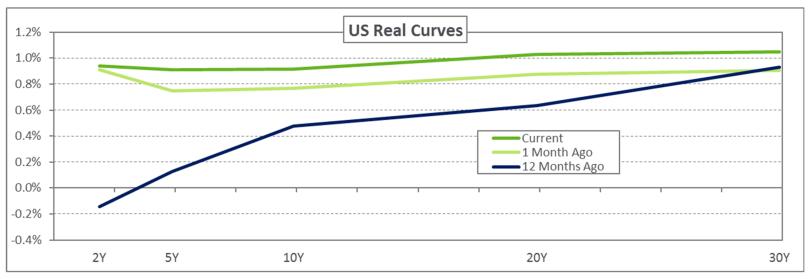
Source: Bloomberg

| | Yield (%) | | | Total Return (%) | | |
|--------------|---------------------|-------|---------------|------------------|-----------|--|
| | Current 1 Month Ago | | 12 Months Ago | 1 Month | 12 Months | |
| 3M Treasury | 2.28% | 2.14% | 1.11% | 0.16% | 1.52% | |
| 6M Treasury | 2.41% | 2.26% | 1.21% | 0.17% | 1.57% | |
| 2Y Treasury | 2.84% | 2.66% | 1.51% | -0.12% | -0.21% | |
| 5Y Treasury | 2.95% | 2.76% | 1.95% | -0.72% | -2.05% | |
| 10Y Treasury | 3.06% | 2.87% | 2.34% | -1.48% | -3.97% | |
| 30Y Treasury | 3.20% | 3.01% | 2.87% | -3.34% | -3.75% | |

Source: Barclays, Bloomberg



REAL YIELDS



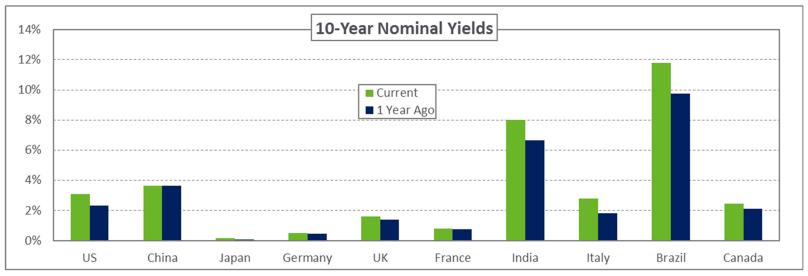
Source: Bloomberg

| | | Real Rates | Breakeven Rates | | |
|--------------|---------|-------------|-----------------|---------|---------------|
| | Current | 1 Month Ago | 12 Months Ago | Current | 12 Months Ago |
| 2Y Treasury | 0.94% | 0.91% | -0.14% | 1.81% | 1.56% |
| 5Y Treasury | 0.91% | 0.75% | 0.13% | 2.03% | 1.78% |
| 10Y Treasury | 0.91% | 0.77% | 0.48% | 2.14% | 1.85% |
| 20Y Treasury | 1.03% | 0.88% | 0.64% | 2.08% | 1.76% |
| 30Y Treasury | 1.05% | 0.90% | 0.93% | 2.16% | 1.93% |

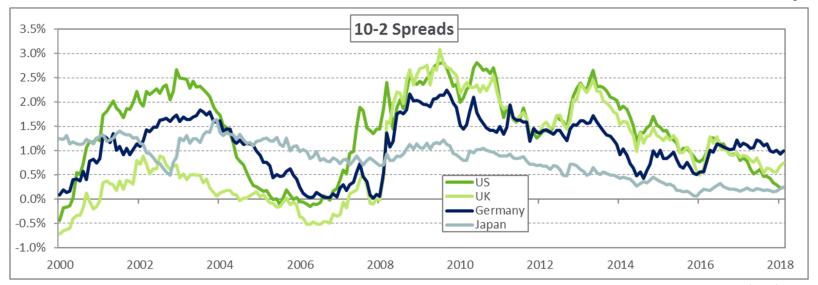
Source: Barclays, Bloomberg



NOMINAL YIELDS



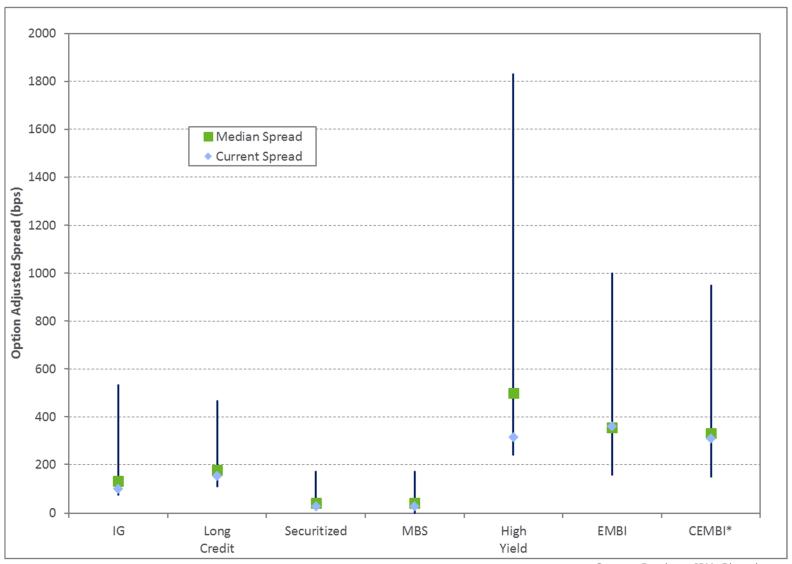
Source: Bloomberg



Source: Bloomberg



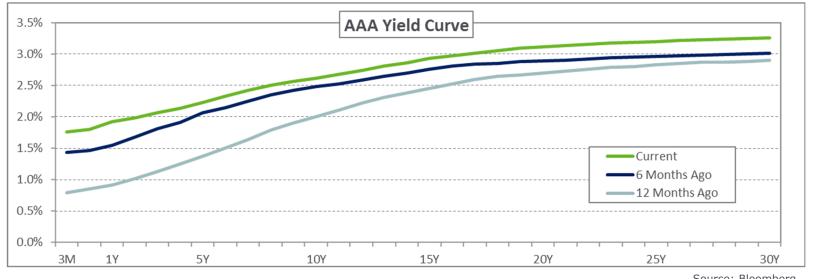
CREDIT SPREADS



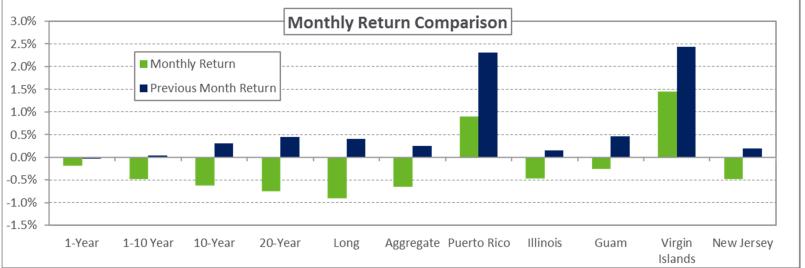


Source: Barclays, JPM, Bloomberg Data range: 01/31/2000 through month-end *JPM CEMBI calculated since 12/31/2001

MUNICIPAL BONDS



Source: Bloomberg



Source: Barclays, Bloomberg

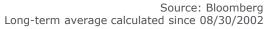


MUNICIPAL BOND YIELDS

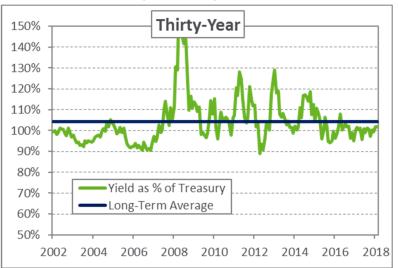




Source: Bloomberg Long-term average calculated since 08/30/2002





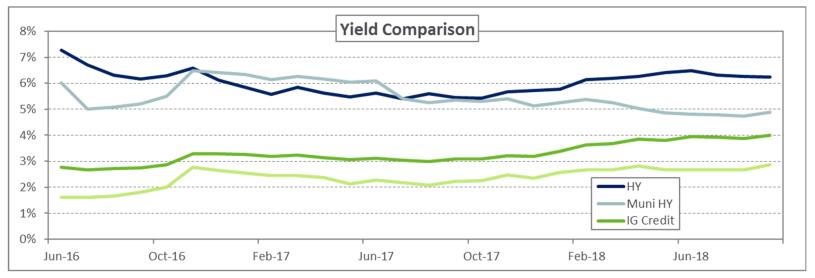


Source: Bloomberg Long-term average calculated since 08/30/2002

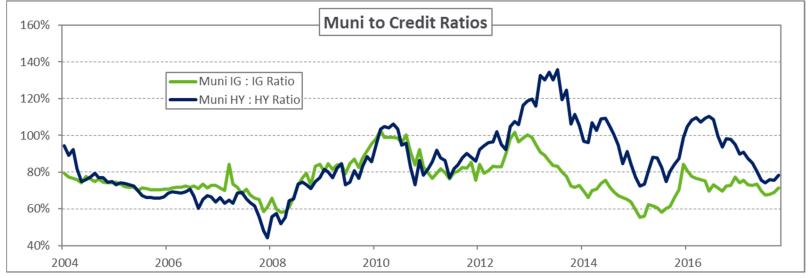
Source: Bloomberg Long-term average calculated since 08/30/2002



MUNICIPAL BOND RATIOS



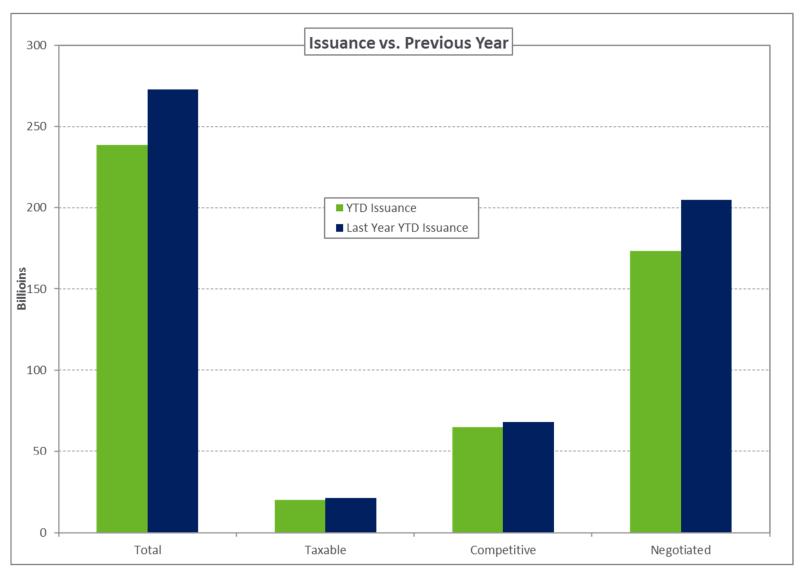
Source: Barclays, Bloomberg

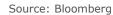


Source: Barclays, Bloomberg, NEPC



MUNICIPAL BOND ISSUANCE



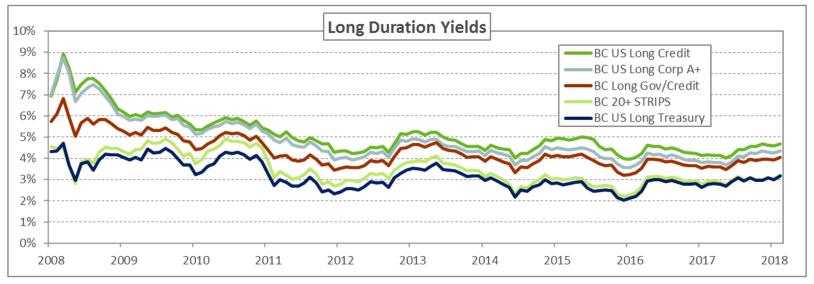




LONG DURATION

| Index | Month-End Yield | 1 Month Prior Yield | 1 Year Prior Yield | Duration |
|--------------------------|--------------------------|---------------------|--------------------|----------|
| Barclays Long Treasury | 3.2% | 3.0% | 2.8% | 17.0 |
| Barclays 20+ STRIPS | Barclays 20+ STRIPS 3.2% | | 2.9% | 25.3 |
| Barclays Long Gov/Credit | 4.1% | 3.9% | 3.6% | 14.8 |
| Barclays Long Credit | 4.7% | 4.6% | 4.2% | 13.4 |
| Barclays Long Corp A+ | 4.4% | 4.3% | 3.8% | 14.1 |

Source: Barclays, Bloomberg



Source: Barclays, Bloomberg



REAL ASSETS

NEPC, LLC —

REAL ASSETS INDEX PERFORMANCE

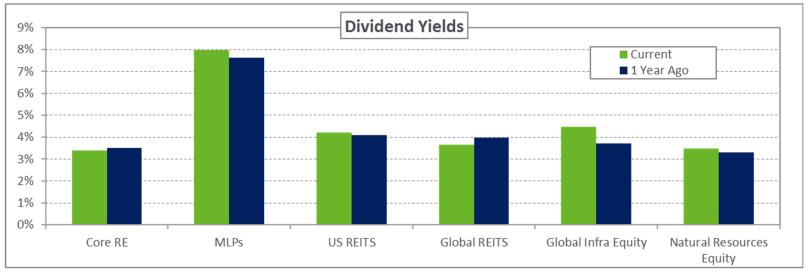
| Index | 1 Month | 3 Month | YTD | 1 Year | 3 Year | 5 Year |
|---------------------------------|---------|---------|--------|--------|--------|--------|
| Bloomberg Commodity Index | 1.9% | -2.0% | -2.0% | 2.6% | -0.1% | -7.2% |
| Bloomberg Sub Agriculture Index | -2.1% | -5.4% | -10.9% | -12.7% | -7.5% | -10.0% |
| Coffee | 0.8% | -13.0% | -24.1% | -26.9% | -13.9% | -10.9% |
| Corn | -2.2% | -4.0% | -7.1% | -11.4% | -12.6% | -13.6% |
| Cotton | -7.0% | -8.5% | -0.4% | 14.4% | 9.0% | -0.8% |
| Soybean | 0.2% | -3.9% | -15.8% | -18.2% | -5.5% | -6.3% |
| Soybean Oil | 0.8% | -2.5% | -16.2% | -15.9% | -3.0% | -10.8% |
| Sugar | -1.0% | -14.1% | -31.6% | -26.2% | -9.5% | -17.9% |
| Wheat | -6.5% | -1.7% | 6.2% | -2.5% | -13.7% | -15.3% |
| Bloomberg Sub Energy | 5.2% | 4.4% | 17.6% | 28.1% | 0.4% | -12.7% |
| Brent Crude | 7.3% | 5.8% | 30.1% | 55.1% | 11.1% | -11.1% |
| Heating Oil | 4.7% | 6.2% | 17.0% | 33.2% | 7.4% | -8.3% |
| Natural Gas | 2.5% | 2.9% | -0.1% | -11.9% | -18.2% | -20.2% |
| Unleaded Gas | 5.6% | 5.5% | 14.6% | 30.3% | 4.6% | -8.2% |
| WTI Crude Oil | 5.8% | 3.3% | 27.2% | 47.6% | 3.1% | -14.8% |
| Bloomberg Sub Industrial Metals | 2.2% | -6.9% | -11.8% | -2.4% | 7.9% | -1.4% |
| Aluminum | -2.5% | -2.5% | -6.8% | 0.3% | 8.3% | -0.9% |
| Copper | 5.2% | -5.7% | -16.0% | -6.5% | 4.5% | -4.4% |
| Nickel | -1.6% | -15.6% | -1.5% | 19.5% | 5.3% | -3.3% |
| Zinc | 7.8% | -6.2% | -18.2% | -13.4% | 16.3% | 5.7% |
| Bloomberg Sub Precious Metals | -0.3% | -6.0% | -10.7% | -8.8% | 1.0% | -4.2% |
| Gold | -0.7% | -5.0% | -9.4% | -7.7% | 1.5% | -2.7% |
| Silver | 1.2% | -9.3% | -14.8% | -12.6% | -0.8% | -8.7% |
| Bloomberg Sub Livestock | 7.9% | 2.9% | -2.4% | 0.8% | -1.8% | -2.7% |
| Lean Hogs | 15.1% | -0.9% | -8.8% | -1.7% | -7.8% | -9.5% |
| Live Cattle | 5.2% | 5.1% | 0.6% | 1.6% | 1.5% | 1.4% |

Source: Bloomberg

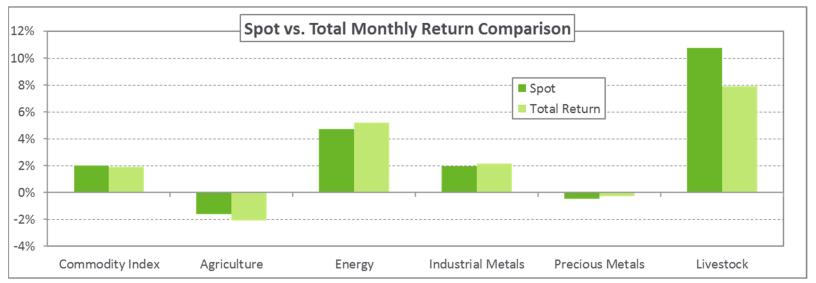
Bloomberg subindex total return indices reflects the return of the underlying one month commodity futures price movements



INCOME YIELD



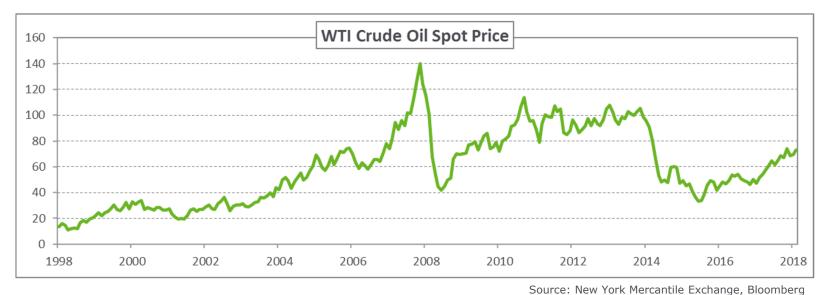
Source: Alerian, NAREIT, S&P, Bloomberg

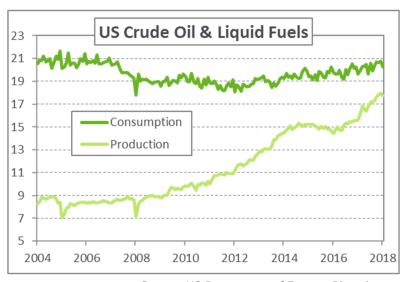


Source: Bloomberg, NEPC



OIL MARKETS





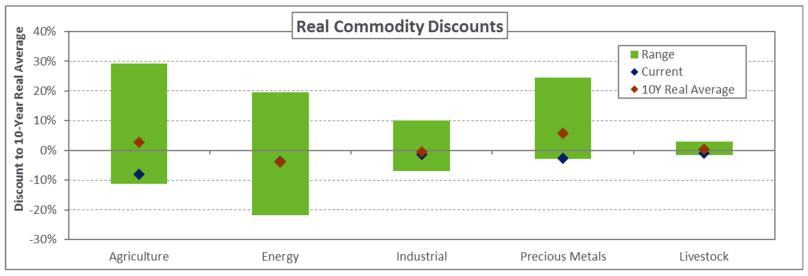
World Crude Oil & Liquid Fuels Consumption Production

Source: US Department of Energy, Bloomberg

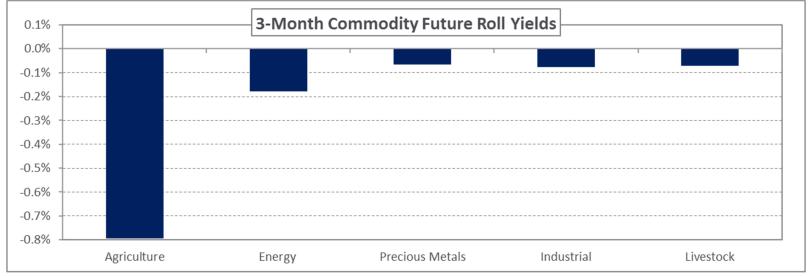
Source: OECD, Bloomberg



VALUATIONS



Source: Bloomberg, NEPC



Source: Bloomberg



POLICY INDEX HISTORY

- 4/1/2012 6/30/2012: 23% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 18% Barclays Aggregate, 15% Bank of America Merrill Lynch US High BB-B Constrained Index, 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 8% (90 Day T-Bill + 2%), 3% Wilshire REIT, 2% NCREIF Property Index, 5% Cambridge Associates US All PE 1 Quarter Lag, 1% (CPI + 4% Seasonally Adjusted), 1% 90 Day T-Bill.
- 7/1/2012 6/30/2013: 23% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 18% Barclays Aggregate Index, 15% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 3% Wilshire REIT, 2% NCREIF Property Index, 8% (91 Day T-Bill + 2% 1 month lag), 5% Cambridge Associates All US PE 1 Quarter Lag, 1% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 7/1/2013 6/30/2014: 20% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 7% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 2% NCREIF Property Index, 3% (91 Day T-Bill + 2% 1 Month Lag), 8% Cambridge Associates US All PE 1 Quarter Lag, 7% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 7/1/2014 9/30/2014: 20% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 7% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 2% NCREIF Property Index, 3% (91 Day T-Bill + 2% 1 Month Lag), 8% Cambridge Associates US All PE 1 Quarter Lag, 7% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.



POLICY INDEX HISTORY

- 10/1/2014 1/31/2016: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 4% Wilshire REIT Index, 3% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 2/1/2016 12/31/2016: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% (50% JP Morgan EMBI Global Diversified Index / 50% JP Morgan GBI EM Global Diversified Index), 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 4% Wilshire REIT Index, 3% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 1/1/2017 9/30/2017: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% (50% JP Morgan EMBI Global Diversified Index / 50% JP Morgan GBI EM Global Diversified Index), 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 4% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 10/1/2017 12/31/2017: 16% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 18% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 7% (60% MSCI World / 40% CITI WGBI), 5% Libor + 2%, 3% Wilshire REIT Index, 4% NCREIF Property Index, 13% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 1/1/2018 Current: 16% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 18% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 12% Libor + 2%, 3% Wilshire REIT Index, 4% NCREIF Property Index, 13% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.



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

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

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

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

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

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

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

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

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

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

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

Standard Deviation - The standard deviation is a statistical term that de-scribes 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 <math>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 Reta

Up/Down Capture Ratio - A measure of what percentage of a market's re-turns 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.

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

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



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 mortgage-backed 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 Maturity - 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: 'InvestorForce, 'Interaction Effect Performance Attribution, 'NEPC, LLC, 'Investopedia, 'Hedgeco.net



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



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 Deviation - 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



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