# PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

**PERIOD ENDING: DECEMBER 31, 2019**

Investment Performance Review for

## Western States Office and Professional Employees’ International Union Pension Plan

# Table of Contents

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 300-297-1777
SAN FRANCISCO 415-362-3484

Investment Landscape TAB I

Investment Performance Review TAB II

Verus

# PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

1ST QUARTER 2020

Investment Landscape

# Recent Verus research

## Visit: https://www.verusinvestments.com/insights/

### Annual outlooks

**CAPITAL MARKET ASSUMPTIONS**

Some important developments occurred in the last year. During our 2020 Capital Market Assumptions webinar, we discussed:

- Market movements of 2019 and how these shifts have affected our long-term outlook
- The impact of falling interest rates on fixed income expectations
- Why it is important to differentiate between shorter-term and longer-term forecasting exercises

### Topics of interests

**WHY BENCHMARKS MATTER**

In this Topics of Interest paper, we seek to outline the importance of benchmark selection within the investment process. The white paper addresses the following points:

- Benchmarks which appear similar can behave very differently, even over long periods of time
- Unconsidered benchmark selection can introduce uncompensated tracking error
- Tools available to investors to assist in determining appropriate benchmark indexes

**RISK IN MANAGER SELECTION**

In our latest Topics of Interest paper, we provide a framework for assessing the candidacy of a manager for portfolio inclusion and consider the implications of one manager versus alternatives. It addresses the following questions:

- Does the manager add a desired exposure?
- Does the manager exhibit skill?
- What does the manager add to the broader portfolio relative to other candidates?

# Table of contents

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484

Economic environment 6

Fixed income rates & credit 17

Equity 23

Other assets 34

Appendix 36

# 4th quarter summary

### THE ECONOMIC CLIMATE

— Real GDP grew at a 2.1% rate year-over-year in the third quarter (2.1% quarterly annualized rate). Falling imports and weak fixed investment (-0.2% contribution) acted as a drag on growth, while personal consumption continued to as the greatest driver of growth. ***p. 7***

— U.S. and Chinese negotiators signed the "phase one" trade agreement, and Boris Johnson's Conservative Party in the U.K. won a decisive victory. These events appear to have removed some uncertainty from the geopolitical landscape over the short- to intermediate-term. ***p. 15***

### PORTFOLIO IMPACTS

— Global equity markets exhibited strong performance through Q4, and U.S. equity performance was in-line (MSCI ACWI +9.0%, S&P 500 +9.1%). Emerging markets were the top performing asset class (+11.8%). ***p. 40***

— U.S. headline inflation increased 2.3% YoY in December, alongside the core inflation growth figure, and up from 1.7% in September. Although this was a notable jump in the inflation rate, investors appear more concerned about global deflationary forces, as indicated by the 10yr U.S. TIPS Breakeven Inflation Rate of 1.73%. Cyclical price pressures remain surprisingly absent from the current environment. ***p. 9***

### THE INVESTMENT CLIMATE

— In October, the Federal Open Market Committee cut interest rates by 0.25% to a new range of 1.50 – 1.75%. This marked the third consecutive rate cut by the committee. ***p. 18***

— Global sovereign bond yields picked up modestly in Q4, on higher inflation and growth prospects. The dollar value of negative-yielding outstanding debt fell from nearly $15 trillion to just above $11 trillion. Central bankers appealed for fiscal action, citing the limited capacity of monetary policy to sustain further economic expansion. ***p. 18***

### ASSET ALLOCATION ISSUES

— Most risk assets provided sizable gains in Q4. Global equities delivered +9.0%, U.S. high yield increased +2.6%, and Emerging Market Local Debt rose +5.2%. Longer duration fixed income saw losses as interest rates rebounded. ***p. 40***

— The U.S. dollar weakened -0.5% against both developed and emerging currencies in Q4, reversing moves of the prior quarter. Dollar volatility remains low relative to the big swings that occurred throughout 2014-2018. ***p. 35***

— Although risk assets appear to have rocketed higher in 2019, which may create concerns over valuations, it is important to note that much of this performance was due to assets recovering from a sharp fall in late-2018. ***p. 25***

A neutral risk stance may be appropriate in today's environment

# What drove the market in Q4?

**"U.S. trade deficit falls 7.6% in October to 16-month low on decline in Chinese imports"**

**U.S. FEDERAL TRADE DEFICIT ($BILLIONS)**

| Jun | Jul | Aug | Sep | Oct | Nov |
|---|---|---|---|---|---|
| 53.7 | 52.7 | 53.5 | 51.1 | 46.9 | 43.1 |

*Article Source: MarketWatch, December 5th, 2019*

**"As markets climb higher, are stocks becoming overvalued?"**

**BLENDED FORWARD 12-MONTH P/E RATIO OF THE S&P 500 INDEX**

| Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|
| 17.0x | 16.6x | 16.9x | 17.3x | 17.8x | 18.3x |

*Article Source: CNBC, December 30th, 2019*

**"Fed 'prepared to adjust' balance sheet to prevent repo market flare-up"**

**MONTHLY CHANGE IN THE SIZE OF THE FED BALANCE SHEET ($BILLIONS)**

| Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|
| -47.7 | -19.2 | 97.8 | 162.1 | 33.1 | 112.7 |

*Article Source: Yahoo Canada Finance, December 11th, 2019*

**"China's pork price jumps 110 per cent, sending consumer inflation rocketing to eight-year high"**

**CHINA CPI INFLATION (YoY % CHANGE)**

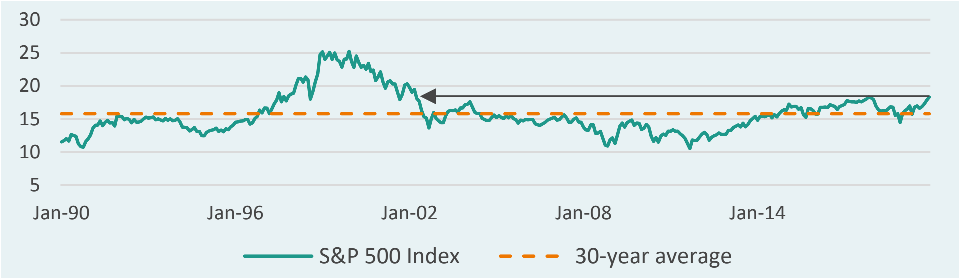
| Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|
| 2.8 | 2.8 | 3.0 | 3.8 | 4.5 | 4.5 |

*Article Source: South China Morning Post, December 10th, 2019*

**U.S. MONTHLY TRADE DEFICIT (BILLIONS)**

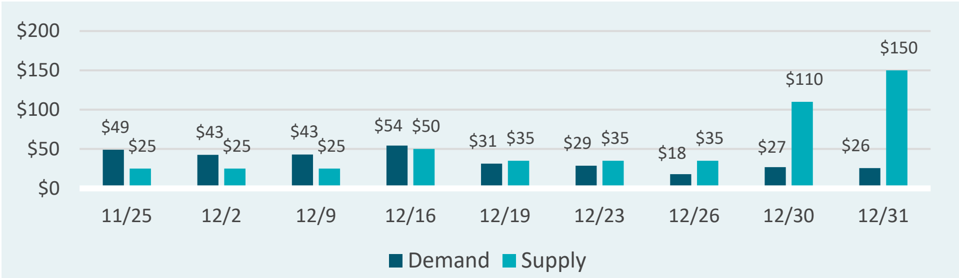

*Source: Bloomberg, as of 11/30/19*

**FORWARD PRICE/EARNINGS RATIO (BLENDED 12-MONTH EARNINGS)**




*Source: Bloomberg, as of 12/31/19.*

**YEAR-END LIQUIDITY OFFERED UP BY THE NEW YORK FED (BILLIONS)**




*Source: New York Fed, as of 12/31/19.*

# Economic environment

# U.S. economics summary

— Real GDP grew at a 2.1% rate year-over-year in the third quarter (2.0% quarterly annualized rate). Falling imports and weak fixed investment (-0.2% contribution) acted as a drag on growth, while personal consumption continued to be the greatest driver of growth.

— U.S. headline inflation came in at 2.3% YoY in December, in line with the core inflation growth figure. Despite more than 10 years of economic expansion, cyclical price pressures seem surprisingly absent from the current environment. Investors appear more concerned about global deflationary forces.

— The U.S. labor market showed further strength in the fourth quarter and unemployment remained at 50-year lows of 3.5%.

— Consumer sentiment indicators remain near all-time-highs and improved slightly over the quarter.

— American households are in a strong financial position, with balance sheets that appear increasingly robust. At the end of Q3, U.S. household debt outstanding was equal to about 74% of GDP, the healthiest level since Q4 2001.

— U.S. and Chinese negotiators signed the "phase one" agreement on trade, and Boris Johnson's Conservative Party won a decisive victory in the U.K. These developments may ease some of the economic uncertainty across the global economy, providing a tailwind to future growth.

— Existing home sales grew +2.7% YoY in November. New home sales, a far smaller portion of the overall market, grew at a stronger rate of +16.9% YoY, as construction activity further accelerated. Rising homebuilder activity in recent years may ease some of the low inventory pressures in the current market environment.

| | **Most Recent** | **12 Months Prior** |
|---|---|---|
| GDP *(YoY)* | 2.1% *9/30/19* | 3.1% *9/30/18* |
| Inflation *(CPI YoY, Core)* | 2.3% *12/31/19* | 2.2% *12/31/18* |
| Expected Inflation *(5yr-5yr forward)* | 1.8% *12/31/19* | 1.8% *12/31/18* |
| Fed Funds Target Range | 1.50 – 1.75% *12/31/19* | 2.25 – 2.50% *12/31/18* |
| 10 Year Rate | 1.9% *12/31/19* | 2.7% *12/31/18* |
| U-3 Unemployment | 3.5% *12/31/19* | 3.9% *12/31/18* |
| U-6 Unemployment | 6.7% *12/31/19* | 7.6% *12/31/18* |

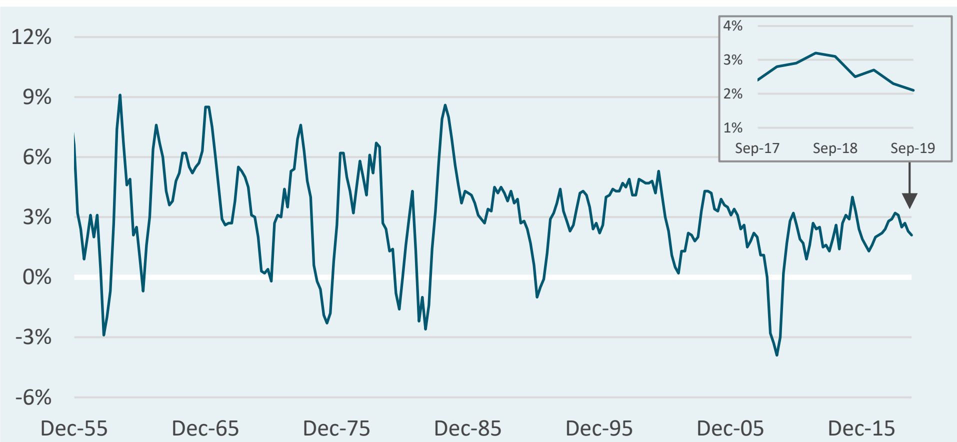
# GDP growth

Real GDP grew at a 2.1% rate year-over-year in the third quarter (2.1% quarterly annualized rate). Falling imports detracted -0.3% from the overall GDP print, along with weak fixed investment (-0.2% contribution). Personal consumption, the largest component of gross domestic product, continued to drive the economy forward. The U.S. economy is pacing near the 2.0% rate that economists generally expect for full year 2020.

While trade policies and conflict likely resulted in a mild drag on economic growth in 2019, the U.S. and China have signed the "phase one" trade deal. A partial trade resolution, or at least an indication that negotiations are headed in a more positive direction, could provide a lift to the economy and markets.

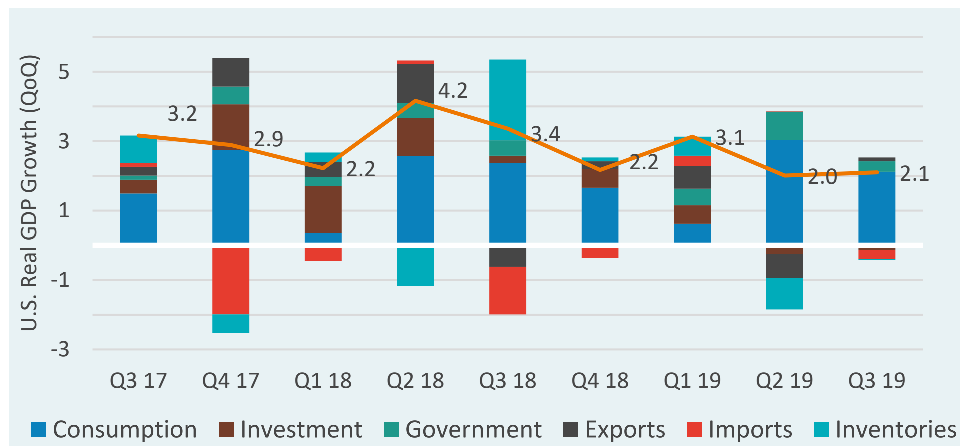
On January 17th, the Federal Reserve Bank of Atlanta GDPNow forecast indicated GDP growth of 1.8% in the fourth quarter. This forecast dipped recently due to weak personal consumption expenditures.

### U.S. REAL GDP GROWTH (YOY)




*Source: Bloomberg, as of 9/30/19*

### U.S. GDP GROWTH ATTRIBUTION




*Source: BEA, annualized quarterly rate, as of 9/30/19*

# Inflation

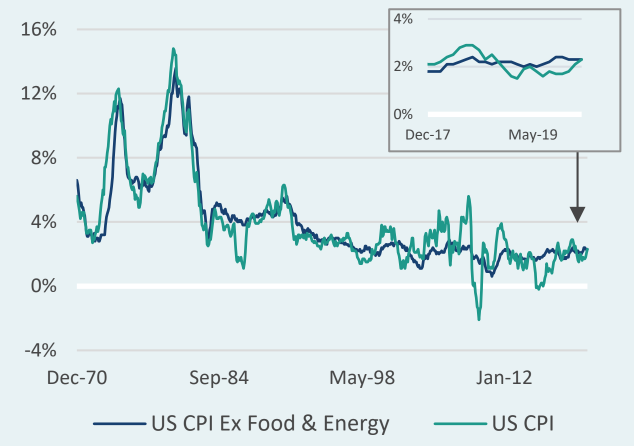
U.S. headline inflation increased 2.3% YoY in December, in line with the core inflation growth figure, and up from 1.7% in September. Although this is a notable jump in the inflation rate, investors appear more concerned about global deflationary forces. Cyclical price pressures remain surprisingly absent from the current environment.

During the quarter, the market's pricing of inflation increased from a low of 1.48% to 1.73%. While the breakeven rate has risen materially from its cycle low of 1.18% achieved in February 2016, it remains depressed by historical standards.

Consumer expectations moved in the opposite direction, falling from 2.7% at the beginning of the year to 2.3% in December.

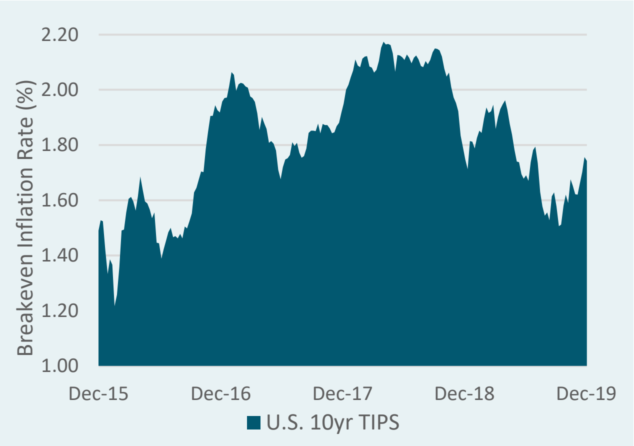
We believe it is likely that inflation will remain subdued. But it is also worth noting that if inflation or inflation fears returned to the markets, this might place central banks in a perilous position. It is doubtful that central banks could hike interest rates for any sustained period of time without risking recession.

**U.S. CPI (YOY)**



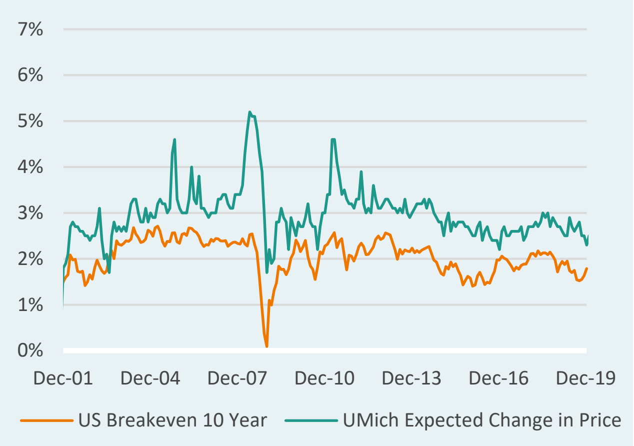

*Source: Bloomberg, as of 12/31/19*

**U.S. BREAKEVEN INFLATION RATE**




*Source: FRED, as of 12/31/19*

**INFLATION EXPECTATIONS**




*Source: Bloomberg, as of 12/31/19*

# Labor market

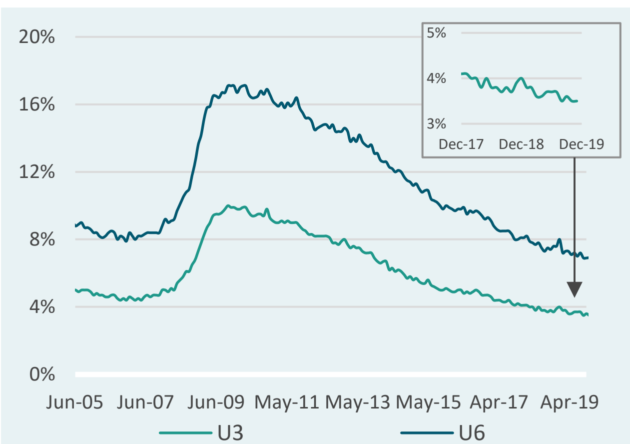
The U.S. labor market continued to show strength in Q4 and unemployment remained at 50-year lows of 3.5%. Year-over-year growth in non-farm payroll additions slowed to its lowest level since September 2017 at 1.4%. Nearly 1.24 jobs are now available per unemployed worker in the labor force, which suggests there is a limited remaining supply of workers to meet business hiring demands.

Average hourly earnings for production and nonsupervisory employees grew 3.0% year-over-year in December, outpacing inflation (2.3%). Sustained real wage growth would support sentiment, which is near cycle highs.

One plausible case for strong consumption to continue hinges on the fact that several key unemployment rates are near historic lows. The unemployment rate for workers who are at least 25 years old and lack high school diplomas (5.3%) is at an at all-time-low level since the data was first recorded in the year 2000. Typically, workers with less education earn less in nominal terms, but have a higher marginal propensity to consume per each dollar earned. These recent increases in employment for those workers who are more likely to spend may lead to outsized positive impacts on economic growth.

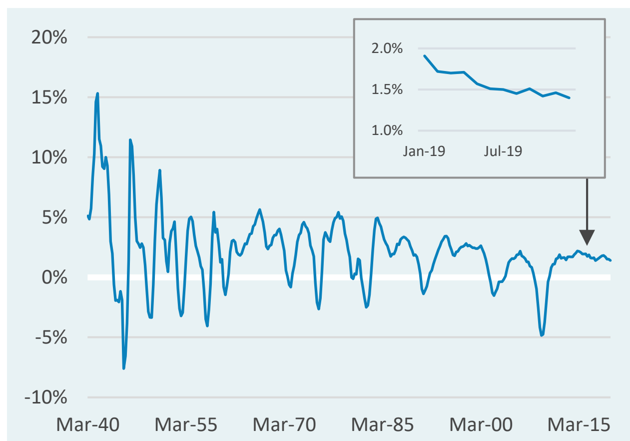
U.S. labor market remains strong, though further upside may be limited

**U.S. UNEMPLOYMENT**



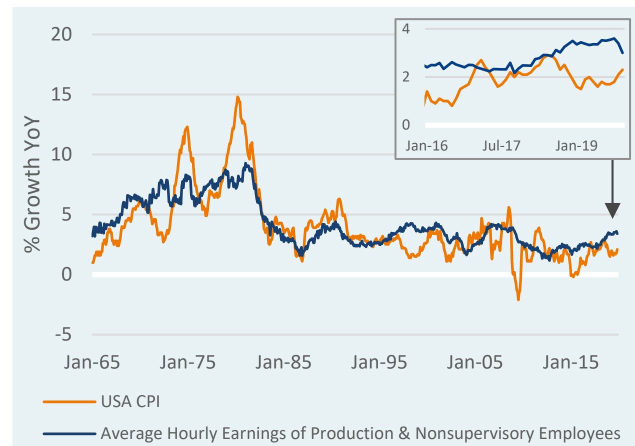

*Source: FRED, as of 12/31/19*

**NON-FARM PAYROLL GROWTH (YOY)**



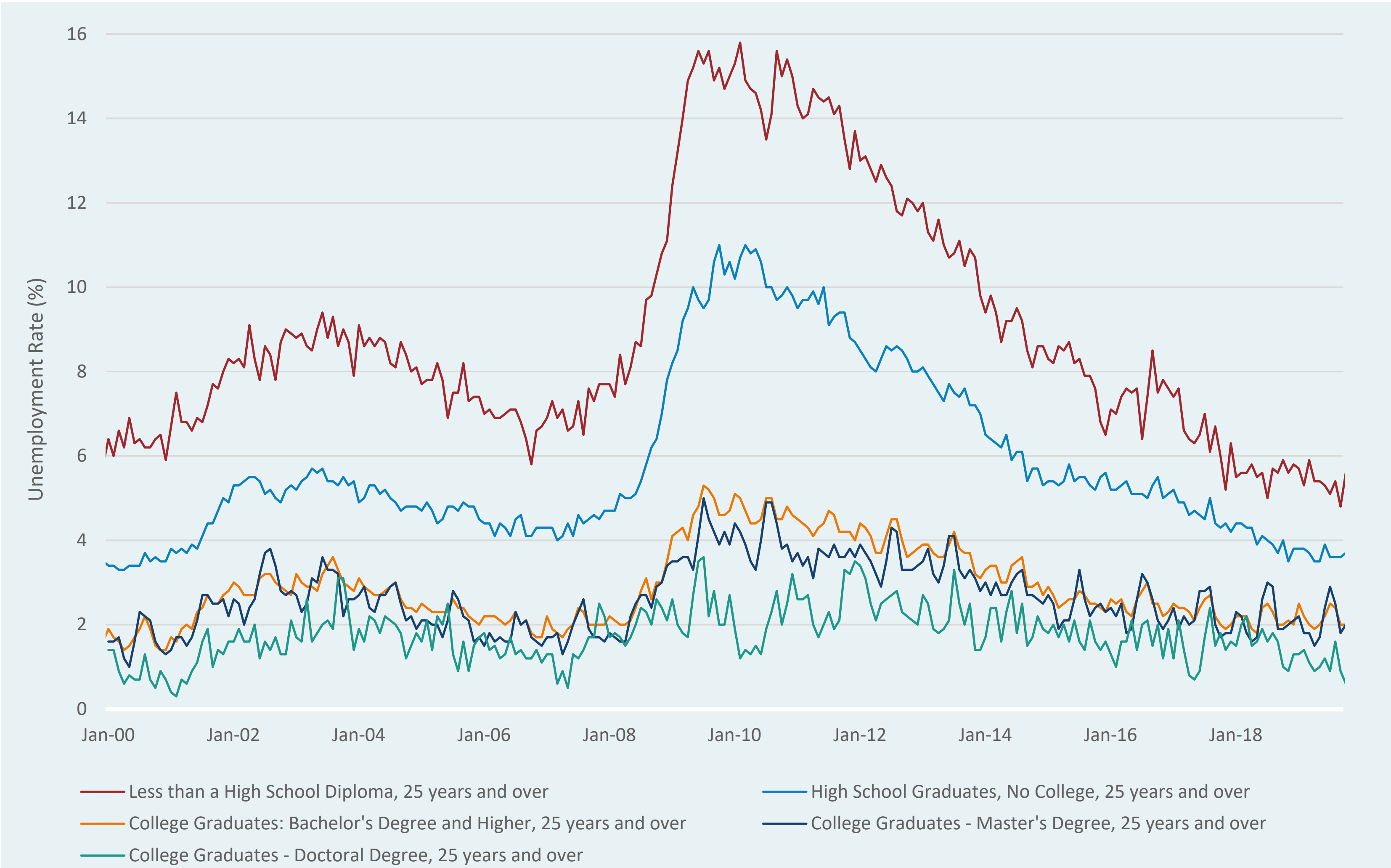

*Source: BLS, as 12/31/19*

**U.S. WAGE GROWTH**




*Source: FRED, as of 11/30/19*

# U.S. unemployment




The U.S. job market is very strong, for all levels of education

*Source: FRED, as of 11/30/19*

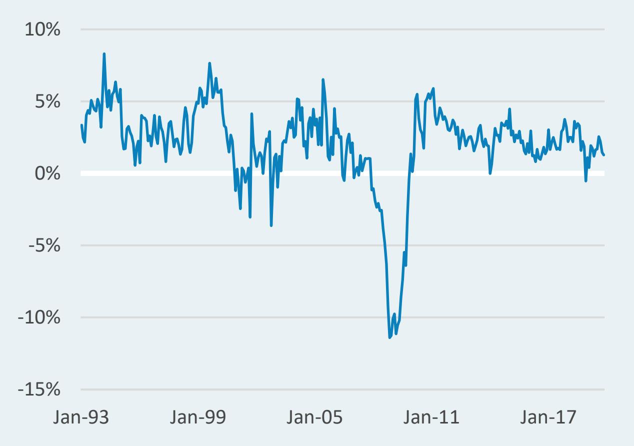
# The consumer

The U.S. consumer continued to push the U.S. economy forward, supported by low unemployment, solid wage gains, and high sentiment. American households are in a strong financial position, with balance sheets that appear robust. At the end of Q3, U.S. household debt outstanding was equal to about 74% of GDP, the healthiest level since Q4 2001.

Retail sales growth slid a bit in real terms, but much of this move was due to a pickup in inflation. The price of a barrel of WTI crude oil rose from $53 to $61, helping to propel year-over-year growth in headline inflation from 1.7% to 2.3%. Overall, retail sales growth remains solid, and has been boosted recently by a surge in e-commerce sales. Cyber Monday sales grew nearly 20% this year, hitting a record $9.4 billion U.S. dollars according to data from Adobe Analytics. Shoppers' carts were also about 6% larger at checkout than they were last year, perhaps hinting at a more optimistic consumer outlook.

Credit conditions remain benign. Credit-card borrowing ticked down slightly and was offset by faster growth in auto and student loans. Some might consider credit-card debt "worse debt" and auto and student loan debt "better debt" in that prudent investments in transportation and human capital are likely higher-returning than ultra-short-term consumption.

REAL RETAIL SALES GROWTH (YOY)

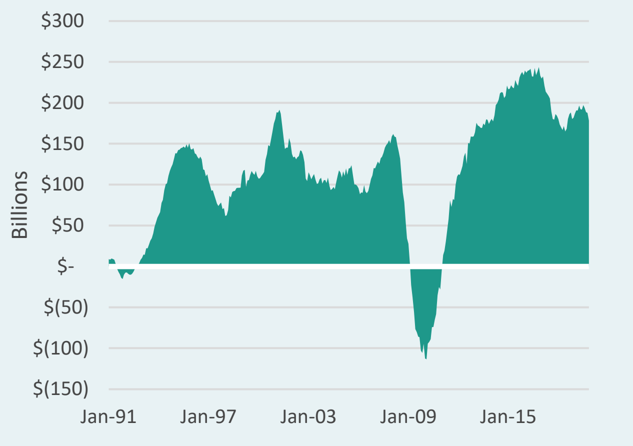



*Source: FRED, as of 11/30/19*

E-COMMERCE SALES GROWTH (QUARTERLY YOY)


*Source: U.S. Census Bureau, Bloomberg, as of 9/30/19*

12-MONTH GROWTH IN CONSUMER CREDIT




*Source: Federal Reserve, Bloomberg, as of 11/30/19*

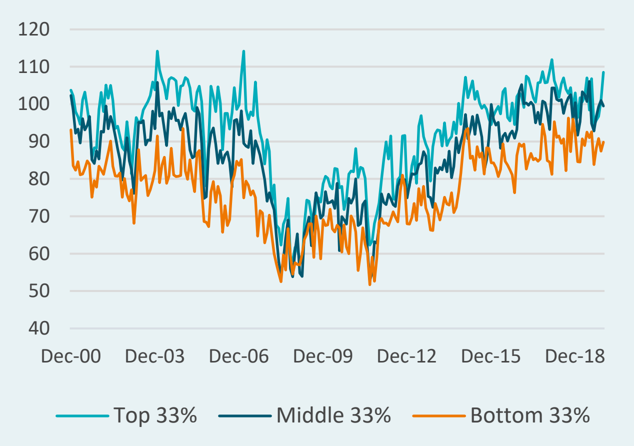
# Sentiment

Consumer sentiment indicators remain near all-time-highs and improved slightly as a number of closely-followed geopolitical storylines appeared to move closer to resolution. The U.S. and China “phase one” trade deal, and the victory of Boris Johnson’s Conservative Party in the U.K. appears to have at least removed some uncertainty from the geopolitical landscape over the short- to intermediate-term.

Over the quarter, the difference between the sentiment reading for the top third of income earners and the bottom third of income earners moved from the $10^{th}$ percentile to the $65^{th}$ percentile of monthly periods since 2001, indicating a widening in the gap between the “haves” and “have-nots”.

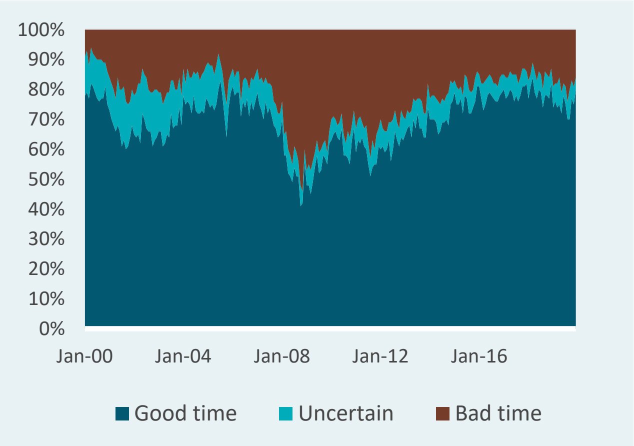
Consumers view the economic conditions for buying big-ticket household items such as furniture, refrigerators and televisions as close to as favorable as they have been over the course of the expansion. This belief appears to be rooted in dual expectations for job security and real wage gains.

**CONSUMER SENTIMENT BY INCOME BRACKET**



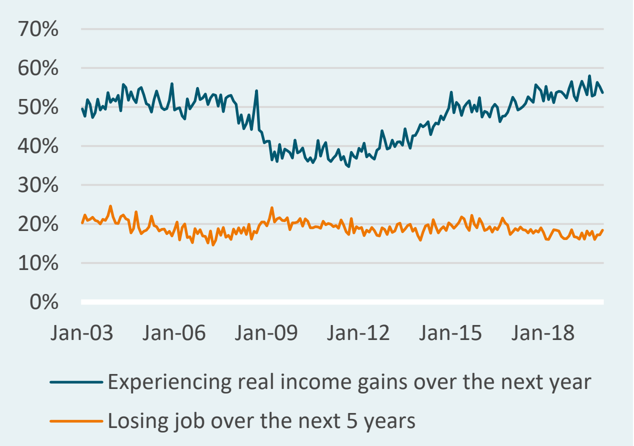

*Source: University of Michigan, as of 12/31/19*

**CONDITIONS FOR BUYING BIG-TICKET ITEMS (%)**




*Source: University of Michigan, as of 12/31/19*

**CONSUMER FEAR GAUGE**




*Source: University of Michigan, as of 12/31/19*

# Housing

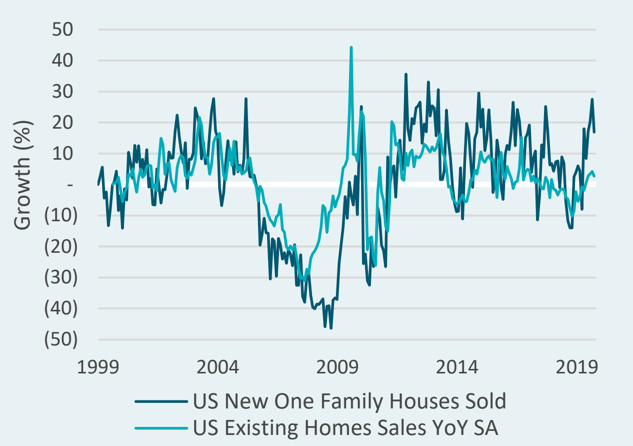
In the first half of 2019 the housing market appeared to be cooling off, coming down from a strong boom throughout the recent economic expansion. The average home sales price is down -8% from the highs of late-2017, although other variables such as the types and location of homes sold can impact these numbers. Homebuilding activity ticked up in the second half of the year as homebuilder sentiment jolted higher in 2019.

Existing home sales grew +2.7% YoY in November. New home sales, a far smaller portion of the overall market, grew at a stronger rate of +16.9% YoY, as construction activity further accelerated. Rising homebuilder activity in recent years may ease some of the low inventory pressures in the current market environment.

The housing boom has contributed to a rebound in the U.S. homeownership rate. A decade-long trend away from buying and towards renting appears to have reversed in mid-2016. Since that time, the rate of homeownership has risen to 64.7% from a low of 63.1%.

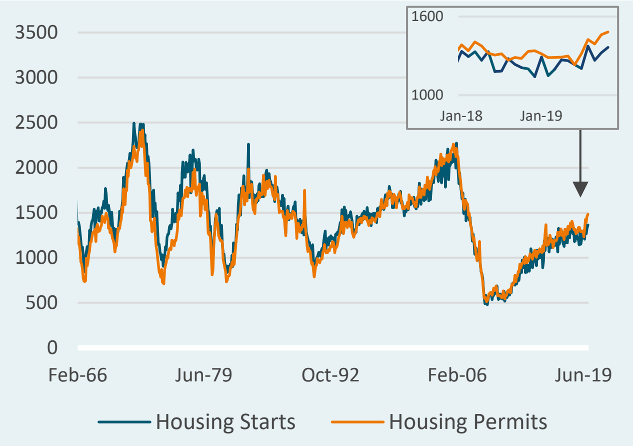
It is always helpful to remember that home price trends can vary meaningfully by location, which means national statistics are sometimes difficult to interpret at a local level.

### U.S. HOME SALES (YOY)



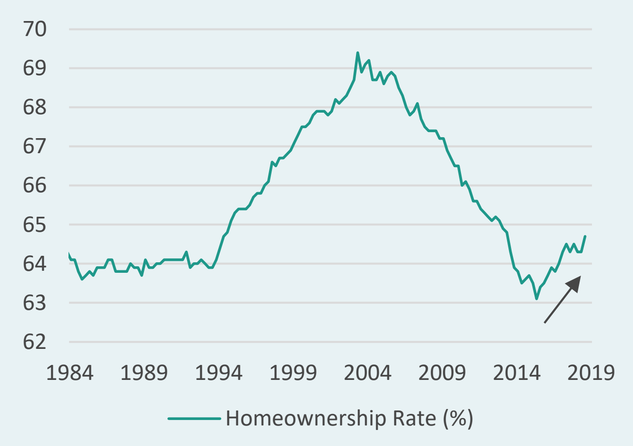

Source: FRED, as of 11/30/19

### HOUSING STARTS & PERMITS




Source: Bloomberg, NAHB, as of 11/30/19 (see appendix)

### HOMEOWNERSHIP RATE




Source: FRED, as of 9/30/19

# International economics summary

— The growth of international developed economies remains in a range of 0.5% to 2.0%, near the 2.1% growth rate of the slowing U.S. economy.

— In January, the IMF forecasted 2.9% global growth in 2019 and an acceleration to 3.3% in 2020. These growth expectations were 0.1% lower than the previous quarter's report, and were mostly a result of downward adjustments to emerging markets expectations.

— Inflation continues to be muted across international developed markets, keeping more options on the table for central banks to step in as needed with accommodative policy.

— The U.K. general election in December resulted in a landslide victory for Boris Johnson. The election, through a consolidation of Tory party power, effectively guarantees that Brexit will ultimately be carried out.

— While the global economy has exhibited mild growth, labor markets continue to tighten across the board. By traditional unemployment measures, job markets are now stronger than pre-2008 levels in most major economies.

— U.S. and Chinese negotiators signed the "phase one" agreement on trade, and the decisive victory of Boris Johnson's Conservative Party in the U.K. appears to have at least removed some uncertainty from the geopolitical landscape over the short- to intermediate-term.

— China has experienced a significant jump in inflation to 4.5% as an outbreak of African swine fever resulted in a doubling of pork prices. This compares to a 5-year average inflation rate of 1.9%. An acceleration of inflation may create issues for Chinese leadership in an already-slowing economy.

| **Area** | **GDP (Real, YoY)** | **Inflation (CPI, YoY)** | **Unemployment** |
|---|---|---|---|
| United States | 2.1% *9/30/19* | 2.3% *12/31/19* | 3.5% *12/31/19* |
| Eurozone | 1.2% *9/30/19* | 1.3% *12/31/19* | 7.5% *11/30/19* |
| Japan | 1.7% *9/30/19* | 0.9% *12/31/19* | 2.2% *11/30/19* |
| BRICS Nations | 4.9% *9/30/19* | 4.4% *12/31/19* | 5.1% *9/30/19* |
| Brazil | 1.2% *9/30/19* | 4.3% *12/31/19* | 11.2% *11/30/19* |
| Russia | 1.7% *9/30/19* | 3.1% *12/31/19* | 4.6% *11/30/19* |
| India | 4.5% *9/30/19* | 7.4% *12/31/19* | 8.5% *12/31/17* |
| China | 6.0% *9/30/19* | 4.5% *12/31/19* | 3.6% *9/30/19* |

# International economics

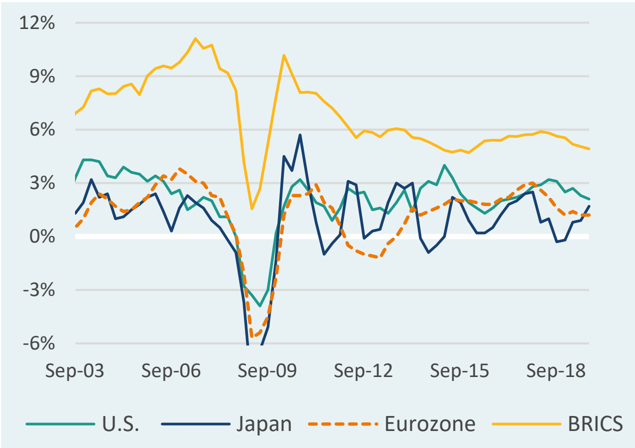
The United States grew at a pace of 2.1% year-over-year in the third quarter, moving more closely in line with other developed nations which have posted growth of 1.0%-2.0%.

While the global economy has exhibited mild growth, labor markets continue to tighten across the board. By traditional unemployment measures, job markets are now stronger than pre-2008 levels in most major economies.

Inflation has remained subdued across international developed markets, and many pundits have viewed the mild inflation data as a cue for central banks to step in and attempt to bolster economic growth through more accommodative policy. Inflation remains muted in emerging economies, and most economies are experiencing CPI below the 5-year average.

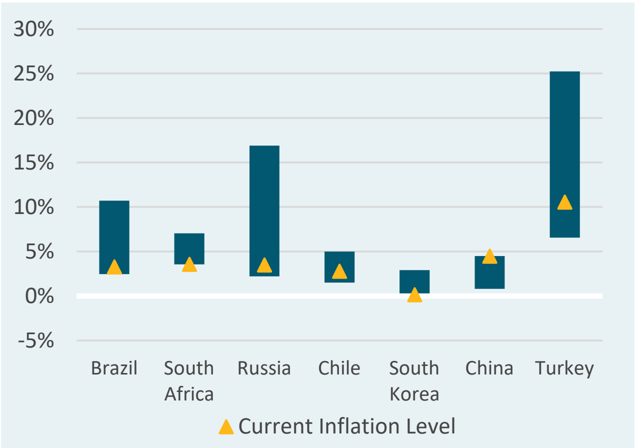
China's inflation rate has become an outlier, jumping to 4.5% as an outbreak of African swine fever resulted in a doubling of pork prices in the country during the year. This compares to a 5-year average inflation rate of 1.9%. Prices of other meats in China have also increased on heightened demand for pork substitutes. An acceleration of inflation may create issues for Chinese leadership in an already-slowing economy.

**REAL GDP GROWTH (YOY)**



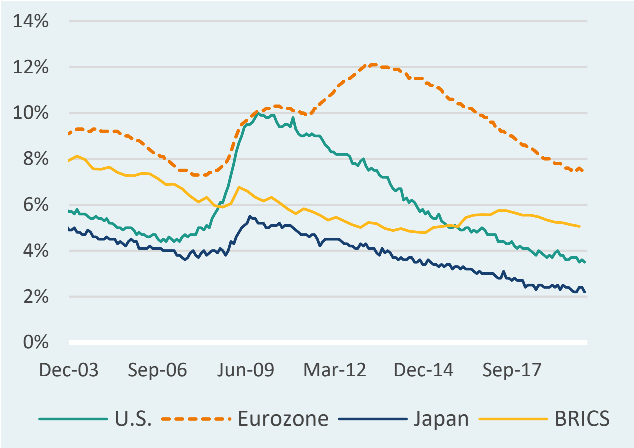

*Source: Bloomberg, as of 9/30/19*

**INFLATION (CPI YOY)**




*Source: Bloomberg, inflation range of past 5 years, as of 11/30/19*

**UNEMPLOYMENT RATE**




*Source: Bloomberg, as of 11/30/19 or most recent release*

# Fixed income rates & credit

# Interest rate environment

— The global sovereign bond rally lost steam in Q4 as inflation and growth prospects mildly reflated. Central bankers at the European Central Bank and the Federal Reserve signaled that policy would likely remain on hold in the absence of significant economic developments.

— Global ten-year sovereign bond yields picked up moderately, most significantly in Europe. Over the quarter, the U.S.-dollar value of global outstanding negative-yielding debt fell from nearly $15 trillion to just above $11 trillion.

— In October, the Federal Open Market Committee cut the range for its benchmark interest rate by 0.25% to a new range of 1.50 to 1.75%.

— Diversity of opinion among FOMC participants about the path of interest rates has faded. Most members now expect rates to remain flat in 2020, and move back toward 2.50% over the longer term.

— The New York Fed conducted a series of term repurchase operations aimed at providing sufficient liquidity for firms to get through the year-end turn when demand for cash typically surges. The Fed balance sheet grew by $300B in Q4, and analysts continue to debate whether the Fed's involvement in repo markets should be considered "technical" or "stimulative" in nature.

— The Governing Council of the ECB decided to leave key interest rates unchanged and confirmed that net asset purchases to the tune of €20 billion per month had begun in November.

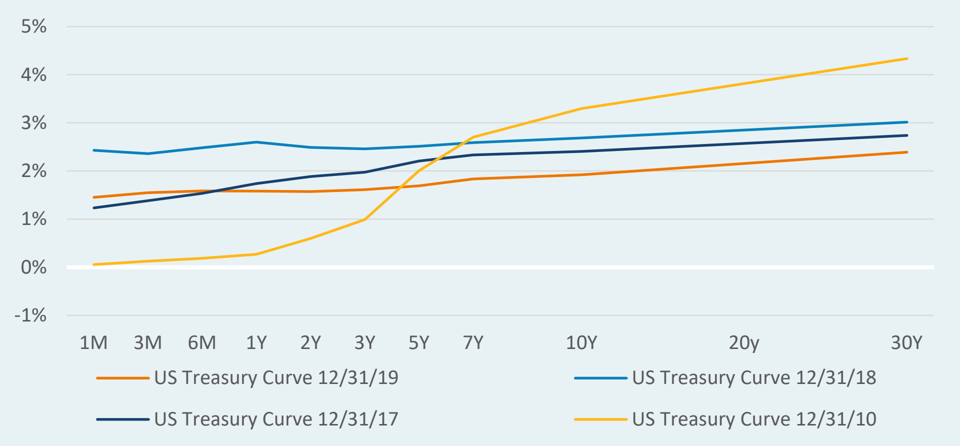
— In Christine Lagarde's first major move as President, she announced the ECB's first Strategic Policy review since 2003, which will begin in January and will address a wide range of topics, including: low inflation, the price-stability goal, climate change, and cryptocurrency.

| Area | Short Term (3M) | 10-Year |
|---|---|---|
| United States | 1.54% | 1.92% |
| Germany | (0.78%) | (0.19%) |
| France | (0.65%) | 0.12% |
| Spain | (0.61%) | 0.47% |
| Italy | (0.34%) | 1.41% |
| Greece | 0.26% | 1.47% |
| U.K. | 0.69% | 0.82% |
| Japan | (0.10%) | (0.01%) |
| Australia | 0.94% | 1.37% |
| China | 2.43% | 3.14% |
| Brazil | 4.30% | 6.79% |
| Russia | 4.95% | 6.36% |

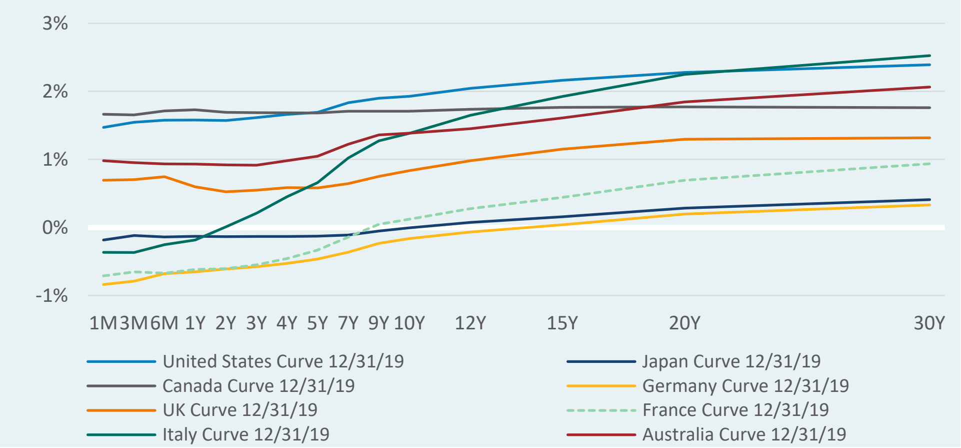
*Source: Bloomberg, as of 12/31/19*

# Yield environment

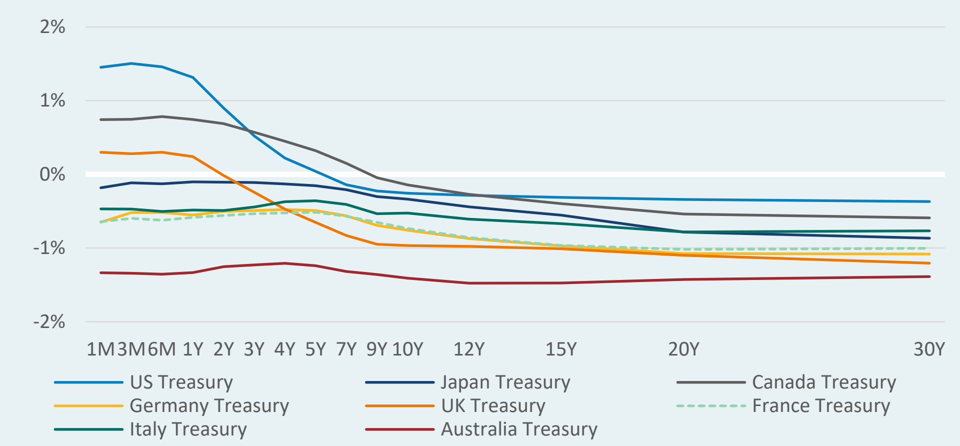
U.S. YIELD CURVE



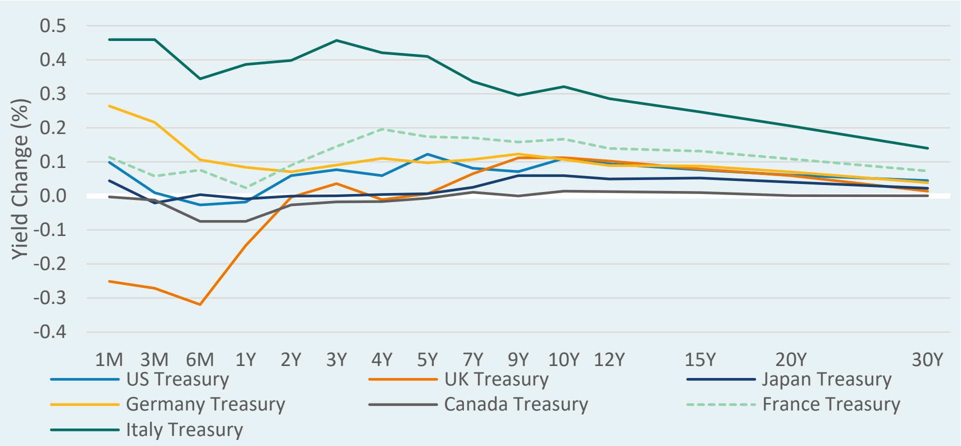

GLOBAL GOVERNMENT YIELD CURVES




YIELD CURVE CHANGES OVER LAST FIVE YEARS




IMPLIED CHANGES OVER NEXT YEAR




*Source: Bloomberg, as of 12/31/19*

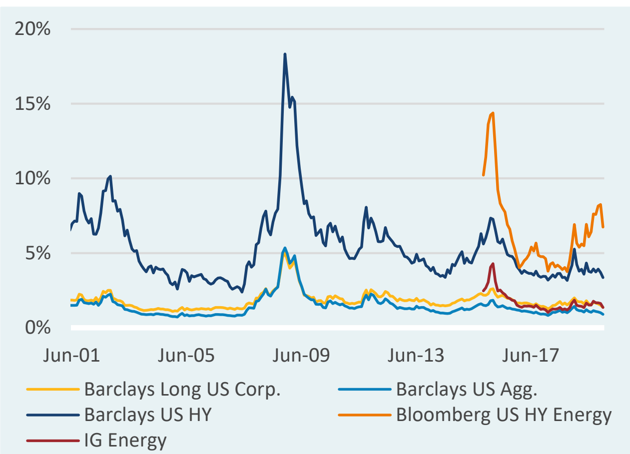
# Credit environment

Credit enjoyed a positive 2019 driven by tightening spreads. Both investment grade and below-investment grade assets remained somewhat stable over the period. In high yield, CCCs and energy-related bonds were the best performers during Q4. High yield spreads tightened meaningfully over the year and the quarter (190 bps and 37 bps, respectively). Investment grade bonds also enjoyed positive performance fueled by this year's rate rally, attractive profit margins, and continued demand from investors for higher quality credit.

In the fourth quarter, high yield bonds have returned +3.4%, materially outperforming bank loans (+1.7%) and investment grade credit (+1.1%). In 2019, high yield bonds have returned +14.4%, materially outperforming bank loans (+8.6%) and slightly outperforming investment grade credit (+13.8%). Bank loans have experienced outflows for much of the year driven by lessening demand for the asset class.

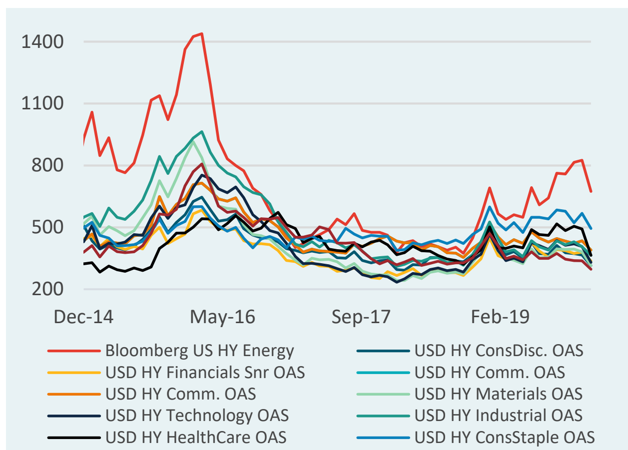
Based on concerns over late-cycle behavior in credit markets, we do not believe investors are being adequately compensated for credit risk. Late-cycle volatility tends to coincide with widening credit spreads and higher propensity for default activity. An underweight to U.S. investment grade, high yield credit, and bank loans may be warranted, with an overweight to emerging market debt which appears to offer more attractive value. This positioning should result in an overall neutral credit risk stance. Within U.S. markets, higher quality and more liquid assets appear most attractive.

**SPREADS**




*Source: Barclays, Bloomberg, as of 12/31/19*

**HIGH YIELD SECTOR SPREADS (BPS)**




*Source: Bloomberg, as of 12/31/19*

| | Credit Spread (OAS) | |
|---|---|---|
| **Market** | **12/31/19** | **12/31/18** |
| Long U.S. Corp | 1.4% | 2.0% |
| U.S. Inv Grade Corp | 0.9% | 1.5% |
| U.S. High Yield | 3.4% | 5.3% |
| U.S. Bank Loans* | 4.4% | 5.1% |

*Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/19*
**Discount margin (4-year life)*

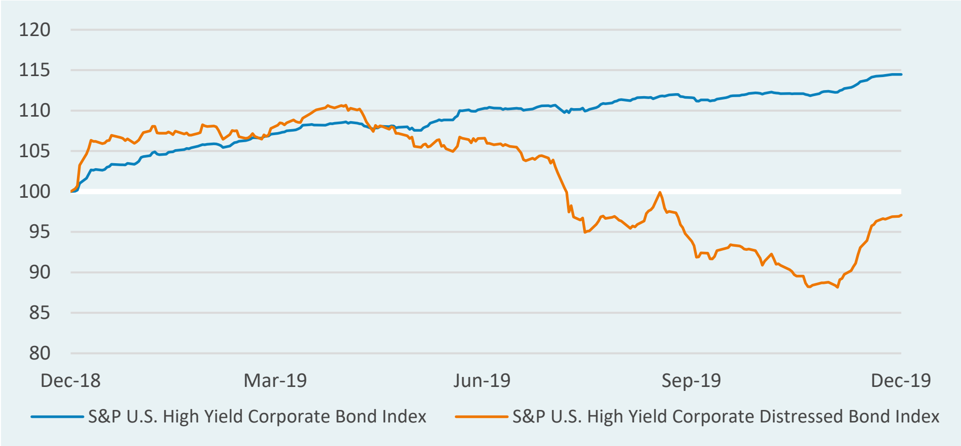
# High yield – what's in it?

The high yield market rallied in 2019 to provide double digit positive returns for only the fourth time since the 2008-2009 global financial crisis. However, the market was characterized by significant divergences as investors rotated into upper-tier credits relative to lower-tier credits due to volatility and geopolitical uncertainty picking up during the year. This was evidenced by the ratio of CCC/BB credit spread levels, which climbed to levels last seen two decades ago.  Investors generally see CCC credits as a proxy for less liquid and/or more complex situations and risks, especially relative to the BB segment.

The distressed market was negatively impacted by investor distaste for less liquid risk during the year. This was particularly true in the energy sector, and in certain retail and healthcare industries. Selling pressures peaked in November as the riskiest segment of the high yield market suffered losses in excess of those experienced during the 2018 year-end drawdown. Market participants pulled money from the space, which resulted in significant redemptions amongst distressed-focused hedge funds and even closures of hedge funds that had previously successfully navigated the global financial crisis.

CCC/BB SPREAD RATIO


HIGH YIELD VS. HIGH YIELD DISTRESSED (INDEXED 12/31/2018=100)




*Source: Standard & Poor's, J.P. Morgan, Wall Street Journal, as of 12/31/19*

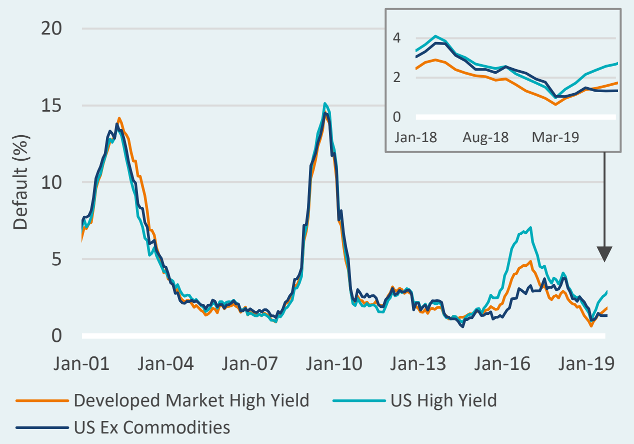
# Default & issuance

Default activity for 2019 was slightly higher than 2018 by roughly 0.8%. This was mainly due to elevated defaults in commodity-related industries such as energy and metals/mining. The par-weighted default rate for high yield ended the year at 2.6% and remained below its long-term average range of 3.0-3.5%.

For loans, the par-weighted default rate for 2019 was 1.6% and remained below the long-term average of 3.1%, according to data from J.P. Morgan. Notably, defaults in commodity-related sectors accounted for essentially half of the year's default/distressed activity.

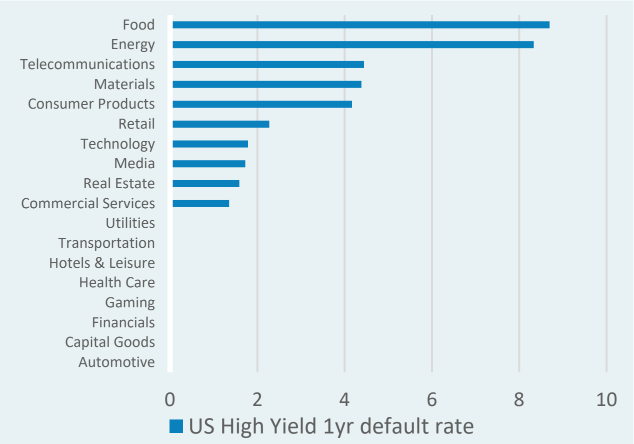
Gross high yield issue activity for 2019 was $287 billion which was up 52% from a year ago. Loan market issuance is significantly behind last year's pace, likely influenced by lower demand for floating rate securities now that the Federal Reserve has paused monetary tightening. Gross loan issuance is essentially down 44% from a year ago although there was an increase in issuance at the end of December.

**HY DEFAULT RATE (ROLLING 1-YEAR)**



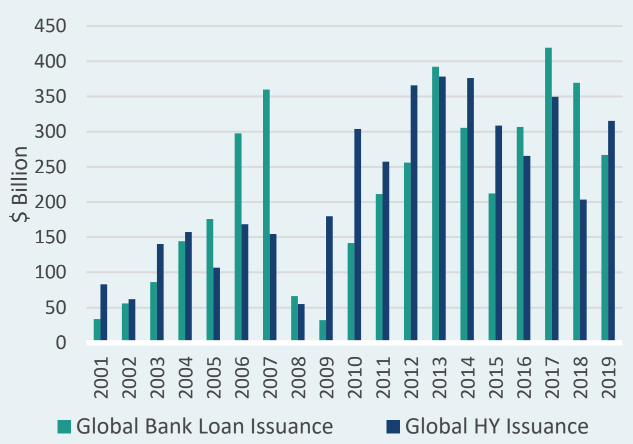

*Source: BofA Merrill Lynch, as of 12/31/19*

**U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)**




*Source: BofA Merrill Lynch, as of 12/31/19 – par weighted*

**GLOBAL ISSUANCE ($ BILLIONS)**




*Source: Bloomberg, BofA Merrill Lynch, as of 12/31/19*

# Equity

# Equity environment

— Global equity markets exhibited strong performance through Q4, and U.S. equity performance was in-line (MSCI ACWI +9.0%, S&P 500 +9.1%). Emerging markets were the top performing asset class (+11.8%).

— Global currency volatility has been muted over the last few years, which has made ignoring currency exposure less consequential. Expecting low currency volatility to persist may be an assumption that gets investors into trouble.

— Unhedged U.S. investors in U.K. equities outperformed their hedged peers by 7.8% in Q4, as a stronger pound sterling dominated the U.K. equity return narrative.

— Based on price-to-forward earnings ratios international equity valuations appear elevated, but unlike in the U.S., they do not yet appear stretched.

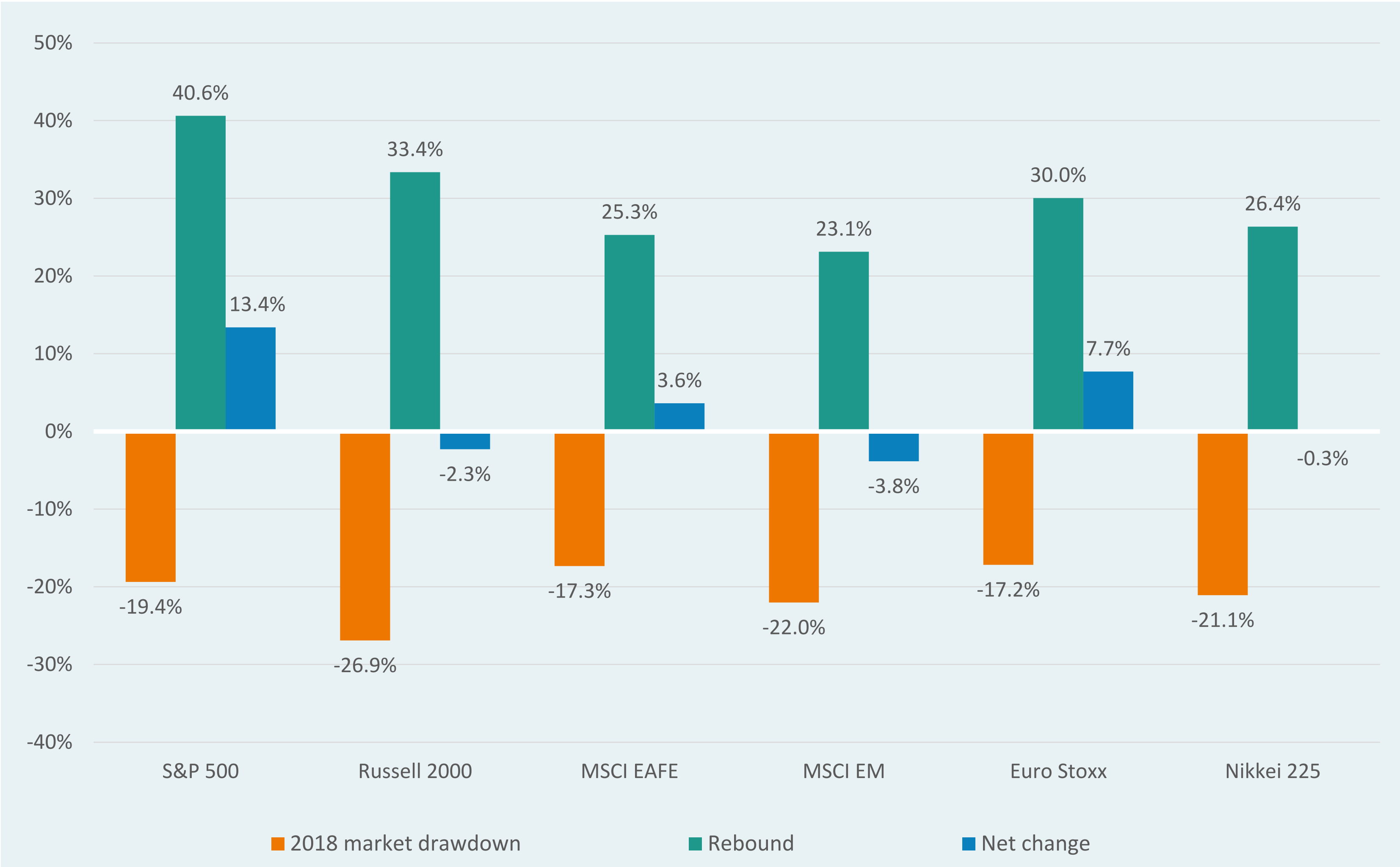
— The outlook for monetary policy remains supportive of global equity price movement in 2020. Of the five major global central banks (Federal Reserve, European Central Bank, Bank of England, Bank of Japan, People's Bank of China), four out of five are providing accommodation through their respective balance sheets. Futures imply better than 50/50 odds that the Bank of England cuts its main rate 0.25% at the end of January and China has continued to cut its benchmark lending rate.

— Inflation remains muted in emerging economies, and most economies are experiencing CPI below the 5-year average. Central bank policy has remained accommodative in many major countries within the universe such as China, South Korea, Brazil, and South Africa. This accommodation could provide a boost for equity market pricing as we move further into 2020.

| | QTD TOTAL RETURN | | 1 YEAR TOTAL RETURN | |
|---|---|---|---|---|
| | (unhedged) | (hedged) | (unhedged) | (hedged) |
| US Large Cap (S&P 500) | 9.1% | | 31.5% | |
| US Small Cap (Russell 2000) | 9.9% | | 25.5% | |
| US Large Value (Russell 1000 Value) | 7.4% | | 26.5% | |
| US Large Growth (Russell 1000 Growth) | 10.6% | | 36.4% | |
| International Large (MSCI EAFE) | 8.2% | 5.8% | 22.0% | 24.6% |
| Eurozone (Euro Stoxx 50) | 8.3% | 5.9% | 25.9% | 32.1% |
| U.K. (FTSE 100) | 10.8% | 3.0% | 22.1% | 19.5% |
| Japan (NIKKEI 225) | 8.2% | 9.6% | 21.9% | 23.5% |
| Emerging Markets (MSCI Emerging Markets) | 11.8% | 9.5% | 18.4% | 17.7% |

*Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/19*

# A different look at 2019 performance




Most of the high returns of 2019 were due to markets recovering from the 2018 drop

Adjusting for this effect shows us that 2019 was a fairly average year

*Source: Standard & Poor's, MSCI, Verus, as of 12/31/19 – "Drawdown" defined as the total market fall in 2018, "Rebound" defined as the total % return from the low point of the fall to the end of 2019. "Net Change" defined as the % market return from the 2018 high point to the end of 2019.*

# Domestic equity

U.S. equities outpaced international in the fourth quarter (S&P 500 +9.1%, MSCI EAFE +8.2%) as domestic markets continued to lead.

Falling interest rates in 2019 have supported stock prices, as fixed income becomes less attractive on a relative basis, and cheaper borrowing should bolster future corporate earnings. As the dividend yield of U.S. stocks is once again higher than U.S. Treasury yields, investors may feel pressure to maintain greater exposure to equities in order to meet return objectives.

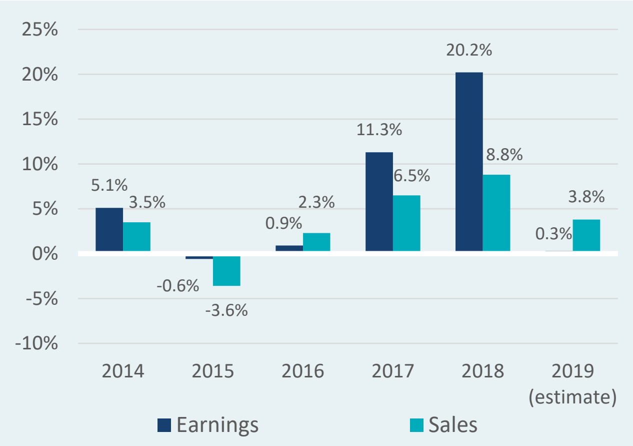
The S&P 500 delivered a 31.5% total return in calendar year 2019, while underlying corporate profits are expected to be flat at +0.3%. This of course means that performance has been driven by higher stock multiples rather than fundamentals. It is worth noting that a significant portion of 2019 performance was a recovery from the late-2018 sell-off of nearly -20%.

U.S. markets may continue to outperform over the shorter-term due to relative economic and market strength, and prices may certainly rise further. But history suggests that a widening gap between U.S. and international stock valuations will constrain U.S. performance over the longer-term.

**U.S. EQUITIES**

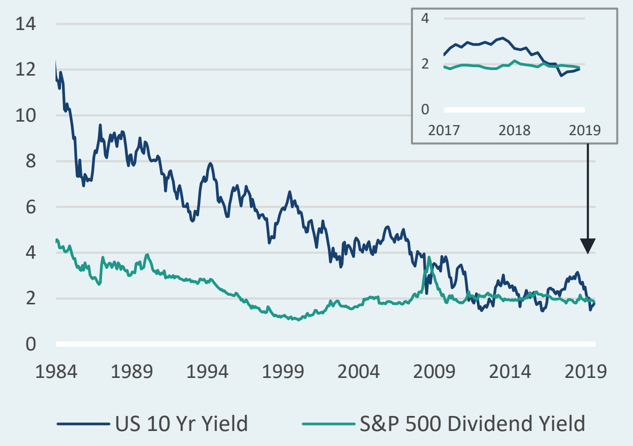

*Source: Standard & Poor's, as of 12/31/19*

**EARNINGS**




*Source: FactSet, as of 12/20/19*

**RELATIVE YIELDS**




*Source: Standard & Poor's, as of 11/30/19*

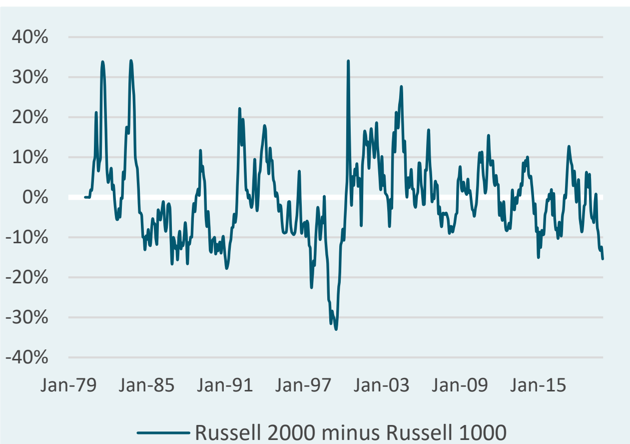
# Domestic equity size & style

Value stocks lagged growth stocks during the fourth quarter (Russell 1000 Growth +10.6%, Russell 1000 Value +7.4%) while small cap stocks outperformed large stocks (Russell 2000 +9.9%, Russell 1000 +9.0%). During calendar year 2019, both size and value factors significantly underperformed (Russell 1000 +31.4%, Russell 2000 +25.5%; Russell 3000 Growth +35.8%, Russell 3000 Value +26.2%).

The impact of sector performance on the value premium was significant, once again, in 2019. Information Technology delivered very high returns (+50.3%) – a sector which tends to contains more growth stocks. Energy (+11.8%) and Materials (+24.6%) – industries which traditionally contain more value stocks – lagged the overall index (S&P 500 +31.5%).

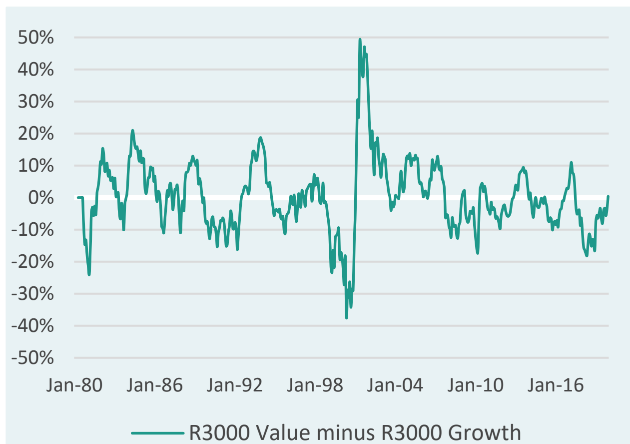
In mid-2016 we argued that there were clear and economic reasons for long-term value factor underperformance, and that a tactical overweight to the value factor did not appear warranted. This view has continued to be correct, as those who bought into value anytime of the past three years would have underperformed. While value continues to be historically cheap, price itself is not a catalyst for outperformance. We remain watchful of value stocks, but do not yet see clear signs of opportunity. As always, attempting to time factors is extremely difficult. We believe this should be done only rarely, if at all, and only when market conditions are particularly compelling.

**SMALL CAP VS LARGE CAP (YOY)**



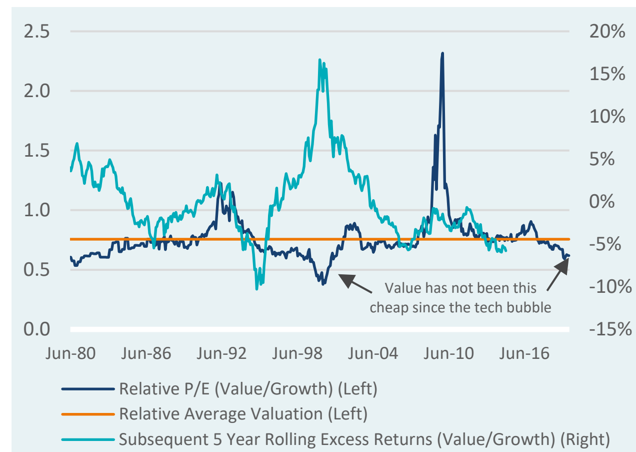

*Source: FTSE, as of 12/31/19*

**VALUE VS GROWTH (YOY)**




*Source: FTSE, as of 12/31/19*

**VALUE CONTINUES TO LOOK CHEAP**




*Source: Russell, Bloomberg, as of 12/31/19*

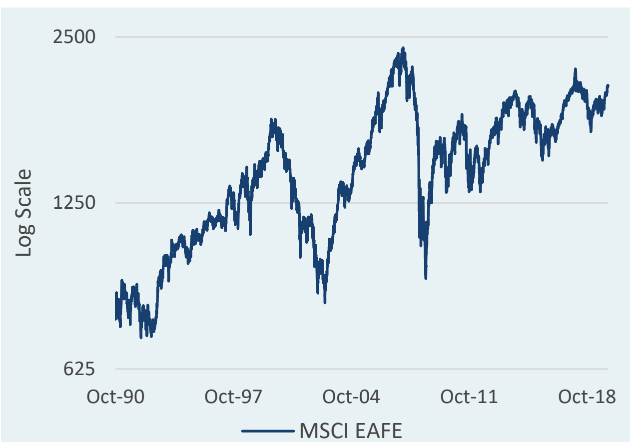
# International developed equity

Equities in Europe and Japan posted strong performance for the quarter but failed to keep up with stocks in the U.S. and emerging markets. The U.S. dollar appreciated slightly against the yen, providing headwinds (-1.4%) for unhedged U.S. investors in Japanese stocks. Conversely, a slightly weaker U.S. dollar against the euro put some additional wind in the sails (+2.4%) of U.S. investors in European equities.

When investing in international equities, the "which currency should my assets be denominated?" question has been nearly equally as important as the "what assets should I hold?" question. Over the last three years however, global currency volatility has been muted, which has made it much easier for investors to avoid thinking about their various currency exposures. Verus' view remains that currency risk is not compensated, and that it tends to result in increased risk without necessarily adding to return.

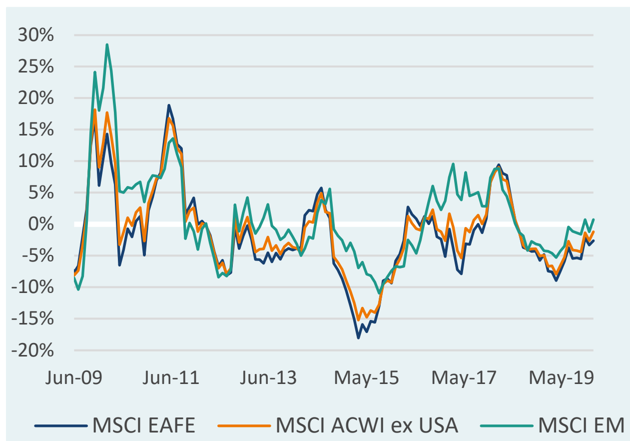
International equity valuations remain elevated, but unlike in the U.S., they do not yet appear stretched. Forward price-to-earnings ratios for the MSCI U.K. and Italy indices rank in the 59th and 52nd percentiles respectively, relative to the monthly expansion average. Valuations are a bit richer in the rest of the EAFE complex, but they may still have room to run.

**INTERNATIONAL DEVELOPED EQUITIES**



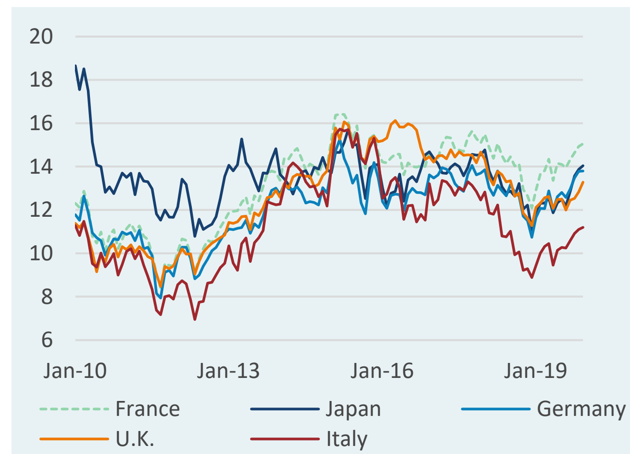

*Source: MSCI, as of 12/31/19*

**EFFECT OF CURRENCY (1-YEAR ROLLING)**




*Source: MSCI, as of 12/31/19*

**BLENDED FORWARD 12-MONTH P/E RATIOS**




*Source: MSCI, Bloomberg, as of 12/31/19*

# Emerging market equity

Emerging market equities (+11.8%) outperformed both U.S. (+9.1%) and international developed equities (+8.2%) over the quarter, but still lagged over the full calendar year. In 2019, emerging market equities delivered a total return of 18.4%, and trailed the total return of international developed equities by 3.6%. Regionally, the Asian segment (+12.5%) of the emerging market complex performed better than the Latin American (+10.5%) segment in both Q4 and in 2019.

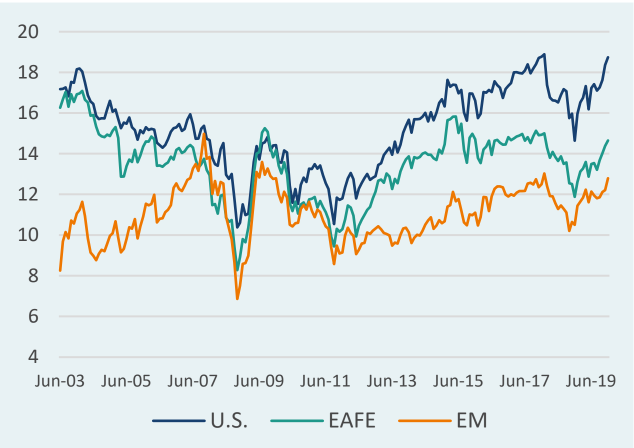
Emerging market equities saw multiple expansion in Q4: the forward P/E of the MSCI EM Index expanded from a level in line with the 5-year average to a bit higher than average levels. We do not yet view pricing in this space as rich and see there being more room for multiple expansion.

Inflation remains muted in emerging economies, and most economies are experiencing CPI below the 5-year average. Central bank policy has remained accommodative in many major countries within the universe such as China, South Korea, Brazil, and South Africa. This accommodation could provide a boost for equity market pricing as we move further into 2020.

#### EMERGING MARKET EQUITY

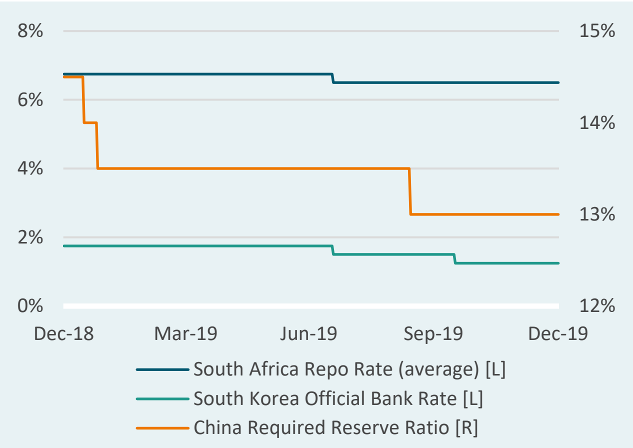

*Source: MSCI, as of 12/31/19*

#### FORWARD P/E



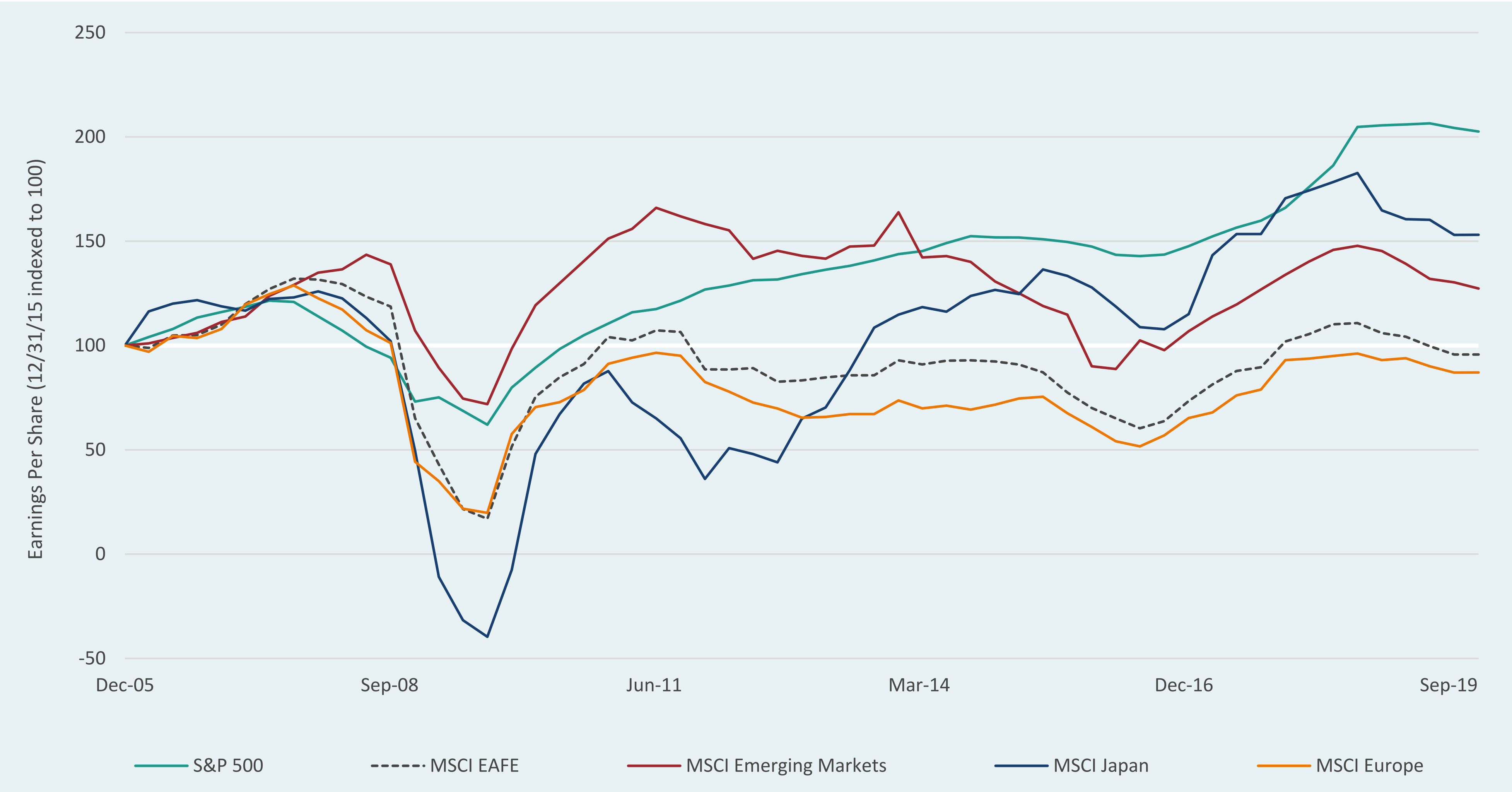

*Source: MSCI, as of 12/31/19*

#### CENTRAL BANK ACCOMODATION




*Source: MSCI, as of 12/31/19*

# Equity earnings growth




*Source: Bloomberg, as of 12/31/19*

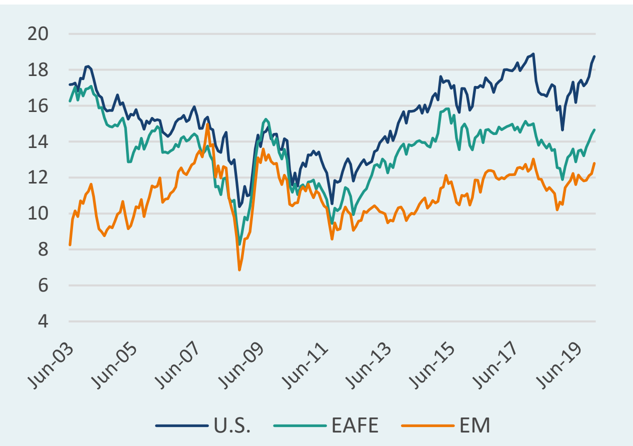
# Equity valuations

Equity valuations expanded materially in 2019 as prices recovered from their year-end 2018 fall and then continued climbing through the fourth quarter. U.S. equities are expensive relative to their long-run average and prices may become more difficult to justify in an environment of flat earnings growth. International and emerging equity valuations are near average levels. We remain watchful of earnings trends in 2020, which may have important implications for the future path of equities.

In the United States, stocks within the Information Technology (22.7x) and Communication Services (19.5x) sectors have retained forward P/E ratios elevated well above their respective 5- and 10-year averages. Last year, growing concerns over data privacy, support for anti-trust regulation, and several idiosyncratic scandals weighed on the tech sector. Over the course of this election year, we expect the issue of mega-cap tech regulation to remain beneath the microscope.

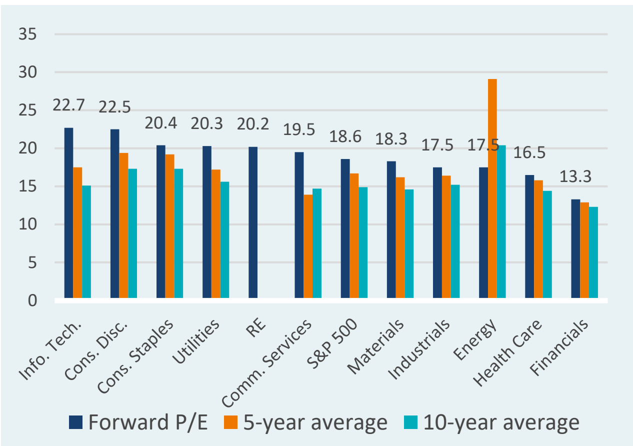
Compared to U.S. and EM equities, international developed equities offer the greatest yield at present, offering a three-month average trailing dividend yield of 3.4%.

FORWARD P/E RATIOS



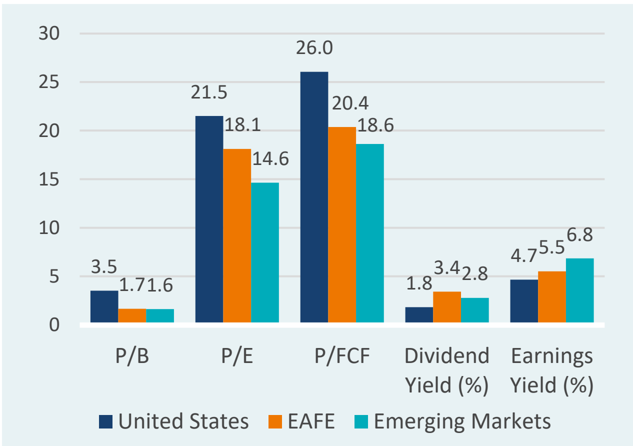

*Source: MSCI, 12m forward P/E, as of 12/31/19*

S&P 500 INDEX FORWARD SECTOR P/E RATIOS




*Source: Standard & Poor's, FactSet, as of 1/17/20*

VALUATION METRICS (3-MONTH AVERAGE)




*Source: Bloomberg, MSCI as of 12/31/19 - trailing P/E*

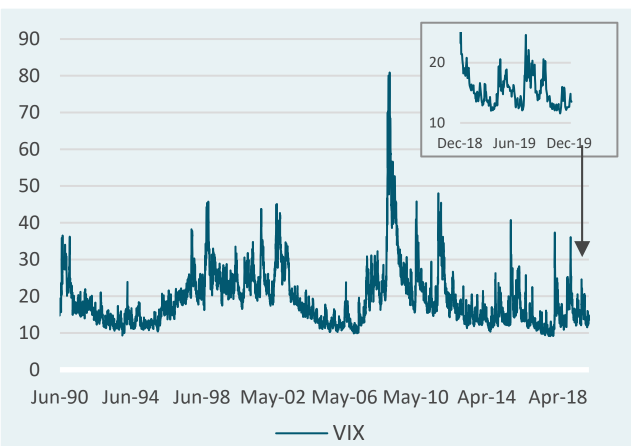
# Equity volatility

The implied volatility of large-cap U.S. stocks returned to a subdued level. The CBOE VIX Index, which calculates the market's expectation for volatility implied by S&P 500 Index options, declined from 16.2 to 13.8, a reading which lies in the 15th percentile of weekly readings over the last thirty years. Net non-commercial short VIX positioning reached new all-time-highs in the 4th quarter, meaning that many people are betting on volatility to remain low and push lower. Some investors view this assumption as concerning, and as a signal that the market may be ready for a correction.

U.S. large-cap and emerging market stocks have experienced a higher degree of volatility than international developed stocks over the last several years. Some of the divergence may be attributable to the impacts of the ever-changing U.S.-China trade narrative which has held the full attention of market participants for much of the prior two years.

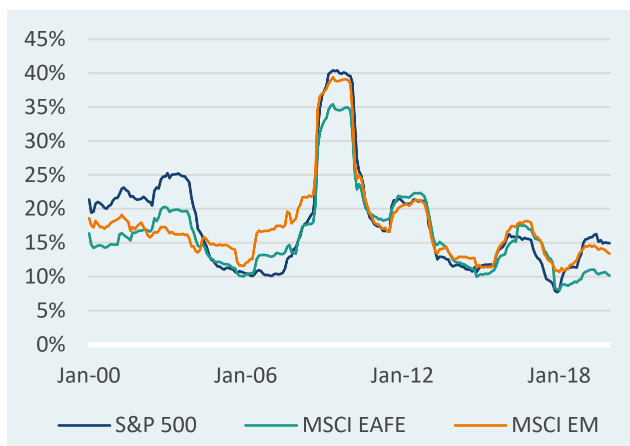
The MSCI EM Index touched new all-time highs in April and did not eclipse that level for another 174 days. In 2019, the S&P 500 and MSCI EAFE indices spent a maximum of 65 and 82 trading days between fresh all-time highs, respectively.

**U.S. IMPLIED VOLATILITY (VIX)**



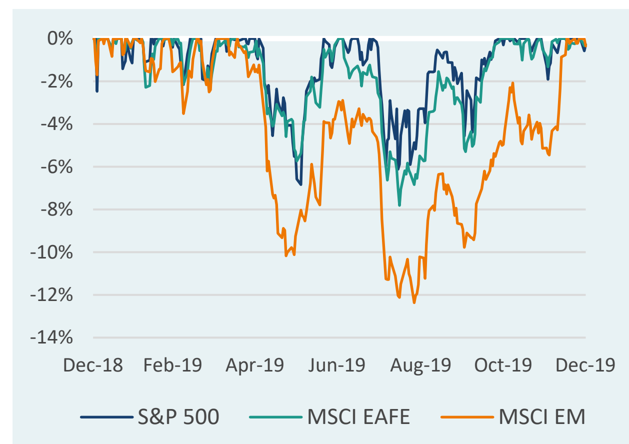

*Source: CBOE, as of 12/31/19*

**ROLLING 1-YEAR REALIZED VOLATILITY**



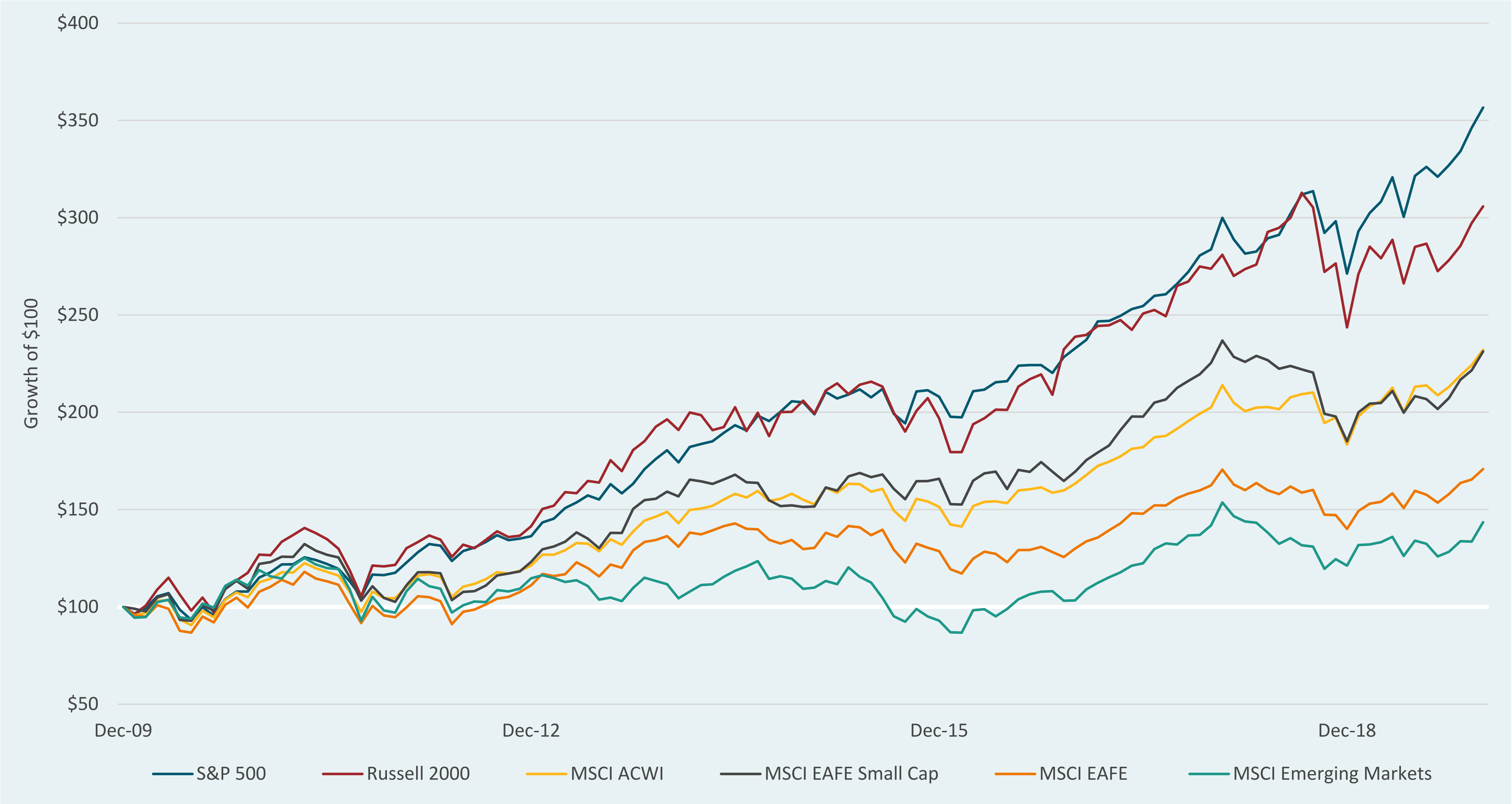

*Source: Standard & Poor's, MSCI, Bloomberg, as of 12/31/19*

**2019 MAX DRAWDOWNS FROM PREVIOUS ALL-TIME-HIGH INDEX LEVELS**




*Source: Standard & Poor's, MSCI, Bloomberg, as of 12/31/19*

# Long-term equity performance




*Source: Standard & Poor's, Russell, MSCI, Bloomberg, as of 12/31/19*

# Other assets

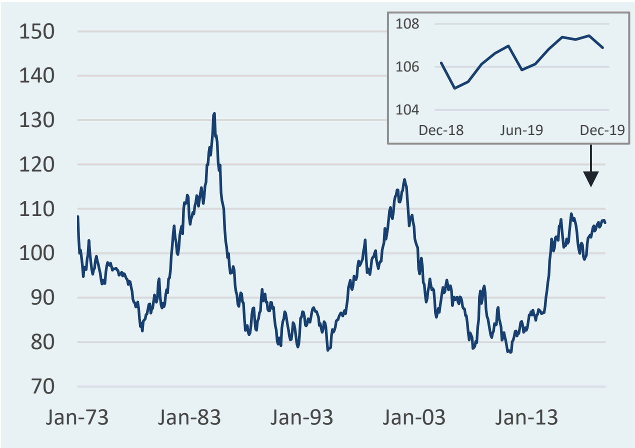
# Currency

The U.S. dollar weakened versus both developed and emerging market currency baskets in the 4th quarter, fading some of the strong relative performance it had experienced back in Q3 2019. An index tracking the weighted average of the foreign exchange value of the U.S. dollar against major currencies fell 0.5%.

J.P. Morgan's Emerging Market Currency Index fell -1.4% in 2019. Many analysts have argued that global disinflationary pressures have eased some long-standing concerns over the risk of capital flight within the emerging market complex. So long as inflationary risks are muted, then higher nominal interest rates in the emerging market complex should afford emerging market central bankers' further room to cut rates than their developed market peers. If implemented, the relative accommodation supplied may fuel both growth and currency depreciation.

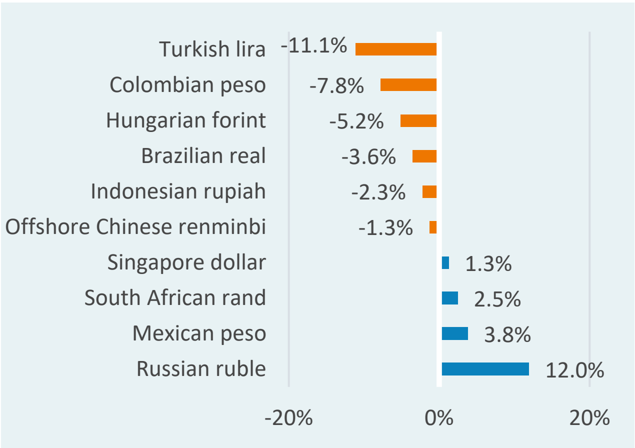
The British pound sterling bounced back sharply in Q4, rising from $1.23 to $1.33. Prime Minister Boris Johnson's Conservative Party secured a firm majority in Parliament, lifting the shroud of "Brexit" from the geopolitical landscape.

U.S. DOLLAR TRADE WEIGHTED INDEX




*Source: Federal Reserve, Verus, as of 12/31/19*

JP MORGAN EMCI CONSTITUENT 2019 RETURNS




*Source: J.P. Morgan, Bloomberg, as of 12/31/19*

GBP/USD


*Source: Bloomberg, as of 12/31/19*

# Appendix

# Periodic table of returns

BEST ↑ … ↓ WORST

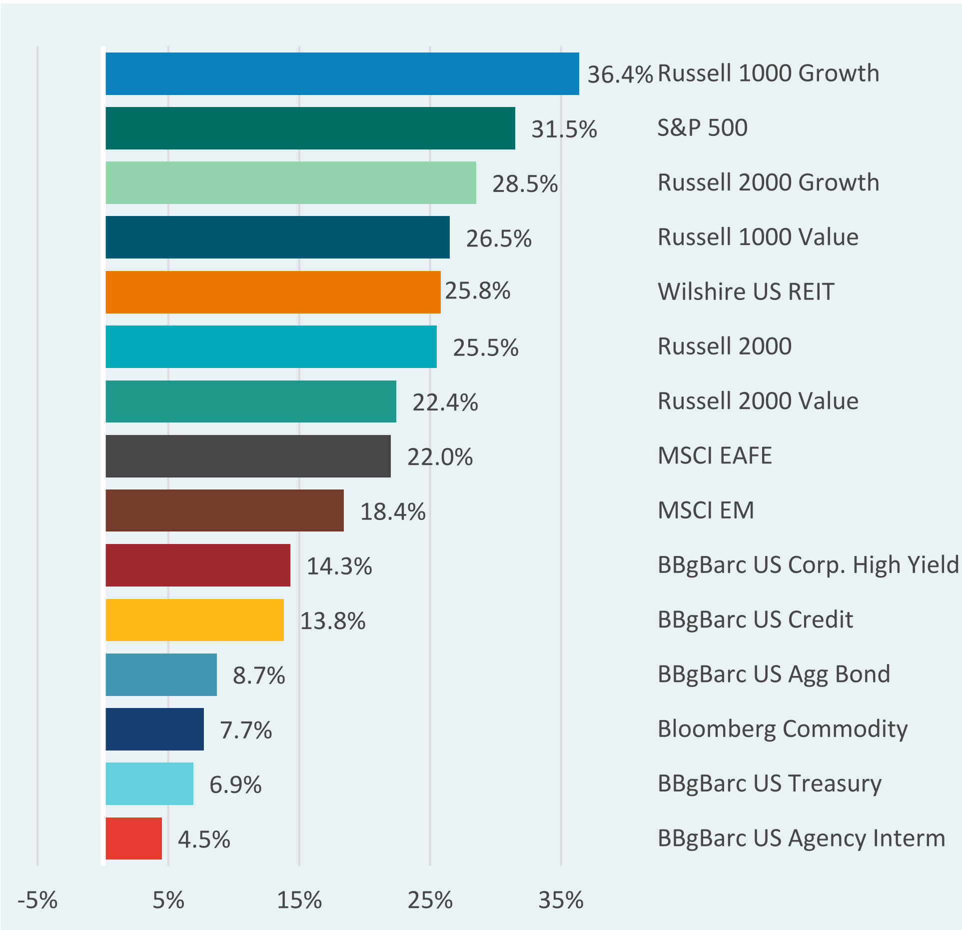
| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 5-Year | 10-Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Large Cap Growth | 38.7 | 66.4 | 31.8 | 14.0 | 25.9 | 56.3 | 26.0 | 34.5 | 32.6 | 39.8 | 5.2 | 79.0 | 29.1 | 14.3 | 18.6 | 43.3 | 13.5 | 13.3 | 31.7 | 37.3 | 6.7 | 36.4 | 14.6 | 15.2 |
| Large Cap Equity | 27.0 | 43.1 | 22.8 | 8.4 | 10.3 | 48.5 | 22.2 | 21.4 | 26.9 | 16.2 | 1.4 | 37.2 | 26.9 | 7.8 | 18.1 | 38.8 | 13.2 | 5.7 | 21.3 | 30.2 | 1.9 | 31.4 | 11.5 | 13.5 |
| Small Cap Growth | 20.3 | 33.2 | 12.2 | 7.3 | 6.7 | 47.3 | 20.7 | 20.1 | 23.5 | 15.8 | -6.5 | 34.5 | 24.5 | 2.6 | 17.9 | 34.5 | 13.0 | 0.9 | 17.3 | 25.0 | 0.0 | 28.5 | 9.3 | 13.0 |
| Large Cap Value | 19.3 | 27.3 | 11.6 | 3.3 | 1.6 | 46.0 | 18.3 | 14.0 | 22.2 | 11.8 | -21.4 | 32.5 | 19.2 | 1.5 | 17.5 | 33.5 | 11.8 | 0.6 | 12.1 | 22.2 | -1.5 | 26.5 | 8.6 | 11.8 |
| Small Cap Equity | 16.2 | 26.5 | 7.0 | 2.8 | 1.0 | 39.2 | 16.5 | 7.5 | 18.4 | 11.6 | -25.9 | 28.4 | 16.8 | 0.4 | 16.4 | 33.1 | 6.0 | 0.0 | 11.8 | 21.7 | -3.5 | 25.5 | 8.3 | 11.8 |
| Small Cap Value | 8.7 | 21.3 | 4.1 | -2.4 | -6.0 | 29.9 | 14.3 | 6.3 | 15.5 | 10.3 | -33.8 | 23.3 | 16.1 | -2.1 | 15.3 | 23.3 | 4.9 | -0.8 | 11.2 | 14.6 | -6.0 | 22.4 | 8.2 | 10.6 |
| International Equity | 15.6 | 24.3 | 6.0 | 2.5 | -5.9 | 30.0 | 14.5 | 7.1 | 16.6 | 10.9 | -28.9 | 27.2 | 16.7 | 0.1 | 16.3 | 32.5 | 5.6 | -0.4 | 11.3 | 17.1 | -4.8 | 22.0 | 7.0 | 9.8 |
| 60/40 Global Portfolio | 4.9 | 20.9 | -3.0 | -5.6 | -11.4 | 29.7 | 12.9 | 5.3 | 15.1 | 7.0 | -35.6 | 20.6 | 15.5 | -2.9 | 14.6 | 12.1 | 4.2 | -1.4 | 8.0 | 13.7 | -8.3 | 18.6 | 6.1 | 6.4 |
| Emerging Markets Equity | 1.2 | 13.2 | -7.3 | -9.1 | -15.5 | 25.2 | 11.4 | 4.7 | 13.3 | 7.0 | -36.8 | 19.7 | 13.1 | -4.2 | 11.5 | 11.0 | 3.4 | -2.5 | 7.1 | 7.8 | -9.3 | 18.4 | 5.7 | 5.5 |
| US Bonds | -2.5 | 11.4 | -7.8 | -9.2 | -15.7 | 23.9 | 9.1 | 4.6 | 10.4 | 5.8 | -37.6 | 18.9 | 10.2 | -5.5 | 10.5 | 9.0 | 2.8 | -3.8 | 5.7 | 7.7 | -11.0 | 8.7 | 5.6 | 3.7 |
| Hedge Funds of Funds | -5.1 | 7.3 | -14.0 | -12.4 | -20.5 | 11.6 | 6.9 | 4.6 | 9.1 | 4.4 | -38.4 | 11.5 | 8.2 | -5.7 | 4.8 | 0.1 | 0.0 | -4.4 | 2.6 | 7.0 | -11.2 | 7.8 | 3.0 | 3.7 |
| Commodities | -6.5 | 4.8 | -22.4 | -19.5 | -21.7 | 9.0 | 6.3 | 4.2 | 4.8 | -0.2 | -38.5 | 5.9 | 6.5 | -11.7 | 4.2 | -2.0 | -1.8 | -7.5 | 1.0 | 3.5 | -12.9 | 7.7 | 2.2 | 2.8 |
| Real Estate | -25.3 | -0.8 | -22.4 | -20.4 | -27.9 | 4.1 | 4.3 | 3.2 | 4.3 | -1.6 | -43.1 | 0.2 | 5.7 | -13.3 | 0.1 | -2.3 | -4.5 | -14.9 | 0.5 | 1.7 | -13.8 | 4.8 | 1.1 | 0.6 |
| Cash | -27.0 | -1.5 | -30.6 | -21.2 | -30.3 | 1.0 | 1.4 | 2.4 | 2.1 | -9.8 | -53.2 | -16.9 | 0.1 | -18.2 | -1.1 | -9.5 | -17.0 | -24.7 | 0.3 | 0.9 | -14.6 | 2.1 | -3.9 | -4.7 |

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond

*Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 9/30/19.*

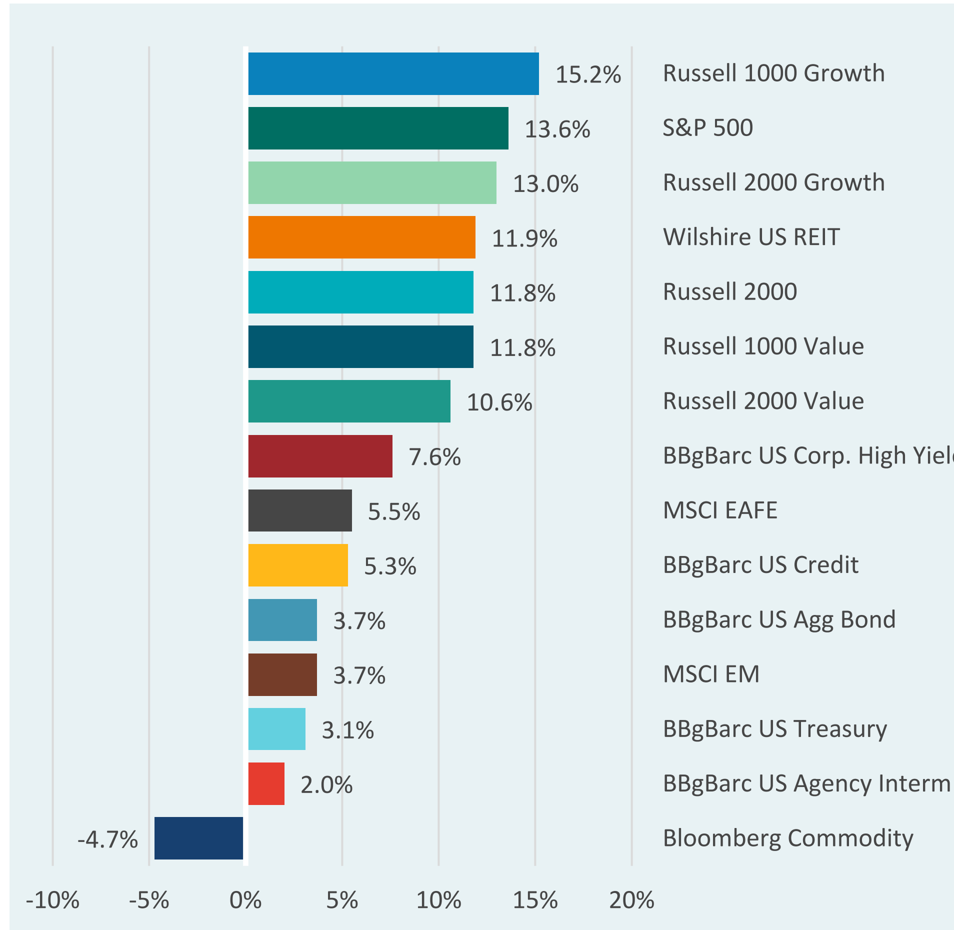
# Major asset class returns

ONE YEAR ENDING DECEMBER




Source: Morningstar, as of 12/31/19

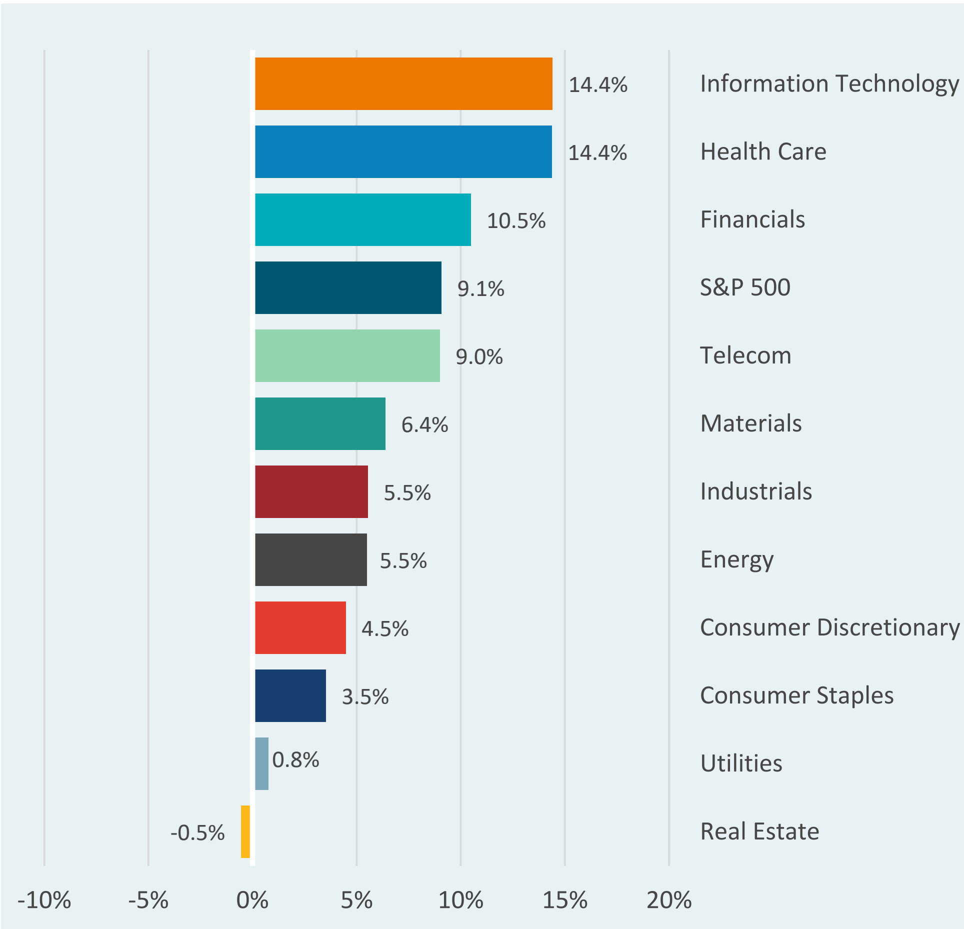
TEN YEARS ENDING DECEMBER




Source: Morningstar, as of 12/31/19

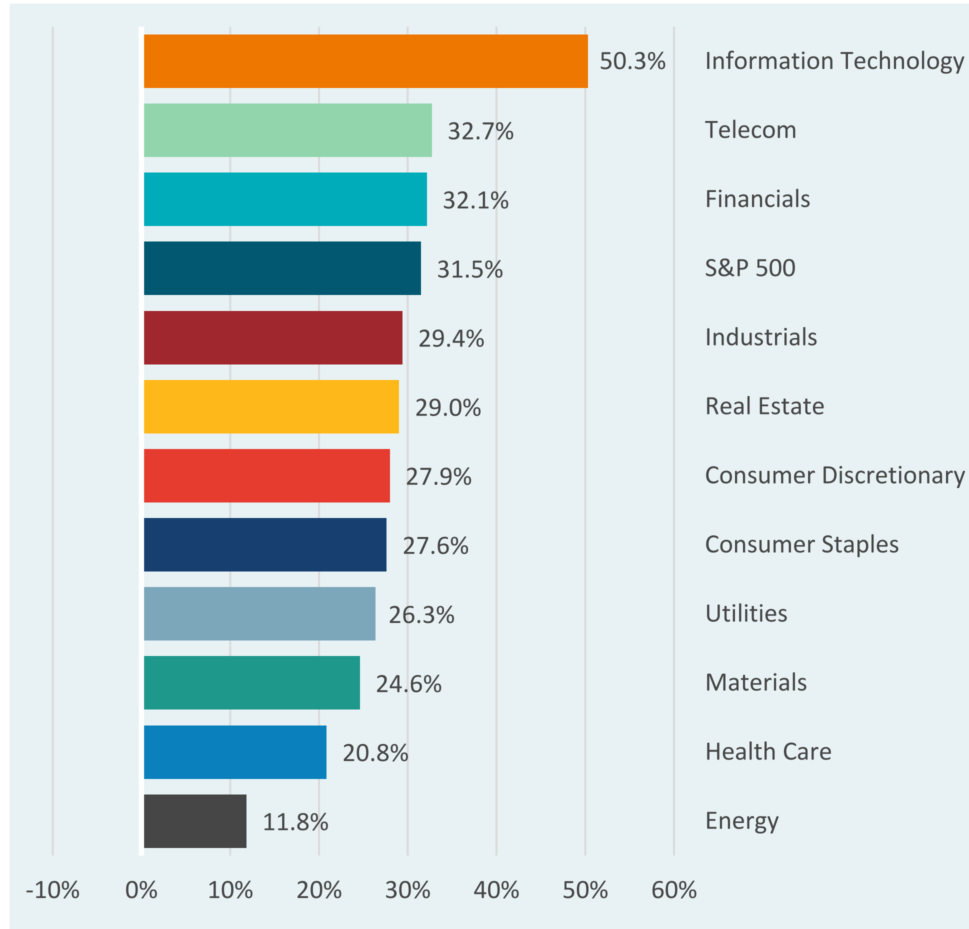
# S&P 500 sector returns

**Q4 2019**




*Source: Morningstar, as of 12/31/19*

**ONE YEAR ENDING DECEMBER**




*Source: Morningstar, as of 12/31/19*

# Detailed index returns

**DOMESTIC EQUITY**

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|---|
| **Core Index** | | | | | | | |
| S&P 500 | 3.0 | 9.1 | 31.5 | 31.5 | 15.3 | 11.7 | 13.6 |
| S&P 500 Equal Weighted | 2.8 | 7.6 | 29.2 | 29.2 | 12.4 | 9.8 | 13.5 |
| DJ Industrial Average | 1.9 | 6.7 | 25.3 | 25.3 | 15.7 | 12.6 | 13.4 |
| Russell Top 200 | 3.1 | 9.8 | 31.8 | 31.8 | 16.2 | 12.3 | 13.7 |
| Russell 1000 | 2.9 | 9.0 | 31.4 | 31.4 | 15.0 | 11.5 | 13.5 |
| Russell 2000 | 2.9 | 9.9 | 25.5 | 25.5 | 8.6 | 8.2 | 11.8 |
| Russell 3000 | 2.9 | 9.1 | 31.0 | 31.0 | 14.6 | 11.2 | 13.4 |
| Russell Mid Cap | 2.3 | 7.1 | 30.5 | 30.5 | 12.1 | 9.3 | 13.2 |
| **Style Index** | | | | | | | |
| Russell 1000 Growth | 3.0 | 10.6 | 36.4 | 36.4 | 20.5 | 14.6 | 15.2 |
| Russell 1000 Value | 2.8 | 7.4 | 26.5 | 26.5 | 9.7 | 8.3 | 11.8 |
| Russell 2000 Growth | 2.3 | 11.4 | 28.5 | 28.5 | 12.5 | 9.3 | 13.0 |
| Russell 2000 Value | 3.5 | 8.5 | 22.4 | 22.4 | 4.8 | 7.0 | 10.6 |

**INTERNATIONAL EQUITY**

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|---|
| **Broad Index** | | | | | | | |
| MSCI ACWI | 3.5 | 9.0 | 26.6 | 26.6 | 12.4 | 8.4 | 8.8 |
| MSCI ACWI ex US | 4.3 | 8.9 | 21.5 | 21.5 | 9.9 | 5.5 | 5.0 |
| MSCI EAFE | 3.2 | 8.2 | 22.0 | 22.0 | 9.6 | 5.7 | 5.5 |
| MSCI EM | 7.5 | 11.8 | 18.4 | 18.4 | 11.6 | 5.6 | 3.7 |
| MSCI EAFE Small Cap | 4.4 | 11.5 | 25.0 | 25.0 | 10.9 | 8.9 | 8.7 |
| **Style Index** | | | | | | | |
| MSCI EAFE Growth | 2.9 | 8.4 | 27.9 | 27.9 | 12.8 | 7.7 | 6.9 |
| MSCI EAFE Value | 3.7 | 7.8 | 16.1 | 16.1 | 6.3 | 3.5 | 4.0 |
| **Regional Index** | | | | | | | |
| MSCI UK | 5.2 | 10.0 | 21.0 | 21.0 | 8.3 | 3.3 | 5.0 |
| MSCI Japan | 2.1 | 7.6 | 19.6 | 19.6 | 8.9 | 7.7 | 6.6 |
| MSCI Euro | 2.9 | 7.9 | 22.9 | 22.9 | 9.1 | 5.1 | 3.7 |
| MSCI EM Asia | 7.1 | 12.5 | 19.2 | 19.2 | 12.9 | 6.6 | 5.8 |
| MSCI EM Latin American | 10.3 | 10.5 | 17.5 | 17.5 | 10.7 | 4.2 | (0.6) |

**FIXED INCOME**

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|---|
| **Broad Index** | | | | | | | |
| BBgBarc US TIPS | 0.4 | 0.8 | 8.4 | 8.4 | 3.3 | 2.6 | 3.4 |
| BBgBarc US Treasury Bills | 0.1 | 0.5 | 2.3 | 2.3 | 1.7 | 1.1 | 0.6 |
| BBgBarc US Agg Bond | (0.1) | 0.2 | 8.7 | 8.7 | 4.0 | 3.0 | 3.7 |
| **Duration** | | | | | | | |
| BBgBarc US Treasury 1-3 Yr | 0.2 | 0.5 | 3.6 | 3.6 | 1.9 | 1.4 | 1.2 |
| BBgBarc US Treasury Long | (2.8) | (4.1) | 14.8 | 14.8 | 6.9 | 4.1 | 7.0 |
| BBgBarc US Treasury | (0.6) | (0.8) | 6.9 | 6.9 | 3.3 | 2.4 | 3.1 |
| **Issuer** | | | | | | | |
| BBgBarc US MBS | 0.3 | 0.7 | 6.4 | 6.4 | 3.2 | 2.6 | 3.2 |
| BBgBarc US Corp. High Yield | 2.0 | 2.6 | 14.3 | 14.3 | 6.4 | 6.1 | 7.6 |
| BBgBarc US Agency Interm | 0.1 | 0.3 | 4.5 | 4.5 | 2.4 | 1.9 | 2.0 |
| BBgBarc US Credit | 0.3 | 1.1 | 13.8 | 13.8 | 5.8 | 4.4 | 5.3 |

**OTHER**

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|---|
| **Index** | | | | | | | |
| Bloomberg Commodity | 5.0 | 4.4 | 7.7 | 7.7 | (0.9) | (3.9) | (4.7) |
| Wilshire US REIT | (0.7) | (1.1) | 25.8 | 25.8 | 7.6 | 6.9 | 11.9 |
| CS Leveraged Loans | 1.6 | 1.7 | 8.2 | 8.2 | 4.5 | 4.5 | 5.2 |
| Alerian MLP | 8.9 | (4.6) | 6.7 | 6.7 | (5.0) | (7.0) | 4.8 |
| **Regional Index** | | | | | | | |
| JPM EMBI Global Div | 2.0 | 1.8 | 15.0 | 15.0 | 6.7 | 6.2 | 6.9 |
| JPM GBI-EM Global Div | 4.1 | 5.2 | 13.5 | 13.5 | 7.0 | 2.8 | 2.7 |
| **Hedge Funds** | | | | | | | |
| HFRI Composite | 1.8 | 3.5 | 10.4 | 10.4 | 4.5 | 3.5 | 4.0 |
| HFRI FOF Composite | 1.3 | 2.5 | 7.8 | 7.8 | 3.7 | 2.2 | 2.8 |
| **Currency (Spot)** | | | | | | | |
| Euro | 1.8 | 3.0 | (1.8) | (1.8) | 2.1 | (1.5) | (2.4) |
| Pound | 2.4 | 7.5 | 4.0 | 4.0 | 2.3 | (3.2) | (2.0) |
| Yen | 0.8 | (0.6) | 1.0 | 1.0 | 2.4 | 2.0 | (1.5) |

*Source: Morningstar, HFR, as of 12/31/19*

# Definitions

***Bloomberg US Weekly Consumer Comfort Index*** *- tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.langerresearch.com)*

***University of Michigan Consumer Sentiment Index*** *- A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)*

***NFIB Small Business Outlook*** *- Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (http://www.nfib-sbet.org/about/)*

***NAHB Housing Market Index –*** *the housing market index is a weighted average of separate diffusion induces for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula "(Good-Poor + 100)/2" to the present and future sales series and "(High/Very High-Low/Very Low + 100)/2" to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.*

# Notices & disclosures

***Past performance is no guarantee of future results.*** *This report or presentation is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and should not be relied upon by retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. The opinions and information expressed are current as of the date provided or cited only and are subject to change without notice. This information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. Verus Advisory Inc. expressly disclaim any and all implied warranties or originality, accuracy, completeness, non-infringement, merchantability and fitness for a particular purpose. This report or presentation cannot be used by the recipient for advertising or sales promotion purposes.*

*The material may include estimates, outlooks, projections and other "forward-looking statements." Such statements can be identified by the use of terminology such as "believes," "expects," "may," "will," "should," "anticipates," or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.*

*"VERUS ADVISORY™ and any associated designs are the respective trademarks of Verus Advisory, Inc. Additional information is available upon request.*

Verus *is a registered trademark of Verus Advisory, Inc.*

# Western States Office & Professional Employees Pension Fund

## Investment Performance Review

## Period Ending: December 31, 2019

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484

# 4th quarter summary

### THE ECONOMIC CLIMATE

— Real GDP grew at a 2.1% rate year-over-year in the third quarter (2.1% quarterly annualized rate). Falling imports and weak fixed investment (-0.2% contribution) acted as a drag on growth, while personal consumption continued to as the greatest driver of growth.

— U.S. and Chinese negotiators signed the “phase one” trade agreement, and Boris Johnson’s Conservative Party in the U.K. won a decisive victory. These events appear to have removed some uncertainty from the geopolitical landscape over the short- to intermediate-term.

### PORTFOLIO IMPACTS

— Global equity markets exhibited strong performance through Q4, and U.S. equity performance was in-line (MSCI ACWI +9.0%, S&P 500 +9.1%). Emerging markets were the top performing asset class (+11.8%).

— U.S. headline inflation increased 2.3% YoY in December, alongside the core inflation growth figure, and up from 1.7% in September. Although this was a notable jump in the inflation rate, investors appear more concerned about global deflationary forces, as indicated by the 10yr U.S. TIPS Breakeven Inflation Rate of 1.73%. Cyclical price pressures remain surprisingly absent from the current environment.

### THE INVESTMENT CLIMATE

— In October, the Federal Open Market Committee cut interest rates by 0.25% to a new range of 1.50 – 1.75%. This marked the third consecutive rate cut by the committee.

— Global sovereign bond yields picked up modestly in Q4, on higher inflation and growth prospects. The dollar value of negative-yielding outstanding debt fell from nearly $15 trillion to just above $11 trillion. Central bankers appealed for fiscal action, citing the limited capacity of monetary policy to sustain further economic expansion.

### ASSET ALLOCATION ISSUES

— Most risk assets provided sizable gains in Q4. Global equities delivered +9.0%, U.S. high yield increased +2.6%, and Emerging Market Local Debt rose +5.2%. Longer duration fixed income saw losses as interest rates rebounded.

— The U.S. dollar weakened -0.5% against both developed and emerging currencies in Q4, reversing moves of the prior quarter. Dollar volatility remains low relative to the big swings that occurred throughout 2014-2018.

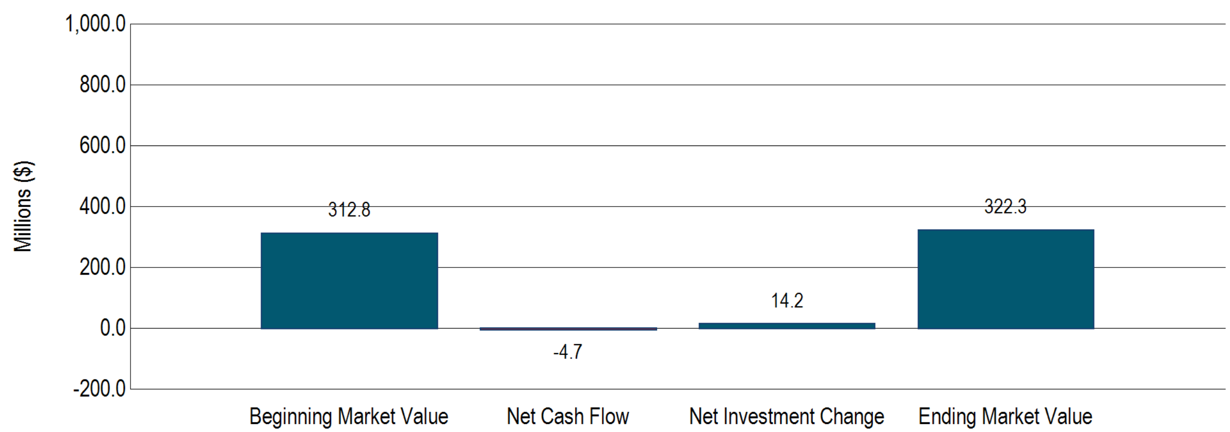
— Although risk assets appear to have rocketed higher in 2019, which may create concerns over valuations, it is important to note that much of this performance was due to assets recovering from a sharp fall in late-2018.

A neutral risk stance may be appropriate in today’s environment

## Portfolio Reconciliation

| | Last Three Months | Year-To-Date |
|---|---|---|
| Beginning Market Value | $312,785,905 | $295,732,840 |
| Net Cash Flow | -$4,667,325 | -$23,666,018 |
| Net Investment Change | $14,166,740 | $50,218,499 |
| Ending Market Value | $322,285,320 | $322,285,320 |

### Change in Market Value
### Last Three Months




*Contributions and withdrawals may include intra-account transfers between managers/funds.*

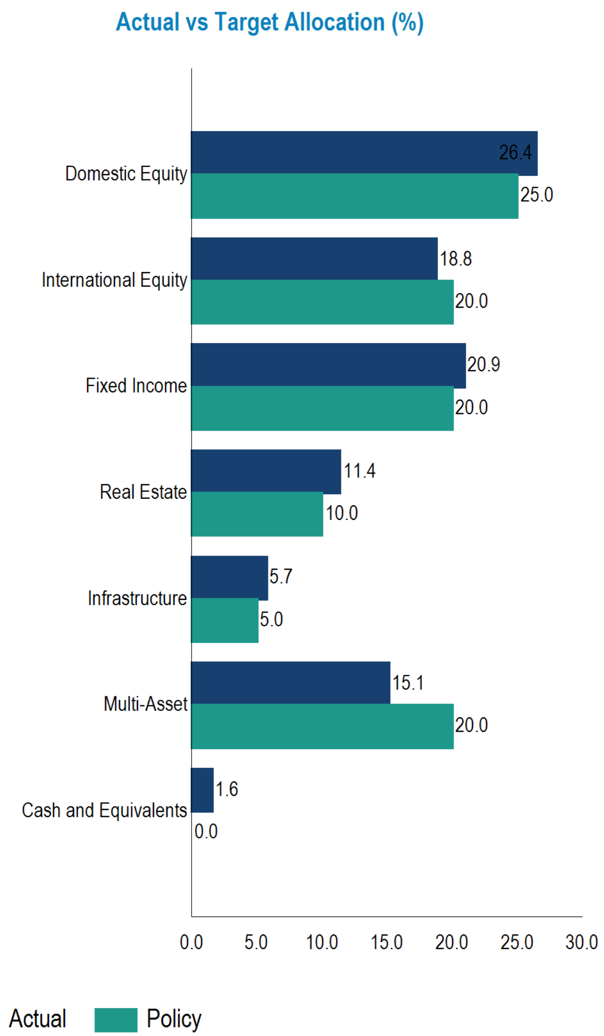
# Total Fund
## Cash Flow by Manager - Last Three Months

Period Ending: December 31, 2019

| | Beginning Market Value | Contributions | Withdrawals | Net Cash Flow | Net Investment Change | Ending Market Value |
|---|---|---|---|---|---|---|
| BlackRock Equity Index NL | $33,962,405 | $0 | -$2,300,000 | -$2,300,000 | $3,049,909 | $34,712,314 |
| INTECH US Adaptive Volatility | $33,737,014 | $0 | $0 | $0 | $655,096 | $34,392,110 |
| PanAgora US Small Cap Core Stock Selector | $14,652,913 | $0 | $0 | $0 | $1,416,021 | $16,068,934 |
| WCM Focused International Growth Fund, L.P. | $32,588,006 | $0 | $0 | $0 | $3,185,853 | $35,773,859 |
| Causeway International Value Ins | $22,251,322 | $0 | $0 | $0 | $2,524,325 | $24,775,648 |
| Loomis Sayles Core Plus | $69,433,293 | $0 | -$2,300,000 | -$2,300,000 | $381,715 | $67,515,007 |
| ASB Allegiance Real Estate | $21,378,682 | $0 | -$55,247 | -$55,247 | $272,231 | $21,595,666 |
| JPMorgan Special Situation Property | $14,888,978 | $0 | -$59,456 | -$59,456 | $217,994 | $15,047,516 |
| IFM Global Infrastructure (US) LP | $9,893,895 | $0 | -$80,352 | -$80,352 | $511,128 | $10,324,671 |
| JPMorgan IIF ERISA LP | $8,074,060 | $0 | -$231,421 | -$231,421 | $346,024 | $8,188,663 |
| Invesco Balanced-Risk Allocation | $47,217,291 | $0 | $0 | $0 | $1,606,445 | $48,823,736 |
| US Bank Checking Account | $2,121,686 | $9,239,253 | -$8,868,804 | $370,449 | $0 | $2,492,135 |
| US Bank Clearing Account | $2,586,360 | $7,726,309 | -$7,737,607 | -$11,298 | $0 | $2,575,062 |
| **Total** | **$312,785,905** | **$16,965,563** | **-$21,632,888** | **-$4,667,325** | **$14,166,740** | **$322,285,320** |

*Loomis Sayles Full Discretion liquidated 3/21/2017. Loomis Sayles Core Plus funded 3/21/2017. Parametric liquidated 4/21/2017. Mellon Dynamic liquidated 5/5/2017. Grosvenor Institutional liquidated 4/30/2018. Brandes International Small Cap Equity liquidated 8/31/2019. Invesco Real Estate II liquidated 9/1/2019.*

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs |
|---|---|---|---|---|---|---|---|
| **Total Fund** | **322,285,320** | **100.0** | **4.5** | **17.2** | **8.7** | **6.7** | **8.0** |
| *Total Fund Policy Index* | | | *5.0* | *18.6* | *8.7* | *6.6* | *7.4* |
| *Target Asset Allocation Policy Index* | | | *5.3* | *19.1* | *9.5* | *7.3* | *8.4* |
| *InvMetrics Tft-Hrtly DB $250mm-$1B Net Rank* | | | *80* | *52* | *56* | *68* | *73* |
| **Total Domestic Equity** | **85,173,358** | **26.4** | **6.2** | **27.2** | **12.6** | **9.9** | **12.9** |
| *Dow Jones U.S. Total Stock Market* | | | *9.0* | *30.9* | *14.5* | *11.2* | *13.4* |
| *InvMetrics Tft-Hrtly DB US Eq Net Rank* | | | *98* | *89* | *74* | *67* | *29* |
| **Total International Equity** | **60,549,507** | **18.8** | **10.4** | **27.8** | **12.1** | **6.3** | **4.7** |
| *Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)* | | | *9.2* | *21.6* | *9.8* | *5.7* | *5.0* |
| *InvMetrics Tft-Hrtly DB ex-US Eq Net Rank* | | | *23* | *10* | *11* | *18* | *70* |
| **Total Fixed Income** | **67,515,007** | **20.9** | **0.5** | **9.4** | **4.8** | **3.9** | **5.4** |
| *Total Fixed Income Benchmark (BBgBarc Aggregate)* | | | *0.2* | *8.7* | *4.0* | *3.0* | *3.7* |
| *InvMetrics Tft-Hrtly DB US Fix Inc Net Rank* | | | *60* | *28* | *19* | *22* | *9* |
| **Total Real Estate** | **36,643,182** | **11.4** | **1.2** | **4.6** | **5.8** | **7.9** | **10.9** |
| *NCREIF ODCE Net* | | | *1.3* | *4.4* | *6.1* | *8.0* | *10.4* |
| **Total Infrastructure** | **18,513,333** | **5.7** | **4.8** | **11.5** | **13.1** | **9.4** | **7.9** |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | *6.8* |
| **Total Multi-Asset** | **48,823,736** | **15.1** | **3.3** | **15.7** | **6.4** | **5.1** | **7.2** |
| *60% MSCI ACWI Net/40% FTSE WGBI* | | | *5.2* | *18.2* | *9.2* | *6.0* | *6.2* |
| *eV Global Balanced Net Rank* | | | *99* | *92* | *93* | *85* | *59* |
| **Total Cash** | **5,067,197** | **1.6** | **0.0** | **0.0** | **1.3** | **1.1** | **--** |




*Policy Index: 45% MSCI World, 25% BBgBarc Aggregate, 10% NCREIF-ODCE net, 20%(60% MSCI ACWI Net/40% CITI WGBI). Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Data prior to 3Q 2015 is from previous consultant.*

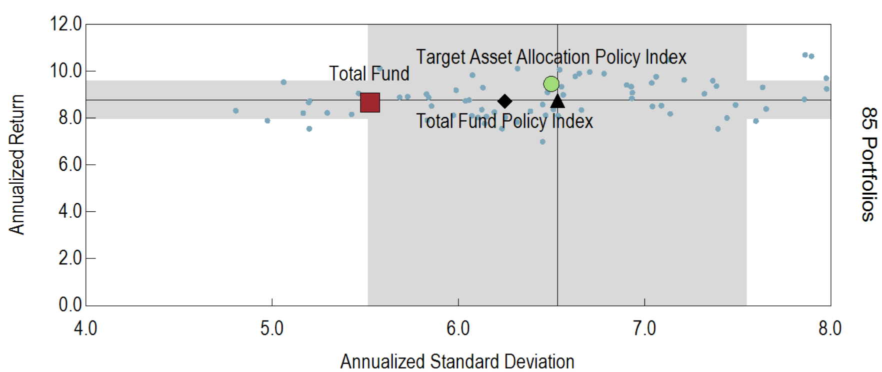
## 3 Year

| | Anlzd Standard Deviation | Ann Excess BM Return | Anlzd Alpha | Beta | R-Squared | Up Mkt Capture Ratio | Down Mkt Capture Ratio | Information Ratio | Tracking Error | Sharpe Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Fund | 5.53% | -0.06% | 1.11% | 0.87 | 0.96 | 89.53% | 78.31% | -0.04 | 1.41% | 1.27 |
| Total Fund Policy Index | 6.25% | 0.00% | 0.00% | 1.00 | 1.00 | 100.00% | 100.00% | -- | 0.00% | 1.13 |
| Target Asset Allocation Policy Index | 6.50% | 0.74% | 0.44% | 1.03 | 0.99 | 107.77% | 102.95% | 1.06 | 0.70% | 1.20 |

## 5 Year

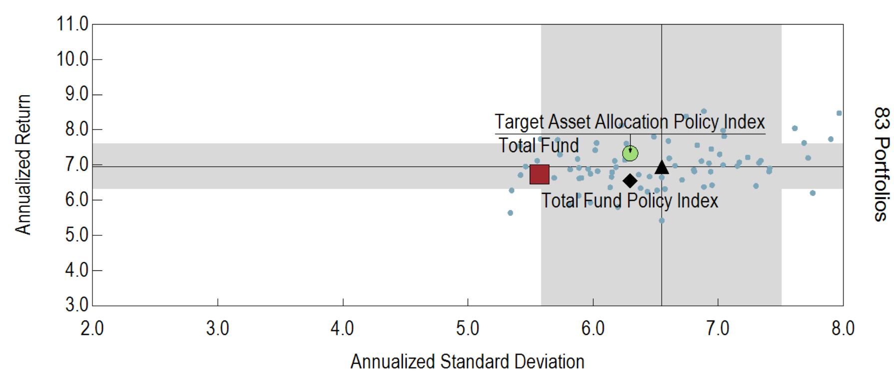
| | Anlzd Standard Deviation | Ann Excess BM Return | Anlzd Alpha | Beta | R-Squared | Up Mkt Capture Ratio | Down Mkt Capture Ratio | Information Ratio | Tracking Error | Sharpe Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Fund | 5.57% | 0.17% | 1.04% | 0.87 | 0.96 | 88.78% | 80.36% | 0.13 | 1.35% | 1.02 |
| Total Fund Policy Index | 6.30% | 0.00% | 0.00% | 1.00 | 1.00 | 100.00% | 100.00% | -- | 0.00% | 0.87 |
| Target Asset Allocation Policy Index | 6.30% | 0.78% | 0.83% | 0.99 | 0.98 | 104.09% | 94.02% | 0.97 | 0.80% | 1.00 |

### 3 Year




- Total Fund
- Total Fund Policy Index
- Target Asset Allocation Policy Index
- Universe Median
- 68% Confidence Interval
- InvMetrics Tft-Hrtly DB $250mm-$1B Net

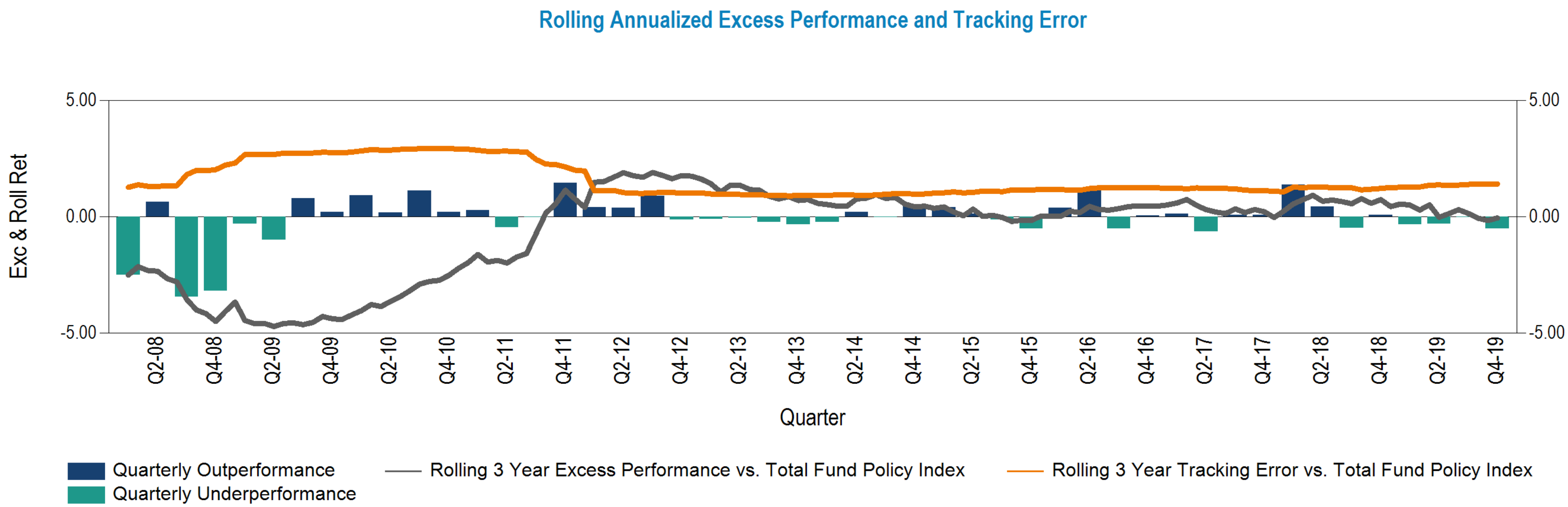
### 5 Year

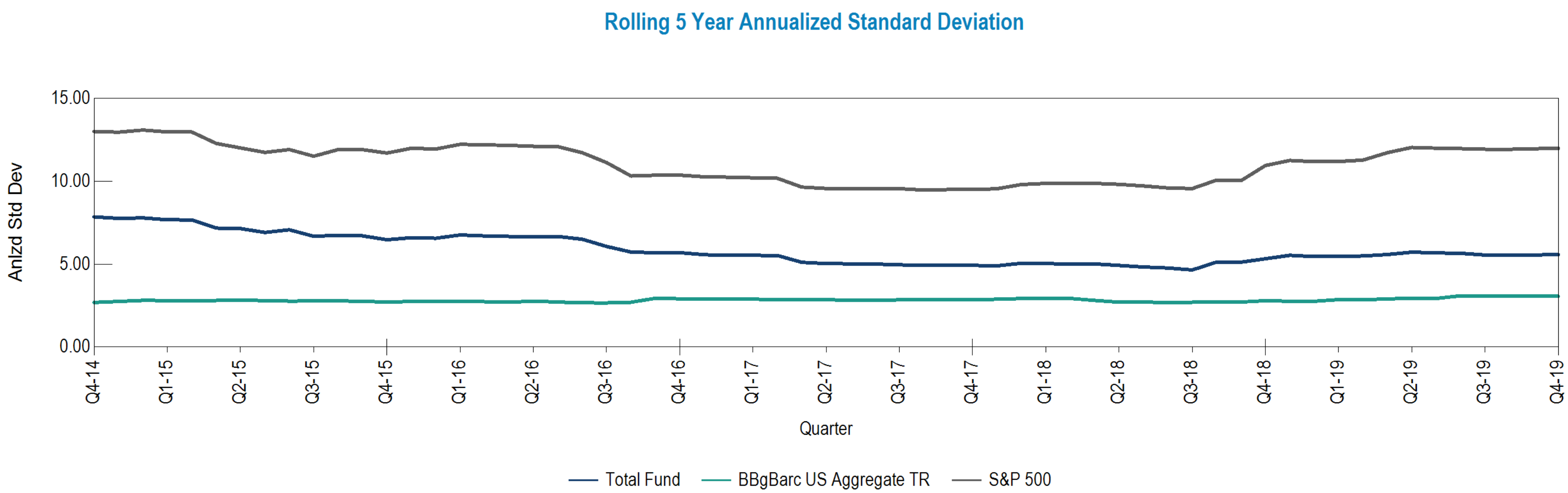



- Total Fund
- Total Fund Policy Index
- Target Asset Allocation Policy Index
- Universe Median
- 68% Confidence Interval
- InvMetrics Tft-Hrtly DB $250mm-$1B Net

# Rolling Performance Relative to Policy (Net of Fees)

Period Ending: December 31, 2019



# Total Fund
# Executive Summary (Net of Fees)

Period Ending: December 31, 2019

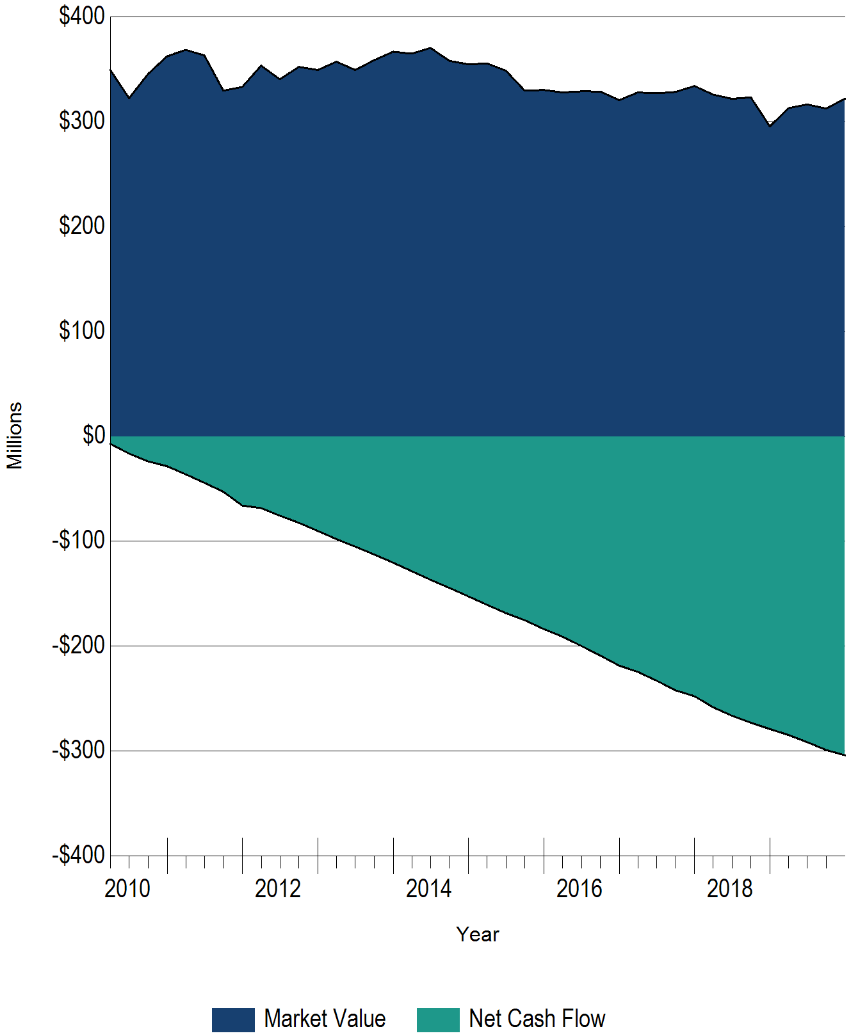
| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Fund** | **322,285,320** | **100.0** | **4.5** | **17.2** | **8.7** | **6.7** | **8.0** | **17.2** | **-3.2** | **13.0** | **6.9** | **0.9** |
| *Total Fund Policy Index* | | | *5.0* | *18.6* | *8.7* | *6.6* | *7.4* | *18.6* | *-4.5* | *13.5* | *5.8* | *1.1* |
| *Target Asset Allocation Policy Index* | | | *5.3* | *19.1* | *9.5* | *7.3* | *8.4* | *19.1* | *-3.2* | *13.7* | *7.2* | *1.3* |
| *InvMetrics Tft-Hrtly DB $250mm-$1B Net Rank* | | | *80* | *52* | *56* | *68* | *73* | *52* | *45* | *64* | *80* | *38* |
| **Domestic Equity** | **85,173,358** | **26.4** | | | | | | | | | | |
| BlackRock Equity Index NL | 34,712,314 | 10.8 | 9.1 | 31.5 | 15.2 | 11.7 | -- | 31.5 | -4.4 | 21.8 | 11.9 | 1.3 |
| *S&P 500* | | | *9.1* | *31.5* | *15.3* | *11.7* | -- | *31.5* | *-4.4* | *21.8* | *12.0* | *1.4* |
| *eV US Large Cap Core Equity Net Rank* | | | *28* | *28* | *25* | *19* | -- | *28* | *32* | *46* | *21* | *37* |
| INTECH US Adaptive Volatility | 34,392,110 | 10.7 | 1.9 | 23.4 | -- | -- | -- | 23.4 | -- | -- | -- | -- |
| *Russell 1000* | | | *9.0* | *31.4* | -- | -- | -- | *31.4* | -- | -- | -- | -- |
| *eV US Large Cap Core Equity Net Rank* | | | *99* | *91* | -- | -- | -- | *91* | -- | -- | -- | -- |
| PanAgora US Small Cap Core Stock Selector | 16,068,934 | 5.0 | 9.4 | 26.1 | 8.2 | -- | -- | 26.1 | -9.2 | 10.8 | 20.3 | -- |
| *Russell 2000* | | | *9.9* | *25.5* | *8.6* | -- | -- | *25.5* | *-11.0* | *14.6* | *21.3* | -- |
| *eV US Small Cap Core Equity Net Rank* | | | *28* | *37* | *49* | -- | -- | *37* | *36* | *83* | *41* | -- |
| **International Equity** | **60,549,507** | **18.8** | | | | | | | | | | |
| WCM Focused International Growth Fund, L.P. | 35,773,859 | 11.1 | 9.8 | 35.7 | 18.1 | -- | -- | 35.7 | -7.4 | 31.1 | -- | -- |
| *MSCI ACWI ex USA* | | | *8.9* | *21.5* | *9.9* | -- | -- | *21.5* | *-14.2* | *27.2* | -- | -- |
| *eV ACWI ex-US All Cap Growth Eq Net Rank* | | | *59* | *12* | *16* | -- | -- | *12* | *1* | *71* | -- | -- |
| Causeway International Value Ins | 24,775,648 | 7.7 | 11.3 | 20.1 | 7.5 | -- | -- | 20.1 | -18.6 | 27.2 | -- | -- |
| *MSCI EAFE* | | | *8.2* | *22.0* | *9.6* | -- | -- | *22.0* | *-13.8* | *25.0* | -- | -- |
| *Foreign Large Value MStar MF Rank* | | | *2* | *22* | *34* | -- | -- | *22* | *91* | *14* | -- | -- |
| **Fixed Income** | **67,515,007** | **20.9** | | | | | | | | | | |
| Loomis Sayles Core Plus | 67,515,007 | 20.9 | 0.5 | 9.4 | -- | -- | -- | 9.4 | -0.4 | -- | -- | -- |
| *BBgBarc US Aggregate TR* | | | *0.2* | *8.7* | -- | -- | -- | *8.7* | *0.0* | -- | -- | -- |
| *eV US Core Plus Fixed Inc Net Rank* | | | *42* | *63* | -- | -- | -- | *63* | *40* | -- | -- | -- |
| **Real Estate** | **36,643,182** | **11.4** | | | | | | | | | | |
| ASB Allegiance Real Estate | 21,595,666 | 6.7 | 1.3 | 4.2 | 5.0 | -- | -- | 4.2 | 7.1 | 3.9 | 4.5 | -- |
| *NCREIF ODCE Net* | | | *1.3* | *4.4* | *6.1* | -- | -- | *4.4* | *7.4* | *6.7* | *7.8* | -- |
| JPMorgan Special Situation Property | 15,047,516 | 4.7 | 1.1 | 5.0 | 7.5 | 9.9 | -- | 5.0 | 9.6 | 7.9 | 8.7 | 18.9 |
| *NCREIF-ODCE* | | | *1.5* | *5.3* | *7.1* | *9.0* | -- | *5.3* | *8.3* | *7.6* | *8.8* | *15.0* |

*Policy Index: 45% MSCI World, 25% BBgBarc Aggregate, 10% NCREIF-ODCE net, 20%(60% MSCI ACWI Net/40% CITI WGBI). Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Loomis Sayles Core Plus replaced Loomis Sayles Full Discretion 3/21/2017. Parametric liquidated 4/21/2017. Mellon Dynamic liquidated 5/5/2017. Grosvenor Institutional liquidated 4/30/2018. Brandes International Small Cap Equity liquidated 8/31/2019. Invesco Real Estate II liquidated 9/1/2019. Data prior to 3Q 2015 is from previous consultant.*

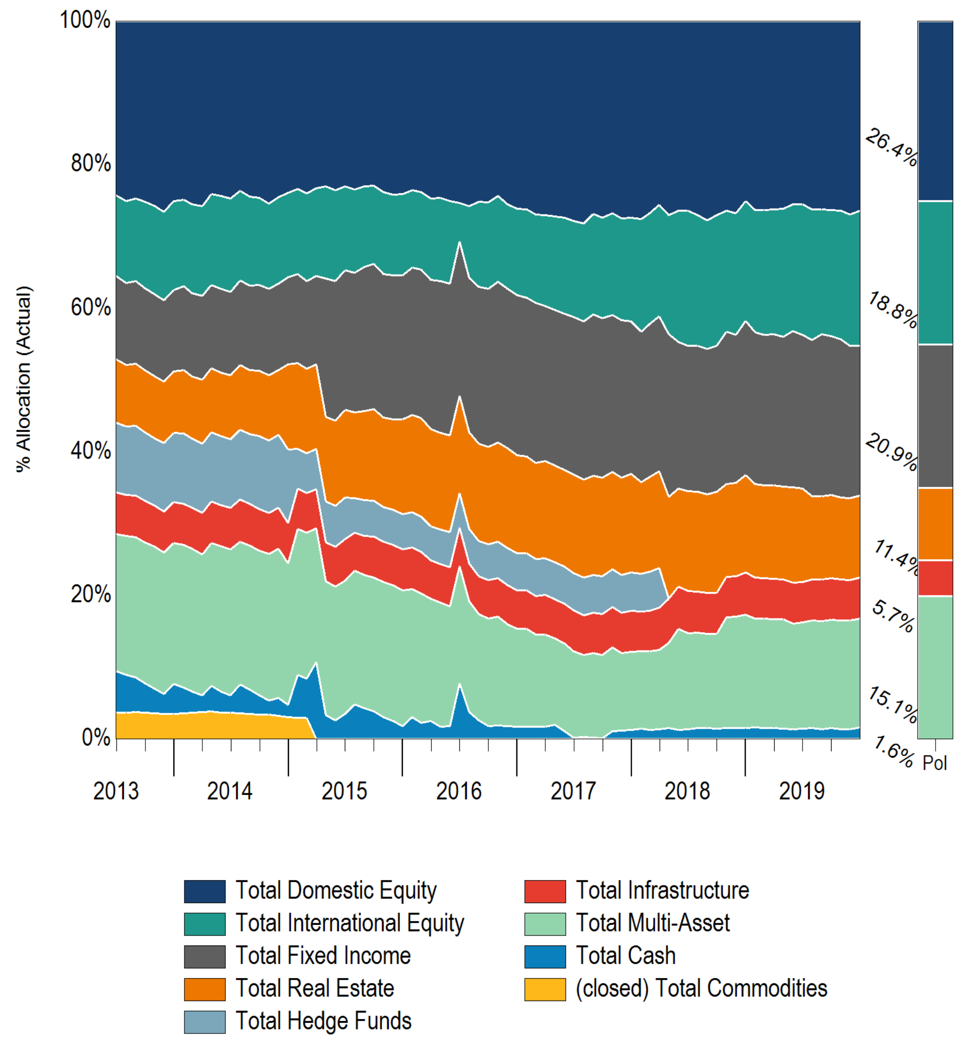
| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Infrastructure** | **18,513,333** | **5.7** | | | | | | | | | | |
| IFM Global Infrastructure (US) LP | 10,324,671 | 3.2 | 5.2 | 14.6 | 17.1 | 12.4 | 10.0 | 14.6 | 15.8 | 21.1 | 6.1 | 5.2 |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | *6.8* | *7.4* | *7.0* | *7.2* | *7.2* | *5.8* |
| JPMorgan IIF ERISA LP | 8,188,663 | 2.5 | 4.3 | 8.0 | 8.7 | 6.1 | -- | 8.0 | 4.2 | 14.2 | 1.2 | 3.4 |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | -- | *7.4* | *7.0* | *7.2* | *7.2* | *5.8* |
| **Multi-Asset** | **48,823,736** | **15.1** | | | | | | | | | | |
| Invesco Balanced-Risk Allocation | 48,823,736 | 15.1 | 3.3 | 15.7 | 6.4 | 5.4 | -- | 15.7 | -5.8 | 10.5 | 12.2 | -3.5 |
| *60% MSCI ACWI Net/40% FTSE WGBI* | | | *5.2* | *18.2* | *9.2* | *6.0* | -- | *18.2* | *-5.8* | *17.1* | *5.5* | *-2.6* |
| *FTSE 3-Month T-bill +6%* | | | *1.9* | *8.4* | *7.7* | *7.1* | -- | *8.4* | *8.0* | *6.9* | *6.3* | *6.0* |
| *eV Global Balanced Net Rank* | | | *99* | *92* | *93* | *82* | -- | *92* | *22* | *99* | *19* | *74* |
| **Cash and Equivalents** | **5,067,197** | **1.6** | | | | | | | | | | |
| US Bank Checking Account | 2,492,135 | 0.8 | | | | | | | | | | |
| US Bank Clearing Account | 2,575,062 | 0.8 | | | | | | | | | | |

*Policy Index: 45% MSCI World, 25% BBgBarc Aggregate, 10% NCREIF-ODCE, 20%(60% MSCI ACWI Net/40% CITI WGBI). Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Loomis Sayles Core Plus replaced Loomis Sayles Full Discretion 3/21/2017. Parametric liquidated 4/21/2017. Mellon Dynamic liquidated 5/5/2017. Grosvenor Institutional liquidated 4/30/2018. Brandes International Small Cap Equity liquidated 8/31/2019. Invesco Real Estate II liquidated 9/1/2019. Data prior to 3Q 2015 is from previous consultant.*

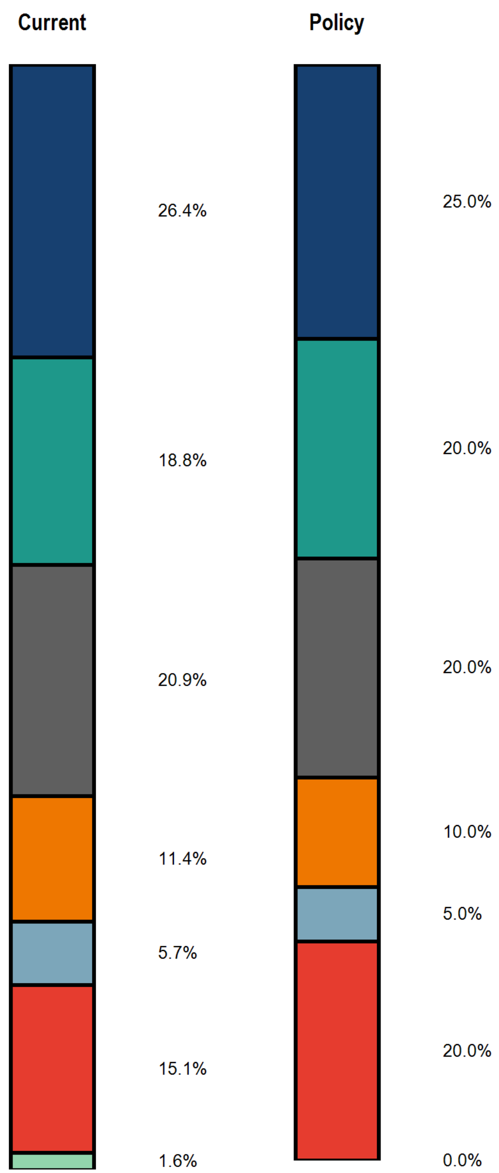
Market Value History




Asset Allocation History

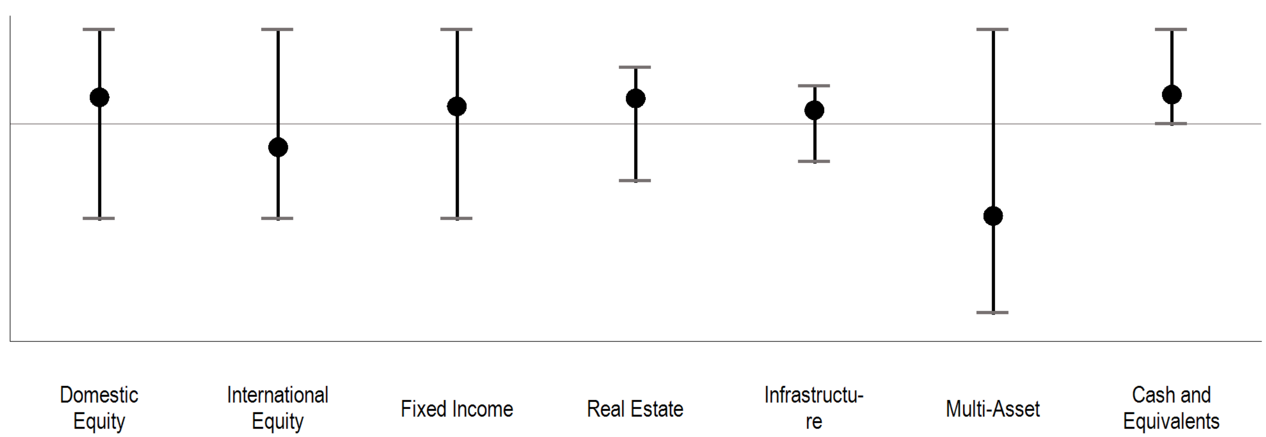



*Net cash flow is cumulative.*




| | Current | % | Policy | Difference | Policy Range | Within Range |
|---|---|---|---|---|---|---|
| Domestic Equity | $85,173,358 | 26.4% | 25.0% | $4,602,027 | 20.0% - 30.0% | Yes |
| International Equity | $60,549,507 | 18.8% | 20.0% | -$3,907,557 | 15.0% - 25.0% | Yes |
| Fixed Income | $67,515,007 | 20.9% | 20.0% | $3,057,943 | 15.0% - 25.0% | Yes |
| Real Estate | $36,643,182 | 11.4% | 10.0% | $4,414,650 | 7.0% - 13.0% | Yes |
| Infrastructure | $18,513,333 | 5.7% | 5.0% | $2,399,067 | 3.0% - 7.0% | Yes |
| Multi-Asset | $48,823,736 | 15.1% | 20.0% | -$15,633,328 | 10.0% - 25.0% | Yes |
| Cash and Equivalents | $5,067,197 | 1.6% | 0.0% | $5,067,197 | 0.0% - 5.0% | Yes |
| **Total** | **$322,285,320** | **100.0%** | **100.0%** | | | |

**Actual vs. Target**



| | Domestic Equity | International Equity | Fixed Income | Real Estate | Infrastructu-re | Multi-Asset | Cash and Equivalents |
|---|---|---|---|---|---|---|---|
| Policy (%) | 25.0 | 20.0 | 20.0 | 10.0 | 5.0 | 20.0 | 0.0 |
| Over/Under (%) | 1.4 | -1.2 | 0.9 | 1.4 | 0.7 | -4.9 | 1.6 |

Target Range Current

# Total Fund
## Investment Fund Fee Analysis — Period Ending: December 31, 2019

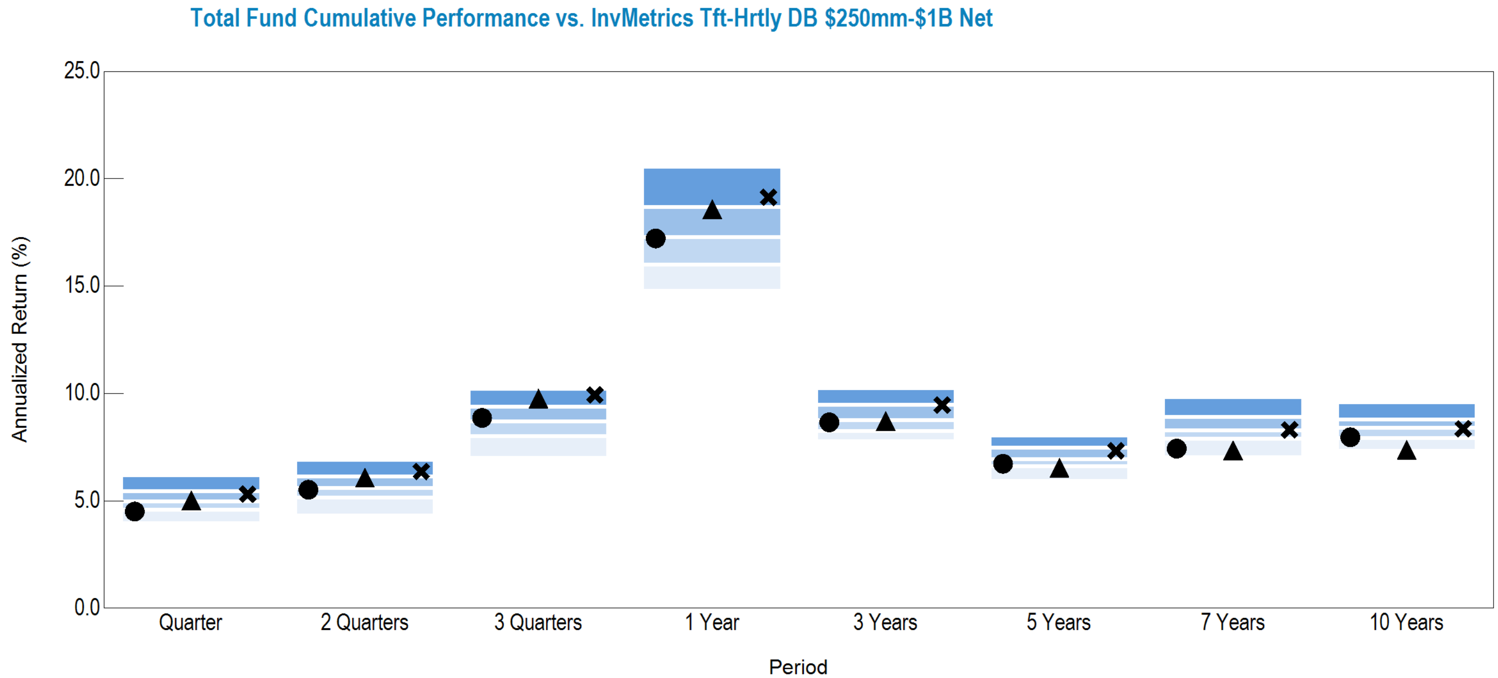
| Name | Asset Class | Fee Schedule | Market Value | % of Portfolio | Estimated Fee Value | Estimated Fee |
|---|---|---|---|---|---|---|
| BlackRock Equity Index NL | Domestic Equity | 0.03% of Assets | $34,712,314 | 10.8% | $10,414 | 0.03% |
| INTECH US Adaptive Volatility | Domestic Equity | 0.40% of Assets | $34,392,110 | 10.7% | $137,568 | 0.40% |
| PanAgora US Small Cap Core Stock Selector | Domestic Equity | 0.85% of Assets | $16,068,934 | 5.0% | $136,586 | 0.85% |
| WCM Focused International Growth Fund, L.P. | International Equity | 0.75% of Assets | $35,773,859 | 11.1% | $268,304 | 0.75% |
| Causeway International Value Ins | International Equity | 0.90% of Assets | $24,775,648 | 7.7% | $222,981 | 0.90% |
| Loomis Sayles Core Plus | Fixed Income | 0.35% of First 20.0 Mil,<br>0.25% Thereafter | $67,515,007 | 20.9% | $188,788 | 0.28% |
| ASB Allegiance Real Estate | Real Estate | 1.25% of First 5.0 Mil,<br>1.00% of Next 10.0 Mil,<br>0.90% of Next 60.0 Mil,<br>0.75% Thereafter | $21,595,666 | 6.7% | $221,861 | 1.03% |
| JPMorgan Special Situation Property | Real Estate | 1.60% of Assets | $15,047,516 | 4.7% | $240,760 | 1.60% |
| IFM Global Infrastructure (US) LP | Infrastructure | 0.77% of Assets | $10,324,671 | 3.2% | $79,500 | 0.77% |
| JPMorgan IIF ERISA LP | Infrastructure | 1.25% of First 50.0 Mil,<br>1.15% of Next 50.0 Mil,<br>1.05% Thereafter | $8,188,663 | 2.5% | $102,358 | 1.25% |
| Invesco Balanced-Risk Allocation | Multi-Asset | 0.38% of First 250.0 Mil,<br>0.35% of Next 500.0 Mil,<br>0.33% of Next 250.0 Mil,<br>0.30% Thereafter | $48,823,736 | 15.1% | $183,089 | 0.38% |
| US Bank Checking Account | Cash and Equivalents | | $2,492,135 | 0.8% | | |
| US Bank Clearing Account | Cash and Equivalents | | $2,575,062 | 0.8% | | |
| **Total** | | | **$322,285,320** | **100.0%** | **$1,792,209** | **0.56%** |

# Total Fund
## Watch List (Net of Fees)

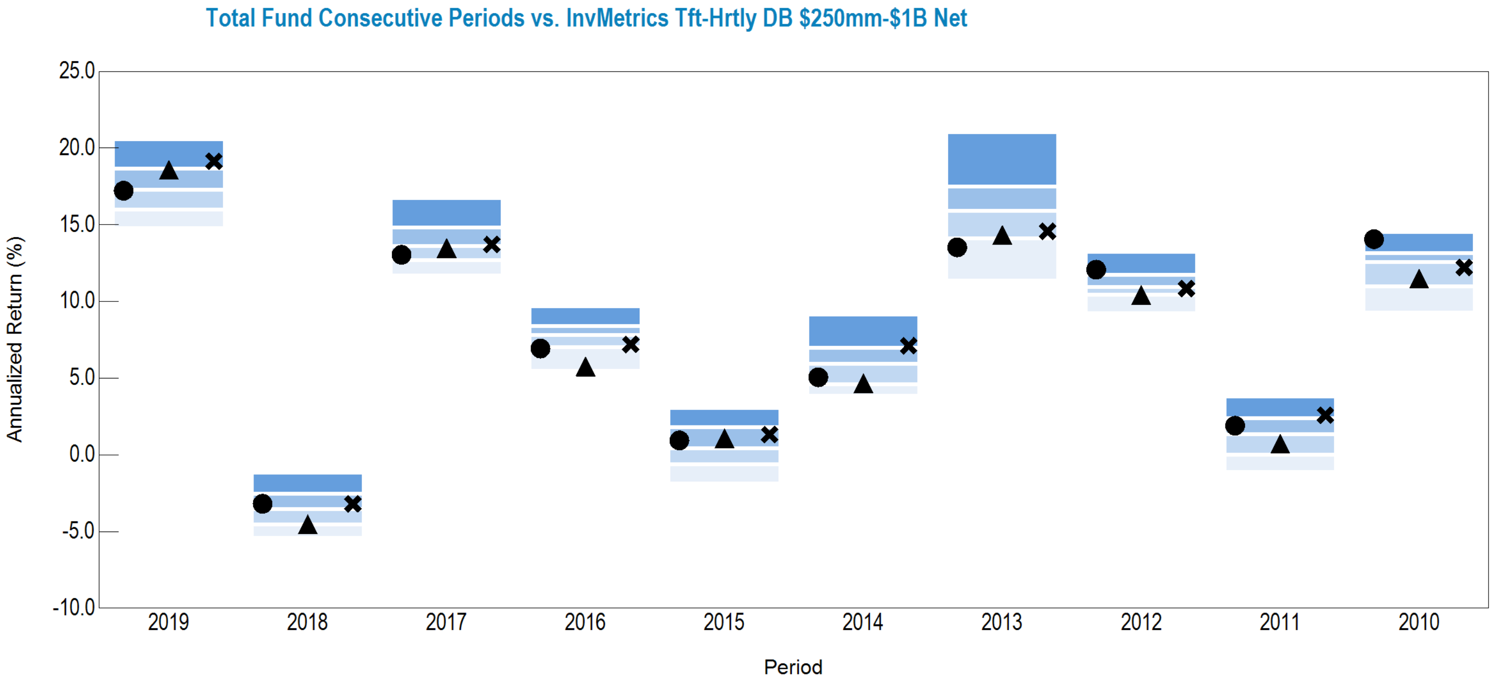
Period Ending: December 31, 2019

| Name | Allocation Group | Status | Rule 1 | Rule 2 | Rule 3 | Rule 4 | Rule 5 | Rule 6 |
|---|---|---|---|---|---|---|---|---|
| BlackRock Equity Index NL | Domestic Equity | No Issues | -- | -- | -- | -- | -- | ✓ |
| INTECH US Adaptive Volatility | Domestic Equity | No Issues | -- | -- | -- | -- | -- | -- |
| PanAgora US Small Cap Core Stock Selector | Domestic Equity | No Issues | ⚐ | ✓ | -- | -- | -- | -- |
| WCM Focused International Growth Fund, L.P. | International Equity | No Issues | ✓ | ✓ | -- | -- | -- | -- |
| Causeway International Value Ins | International Equity | No Issues | ⚐ | ✓ | -- | -- | -- | -- |
| Loomis Sayles Core Plus | Fixed Income | No Issues | -- | -- | -- | -- | -- | -- |
| ASB Allegiance Real Estate | Real Estate | No Issues | ⚐ | -- | -- | -- | -- | -- |
| JPMorgan Special Situation Property | Real Estate | No Issues | ✓ | -- | ✓ | -- | -- | -- |
| IFM Global Infrastructure (US) LP | Infrastructure | No Issues | ✓ | -- | ✓ | -- | -- | -- |
| JPMorgan IIF ERISA LP | Infrastructure | No Issues | ✓ | -- | ⚐ | -- | -- | -- |
| Invesco Balanced-Risk Allocation | Multi-Asset | No Issues | ⚐ | ⚐ | ⚐ | ⚐ | -- | -- |

Rule 1 - Manager has underperformed the benchmark index for the three year period.
Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the three year period.
Rule 3 - Manager has underperformed the benchmark index for the five year period.
Rule 4 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.
Rule 5 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.
Rule 6 - Index Fund Tracking Error exceeds 0.25% of the appropriate benchmark over the one year period.




| | Return (Rank) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 6.2 | | 6.9 | | 10.2 | | 20.6 | | 10.2 | | 8.0 | | 9.8 | | 9.6 | |
| 25th Percentile | 5.5 | | 6.1 | | 9.4 | | 18.7 | | 9.5 | | 7.5 | | 8.9 | | 8.8 | |
| Median | 5.0 | | 5.6 | | 8.7 | | 17.3 | | 8.8 | | 7.0 | | 8.3 | | 8.4 | |
| 75th Percentile | 4.6 | | 5.2 | | 8.0 | | 16.0 | | 8.3 | | 6.6 | | 7.9 | | 7.9 | |
| 95th Percentile | 4.0 | | 4.3 | | 7.0 | | 14.8 | | 7.8 | | 6.0 | | 7.0 | | 7.3 | |
| # of Portfolios | 86 | | 86 | | 86 | | 86 | | 85 | | 83 | | 80 | | 72 | |
| ● Total Fund | 4.5 | (80) | 5.5 | (64) | 8.9 | (45) | 17.2 | (52) | 8.7 | (56) | 6.7 | (68) | 7.4 | (88) | 8.0 | (73) |
| ▲ Total Fund Policy Index | 5.0 | (46) | 6.1 | (27) | 9.8 | (14) | 18.6 | (28) | 8.7 | (53) | 6.6 | (79) | 7.4 | (89) | 7.4 | (95) |
| ✕ Target Asset Allocation Policy Index | 5.3 | (33) | 6.4 | (21) | 9.9 | (9) | 19.1 | (19) | 9.5 | (26) | 7.3 | (28) | 8.3 | (49) | 8.4 | (53) |




| | Return (Rank) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 20.6 | | -1.2 | | 16.7 | | 9.7 | | 3.0 | | 9.1 | | 21.0 | | 13.2 | | 3.8 | | 14.5 | |
| 25th Percentile | 18.7 | | -2.5 | | 14.9 | | 8.4 | | 1.8 | | 7.0 | | 17.5 | | 11.8 | | 2.4 | | 13.2 | |
| Median | 17.3 | | -3.5 | | 13.6 | | 7.8 | | 0.4 | | 6.0 | | 15.9 | | 11.0 | | 1.4 | | 12.6 | |
| 75th Percentile | 16.0 | | -4.5 | | 12.7 | | 7.0 | | -0.6 | | 4.6 | | 14.2 | | 10.4 | | 0.0 | | 11.0 | |
| 95th Percentile | 14.8 | | -5.4 | | 11.7 | | 5.5 | | -1.9 | | 3.9 | | 11.4 | | 9.3 | | -1.1 | | 9.3 | |
| # of Portfolios | 86 | | 84 | | 69 | | 56 | | 58 | | 55 | | 49 | | 37 | | 34 | | 32 | |
| ● Total Fund | 17.2 | (52) | -3.2 | (45) | 13.0 | (64) | 6.9 | (80) | 0.9 | (38) | 5.1 | (70) | 13.5 | (79) | 12.1 | (20) | 1.9 | (40) | 14.1 | (10) |
| ▲ Total Fund Policy Index | 18.6 | (28) | -4.5 | (75) | 13.5 | (51) | 5.8 | (93) | 1.1 | (37) | 4.7 | (75) | 14.3 | (70) | 10.4 | (79) | 0.7 | (60) | 11.5 | (66) |
| ✖ Target Asset Allocation Policy Index | 19.1 | (19) | -3.2 | (45) | 13.7 | (46) | 7.2 | (69) | 1.3 | (36) | 7.1 | (21) | 14.6 | (66) | 10.8 | (63) | 2.6 | (20) | 12.2 | (58) |

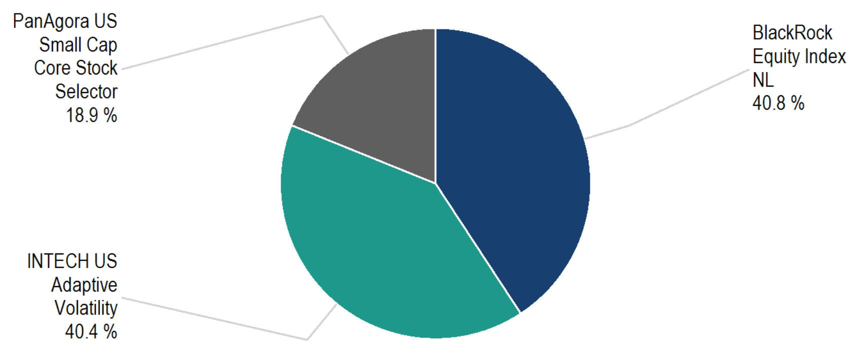
# Domestic Equity

# Total Domestic Equity
## Performance Summary (Net of Fees)

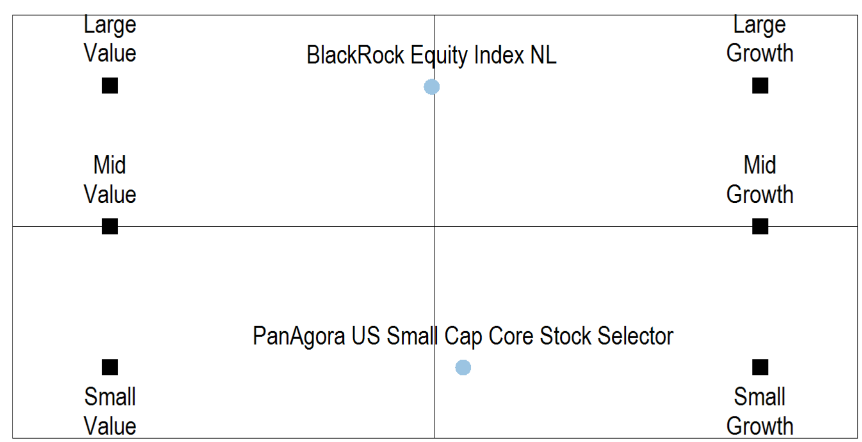
Period Ending: December 31, 2019

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Domestic Equity** | **85,173,358** | **100.0** | **6.2** | **27.2** | **12.6** | **9.9** | **12.9** | **27.2** | **-5.9** | **19.4** | **11.5** | **0.7** |
| *Dow Jones U.S. Total Stock Market* | | | *9.0* | *30.9* | *14.5* | *11.2* | *13.4* | *30.9* | *-5.3* | *21.2* | *12.6* | *0.4* |
| *InvMetrics Tft-Hrtly DB US Eq Net Rank* | | | *98* | *89* | *74* | *67* | *29* | *89* | *34* | *71* | *61* | *30* |
| **Domestic Equity** | **85,173,358** | **100.0** | | | | | | | | | | |
| BlackRock Equity Index NL | 34,712,314 | 40.8 | 9.1 | 31.5 | 15.2 | 11.7 | -- | 31.5 | -4.4 | 21.8 | 11.9 | 1.3 |
| *S&P 500* | | | *9.1* | *31.5* | *15.3* | *11.7* | -- | *31.5* | *-4.4* | *21.8* | *12.0* | *1.4* |
| *eV US Large Cap Core Equity Net Rank* | | | *28* | *28* | *25* | *19* | -- | *28* | *32* | *46* | *21* | *37* |
| INTECH US Adaptive Volatility | 34,392,110 | 40.4 | 1.9 | 23.4 | -- | -- | -- | 23.4 | -- | -- | -- | -- |
| *Russell 1000* | | | *9.0* | *31.4* | -- | -- | -- | *31.4* | -- | -- | -- | -- |
| *eV US Large Cap Core Equity Net Rank* | | | *99* | *91* | -- | -- | -- | *91* | -- | -- | -- | -- |
| PanAgora US Small Cap Core Stock Selector | 16,068,934 | 18.9 | 9.4 | 26.1 | 8.2 | -- | -- | 26.1 | -9.2 | 10.8 | 20.3 | -- |
| *Russell 2000* | | | *9.9* | *25.5* | *8.6* | -- | -- | *25.5* | *-11.0* | *14.6* | *21.3* | -- |
| *eV US Small Cap Core Equity Net Rank* | | | *28* | *37* | *49* | -- | -- | *37* | *36* | *83* | *41* | -- |

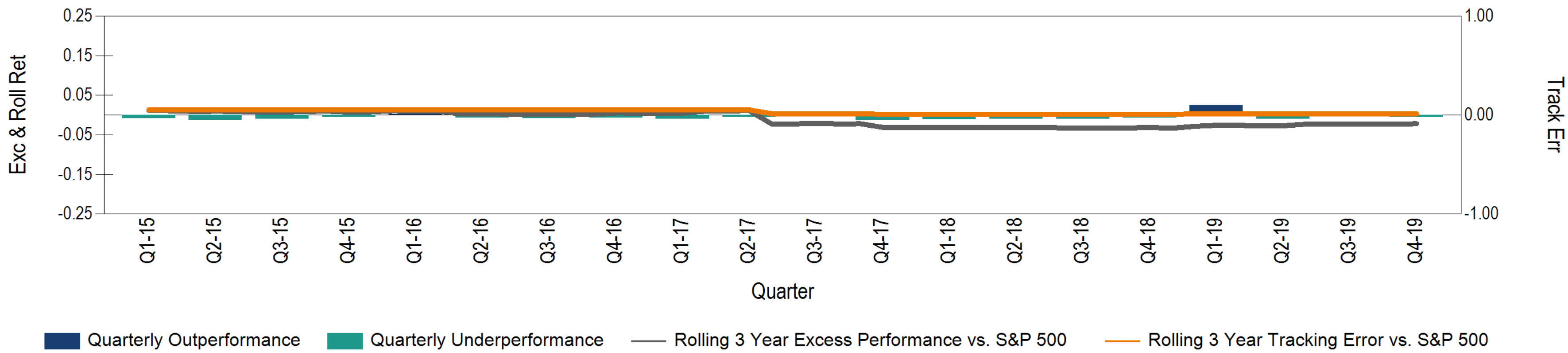
**Total Domestic Equity**
**Current Allocation**

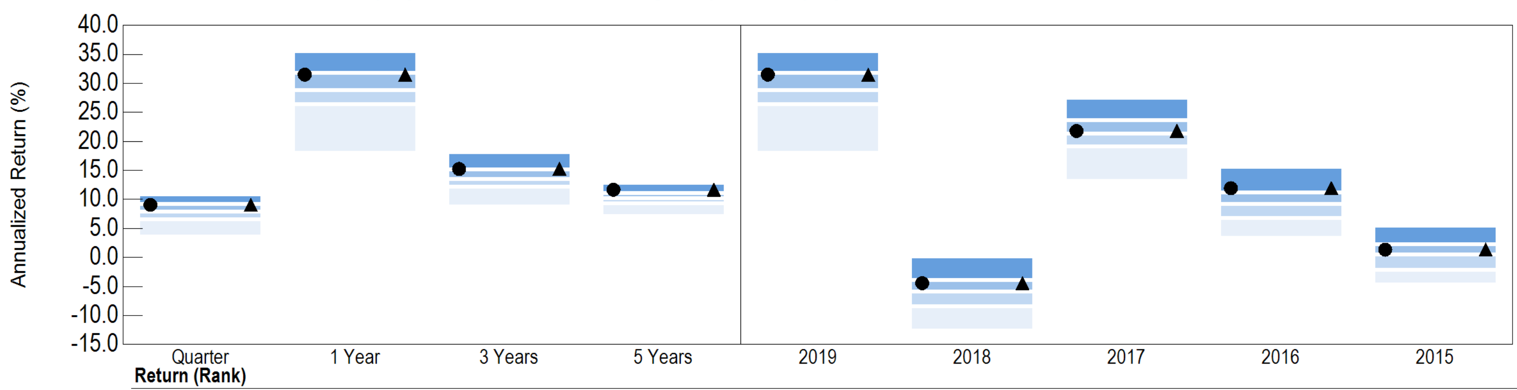



**Domestic Effective Style Map**
**3 Years**



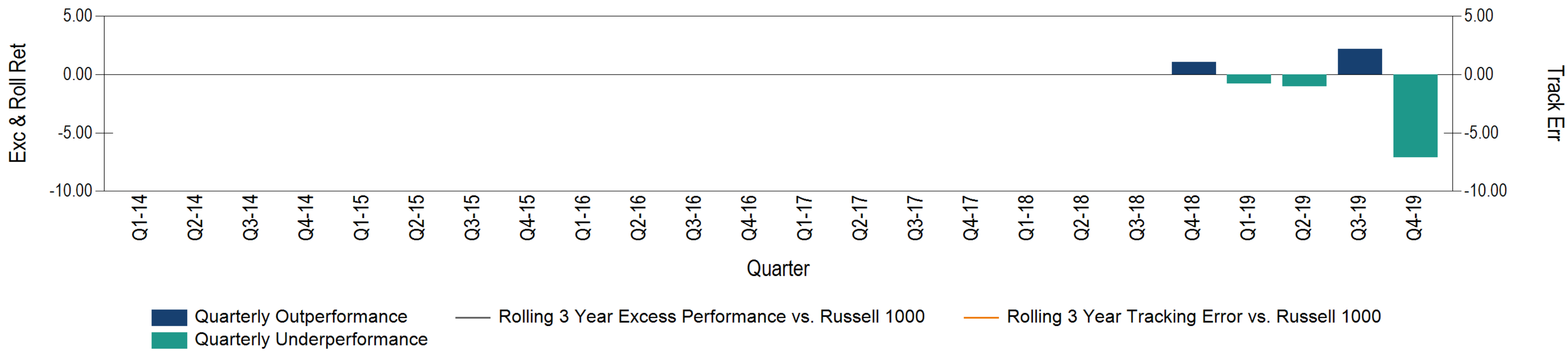

*Style map requires 3 years of returns. INTECH US Adaptive Volatility replaced INTECH US Managed Volatility on 8/3/2018.*



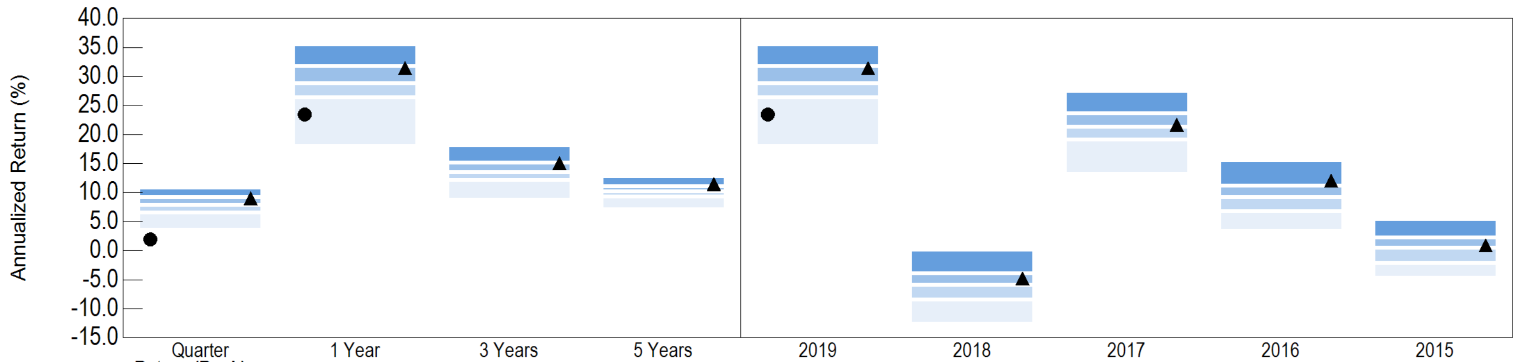




| | Quarter Return (Rank) | | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 10.8 | | 35.5 | | 18.1 | | 12.8 | | 35.5 | | 0.1 | | 27.4 | | 15.6 | | 5.4 | |
| 25th Percentile | 9.3 | | 31.9 | | 15.2 | | 11.1 | | 31.9 | | -3.8 | | 23.7 | | 11.3 | | 2.4 | |
| Median | 8.0 | | 28.9 | | 13.6 | | 10.3 | | 28.9 | | -5.8 | | 21.4 | | 9.3 | | 0.6 | |
| 75th Percentile | 6.6 | | 26.5 | | 12.3 | | 9.4 | | 26.5 | | -8.3 | | 19.2 | | 6.9 | | -2.0 | |
| 95th Percentile | 3.7 | | 18.1 | | 8.8 | | 7.2 | | 18.1 | | -12.5 | | 13.2 | | 3.4 | | -4.6 | |
| # of Portfolios | 203 | | 203 | | 197 | | 180 | | 203 | | 189 | | 188 | | 177 | | 142 | |
| ● BlackRock Equity Index NL | 9.1 | (28) | 31.5 | (28) | 15.2 | (25) | 11.7 | (19) | 31.5 | (28) | -4.4 | (32) | 21.8 | (46) | 11.9 | (21) | 1.3 | (37) |
| ▲ S&P 500 | 9.1 | (28) | 31.5 | (28) | 15.3 | (25) | 11.7 | (19) | 31.5 | (28) | -4.4 | (32) | 21.8 | (46) | 12.0 | (21) | 1.4 | (37) |

## Rolling Annualized Excess Performance and Tracking Error

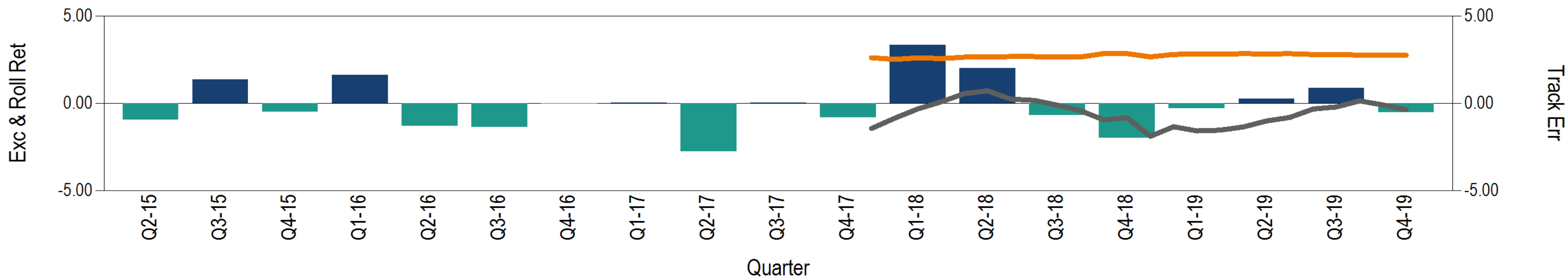


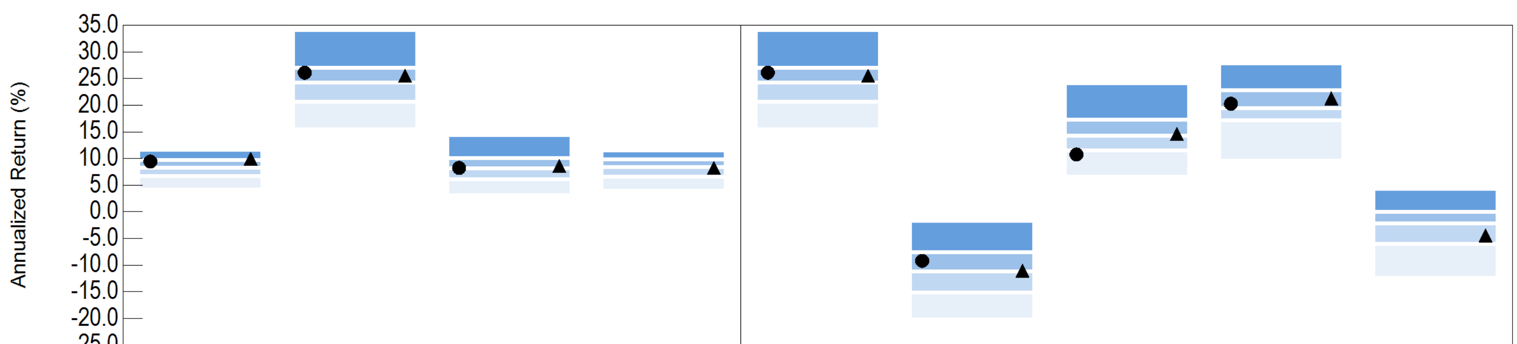

## INTECH US Adaptive Volatility vs. eV US Large Cap Core Equity Net Universe




| Return (Rank) | Quarter | | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5th Percentile** | 10.8 | | 35.5 | | 18.1 | | 12.8 | | 35.5 | | 0.1 | | 27.4 | | 15.6 | | 5.4 | |
| **25th Percentile** | 9.3 | | 31.9 | | 15.2 | | 11.1 | | 31.9 | | -3.8 | | 23.7 | | 11.3 | | 2.4 | |
| **Median** | 8.0 | | 28.9 | | 13.6 | | 10.3 | | 28.9 | | -5.8 | | 21.4 | | 9.3 | | 0.6 | |
| **75th Percentile** | 6.6 | | 26.5 | | 12.3 | | 9.4 | | 26.5 | | -8.3 | | 19.2 | | 6.9 | | -2.0 | |
| **95th Percentile** | 3.7 | | 18.1 | | 8.8 | | 7.2 | | 18.1 | | -12.5 | | 13.2 | | 3.4 | | -4.6 | |
| **# of Portfolios** | 203 | | 203 | | 197 | | 180 | | 203 | | 189 | | 188 | | 177 | | 142 | |
| ● **INTECH US Adaptive Volatility** | 1.9 | (99) | 23.4 | (91) | -- | (--) | -- | (--) | 23.4 | (91) | -- | (--) | -- | (--) | -- | (--) | -- | (--) |
| ▲ **Russell 1000** | 9.0 | (28) | 31.4 | (29) | 15.0 | (27) | 11.5 | (20) | 31.4 | (29) | -4.8 | (37) | 21.7 | (47) | 12.1 | (20) | 0.9 | (47) |

*INTECH US Adaptive Volatility replaced INTECH US Managed Volatility on 8/3/2018.*

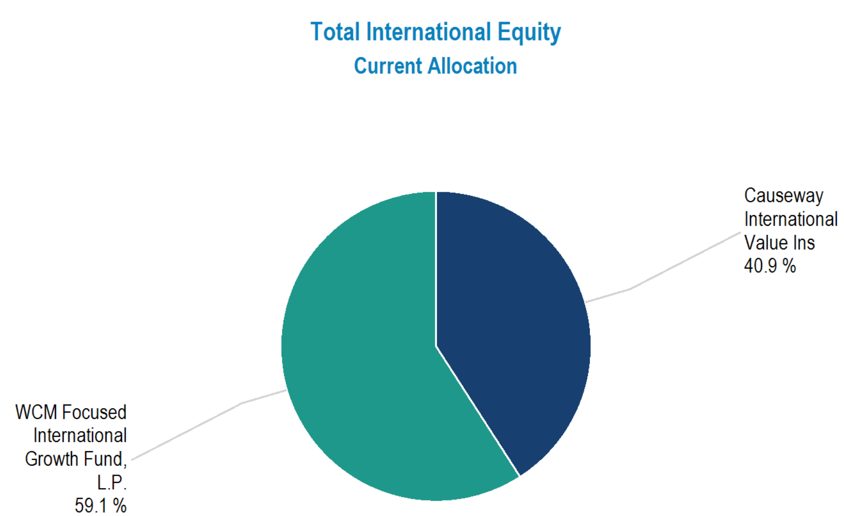



| | Quarter | | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Return (Rank) | | | | | | | | | | | | | | | | | |
| 5th Percentile | 11.6 | | 34.1 | | 14.4 | | 11.5 | | 34.1 | | -1.8 | | 24.1 | | 27.8 | | 4.2 | |
| 25th Percentile | 9.8 | | 27.0 | | 10.2 | | 9.9 | | 27.0 | | -7.5 | | 17.3 | | 22.8 | | 0.1 | |
| Median | 8.3 | | 24.3 | | 8.2 | | 8.5 | | 24.3 | | -11.1 | | 14.4 | | 19.5 | | -2.1 | |
| 75th Percentile | 6.8 | | 20.7 | | 6.2 | | 6.7 | | 20.7 | | -15.1 | | 11.6 | | 17.3 | | -5.9 | |
| 95th Percentile | 4.2 | | 15.5 | | 3.1 | | 4.0 | | 15.5 | | -20.1 | | 6.7 | | 9.7 | | -12.3 | |
| # of Portfolios | 112 | | 112 | | 108 | | 102 | | 112 | | 113 | | 106 | | 99 | | 88 | |
| ● PanAgora US Small Cap Core Stock Selector | 9.4 | (28) | 26.1 | (37) | 8.2 | (49) | -- | (--) | 26.1 | (37) | -9.2 | (36) | 10.8 | (83) | 20.3 | (41) | -- | (--) |
| ▲ Russell 2000 | 9.9 | (23) | 25.5 | (41) | 8.6 | (46) | 8.2 | (56) | 25.5 | (41) | -11.0 | (50) | 14.6 | (46) | 21.3 | (34) | -4.4 | (71) |

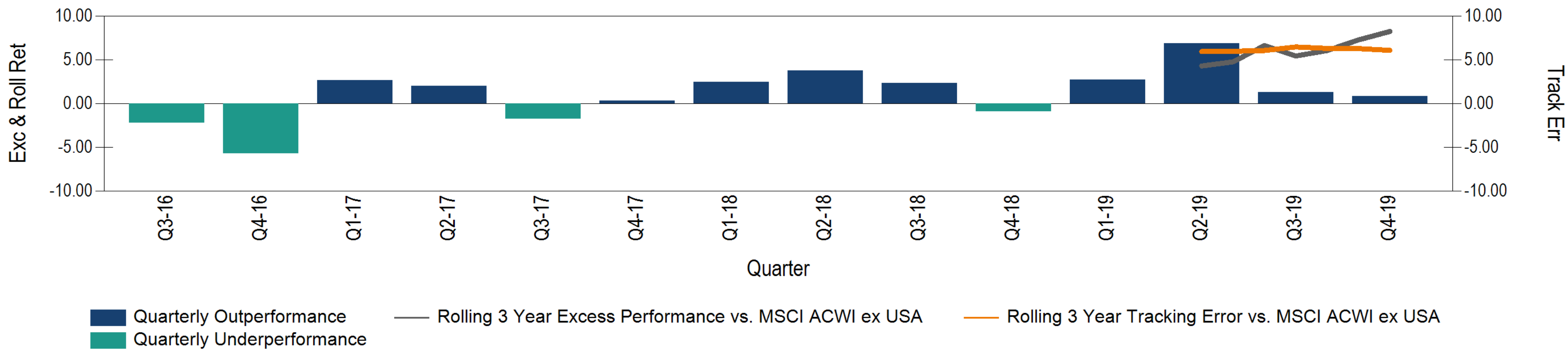
# International Equity

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total International Equity** | **60,549,507** | **100.0** | **10.4** | **27.8** | **12.1** | **6.3** | **4.7** | **27.8** | **-13.0** | **26.6** | **0.9** | **-4.5** |
| *Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)* | | | *9.2* | *21.6* | *9.8* | *5.7* | *5.0* | *21.6* | *-14.8* | *27.8* | *4.4* | *-4.6* |
| *InvMetrics Tft-Hrtly DB ex-US Eq Net Rank* | | | *23* | *10* | *11* | *18* | *70* | *10* | *14* | *71* | *82* | *51* |
| **International Equity** | **60,549,507** | **100.0** | | | | | | | | | | |
| WCM Focused International Growth Fund, L.P. | 35,773,859 | 59.1 | 9.8 | 35.7 | 18.1 | -- | -- | 35.7 | -7.4 | 31.1 | -- | -- |
| *MSCI ACWI ex USA* | | | *8.9* | *21.5* | *9.9* | -- | -- | *21.5* | *-14.2* | *27.2* | -- | -- |
| *eV ACWI ex-US All Cap Growth Eq Net Rank* | | | *59* | *12* | *16* | -- | -- | *12* | *1* | *71* | -- | -- |
| Causeway International Value Ins | 24,775,648 | 40.9 | 11.3 | 20.1 | 7.5 | -- | -- | 20.1 | -18.6 | 27.2 | -- | -- |
| *MSCI EAFE* | | | *8.2* | *22.0* | *9.6* | -- | -- | *22.0* | *-13.8* | *25.0* | -- | -- |
| *Foreign Large Value MStar MF Rank* | | | *2* | *22* | *34* | -- | -- | *22* | *91* | *14* | -- | -- |

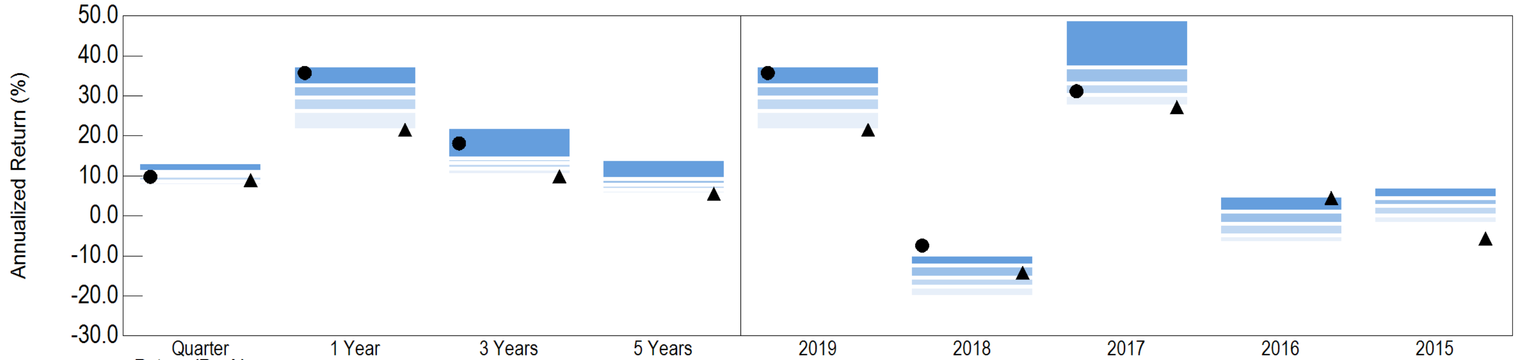



*Invesco Real Estate II liquidated 9/1/2019.*

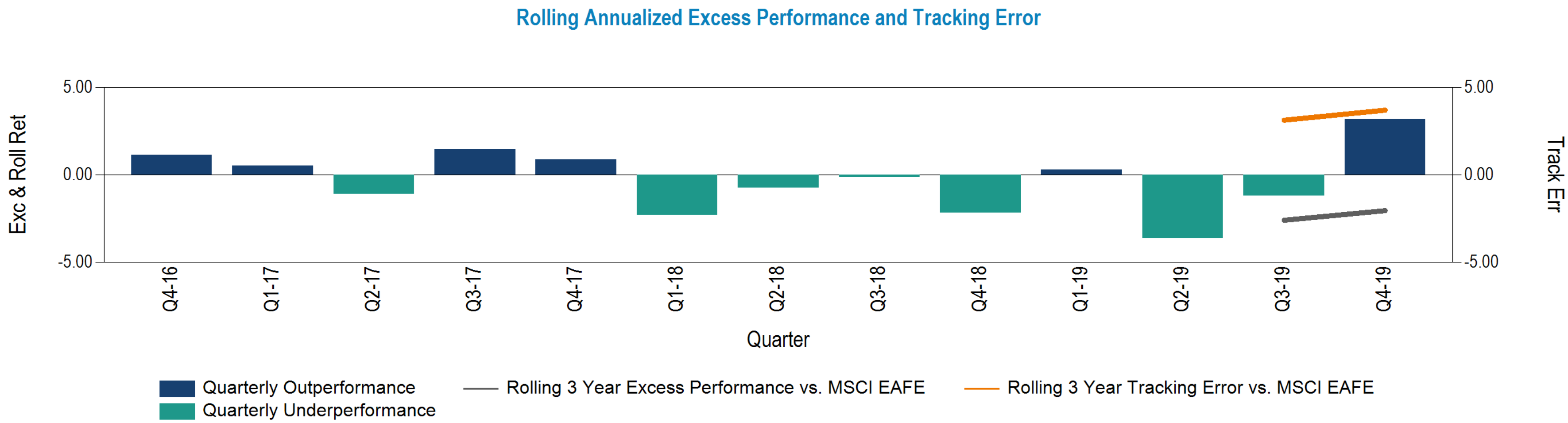
Rolling Annualized Excess Performance and Tracking Error

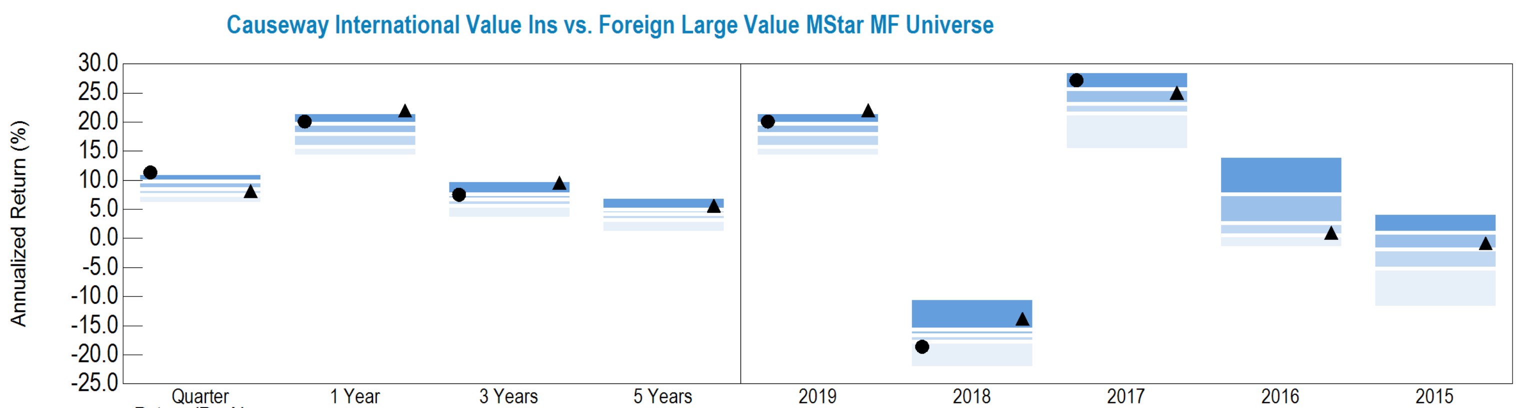



WCM Focused International Growth Fund, L.P. vs. eV ACWI ex-US All Cap Growth Eq Net Universe




| Return (Rank) | Quarter | | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 13.3 | | 37.5 | | 22.1 | | 14.1 | | 37.5 | | -9.7 | | 49.1 | | 5.0 | | 7.2 | |
| 25th Percentile | 11.0 | | 32.7 | | 14.5 | | 9.3 | | 32.7 | | -12.3 | | 37.2 | | 1.2 | | 4.5 | |
| Median | 10.1 | | 29.7 | | 13.4 | | 7.9 | | 29.7 | | -15.3 | | 33.2 | | -2.0 | | 2.5 | |
| 75th Percentile | 8.7 | | 26.2 | | 12.0 | | 6.7 | | 26.2 | | -17.5 | | 30.4 | | -4.7 | | 0.2 | |
| 95th Percentile | 7.6 | | 21.5 | | 10.3 | | 5.5 | | 21.5 | | -20.2 | | 27.5 | | -6.6 | | -1.9 | |
| # of Portfolios | 32 | | 32 | | 29 | | 28 | | 32 | | 26 | | 27 | | 25 | | 18 | |
| ● WCM Focused International Growth Fund, L.P | 9.8 | (59) | 35.7 | (12) | 18.1 | (16) | -- | (--) | 35.7 | (12) | -7.4 | (1) | 31.1 | (71) | -- | (--) | -- | (--) |
| ▲ MSCI ACWI ex USA | 8.9 | (71) | 21.5 | (96) | 9.9 | (97) | 5.5 | (94) | 21.5 | (96) | -14.2 | (49) | 27.2 | (96) | 4.5 | (8) | -5.7 | (99) |



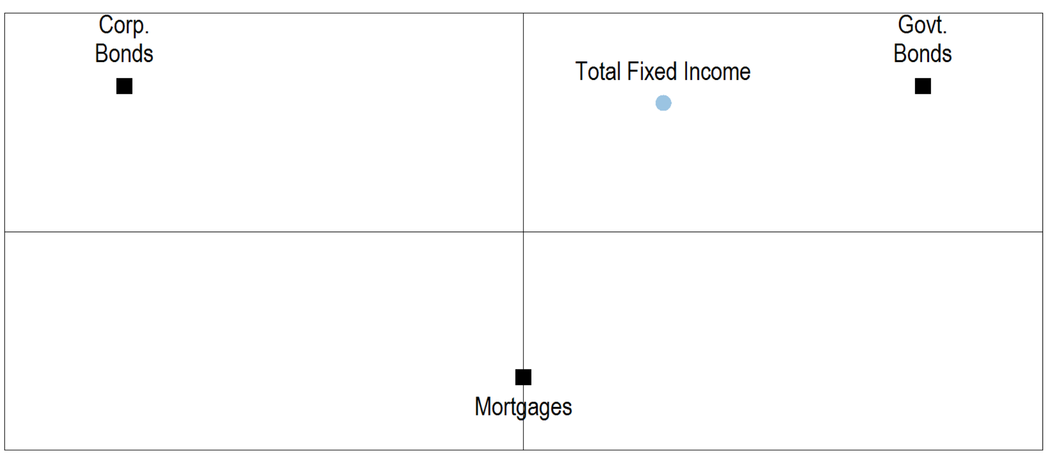




| | Quarter Return | (Rank) | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5th Percentile** | 11.1 | | 21.7 | | 10.0 | | 7.1 | | 21.7 | | -10.4 | | 28.7 | | 14.1 | | 4.4 | |
| **25th Percentile** | 9.8 | | 19.8 | | 7.7 | | 5.0 | | 19.8 | | -15.6 | | 25.7 | | 7.7 | | 1.1 | |
| **Median** | 8.6 | | 18.1 | | 6.7 | | 4.2 | | 18.1 | | -16.5 | | 23.2 | | 2.7 | | -1.8 | |
| **75th Percentile** | 7.5 | | 15.9 | | 5.7 | | 3.2 | | 15.9 | | -17.7 | | 21.5 | | 0.6 | | -5.1 | |
| **95th Percentile** | 6.0 | | 14.2 | | 3.4 | | 1.1 | | 14.2 | | -22.2 | | 15.3 | | -1.6 | | -11.9 | |
| **# of Portfolios** | 84 | | 84 | | 79 | | 71 | | 84 | | 74 | | 74 | | 78 | | 76 | |
| ● **Causeway International Value Ins** | 11.3 | (2) | 20.1 | (22) | 7.5 | (34) | -- | (--) | 20.1 | (22) | -18.6 | (91) | 27.2 | (14) | -- | (--) | -- | (--) |
| ▲ **MSCI EAFE** | 8.2 | (62) | 22.0 | (4) | 9.6 | (6) | 5.7 | (12) | 22.0 | (4) | -13.8 | (17) | 25.0 | (30) | 1.0 | (69) | -0.8 | (43) |

# Domestic Fixed Income

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Fixed Income** | **67,515,007** | **100.0** | **0.5** | **9.4** | **4.8** | **3.9** | **5.4** | **9.4** | **-0.4** | **5.6** | **7.5** | **-2.1** |
| *Total Fixed Income Benchmark (BBgBarc Aggregate)* | | | *0.2* | *8.7* | *4.0* | *3.0* | *3.7* | *8.7* | *0.0* | *3.5* | *2.6* | *0.5* |
| *InvMetrics Tft-Hrtly DB US Fix Inc Net Rank* | | | *60* | *28* | *19* | *22* | *9* | *28* | *75* | *18* | *9* | *93* |
| **Fixed Income** | **67,515,007** | **100.0** | | | | | | | | | | |
| Loomis Sayles Core Plus | 67,515,007 | 100.0 | 0.5 | 9.4 | -- | -- | -- | 9.4 | -0.4 | -- | -- | -- |
| *BBgBarc US Aggregate TR* | | | *0.2* | *8.7* | -- | -- | -- | *8.7* | *0.0* | -- | -- | -- |
| *eV US Core Plus Fixed Inc Net Rank* | | | *42* | *63* | -- | -- | -- | *63* | *40* | -- | -- | -- |

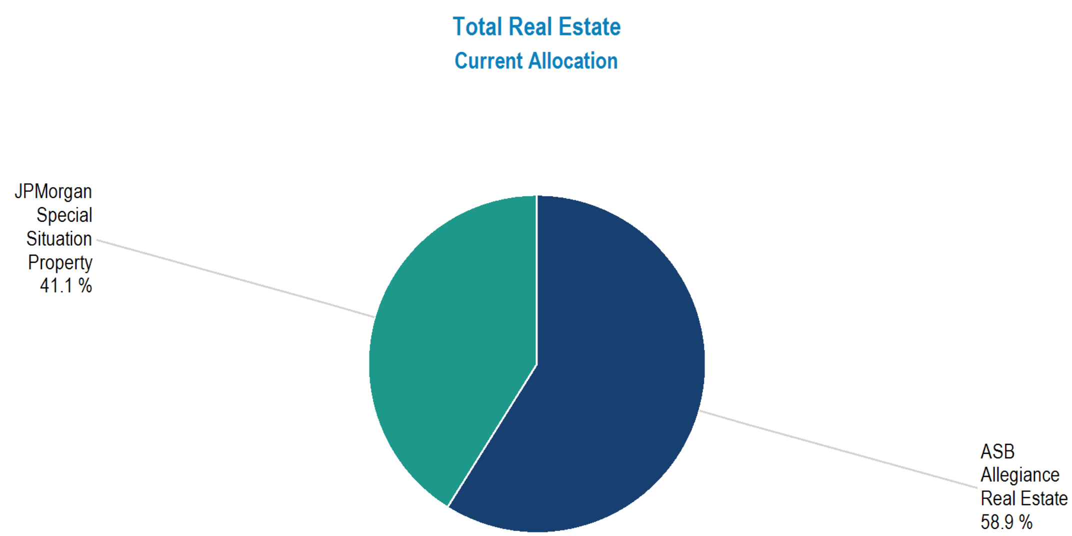
**Fixed Income Style Map**
**3 Years**




*Loomis Sayles Core Plus replaced Loomis Sayles Full Discretion 3/21/2017.*

# Alternatives

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Real Estate** | **36,643,182** | **100.0** | **1.2** | **4.6** | **5.8** | **7.9** | **10.9** | **4.6** | **7.8** | **5.0** | **5.4** | **16.9** |
| *NCREIF ODCE Net* | | | *1.3* | *4.4* | *6.1* | *8.0* | *10.4* | *4.4* | *7.4* | *6.7* | *7.8* | *13.9* |
| **Real Estate** | **36,643,182** | **100.0** | | | | | | | | | | |
| ASB Allegiance Real Estate | 21,595,666 | 58.9 | 1.3 | 4.2 | 5.0 | -- | -- | 4.2 | 7.1 | 3.9 | 4.5 | -- |
| *NCREIF ODCE Net* | | | *1.3* | *4.4* | *6.1* | *--* | *--* | *4.4* | *7.4* | *6.7* | *7.8* | *--* |
| JPMorgan Special Situation Property | 15,047,516 | 41.1 | 1.1 | 5.0 | 7.5 | 9.9 | -- | 5.0 | 9.6 | 7.9 | 8.7 | 18.9 |
| *NCREIF-ODCE* | | | *1.5* | *5.3* | *7.1* | *9.0* | *--* | *5.3* | *8.3* | *7.6* | *8.8* | *15.0* |



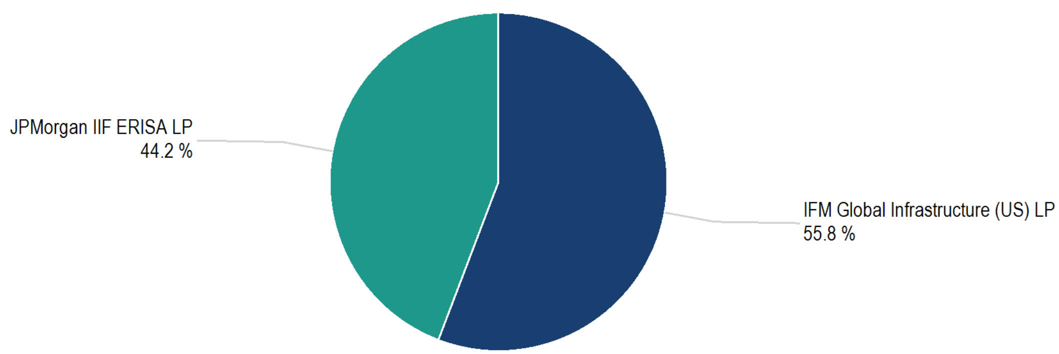

*Invesco Real Estate II liquidated 9/1/2019.*

# Total Infrastructure
## Performance Summary (Net of Fees)

Period Ending: December 31, 2019

| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Infrastructure** | **18,513,333** | **100.0** | **4.8** | **11.5** | **13.1** | **9.4** | **7.9** | **11.5** | **10.2** | **17.9** | **3.8** | **4.2** |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | *6.8* | *7.4* | *7.0* | *7.2* | *7.2* | *5.8* |
| **Infrastructure** | **18,513,333** | **100.0** | | | | | | | | | | |
| IFM Global Infrastructure (US) LP | 10,324,671 | 55.8 | 5.2 | 14.6 | 17.1 | 12.4 | 10.0 | 14.6 | 15.8 | 21.1 | 6.1 | 5.2 |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | *6.8* | *7.4* | *7.0* | *7.2* | *7.2* | *5.8* |
| JPMorgan IIF ERISA LP | 8,188,663 | 44.2 | 4.3 | 8.0 | 8.7 | 6.1 | -- | 8.0 | 4.2 | 14.2 | 1.2 | 3.4 |
| *CPI + 5%* | | | *1.3* | *7.4* | *7.2* | *6.9* | -- | *7.4* | *7.0* | *7.2* | *7.2* | *5.8* |

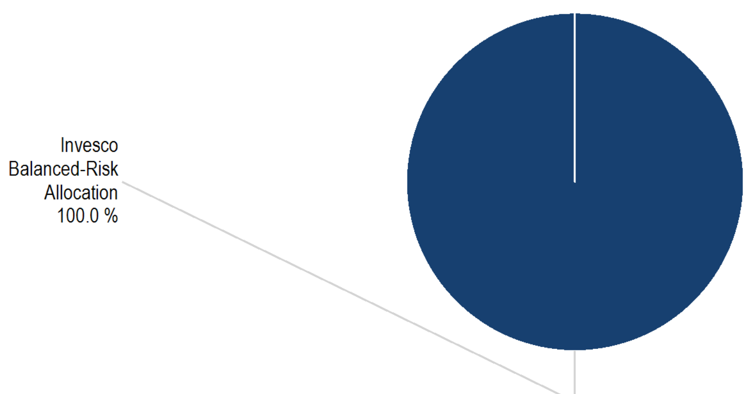
**Total Infrastructure**
**Current Allocation**




*JP Morgan IIF ERISA market value as of 3/31/2018.*

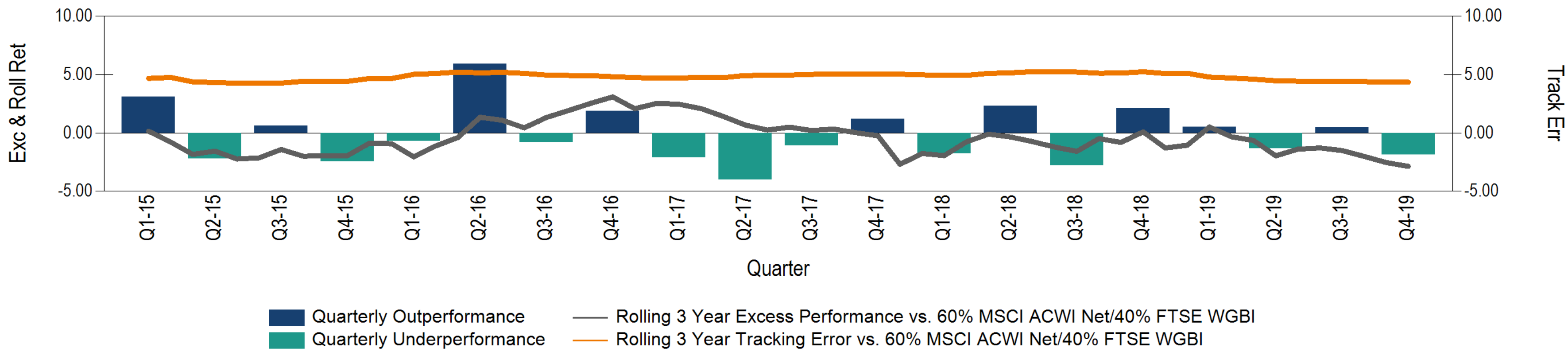
| | Market Value | % of Portfolio | 3 Mo | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Multi-Asset** | **48,823,736** | **100.0** | **3.3** | **15.7** | **6.4** | **5.1** | **7.2** | **15.7** | **-5.8** | **10.6** | **7.4** | **-1.0** |
| *60% MSCI ACWI Net/40% FTSE WGBI* | | | *5.2* | *18.2* | *9.2* | *6.0* | *6.2* | *18.2* | *-5.8* | *17.1* | *5.5* | *-2.6* |
| *eV Global Balanced Net Rank* | | | *99* | *92* | *93* | *85* | *59* | *92* | *22* | *99* | *54* | *38* |
| **Multi-Asset** | **48,823,736** | **100.0** | | | | | | | | | | |
| Invesco Balanced-Risk Allocation | 48,823,736 | 100.0 | 3.3 | 15.7 | 6.4 | 5.4 | -- | 15.7 | -5.8 | 10.5 | 12.2 | -3.5 |
| *60% MSCI ACWI Net/40% FTSE WGBI* | | | *5.2* | *18.2* | *9.2* | *6.0* | -- | *18.2* | *-5.8* | *17.1* | *5.5* | *-2.6* |
| *FTSE 3-Month T-bill +6%* | | | *1.9* | *8.4* | *7.7* | *7.1* | -- | *8.4* | *8.0* | *6.9* | *6.3* | *6.0* |
| *eV Global Balanced Net Rank* | | | *99* | *92* | *93* | *82* | -- | *92* | *22* | *99* | *19* | *74* |

**Total Multi-Asset**
**Current Allocation**

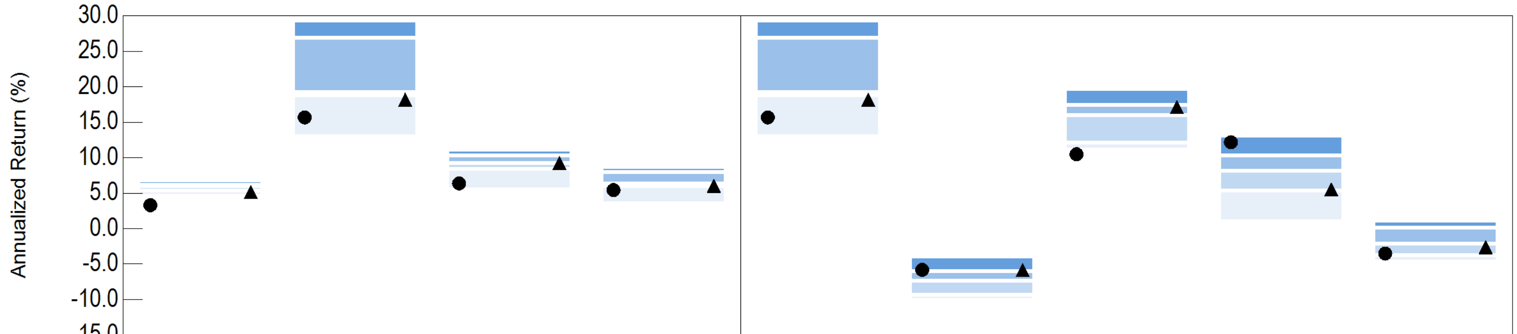



*Mellon Dynamic liquidated 5/5/2017.*

Rolling Annualized Excess Performance and Tracking Error




Invesco Balanced-Risk Allocation vs. eV Global Balanced Net Universe




| | Quarter | | 1 Year | | 3 Years | | 5 Years | | 2019 | | 2018 | | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Return (Rank) | | | | | | | | | | | | | | | | | | |
| 5th Percentile | 6.7 | | 29.3 | | 11.1 | | 8.6 | | 29.3 | | -4.0 | | 19.6 | | 13.1 | | 1.1 | |
| 25th Percentile | 6.2 | | 27.0 | | 10.3 | | 8.0 | | 27.0 | | -6.0 | | 17.5 | | 10.3 | | 0.2 | |
| Median | 6.1 | | 19.3 | | 9.3 | | 6.4 | | 19.3 | | -7.3 | | 16.1 | | 8.2 | | -2.0 | |
| 75th Percentile | 5.4 | | 18.8 | | 8.5 | | 6.0 | | 18.8 | | -9.3 | | 12.2 | | 5.4 | | -3.7 | |
| 95th Percentile | 4.6 | | 13.1 | | 5.6 | | 3.6 | | 13.1 | | -10.0 | | 11.1 | | 1.1 | | -4.6 | |
| # of Portfolios | 9 | | 9 | | 9 | | 9 | | 9 | | 10 | | 9 | | 13 | | 13 | |
| ● Invesco Balanced-Risk Allocation | 3.3 | (99) | 15.7 | (92) | 6.4 | (93) | 5.4 | (82) | 15.7 | (92) | -5.8 | (22) | 10.5 | (99) | 12.2 | (19) | -3.5 | (74) |
| ▲ 60% MSCI ACWI Net/40% FTSE WGBI | 5.2 | (88) | 18.2 | (88) | 9.2 | (53) | 6.0 | (76) | 18.2 | (88) | -5.8 | (22) | 17.1 | (29) | 5.5 | (68) | -2.6 | (64) |

## Performance Return Calculations

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

## Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

## Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

## Manager Line Up

| Manager | Fund Incepted | Data Source | Manager | Fund Incepted | Data Source |
|---|---|---|---|---|---|
| BlackRock Equity Index NL | 4/30/2010 | BlackRock | JPMorgan SSP | 12/31/2014 | JP Morgan |
| INTECH US Adaptive Volatility | 8/3/2018 | INTECH | IFM Global Infrastructure (US) LP | 1/31/2009 | IFM |
| PanAgora US Small Cap | 1/31/2015 | PanAgora | JPMorgan IIF ERISA LP | 9/30/2010 | JP Morgan |
| WCM Focused International Growth | 7/1/2016 | WCM | Invesco Balanced-Risk Allocation | 1/31/2010 | Invesco |
| Causeway International Value | 7/27/2016 | US Bank | US Bank Checking Account | N/A | US Bank |
| Loomis Sayles Core Plus | 3/21/2017 | Loomis Sayles | US Bank Clearing Account | N/A | US Bank |
| ASB Allegiance Real Estate | 3/31/2015 | ASB | | | |

## Policy & Custom Index Composition

| | |
|---|---|
| Policy Index: | 45% MSCI World, 25% BBgBarc Aggregate, 10% NCREIF-ODCE Net, 20% (60%MSCI ACWI Net/40% CITI WGBI) |
| Target Asset Allocation Policy: | 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60%MSCI ACWI Net/40% CITI WGBI). |

# Glossary

**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

# Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.