IRON FINANCIAL

FEDERAL RESERVE BEIGE BOOK SLIGHTLY MORE UPBEAT

INSIDE THIS REPORT

2019 – Quarter 4

Summary of Salient Economic Activity and Key Indicators During Q4 2019:

Labor Markets:

- Total U.S. nonfarm payroll employment increased by 145,000 jobs in December 2019. It was the lowest increase during the quarter; in November and October, jobs grew by 256,000 and 152,000, respectively. For the year, payrolls increased by 2.1 million, an average of 176,000 a month – the slowest year for job creation since 2011 and down considerably from the 2.64 million jobs added in 2018.
- The unemployment rate was little changed in December 2019 and ended the year at 3.5%. However, it remains well below the long-term average of 5.73%. The unemployment rate also has been steadily decreasing year over year; the average was 3.9%, 4.4%, 4.9% for 2018, 2017, and 2016, respectively.
- The Conference Board Employment Trends Index (ETI) increased in November, following a decline in October. The Index now stands at 110.18, up from 109.96 in October. The change represents a 0.1 percent increase in the ETI compared to a year ago.
- Broader measures of unemployment also showed little to no changes as the Labor Participation Rate for December stayed at 63.2%. The broader (U-6) unemployment rate, which takes into account part-time workers looking for full-time work, increased slightly to 6.7%. The rate is much lower than the long-term average of 10.34%.
- Initial jobless claims have remained steady under the key 300,000 threshold, which is associated with a strong labor market. For the week of December 28, 2019, initial Jobless claims decreased 2,000 to 222,000. The four-week moving average was 233,250, which was a 2.08% increase from the previous week.
- Job openings, according to the Bureau of Labor Statistics, edged up to 7.3 million openings at the end of October 2019. The most significant increases in job openings levels were in retail trade, finance and insurance, and durable goods manufacturing.
- Average hourly wages for all employees on private nonfarm payrolls increased 3 cents to $28.32 in December 2019. This represents a monthly annualized growth rate of 1.27%, compared to a long-term average annualized growth rate of 2.52%

Economy:

- In the third quarter of 2019, real GDP growth increased at an annual rate of 2.1%. This is lower than the long-term average of 3.2%. The acceleration in **real GDP** in the third quarter reflected upturns in private inventory investment, exports, and residential fixed investment that were partly offset by decelerations in PCE, federal government spending, and state and local government spending, and a more significant decrease in nonresidential fixed investment. Q4 ’19 GDP is forecast by the Atlanta FED to be 2.3%. The New York Fed has projected Q4 ’19 GDP growth at 1.2%.

Economy: (continued)

- The Federal Reserve's Beige Book was slightly more upbeat compared to its previous assessment last month when the central bank said the economy was expanding at a "slight to modest pace." The U.S. economy grew "modestly" from October through mid-November and the outlook "generally remained positive," according to the Federal Reserve's latest findings. Most Districts reported stable to moderately growing consumer spending, and increases in auto sales and tourism were seen across several Districts. In manufacturing, more Districts reported an expansion in the current period than the previous one, though the majority continued to experience no growth. The picture for nonfinancial services remained quite positive, with most Districts reporting modest to moderate growth. Transportation activity was somewhat mixed across Districts. Reports from the banking sector indicated continued but slightly slower growth in loan volumes. Home sales were mostly flat to up, and residential construction experienced more widespread growth compared to the prior report.
- The Conference Board's Leading Economic Index was unchanged in November, remaining at 111.6, following a 0.2% decline in both October and September.
- The ISM Manufacturing Production Index decreased 12.02% percentage points in December 2019 to 43.20. Compared to one year ago the index is down 20.15%. Readings above 50 indicate an expansion in manufacturing activity, while those below 50 indicate a contraction. This is the lowest level the index has been in almost 11 years. Boeing and GM played a significant role in the decline.
- The ISM Manufacturing New Orders Index registered 46.80 in December 2019, down from 47.20 in November, and down from 51.30 one year ago.
- The ISM Manufacturing Inventories Index was 46.50 in December 2019, up from 45.50 in November and down from 51.20 one year ago.
- The ISM Non-Manufacturing Index decreased to 1.46 in December to 53.90. Compared to last year, the ISM Non-Manufacturing Index is down 11.20%.
- The past relationship between the ISM Non-Manufacturing Index and the overall economy corresponds to a 1.9% increase in real GDP on an annualized basis.
- Total Light vehicle sales are at 17.09 million in November 2019, up from 16.53 million in October. Compared to one year ago, US total light-vehicle sales are down 1.65%.
- Factory orders for manufactured goods made in the US were down 0.7% from a month earlier in November 2019. Demand for machinery fell 0.4% and the demand for primary metals fell 1.1%. Meanwhile, orders for electrical equipment, appliances, and components increased by 0.5%. Compared to a year ago, factory orders were 0.7% lower.
- Total US Building Permits were 1.482 million in Nov 2019, up 1.44% from 1.461 million in October 2019. Compared to the prior year, new US Building Permits are up 11.09%. An increase in building permits is a leading indicator of the health of the US Housing sector and often the US economy at large.
- Existing home sales were 5.35 million in November, down from 5.44 million in October. Compared to the prior year, existing-home sales are up 2.69%.
- New single-family home sales were 719,000 in November 2019, up 1.27% from 710,000 in October, and up 16.91% from 615,000 the prior year.

Economy: (continued)

- Home prices, as measured by the S&P CoreLogic Case-Shiller National Index, were up 3.32% in October 2019 from one year ago. The 10-city Composite annual index rose 1.67% and the 20-city Composite posted a 2.23% year over year gain. The national index, the 10-city composite, and the 20-city composite were all up compared to the previous month.
- Pending home sales are up 1.2% in November. Year-over-year contract signings jumped 7.4% The highest gain occurred in the West, while the other three major U.S. regions saw only marginal variances in month-over-month contract activity. The index in the West grew 5.5% in November and increased 14% from a year ago.
- The S&P/Experian First Mortgage Default Index is at 0.77% in November 2019, compared to 0.77% in October 2019 and 0.64% last year. The default rate is significantly below the historical long-term average of 1.69%.
- Retail sales grew to $462.78 billion in November 2019, up from $461.56 billion in October. This represents a monthly annualized growth rate of 3.15%, compared to a long-term average annualized growth rate of 4.19%.

Inflation:

- Consumer prices, as measured by the Personal Consumption Expenditures (PCE) Price Index, reflect changes in the price of goods and services purchased by consumers in the United States. The core index excludes food and energy where prices tend to swing up and down more dramatically and often than other prices. For the monthly annualized growth rate for November 2019, the PCE Price Index increased by 1.88%, while core prices increased by 1.66%.
- Core inflation rates for November 2019, October 2019 and September 2019 were 2.3%, 2.3%, and 2.36% respectively. Inflation remains far below the long-term average of 3.66%.
- US Core Producer Price Index is at a current level of 117.90 for November 2019, down from 118.40 last month and up from 116.40 one year ago. This is a change of -0.42% from the previous month and 1.29% from one year ago.
- The Producer Price Index for final demand was unchanged in November. Final demand prices increased by 0.4% in October and fell 0.3% in September.

Monetary Policies:

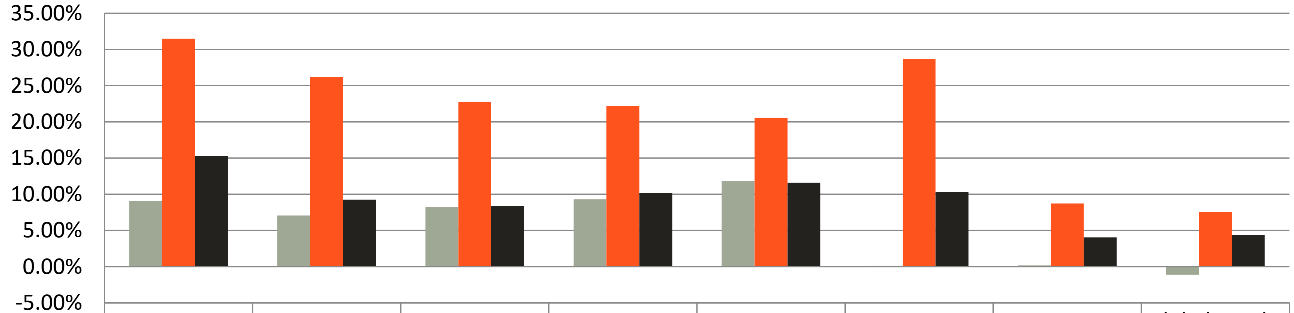
- The Fed cut rates for a third time this year, reversing nearly all of 2018's rate increases as uncertainty from President Trump's trade war and slowing global growth continue to pose risks for the United States economy.
- Chairman Powell said that the decision to lower rates is intended to provide some insurance against ongoing risks. He added that the United States economy remains strong.
- In December, the Federal Reserve left interest rates unchanged and signaled no plans to cut in 2020. The Fed says the U.S. economy is in a good place and does not need an extra boost.

Fiscal Policies – Taxes, Trade, and Tariffs:

- The U.S. trade deficit fell more than expected in November ahead of negotiations with China that cooled the simmering tariff battle between the two sides. The shortfall in goods and services declined to $43.09 billion for the month, below the $43.6 estimate from economists surveyed by Dow Jones. That represented the lowest deficit since October 2016. That was down sharply from $46.0 billion in October, which was revised lower from an initially reported $47.2 billion.
- The United States and China have reached an enforceable agreement on a Phase One trade deal that requires structural reforms and other changes to China's economic and trade regime in the areas of intellectual property, technology transfer, agriculture, financial services, and currency and foreign exchange. The Phase One agreement also includes a commitment by China that it will make substantial additional purchases of U.S. goods and services in the coming years.

Broad Market Performance

Broad Market Index Total Returns



	US Large Cap: S&P 500 TR	US Mid Cap: S&P MidCap 400 TR	US Small Cap: S&P SmallCap 600 TR	Foreign: FTSE Global All Cap ex US TR	Emerging Mkts: FTSE Emerging TR	REITs: FTSE NAREIT All Equity REITs TR	US Bonds: Barclays US Agg Bond TR	Global Bonds: Barclays Gbl Agg Ex USD TR Hdg
Quarter	9.07%	7.06%	8.21%	9.30%	11.81%	0.13%	0.18%	-1.11%
1 Year	31.49%	26.20%	22.78%	22.19%	20.56%	28.66%	8.72%	7.57%
3 Year	15.27%	9.26%	8.36%	10.16%	11.59%	10.29%	4.03%	4.38%

Broad Market Commentary

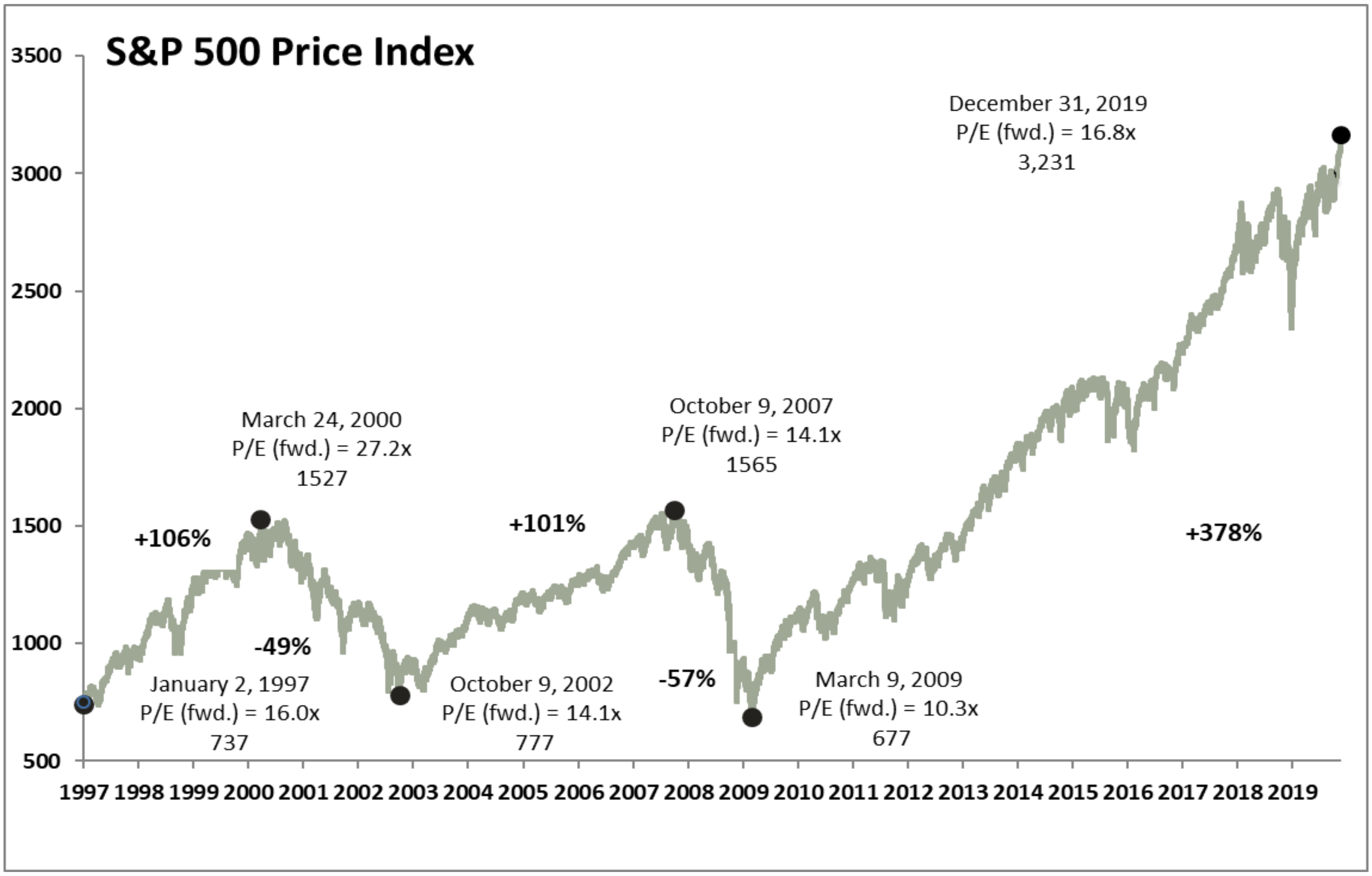
The fourth quarter saw equity markets hit new highs propelled in part by the U.S., Mexico, Canada (USMCA) trade deal moving closer to being ratified and the U.S. and China reaching agreement on Phase One of their trade deal. Phase One of the deal will avoid any new tariffs and roll back existing tariffs between the two countries. Tariffs imposed over the last few years have been seen as a drag on economies around the globe and the reductions and/or elimination of them are viewed as very positive for markets and economies. In October, the Federal Reserve lowered rates for a third time this year. It was another 0.25 bps cut. The Fed indicated that it may pause on any more rate cuts for a while.

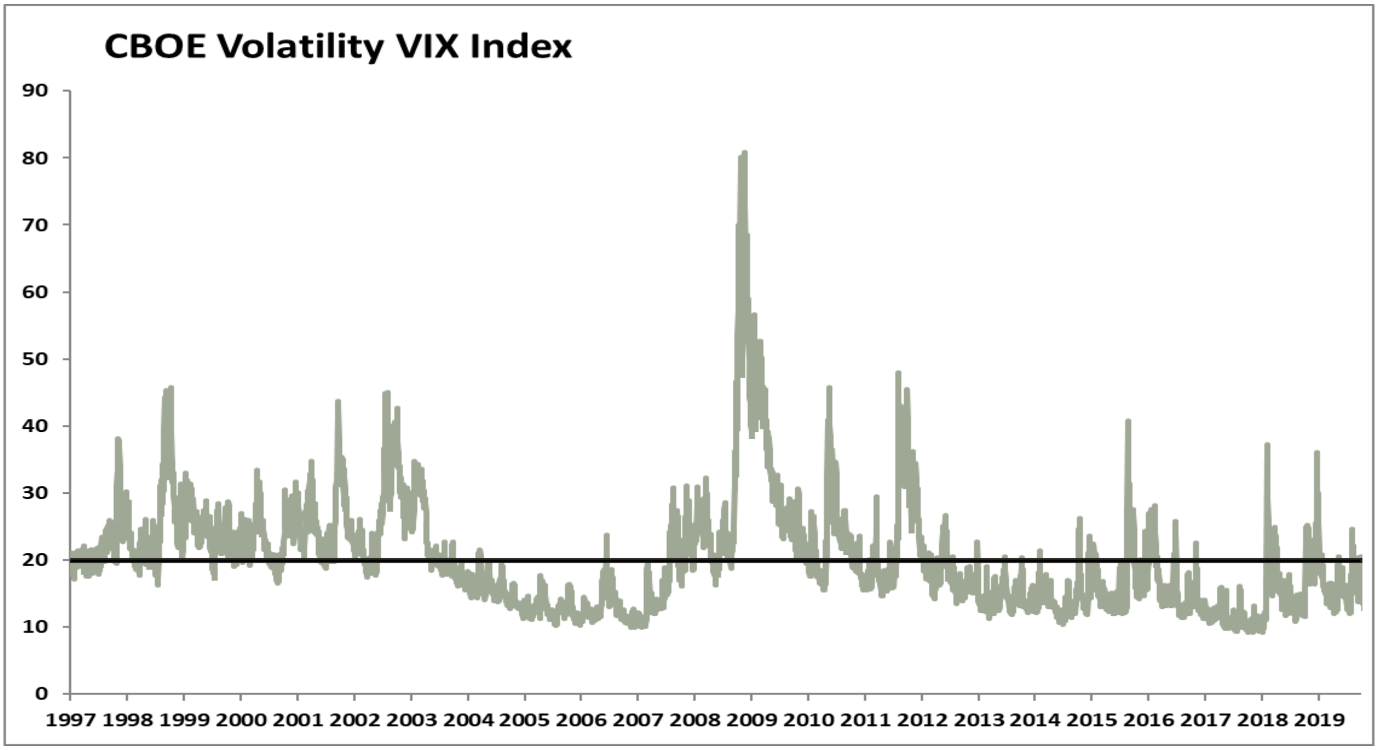
Despite the trade wars, economic data in America continues to look strong. Q3 GDP was revised up from 1.9% to 2.1% and unemployment numbers remain at historic lows. While the December jobs number was lower than estimates, the November jobs number far exceeded all expectations. The positive economic news has helped to dampen talk of a recession. In addition, after almost 2 years of slowing global growth, markets look to be bottoming out and showing signs of stabilizing. The Dow finished the quarter +6.7% and year +25.3%. The S&P return for Q4 was +9.1% and for the year was +31.5%. The NASDAQ ended the quarter +12.5% and the year +36.7%. This was the biggest one year gain for the S&P 500 and NASDAQ since 2013.

The December general election in the UK gave the Conservative Party a resounding victory and its largest majority since 1987. Boris Johnson has promised that Brexit will get done by January 31, 2020. Christine Legarde, the newly elected president of the European Central Bank, said the ECB will keep its ultra-easy economic policy in place. While the Chinese economy has shown signs of slowing, the Chinese government has pledged to maintain a prudent monetary policy and maintain economic growth next year within a “reasonable range”. Phase One of the U.S./China trade deal also calls for China to increase its purchases of U.S. agricultural goods over the next two years.

ASSET CLASS PERFORMANCE

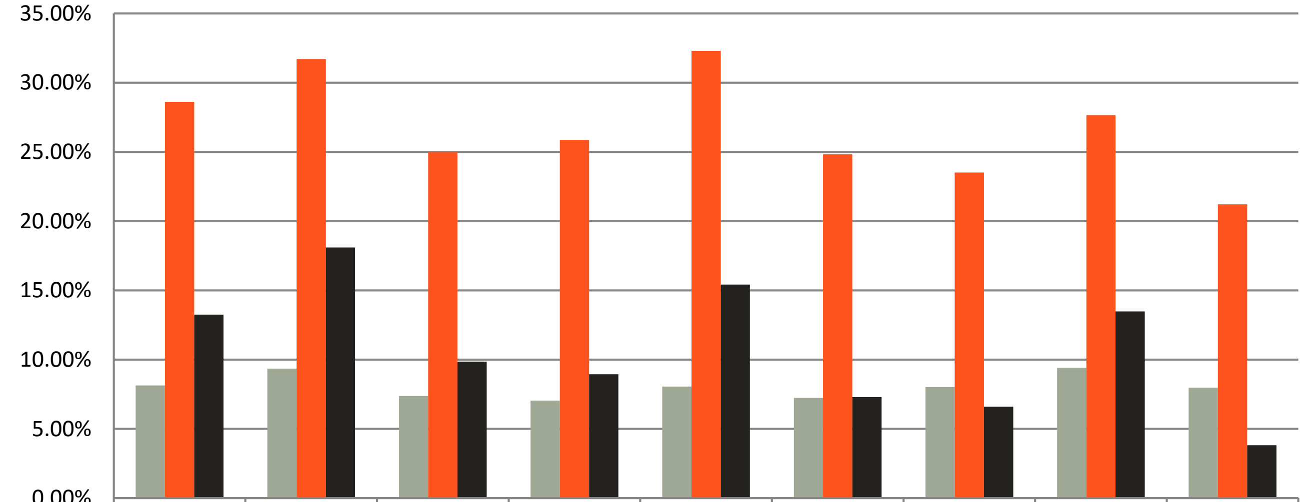
2015	2016	2017	2018	2019	YTD	Trailing 5 Years	
						Annualized Return	Volatility
FTSE NAREIT All Equity REITs 2.83%	S&P SmallCap 600 26.56%	FTSE Emerging 32.53%	Barclays Gbl Agg Ex USD Hdg 3.17%	S&P 500 31.49%	S&P 500 31.49%	S&P 500 11.70%	S&P SmallCap 600 16.03%
S&P 500 1.38%	S&P MidCap 400 20.74%	FTSE Global All Cap ex US 27.77%	ICE BofAML US Convts exMand TR 0.65%	FTSE NAREIT All Equity REITs 28.66%	FTSE NAREIT All Equity REITs 28.66%	S&P SmallCap 600 9.56%	FTSE Emerging 15.46%
Barclays Gbl Agg Ex USD Hdg 1.36%	FTSE Emerging 13.53%	S&P 500 21.83%	Barclays US Agg Bond 0.01%	S&P MidCap 400 26.20%	S&P MidCap 400 26.20%	ICE BofAML US Convts exMand TR 9.23%	S&P MidCap 400 13.91%
Barclays US Agg Bond 0.55%	S&P 500 11.96%	S&P MidCap 400 16.24%	Barclays US Treasury US TIPS -1.26%	ICE BofAML US Convts exMand TR 22.89%	ICE BofAML US Convts exMand TR 22.89%	S&P MidCap 400 9.03%	FTSE NAREIT All Equity REITs 13.11%
Barclays US Treasury US TIPS -1.44%	ICE BofAML US Convts exMand TR 11.71%	ICE BofAML US Convts exMand TR 15.70%	FTSE NAREIT All Equity REITs -4.04%	S&P SmallCap 600 22.78%	S&P SmallCap 600 22.78%	FTSE NAREIT All Equity REITs 8.43%	FTSE Global All Cap ex US 12.42%
S&P SmallCap 600 -1.97%	FTSE NAREIT All Equity REITs 8.63%	S&P SmallCap 600 13.23%	S&P 500 -4.38%	FTSE Global All Cap ex US 22.19%	FTSE Global All Cap ex US 22.19%	FTSE Global All Cap ex US 6.15%	S&P 500 11.98%
S&P MidCap 400 -2.18%	FTSE Global All Cap ex US 5.04%	FTSE NAREIT All Equity REITs 8.67%	S&P SmallCap 600 -8.48%	FTSE Emerging 20.56%	FTSE Emerging 20.56%	FTSE Emerging 5.99%	ICE BofAML US Convts exMand TR 8.99%
ICE BofAML US Convts exMand TR -2.75%	Barclays Gbl Agg Ex USD Hdg 4.90%	Barclays US Agg Bond 3.54%	S&P MidCap 400 -11.08%	Barclays US Agg Bond 8.72%	Barclays US Agg Bond 8.72%	Barclays Gbl Agg Ex USD Hdg 3.87%	Barclays US Treasury US TIPS 3.44%
FTSE Global All Cap ex US -4.03%	Barclays US Treasury US TIPS 4.68%	Barclays US Treasury US TIPS 3.01%	FTSE Emerging -13.04%	Barclays US Treasury US TIPS 8.43%	Barclays US Treasury US TIPS 8.43%	Barclays US Agg Bond 3.05%	Barclays US Agg Bond 3.06%
FTSE Emerging -15.22%	Barclays US Agg Bond 2.65%	Barclays Gbl Agg Ex USD Hdg 2.48%	FTSE Global All Cap ex US -14.36%	Barclays Gbl Agg Ex USD Hdg 7.57%	Barclays Gbl Agg Ex USD Hdg 7.57%	Barclays US Treasury US TIPS 2.62%	Barclays Gbl Agg Ex USD Hdg 2.70%


S&P 500 Price Index
3500
3000
2500
2000
1500
1000
500
December 31, 2019
P/E (fwd.) = 16.8x
3,231
March 24, 2000
P/E (fwd.) = 27.2x
1527
October 9, 2007
P/E (fwd.) = 14.1x
1565
+106%
+101%
+378%
-49%
-57%
January 2, 1997
P/E (fwd.) = 16.0x
737
October 9, 2002
P/E (fwd.) = 14.1x
777
March 9, 2009
P/E (fwd.) = 10.3x
677
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019


CBOE Volatility VIX Index
90
80
70
60
50
40
30
20
10
0
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

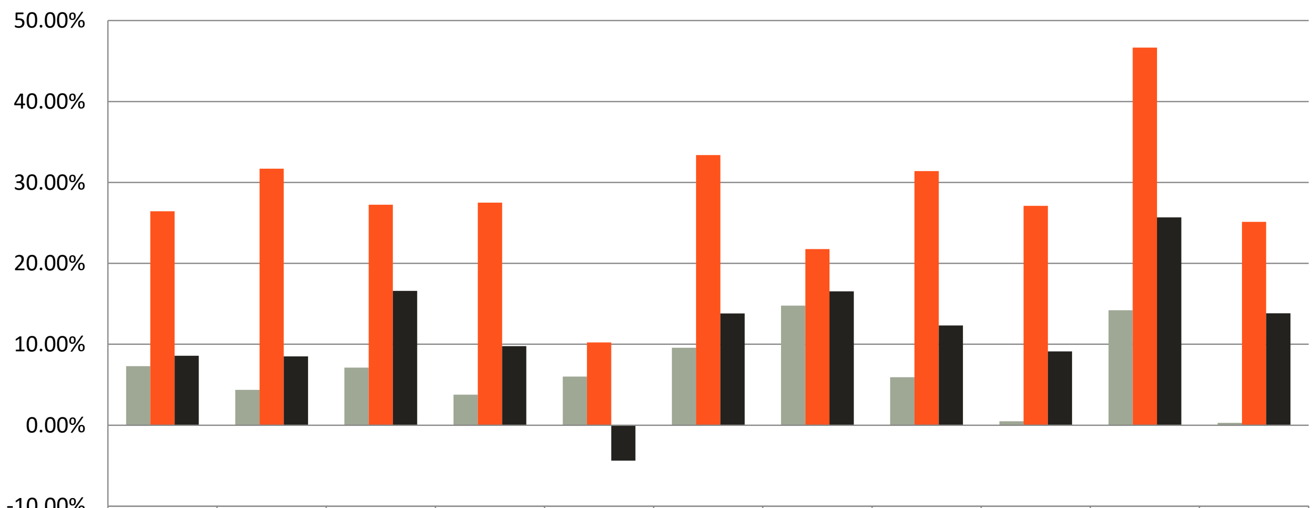
Domestic Equity Performance

Domestic Equity Category Average Total Returns



	Large Blend	Large Growth	Large Value	Mid-Cap Blend	Mid-Cap Growth	Mid-Cap Value	Small Blend	Small Growth	Small Value
Quarter	8.13%	9.35%	7.37%	7.03%	8.05%	7.23%	8.02%	9.41%	7.97%
1 Year	28.62%	31.71%	24.99%	25.87%	32.30%	24.83%	23.51%	27.66%	21.21%
3 Year	13.25%	18.10%	9.86%	8.94%	15.42%	7.29%	6.60%	13.49%	3.82%

Domestic Equity Sector Returns



	Basic Materials	Comm. Services	Consumer Cyclical	Consumer Defensive	Energy	Financial Services	Healthcare	Industrials	Real Estate	Technology	Utilities
YTD	7.30%	4.37%	7.12%	3.77%	6.01%	9.57%	14.78%	5.94%	0.48%	14.21%	0.28%
1 Year	26.44%	31.70%	27.25%	27.51%	10.22%	33.37%	21.77%	31.40%	27.10%	46.66%	25.12%
3 Year	8.57%	8.50%	16.60%	9.78%	-4.37%	13.81%	16.53%	12.33%	9.12%	25.68%	13.82%

**Determined by Morningstar Sector Indices*

Domestic Equity Performance

Quarter

	Value	Blend	Growth
Large Cap	7.37%	8.13%	9.35%
Mid Cap	7.23%	7.03%	8.05%
Small Cap	7.97%	8.02%	9.41%

1 Year

	Value	Blend	Growth
Large Cap	24.99%	28.62%	31.71%
Mid Cap	24.83%	25.87%	32.30%
Small Cap	21.21%	23.51%	27.66%

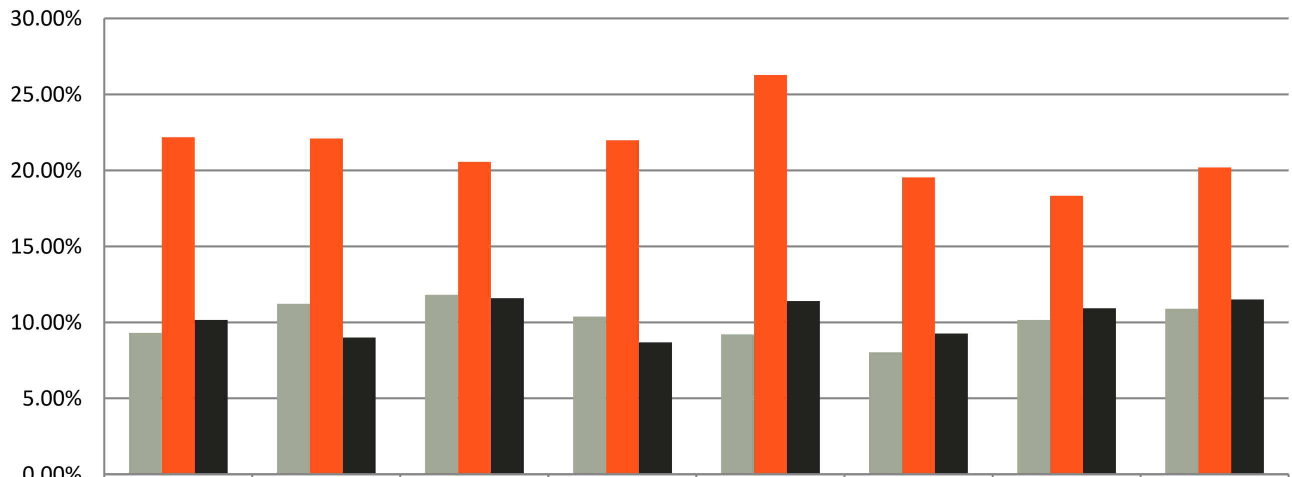
Domestic Equity Commentary

After positive trade news, the U.S. equity market posted strong gains during the fourth quarter of 2019. The U.S. president announced that the signing of the phase one trade deal between the U.S. and China is scheduled for January 15, 2020. Additionally, congress approved the U.S.-Mexico-Canada (USMCA) trade agreement and the U.S. refrained from imposing tariffs on European Union auto exports after the EU imposed taxes on internet companies, which are predominately U.S. based. Much of the fears of protectionism among investors appear ed to subside. Also, with the Fed remaining dovish and the US posting good job numbers, equity markets sentiment rallied.

The tide lifted all boats, but large-caps did better than mid- and small-caps. In the fourth quarter of 2019, the S&P 500 Index gained 9.07%, beating both the S&P Mid Cap 400 Index gain of 7.06% and the S&P SmallCap 600 Index gain of 8.21%. Growth stocks outperformed value stocks with the Russell 3000 Growth Index gaining 10.67% compared to a gain of 7.48% for the Russell 3000 Value Index. Nonetheless, not all sectors performed exceptionally. Defensive stocks trailed the rest of the market. Utility, real estate, and consumer defensive companies gained only 0.28%, 0.48%, and 3.77%, respectively. While healthcare, technology, and financial services gained 14.78%, 14.21%, and 9.57%, respectively. Energy companies also posted a large gain of 11.60%, aided by Brent crude oil 8.59% price surge. Overall, the US equity market finished the quarter with a 9.00% gain and the year with a 30.84% gain, as measure by the CRSP US Total Market Index.

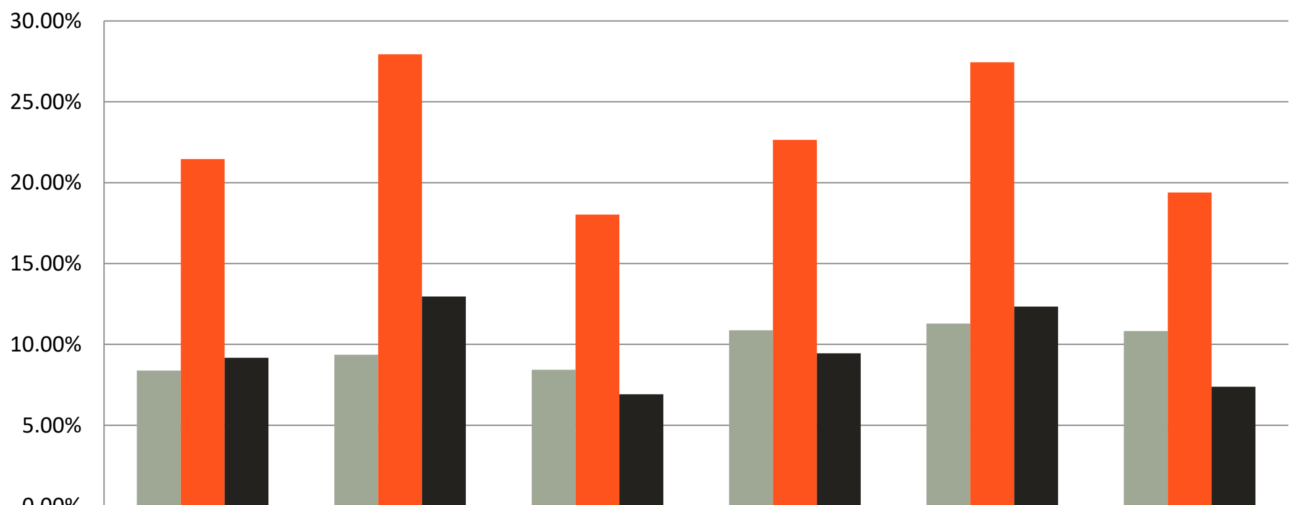
Foreign Equity Performance

Foreign Equity Index Total Returns



	FTSE Global All Cap ex US TR	FTSE Gbl SmallCap Ex US TR	FTSE Emerging TR	FTSE 100 UK	FTSE Europe All Cap Ex UK TR	FTSE Japan All Cap TR	FTSE AP All Cap Ex Japan TR USD	FTSE AW Latin America TR
Quarter	9.30%	11.22%	11.81%	10.38%	9.21%	8.03%	10.16%	10.90%
1 Year	22.19%	22.10%	20.56%	21.99%	26.28%	19.54%	18.34%	20.19%
3 Year	10.16%	9.00%	11.59%	8.68%	11.41%	9.26%	10.93%	11.51%

Foreign Equity Category Average Total Returns



	Foreign Large Blend	Foreign Large Growth	Foreign Large Value	Foreign Small/Mid Blend	Foreign Small/Mid Growth	Foreign Small/Mid Value
Quarter	8.38%	9.36%	8.43%	10.88%	11.29%	10.82%
1 Year	21.46%	27.94%	18.03%	22.65%	27.45%	19.39%
3 Year	9.17%	12.96%	6.92%	9.45%	12.34%	7.38%

**Determined by Morningstar Sector Indices*

Foreign Equity Performance

Quarter

	Value	Blend	Growth
Large Cap	8.43%	8.38%	9.36%
Small/Mid	10.82%	10.88%	11.29%

1 Year

	Value	Blend	Growth
Large Cap	18.03%	21.46%	27.94%
Small/Mid	19.39%	22.65%	27.45%

Foreign Equity Commentary

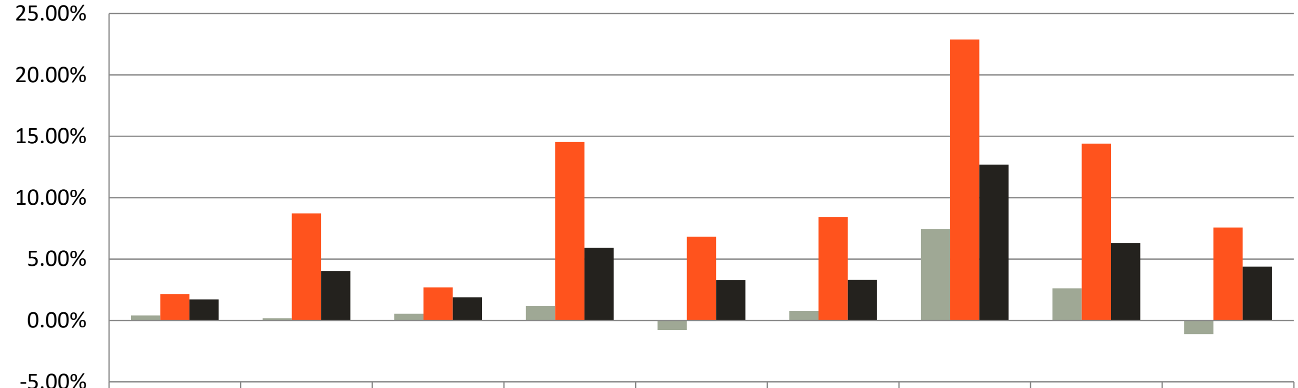
Non-U.S. markets benefited from the positive sentiment created by the rally in U.S. stocks and progress toward the completion of a phase one trade deal between the U.S. and China. The FTSE Global All Cap ex US Index gained 9.24% in Q4 of 2019. Larger caps underperformed relative to mid and small caps. The MSCI World ex USA Large Cap Index gained 7.45% compared to gains of 9.38% and 11.40% for MSCI World ex USA Mid Cap and Small Cap indices. Growth stocks outperformed value stocks by a tad. The MSCI World ex USA Growth Index gained 8.09% compared to 7.56% for the MSCI World ex USA Value Index.

In Europe, Italy's parliament approved its 2020 budget. Although, Italy's budget did not meet European Union (EU) deficit reduction guidelines, the EU did not push for any revisions. Overall, European markets performed well, the FTSE Europe All Cap ex UK Index gained 9.21%, while the UK's FTSE 100 gained 10.38% in Q4 2019. The FTSE Japan All Cap Index gained 8.00% for the quarter, this was despite industrial output declining in Japan. Non-U.S. developed equity markets finished the quarter with 8.17% gain and the year with a 22.01% gain, as measured by the MSCI EAFE Index.

Chinese stocks were one of the largest benefactors of trade developments. The FTSE China Index returned 14.88% for the quarter. In India, president Modi's party faced several electoral setbacks since protests erupted across the country in response to a new citizenship law. The FTSE India Index posted a smaller gain of 5.32%. Despite turbulence in Chile and other Latin America countries, equity markets rallied, the FTSE Latin America Index gained 10.74%. Overall, the FTSE Emerging Index ended the quarter with a 11.76% gain and the year with a 20.11% gain.

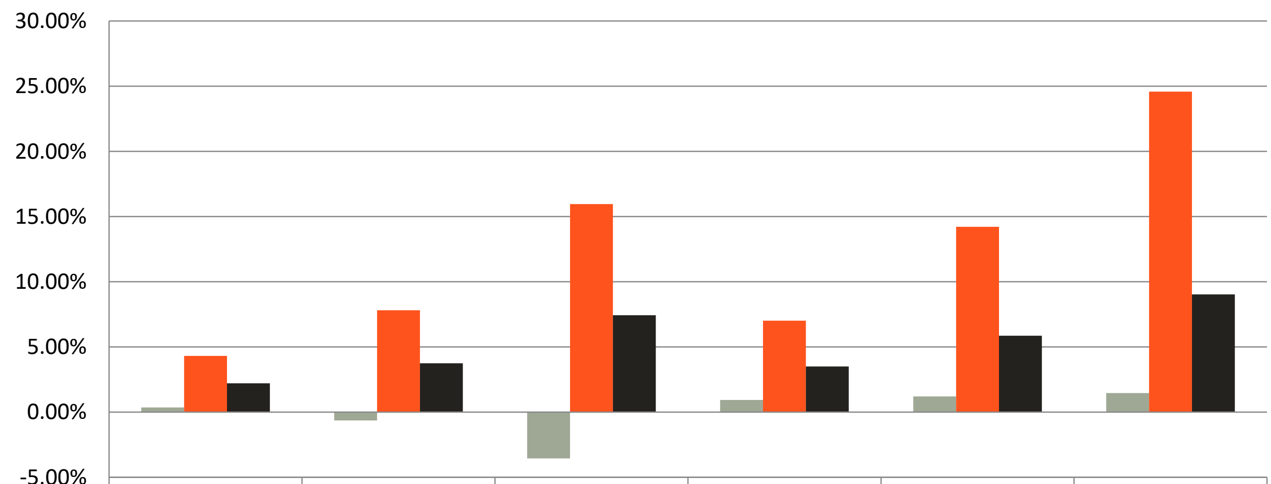
Fixed Income Market Performance

Fixed Income Benchmark Total Returns



	Treasuries: USTREAS T-Bill Auction Ave 3 Mon	Barclays US Agg Bond TR	Short-Term Bonds: Barclays Short-Term Gov/Corporate TR	Corp Bonds: Barclays US Corp TR	Govt Bonds: Barclays US Government TR	Inflation Protected: Barclays US Treasury US TIPS TR	Converts: BofAML Convertible Ex Mandatory TR	High Yield: BofAML US HY Master II TR	World Bond: Barclays Gbl Agg Ex USD TR Hdg
Quarter	0.40%	0.18%	0.54%	1.18%	-0.77%	0.79%	7.46%	2.61%	-1.11%
1 Year	2.15%	8.72%	2.69%	14.54%	6.83%	8.43%	22.89%	14.41%	7.57%
3 Year	1.71%	4.03%	1.89%	5.92%	3.31%	3.32%	12.69%	6.32%	4.38%

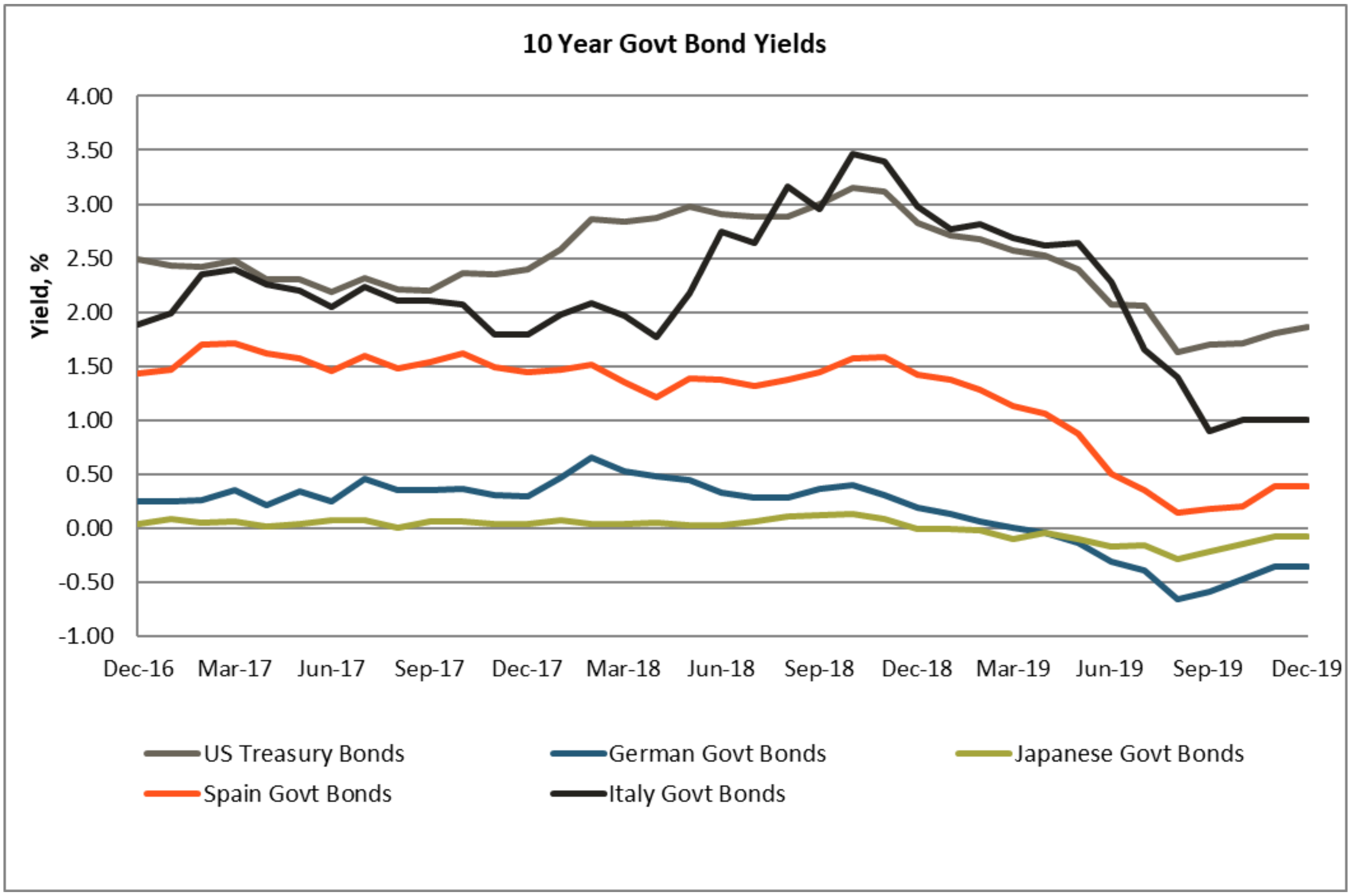
Domestic Fixed Income Total Returns



	Morningstar US 1-5Y Tsy&Gv Bd TR	Morningstar US 5-10Y Tsy&Gv Bd TR	Morningstar US 10+Y Tsy & Gv Bd TR	Morningstar US 1-5Y Corp Bd TR	Morningstar US 5-10Y Corp Bd TR	Morningstar US 10+Y Corp Bd TR
Quarter	0.35%	-0.64%	-3.55%	0.93%	1.20%	1.46%
1 Year	4.31%	7.82%	15.96%	7.01%	14.22%	24.58%
3 Year	2.20%	3.75%	7.43%	3.50%	5.86%	9.03%

**Determined by Morningstar Sector Indices*

Fixed Income – Global Bond Yields



Source: Federal Reserve and Bloomberg

Fixed Income Commentary

The Federal Reserve lower its benchmark interest rate by 0.25 bps points in October. That was the third rate cut of the year. The Fed rate is now in a range of 1.5% to 1.75%. In December, Fed Chairman Jerome Powell indicated that the Fed doesn't plan on any rate cuts in 2020 unless there is a material change in the U.S. economic outlook or a significant move in inflation. Powell stated that, "Both the economy and monetary policy right now are in a good place."

At year end, the yield on the two year note was 1.57% and the 10-year was 1.92%. The 2 year note experienced its biggest one year decline in yield since 2008 and the 10 year note its biggest one year decline in yield since 2014. U.S Investment Grade Corporates finished the year with the strongest performance of the fixed income sectors with a return of +14.5%. U.S. High Yield provided similar returns up 14.3% for the year. In contrast, the sectors that didn't do as well during the year were U.S. 1-3 Yr. Govt/Credit Index +4.03% and Asset-Backed Securities +4.53%.

After the Conservative Party's victory in December Brexit looked more certain to happen. Andrew Bailey was named the new governor of the Bank of England. Bailey will be looked on to help guide Britain's financial industry through Brexit. In addition to Bailey, the European Central Bank (ECB) has a new president Christine Legarde who replaces Mario Draghi. Legarde will keep the ECB's monetary policy and bond buying program in place and she called for European leaders to introduce more growth-friendly policies. In December, China's central bank kept its lending benchmark rate unchanged, but it is expected to pursue more monetary easing in 2020 in response to China's slowing economy.

Glossary

Return: Expressed in percentage terms, Morningstar's calculation of total return is determined each month by taking the change in monthly net asset value, reinvesting all income and capital-gains distributions during that month, and dividing by the starting NAV. Reinvestments are made using the actual reinvestment NAV, and daily payoffs are reinvested monthly. Unless otherwise noted, Morningstar does not adjust total returns for sales charges (such as front-end loads, deferred loads and redemption fees), preferring to give a clearer picture of a fund's performance. The total returns do account for management, administrative, 12b-1 fees and other costs taken out of fund assets. Total returns for periods longer than one year are expressed in terms of compounded average annual returns (also known as geometric total returns), affording a more meaningful picture of fund performance than non-annualized figures.

Annualized Returns: For standard time periods (1, 3, 5 and 10 years) returns are annualized as follows:

Ann Ret = (1+Cum Ret)^(1/y) -1

Where,

Cum Ret = the cumulative return

y = the number of years (1,3, 5 or 10)

Standard Deviation: A statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility. Morningstar computes standard deviation using the trailing monthly total returns for the appropriate time period. All of the monthly standard deviations are then annualized.

Beta: Beta is a measure of systematic risk with respect to a benchmark. Systematic risk is the tendency of the value of the fund and the value of benchmark to move together. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a portfolio's excess return over T-bills to the benchmark's excess return over T-bills, so a beta of 1.10 shows that the portfolio has performed 10% better than its benchmark in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the portfolio's excess return is expected to perform 15% worse than the benchmark's excess return during up markets and 15% better during down markets.

Tracking Error: Tracking error is a measure of the volatility of excess returns relative to a benchmark.

Max Drawdown: The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

R-Square: Reflects the percentage of a portfolio's movements that can be explained by movements in its benchmark. R-squared is a number between 0 and 100% that measures the strength of the relationship between the dependent and independent variables. An R-squared of 0 means that there is no relationship between the two variables and an R-squared of 100% means that the relationship is perfect with every scatter point falling exactly on the regression line. Thus, stock index funds that track the S&P 500 index will have an R-squared very close to 100%. A low R-squared indicates that the fund’s movements are not well explained by movements in the index. An R-squared measure of 35%, for example, means that only 35% of the fund’s movements can be explained by movements in the index.

Sortino Ratio: The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. Since upside variability is not necessary a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

Sharpe Ratio: A risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess returns. The Sharpe Ratio can be used to compare two funds directly on how much risk a fund had to bear to earn excess return over the risk-free rate.

Alpha: Alpha measures a fund's performance after adjusting for the funds systematic risk as measured by the fund's beta with respect to the index. Alpha is the difference between the average excess return on the fund and the average excess return on the levered or de-levered index portfolio. For example, if the fund had an average excess return of 6% per year and its beta with respect to the S&P 500 was 0.8 over a period when the S&P 500's average excess return was 7%, its alpha would be 6% – 0.8*7% = 0.4%.

Style Consistency: The Style Consistency Metric measures the extent of historical portfolio/strategy movement in both the value-growth (X axis) and size (Y axis) dimensions. Investments with low scores are considered more consistent, while investments with high scores are considered less consistent. The metric is calculated as follows:

Style Consistency Metric = Std $\sqrt{VG_i^2 + Size_i^2}$ Dev

Where,

VG = Value-Growth Score of the portfolio

Size = Size score of the portfolio

n = the number of available portfolios for the past 3 years

i = a portfolio of holdings

Std Dev = the sample standard deviation

Style Dispersion: The Style Dispersion Metric measures the degree of overall scatter of the holdings in the most recent portfolio along both the value-growth and size dimensions. The metric is calculated from the Value-Growth Dispersion Metric and Size Dispersion Metric according to the Pythagorean theorem: SQRT(Value-Growth Dispersion Metric+Size Dispersion Metric).

Size Consistency: The Size Consistency Metric measures the extent of historical portfolio/strategy movement in the size (Y axis) dimension. Investments with low scores are considered more consistent, while investments with high scores are considered less consistent. The metric is calculated by taking the standard deviation of the Size Scores of all available portfolios from the past three years.

Information Ratio: Information ratio is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark does not have to be the risk-free rate.

Treynor Ratio: Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

Upside Capture Ratio: Upside Capture Ratio measures a manager's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the security's upside capture return and dividing it by the benchmark's upside capture return.

Downside Capture Ratio: Downside Capture Ratio measures manager's performance in down markets. A down-market is defined as those periods (months or quarters) in which market return is less than 0. In essence, it tells you what percentage of the down-market was captured by the manager. For example, if the ratio is 110%, the manager has captured 110% of the down-market and therefore underperformed the market on the downside.

Manager Tenure: The number of years that the current manager has been the portfolio manager for the investment product. For products with more than one manager, the tenure of the manager who has been with the product the longest is shown.

Turnover Ratio: This is a measure of the portfolio manager's trading activity, which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year), and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year.

Annual Report Net Expense Ratio: The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio. The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees. Sources for expense ratios include the Annual Report - an audited trailing perspective - and the Prospectus - an unaudited projection.

Average Credit Quality: Average credit quality gives a snapshot of the portfolio's overall credit quality. It is an average of each bond's credit rating, adjusted for its relative weighting in the portfolio. The average is calculated using an exponential approach instead of a linear approach to better account for the default rates of bonds with different ratings. AAA bonds carry the highest credit rating, while bonds issued by speculative companies usually carry the lowest credit ratings. For taxable bonds, anything at or below BB is considered a high-yield or junk bond. For municipal bonds, anything at or below BBB is considered a high-yield or junk bond. For the purpose of Morningstar's calculations, U.S. government bonds are considered AAA Nonrated municipal bonds generally are classified as BBB. Other nonrated bonds generally are considered B.

Average Effective Duration: A measure of a fund's interest-rate sensitivity--the longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration. The relationship between funds with different durations is straightforward: A fund with a duration of 10 years is twice as volatile as a fund with a five-year duration.

Note: Definitions are provided by Morningstar