CETERA®
INVESTMENT
MANAGEMENT

Fourth Quarter 2019 Chartbook

Data as of August 31, 2019

Fourth Quarter 2019 Outlook

CETERA® INVESTMENT MANAGEMENT

Economy – Slowdown in Growth

- The U.S. economic expansion is now over 10 years old and there are signs that growth is weakening. Slowing global trade, a strong U.S. Dollar, and trade war uncertainty has led to a contraction in U.S. manufacturing activity for the first time in three years. Jobs growth is still at a solid level, but labor market growth has slowed this year to its lowest pace since 2010.
- Despite slowing growth concerns, we are unlikely to see a recession in the near-term because the services economy remains on solid footing. Consumer spending is still strong and the labor market is still expanding.

Equities – Will the Dovish Fed Boost Stocks?

- The Fed's dovish pivot this year has resulted in strong gains for U.S. equities despite headwinds including slower growth, an earnings recession, and an escalation in the trade war between the U.S. and China. These issues remain and are likely to contribute to more spikes in volatility like we experienced in August.
- Tepid inflation and low bond yields have been supportive of elevated valuations for domestic large cap stocks. Foreign stocks continue to offer lower valuation levels, but most of the major developed regions continue to deal with weak economic and earnings growth. International stocks would benefit from a pickup in global growth and improving global trade.

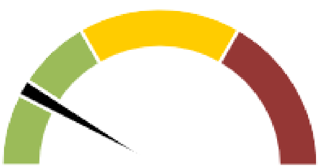
Fixed Income – Where Do Yields Go From Here?

- The rally in bonds extended into August and the 10-year Treasury yield dropped to as low as 1.43%. Globally, the amount of debt with a negative yield climbed to $16 trillion. The bond market is showing angst about the economy and that is reflected in the inverted yield curve.
- The Fed's reversal this year to a dovish path is also driving bond yields lower. Bond yields are likely to stabilize if growth picks up, inflationary pressures return, or if the Fed doesn't cut rates as fast as the market expects.

U.S. Economic Risk Overview

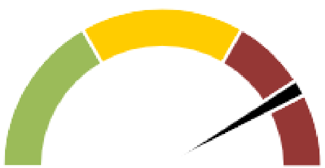
Indicator	Recession Risk	Trend Signal	Trend											Latest
ISM Manufacturing PMI	MODERATE	↓	59.5	57.5	58.8	54.3	56.6	54.2	55.3	52.8	52.1	51.7	51.2	49.1
ISM Non-Manufacturing PMI	LOW	↓	61.6	60.3	60.7	58.0	56.7	59.7	56.1	55.5	56.9	55.1	53.7	56.4
Industrial Production YoY Growth	MODERATE	↓	5.4%	4.1%	4.1%	3.8%	3.6%	2.7%	2.3%	0.7%	1.8%	1.1%	0.5%	0.4%
Building Permits YoY Growth (3 Mo. Avg.)	LOW	↓	0.1%	1.0%	-2.3%	-0.5%	-0.6%	-0.6%	-2.4%	-5.8%	-6.2%	-5.5%	-4.5%	-2.4%
Unemployment Rate	LOW	→	3.7%	3.8%	3.7%	3.9%	4.0%	3.8%	3.8%	3.6%	3.6%	3.7%	3.7%	3.7%
Temporary Help Employment YoY	MODERATE	↓	2.5%	2.7%	2.5%	2.8%	1.9%	1.8%	1.5%	1.2%	1.1%	1.0%	0.6%	0.7%
Real Retail Sales YoY Growth (3 Mo. Avg.)	LOW	→	2.8%	2.4%	1.9%	1.1%	0.8%	0.3%	1.1%	1.4%	1.6%	1.5%	1.5%	1.9%
U. of Michigan Consumer Sentiment	LOW	↓	100.1	98.6	97.5	98.3	91.2	93.8	98.4	97.2	100.0	98.2	98.4	89.8
Philly Fed Leading U.S. Index	LOW	→	1.52	1.35	1.46	1.11	1.10	1.11	1.16	1.22	1.41	1.39	1.01	1.07
Treasury Yield Curve (10yr - 2yr)	MODERATE	→	0.24%	0.28%	0.21%	0.21%	0.18%	0.21%	0.14%	0.24%	0.19%	0.25%	0.13%	0.00%

Recession Riskometer



LOW

Economic Trend Signal



NEGATIVE

Sources are listed on pages 34-35. Data as of 8/31/2019.

Commentary

The dials on the left show our combined estimate of near-term recession risk and direction of economic growth, based on the average reading of ten economic indicators. The Recession Riskometer focuses on producer sentiment, output and manufacturing growth, employment, consumer strength and leading economic indicators.

- At this time, six out of ten recession risk indicators signal a low risk of recession. Four indicators are signaling a moderate risk of recession including the ISM Manufacturing PMI, industrial production growth, temporary help employment, and the Treasury Yield Curve. Weaker global growth, slowing global trade, and the fading impact of fiscal stimulus have all contributed to a slowdown in the outlook for U.S. economic activity. Overall, the risk of a recession is still low in the near-term.
- The overall economic trend signal remains negative. At present, six of the indicators are in a negative trend and four indicators are in a stable trend. The negative reading for the economic trend signal is indicating that our key recession risk indicators are decelerating. This is suggesting that economic growth is slowing.

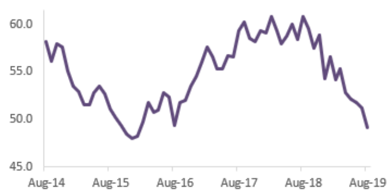
U.S. Economic Risk Indicators

ISM Manufacturing PMI

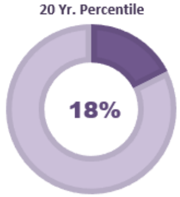
Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
59.5	57.5	58.8	54.3	56.6	54.2	55.3	52.8	52.1	51.7	51.2	49.1

Indicator Recession Risk

MODERATE



20 Yr. Percentile



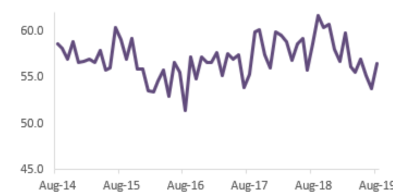
The ISM Manufacturing PMI index fell from 51.2 in July to 49.1 in August. This indicator has contracted for the first time in three years and the index is in the 18th percentile - over the last 20 years the PMI reading has been lower only 18% of the time. *A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.*

ISM Non-Manufacturing PMI

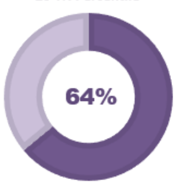
Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
61.6	60.3	60.7	58.0	56.7	59.7	56.1	55.5	56.9	55.1	53.7	56.4

Indicator Recession Risk

LOW



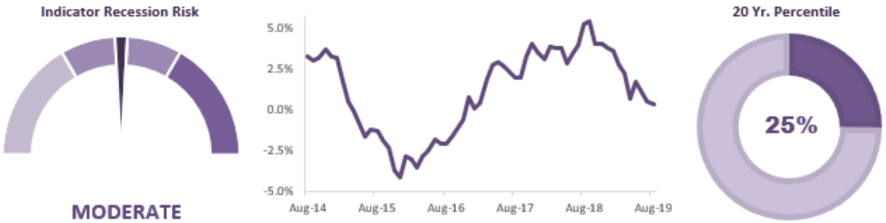
20 Yr. Percentile



The ISM Non-Manufacturing Index, a barometer for services activity, increased to 56.4 in August. This indicator has expanded 115 straight months and is higher than 64% of all readings over the last 20 years. It is a concern if we see a sharp drop in this indicator. *A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.*

Industrial Production - YoY Change

Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
5.4%	4.1%	4.1%	3.8%	3.6%	2.7%	2.3%	0.7%	1.8%	1.1%	0.5%	0.4%



YoY Industrial Production growth dropped to 0.4% in August and has trended lower since reaching a peak of 5.4% last September. The most recent YoY figure is lower than 75% of all monthly readings over the last 20 years. This level indicates a moderate recession risk. *Industrial Production Index measures real output for manufacturing, mining, and utilities. The YoY change in Industrial Production signals a high risk of recession when it falls into negative territory. There is a low recessionary risk when greater than 1%.*

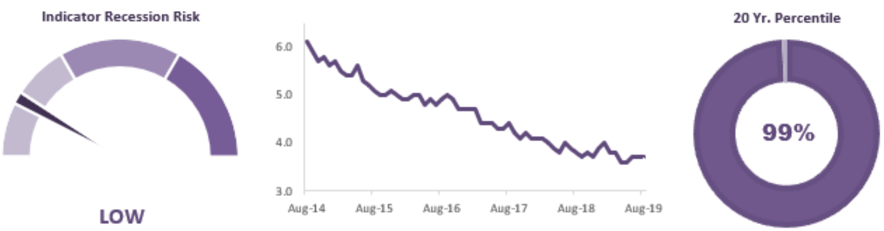
Building Permits YoY Growth (3 Mo. Avg.)

Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19
0.1%	1.0%	-2.3%	-0.5%	-0.6%	-0.6%	-2.4%	-5.8%	-6.2%	-5.5%	-4.5%	-2.4%

The 3-month average of building permits was -2.4% YoY in July. The current reading is lower than 72% of all monthly readings over the past 20 years, but is still signaling a low risk of recession. Despite the pullback in housing, there are signs that activity may be stabilizing. *Building Permits are a measure of the issuance of permits to build new housing units. Building permit growth is a measure of the total year-over-year percentage change in building permits (3-month average). This indicator signals a high recession risk when growth falls below -15% YoY.*

U3 Unemployment Rate

Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
3.7%	3.8%	3.7%	3.9%	4.0%	3.8%	3.8%	3.6%	3.6%	3.7%	3.7%	3.7%



The unemployment rate remained at 3.7% in August and is unlikely to fall much further because the pace of jobs growth is slowing. For now, the unemployment rate is still near a 50-year low. Caution is advised if the unemployment rate begins to move higher. *The U3 Unemployment Rate measures the percentage of people without jobs who are actively seeking work. This is often the officially quoted unemployment rate.*

Temporary Help Employment - YoY Change

Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
2.5%	2.7%	2.5%	2.8%	1.9%	1.8%	1.5%	1.2%	1.1%	1.0%	0.6%	0.7%

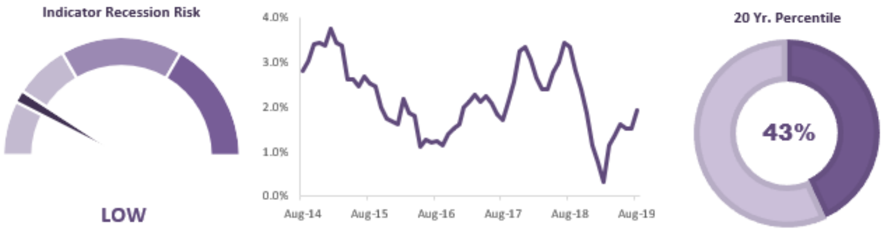
The year-over-year change in temporary help employment has trended lower this year. It was only 0.7% YoY in August, signaling a rising risk of a slowdown in the labor market. The current reading is currently higher than 31% of all months over the past 20 years. Caution is warranted if this indicator falls towards flat or negative YoY growth. *Temporary help employment figures are viewed favorably if they are positive and trending higher. Changes in temporary help numbers are often used as a predictor of changes in future employment.*

U.S. Economic Risk Indicators

CETERA®
INVESTMENT
MANAGEMENT

Real Retail Sales (3 Mo. Avg.) - YoY Change

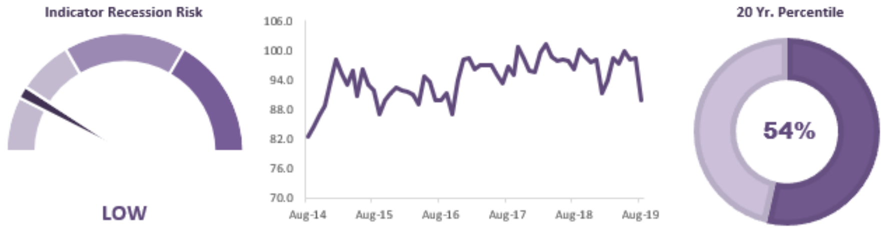
Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
2.8%	2.4%	1.9%	1.1%	0.8%	0.3%	1.1%	1.4%	1.6%	1.5%	1.5%	1.9%



The three-month average of Real Retail Sales climbed to 1.9% YoY through August. This reading is higher than just 43% of all readings over the last 20 years. Retail sales growth has trended higher after weakening earlier in the year. *Real retail sales growth is a measure of the total year-over-year change in retail and food sales adjusted for inflation using the Consumer Price Index. Real retail sales typically decline heading into a recession, and a weaker reading is a concern for the economy.*

U. of Michigan Consumer Sentiment

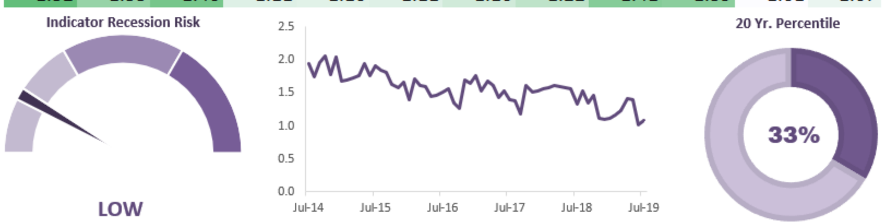
Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
100.1	98.6	97.5	98.3	91.2	93.8	98.4	97.2	100.0	98.2	98.4	89.8



The University of Michigan Consumer Sentiment index fell to a 3-year low of 89.8 in August from 98.4 in July. This indicator is currently in the 54th percentile, meaning it is higher now than 54% of all months over the last 20 years. *Strong consumer confidence is a positive signal for future consumer spending, but it is a concern if this indicator is trending lower. The index uses surveys to gather information on consumer expectations regarding the economy.*

Philly Fed Leading U.S. Index

Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19
1.52	1.35	1.46	1.11	1.10	1.11	1.16	1.22	1.41	1.39	1.01	1.07



The Philly Fed Leading Index increased slightly from 1.01 in June to 1.07 in July. The leading index remains at a level that indicates stable economic growth in future months. The Philly Fed Leading Index is in the 33rd percentile – it is higher than 33% of all months over the last 20 years. *The Philly Fed Leading Index is a composite index of several U.S. economic indicators that lead the economy. This indicator historically has declined into negative territory in recessions and rises back into positive territory in expansions.*

Treasury Yield Curve (10 Yr. Minus 2 Yr.)

Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
0.24%	0.28%	0.21%	0.21%	0.18%	0.21%	0.14%	0.24%	0.19%	0.25%	0.13%	0.00%

The 2-10 yield curve spread briefly inverted in August and ended the month flat. Several parts of the yield curve are currently inverted including the 3mo-10yr spread. A sustained inversion is a red flag for assessing the risk of a recession over the next 12 to 24 months. *The difference (spread) between the yields of the 10-Year and 2-Year maturity Treasury bonds is one of the early and reliable predictors of a recession. Under normal conditions the 10-Year/2-Year spread is positive, and as recession nears the spread flattens and turns negative. This indicator will shift to high recession risk when the spread is below zero.*

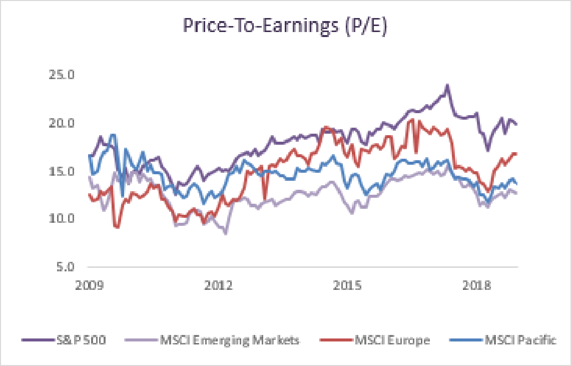
Sources are listed on pages 34-35. Data as of 8/31/2019.

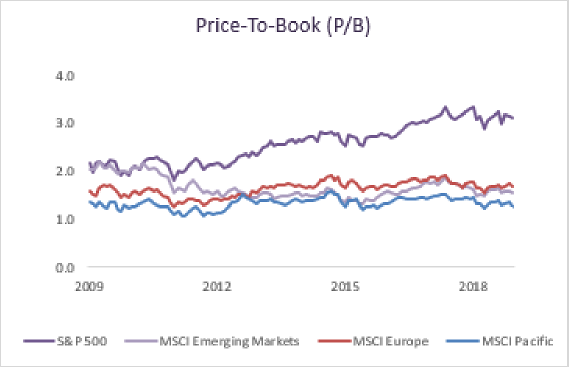
Equity Valuation Overview

CETERA® INVESTMENT MANAGEMENT

Price/Earnings (P/E)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	19.8	17.4	1.0	85%
S&P 500 Growth	25.4	19.8	1.5	92%
S&P 500 Value	15.7	15.3	0.2	53%
S&P MidCap 400	18.1	19.0	-0.4	26%
S&P MidCap 400 Growth	22.6	21.5	0.3	64%
S&P MidCap 400 Value	14.8	17.0	-1.1	13%
S&P SmallCap 600	17.5	19.3	-0.7	18%
S&P SmallCap 600 Growth	21.5	21.1	0.1	55%
S&P SmallCap 600 Value	14.7	17.8	-1.5	7%
MSCI EAFE	15.4	14.4	0.4	64%
MSCI EAFE Growth	21.2	17.8	1.1	87%
MSCI EAFE Value	11.7	12.1	-0.2	39%
MSCI Emerging Markets	12.6	12.7	0.0	47%
MSCI Europe	16.7	14.3	0.8	79%
MSCI Pacific	13.7	15.1	-0.6	27%
MSCI ACWI	17.1	15.6	0.7	77%

Price/Book Value (P/B)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	3.1	2.6	1.3	91%
S&P 500 Growth	5.1	4.0	1.2	85%
S&P 500 Value	2.2	1.9	0.9	80%
S&P MidCap 400	2.0	2.2	-0.5	26%
S&P MidCap 400 Growth	3.1	3.1	-0.1	34%
S&P MidCap 400 Value	1.5	1.7	-0.7	22%
S&P SmallCap 600	1.8	2.0	-0.8	20%
S&P SmallCap 600 Growth	2.5	2.7	-0.4	26%
S&P SmallCap 600 Value	1.4	1.6	-0.9	18%
MSCI EAFE	1.5	1.8	-0.6	33%
MSCI EAFE Growth	2.9	2.7	0.4	73%
MSCI EAFE Value	1.0	1.4	-0.8	8%
MSCI Emerging Markets	1.5	1.9	-0.8	25%
MSCI Europe	1.7	2.1	-0.5	45%
MSCI Pacific	1.3	1.5	-0.6	24%
MSCI ACWI	2.1	2.2	-0.1	58%





Commentary

The two charts above show equity valuations based on the average Price-to-Earnings (P/E) and Price-to-Book (P/B) ratios for commonly used equity benchmarks. To the left, current valuations are compared to their 15-year average, and we show how far (as measured by standard deviation) the current valuation is from the average. Valuations within 0.5 standard deviations are close to historic norms, a reading around 1.5 indicates high valuation, and figures above 2 are near historic highs. The percentile figure shown next provides a ranking of each index valuation relative to its 15-year history. As an example, if the percentile is 80%, valuation is higher than 80% of all other observations for that index over the past 15-years and lower than 20% of the observations.

- As measured by Price-to-Earnings, U.S. large cap and growth stocks have an elevated valuation level compared international and value stocks. The P/E ratio for U.S. large cap growth stocks is 1.5 st. dev's above the 15-year average.
- Valuation levels have receded for U.S. small cap stocks. They are trading at a discount versus their 15-year average P/E.
- Emerging markets and international value stocks are slightly below their historical average valuations. Within EAFE, the Pacific region has a valuation level that is at a discount compared to Europe.
- Based on Price-to-Book, U.S. large cap stocks have a valuation premium compared other categories. U.S. mid and small cap stocks have a discounted P/B versus their 15-year average.
- International developed (MSCI EAFE) and Emerging markets (MSCI Emerging Markets) have a discounted P/B ratio compared to U.S. stocks. They are also discounted versus their 15-year averages.

Source: Cetera Investment Management, Morningstar, MSCI and Standard & Poor's. Data as of 8/31/2019.

Sector Valuation Overview

CETERA®
INVESTMENT
MANAGEMENT

Price/Earnings (P/E)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	19.8	17.4	1.0	85%
S&P 500 Consumer Discretionary	25.0	18.9	2.0	98%
S&P 500 Consumer Staples	23.2	19.2	1.5	94%
S&P 500 Energy	13.9	14.6	-0.1	55%
S&P 500 Financials	12.5	14.4	-0.7	21%
S&P 500 Health Care	22.1	20.6	0.4	55%
S&P 500 Industrials	19.3	17.9	0.5	73%
S&P 500 Information Technology	22.8	20.3	0.6	67%
S&P 500 Materials	18.4	18.0	0.1	56%
S&P 500 Real Estate*	33.0	N/A	N/A	N/A
S&P 500 Utilities	23.4	16.9	2.0	99%
S&P 500 Communication Services	20.7	18.9	0.2	76%

Price/Book Value (P/B)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	3.1	2.6	1.3	91%
S&P 500 Consumer Discretionary	5.5	3.4	1.7	94%
S&P 500 Consumer Staples	5.0	4.0	1.7	96%
S&P 500 Energy	1.5	2.2	-1.4	1%
S&P 500 Financials	1.3	1.4	-0.1	51%
S&P 500 Health Care	3.9	3.4	0.8	72%
S&P 500 Industrials	4.2	3.3	1.3	87%
S&P 500 Information Technology	7.4	4.2	3.3	99%
S&P 500 Materials	2.3	2.8	-1.2	6%
S&P 500 Real Estate*	3.6	N/A	N/A	N/A
S&P 500 Utilities	2.2	1.8	1.5	93%
S&P 500 Communication Services	3.3	2.4	1.5	88%

Commentary

These charts show sector valuations based on the average Price-to-Earnings (P/E) and Price-to-Book (P/B) ratios for the sectors within the S&P 500 index. Valuations are compared to 15 year averages, and we show by how many standard deviations the current is from the average. The percentile figure shown next provides a ranking of each index valuation relative to its 15-year history. As an example, if the percentile is 80%, it is greater than 80% of all other observations over the past 15 years and lower than 20% of observations.

Cyclical sectors:

- Consumer Discretionary, Materials and Financials sectors all have a negative return QTD (through 8/31). Valuations for consumer discretionary stocks remain well above their historical average for P/E (2.0 st. dev above) and P/B (1.7 st. dev above). Financial stocks are trading at a discount versus their historical average. The Materials sector is closer to its historical average valuation level.

Economically-sensitive sectors:

- The energy sector had the worst QTD performance through the first two months of Q3 (-9.7%). Industrials stocks were also negative, while Communication Services and Technology are both positive QTD. Although energy stocks have struggled recently, the energy sector has below-average valuations. The technology sector, on the other hand, is trading slightly above its historical average based on P/B and is significantly above its historical P/B average (3.3 st. dev. above).

Defensive sectors:

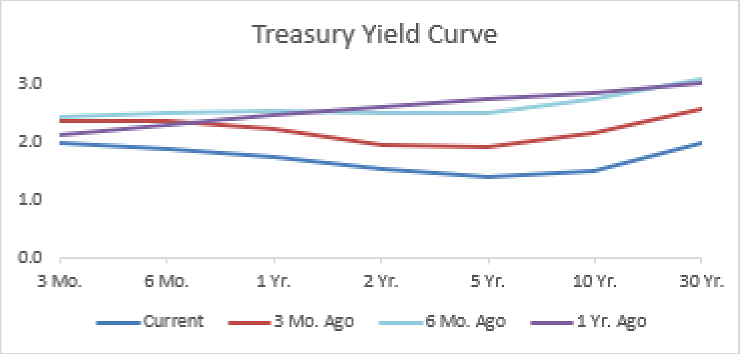
- Utilities, Consumer Staples, and Real Estate stocks led the S&P 500 in Q3 performance through 8/31. Health Care stocks lagged. The defensive sectors have largely performed well in recent months, but their valuation levels are stretched. The defensive sectors are trading at a premium versus their historical average valuation levels.

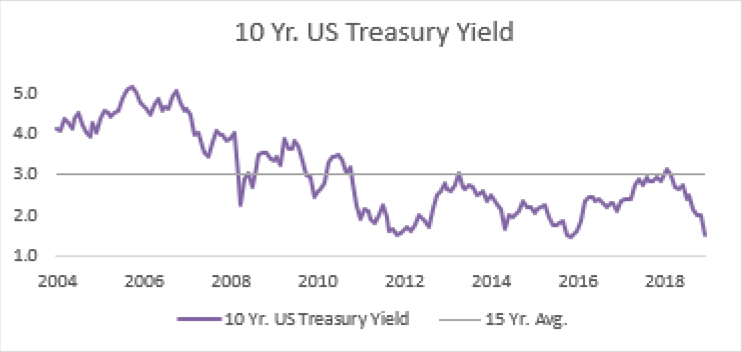
*S&P 500 Real Estate Index does not have 15 years of historical data

Source: Cetera Investment Management, Morningstar, and Standard & Poor's. Data as of 8/31/2019.

Yield				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
BofAML US Treasury Bill 3 Mon USD	1.93	1.31	-0.4	29%
BBgBarc Treasury 1-3 Yr USD	1.56	1.72	0.1	40%
BBgBarc US Treasury 7-10 Yr USD	1.49	2.88	1.3	94%
BBgBarc US Treasury US TIPS USD	1.69	3.02	0.8	85%
BBgBarc Municipal USD	1.65	3.07	1.7	99%
BBgBarc GNMA USD	2.18	3.71	1.2	94%
BBgBarc US Corp IG USD	2.81	4.25	1.1	94%
BBgBarc US Corporate High Yield USD	5.72	7.86	0.8	87%
BBgBarc US Aggregate 1-3 Yr USD	1.79	2.20	0.3	46%
BBgBarc US Agg Bond USD	2.13	3.32	1.0	87%
BBgBarc Global Treasury Ex US USD	0.25	1.82	1.7	100%
JPM EMBI Global Diversified USD	5.16	6.27	1.0	90%

Treasury Spreads				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
BBgBarc Municipal USD	-0.96	0.65	2.2	98%
BBgBarc GNMA USD	-0.43	1.29	2.6	99%
BBgBarc US Corp IG USD	0.20	1.83	2.9	100%
BBgBarc US Corporate High Yield USD	3.11	5.44	1.1	99%
BBgBarc US Agg Bond USD	-0.48	0.89	2.2	99%
BBgBarc Global Treasury Ex US USD	-2.36	-0.60	2.5	98%
JPM EMBI Global Diversified USD	2.55	3.85	1.5	90%

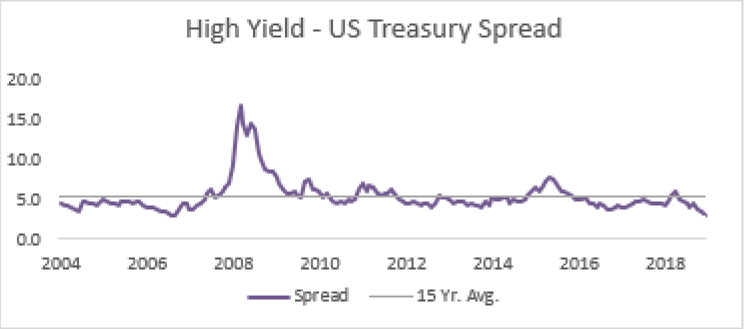




Commentary

The Yield chart above shows current yields for several commonly used fixed income benchmarks, compared to their 15-year average. The Treasury Spreads chart shows spreads of credit-sensitive bond sectors relative to Treasury bonds. We also show by how many standard deviations the current yield is from its average, and how often has it been as high or as low for the past 15 years.

- Bond yields continued their downward trend into August. Escalating trade war rhetoric, tepid inflation, and weaker economic growth contributed to the fall in yields. A large part of the curve is inverted.
- The 10-year Treasury yield dropped near its lowest level in 3 years in August - U.S. government bonds are benefitting from lower yields globally. Roughly $16 trillion of global sovereign debt has a negative yield.
- Short-term bonds look attractive at this level. They have comparable yields with intermediate term debt, with less duration risk. Bond yields are closer to the bottom end of a multi-year range, and could move higher if a trade deal is worked out or growth exceeds expectations.



Source: Cetera Investment Management, Morningstar, BofAML, BBgBarc, JPMorgan, Federal Reserve Bank of St. Louis. Data as of 8/31/2019.

Appendix

U.S. Economic Overview

Employment	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
US Nonfarm Monthly Payrolls ('000)	Aug-19	130	159	282	156	173	-29	-152	27%			153	216	62	178	159	130
US Total Nonfarm Payrolls - YoY Change	Aug-19	1.4%	1.5%	1.7%	1.5%	1.7%	-0.1%	-0.3%	20%			1.7%	1.7%	1.6%	1.5%	1.5%	1.4%
U3 Unemployment Rate	Aug-19	3.7%	3.7%	3.8%	3.7%	3.8%	0.0%	-0.1%	98%			3.8%	3.6%	3.6%	3.7%	3.7%	3.7%
U6 Unemployment Rate	Aug-19	7.2%	7.0%	7.4%	7.1%	7.4%	0.2%	-0.2%	98%			7.3%	7.3%	7.1%	7.2%	7.0%	7.2%
Quit Rate	Jul-19	2.4%	2.3%	2.3%	2.3%	2.3%	0.1%	0.1%	100%			2.3%	2.3%	2.3%	2.3%	2.3%	2.4%
Job Openings: Total Nonfarm ('000)	Jul-19	7,217	7,248	7,442	7,283	7,408	(31)	(225)	90%			7,142	7,474	7,372	7,384	7,248	7,217
Initial Jobless Claims ('000) 4 Wk. MA - Month End	Aug-19	217	212	215	217	218	5	2	94%			214	213	218	223	212	217
KC Fed LMCI Momentum Indicator	Aug-19	0.6	0.9	1.4	0.8	1.0	-0.3	-0.8	22%			1.1	0.9	1.0	0.9	0.9	0.6
Labor Force Participation Rate	Aug-19	63.2%	63.0%	62.7%	63.0%	63.0%	0.2%	0.5%	57%			63.0%	62.8%	62.8%	62.9%	63.0%	63.2%
Employment to Population Ratio	Aug-19	60.9	60.7	60.3	60.7	60.6	0.2	0.6	100%			60.6	60.6	60.6	60.6	60.7	60.9

Consumer	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Retail Sales - YoY Change	Aug-19	4.1%	3.6%	6.1%	3.7%	3.4%	0.6%	-2.0%	50%			3.8%	3.8%	3.0%	3.3%	3.6%	4.1%
Vehicle Sales (Mil. Units, annualized)	Aug-19	17.0	16.8	16.9	17.0	17.1	0.1	0.1	66%			17.3	16.5	17.4	17.2	16.8	17.0
Personal Savings Rate	Jul-19	7.7%	8.0%	7.5%	7.9%	8.0%	-0.3%	0.2%	75%			8.8%	8.4%	8.1%	8.0%	8.0%	7.7%

Production	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Industrial Production - YoY Change	Aug-19	0.4%	0.5%	5.3%	0.7%	2.5%	-0.2%	-4.9%	21%			2.3%	0.7%	1.8%	1.1%	0.5%	0.4%
Capacity Utilization	Aug-19	77.9%	77.5%	79.3%	77.7%	78.5%	0.4%	-1.4%	79%			78.4%	77.8%	77.8%	77.8%	77.5%	77.9%
Core Capital Goods Orders - YoY Change	Jul-19	-0.6%	0.9%	9.1%	0.5%	2.9%	-1.5%	-9.7%	34%			2.4%	3.8%	1.1%	1.1%	0.9%	-0.6%

Housing & Construction	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Building Permits ('000)	Jul-19	1,317	1,232	1,316	1,283	1,295	85	1	91%			1,287	1,288	1,290	1,299	1,232	1,317
Housing Starts ('000)	Jul-19	1,191	1,241	1,184	1,232	1,223	-50	7	76%			1,149	1,199	1,270	1,264	1,241	1,191
New Home Sales ('000)	Jul-19	635	728	609	655	631	-93	26	91%			669	693	656	602	728	635
S&P/Case-Shiller Home Price Index (20 city) - YoY Change	Jun-19	2.2%	2.4%	6.4%	2.3%	3.8%	-0.2%	-4.2%	28%			3.4%	2.8%	2.5%	2.5%	2.4%	2.2%
Total Construction Spending - YoY Change	Jul-19	-2.7%	-2.3%	5.1%	-2.6%	-0.7%	-0.5%	-7.8%	20%			-3.5%	-1.0%	-1.2%	-2.7%	-2.3%	-2.7%

Survey Data	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
ISM Manufacturing PMI Composite	Aug-19	49.1	51.2	60.8	50.7	54.4	-2.1	-11.7	3%			55.3	52.8	52.1	51.7	51.2	49.1
ISM Manufacturing PMI New Orders	Aug-19	49.1	51.2	65.1	50.1	54.9	-2.1	-16.0	3%			57.4	51.7	52.7	50.0	51.2	49.1
ISM Non-Manufacturing PMI Composite	Aug-19	56.4	53.7	58.5	55.1	57.6	2.7	-2.1	62%			56.1	55.5	56.9	55.1	53.7	56.4
ISM Non-Manufacturing PMI New Orders	Aug-19	60.3	54.1	60.4	56.7	59.8	6.2	-0.1	77%			59.0	58.1	58.6	55.8	54.1	60.3
U. of Michigan Consumer Sentiment	Aug-19	89.8	98.4	96.2	95.5	96.8	-8.6	-6.4	55%			98.4	97.2	100.0	98.2	98.4	89.8

Inflation	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Consumer Price Index (CPI) - YoY Change	Aug-19	1.7%	1.8%	2.7%	1.7%	1.9%	-0.1%	-0.9%	50%			1.9%	2.0%	1.8%	1.6%	1.8%	1.7%
Personal Consumption Expenditure (PCE) - YoY Change	Jul-19	1.4%	1.3%	2.5%	1.4%	1.6%	0.1%	-1.1%	34%			1.3%	1.4%	1.5%	1.4%	1.3%	1.4%
Producer Price Index (PPI) - YoY Change	Aug-19	1.8%	1.7%	3.0%	1.7%	2.2%	0.1%	-1.2%	N/A			2.0%	2.4%	1.9%	1.6%	1.7%	1.8%
Average Hourly Earnings - YoY Change	Aug-19	3.2%	3.3%	3.2%	3.2%	3.2%	-0.1%	0.0%	95%			3.2%	3.2%	3.1%	3.2%	3.3%	3.2%

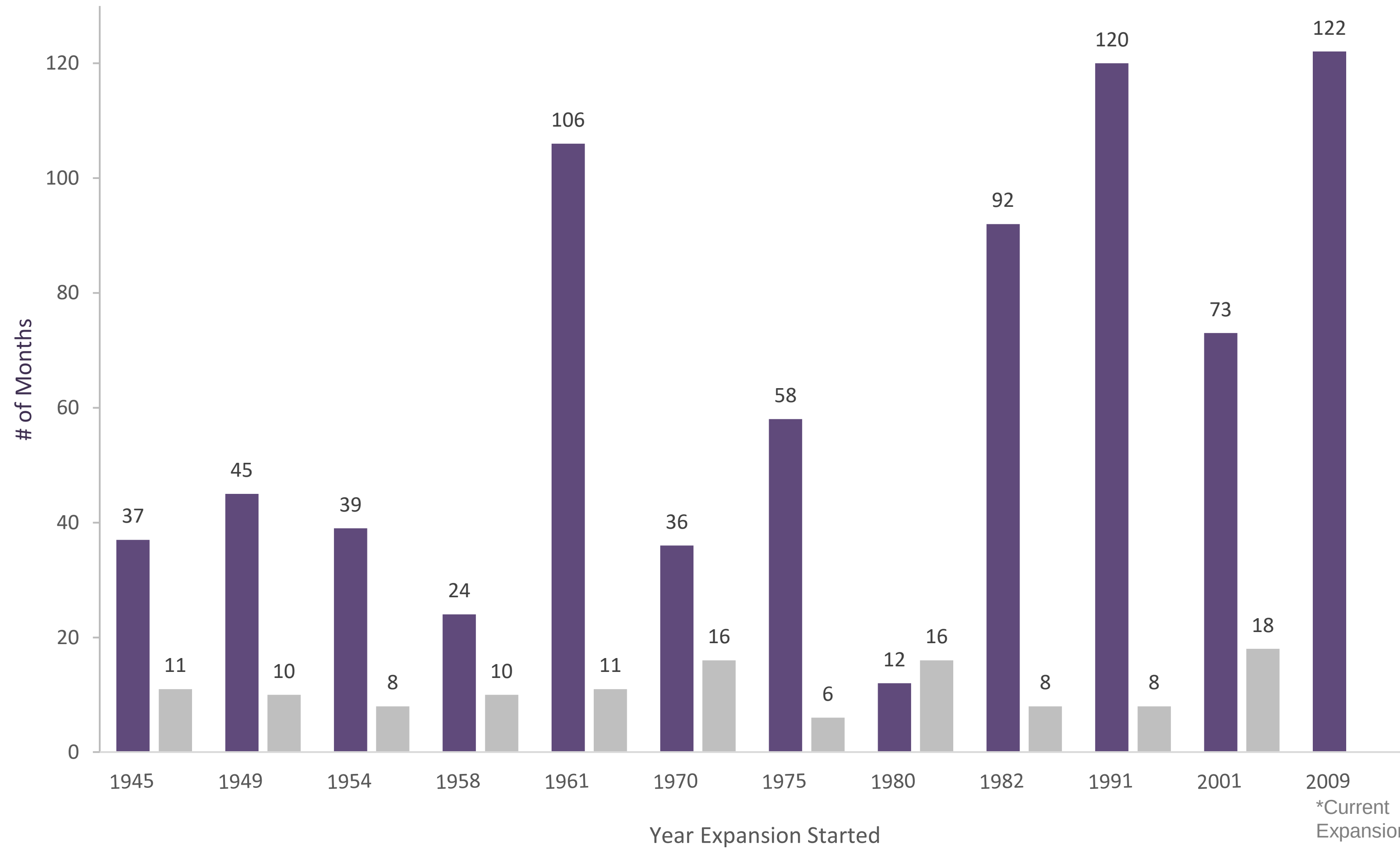
GDP	As of	Latest	Previous	1 Yr. Ago	2 Qtr. Avg.	4 Qtr. Avg.	1 Qtr. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Real GDP - QoQ (SAAR)	Q2-19	2.0%	3.1%	3.5%	2.6%	2.3%	-1.1%	-1.5%	41%			2.6%	3.5%	2.9%	1.1%	3.1%	2.0%
Real GDP - YoY Change	Q2-19	2.3%	2.7%	3.2%	2.5%	2.6%	-0.4%	-0.9%	49%			-2.4%	-5.8%	-6.2%	-5.5%	-4.5%	-2.4%

Other	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend					Latest
Treasury Yield Curve (10 Yr. Minus 2 Yr.) - Month End	Aug-19	0.00%	0.13%	0.24%	0.13%	0.19%	-0.13%	-0.24%	0%			0.14%	0.24%	0.19%	0.25%	0.13%	0.00%
Philly Fed Leading U.S. Index	Jul-19	1.07	1.01	1.33	1.16	1.24	0.06	-0.26	11%			1.16	1.22	1.41	1.39	1.01	1.07

Sources are listed on pages 34-35. Data as of 8/31/2019.

Post-WWII Economic Expansions and Subsequent Recession Length

CETERA® INVESTMENT MANAGEMENT



Source: Cetera Investment Management, National Bureau of Economic Research (NBER). Data as of 8/31/2019.

Percent of Active Managers Beating Category Benchmark

Category	Performance 3 Mo.	Performance YTD	Performance 1 Yr.	Performance 3 Yr.	Performance 2018	Performance 2017	Standard Deviation 1 Yr.	Standard Deviation 3 Yr.
Domestic Large Cap Core	44%	28%	41%	22%	34%	33%	44%	52%
Domestic Large Growth	15%	30%	34%	29%	44%	36%	55%	57%
Domestic Large Cap Value	46%	39%	35%	54%	40%	79%	50%	58%
Domestic Mid Cap Core	30%	19%	24%	19%	31%	24%	45%	35%
Domestic Mid Cap Growth	33%	44%	35%	38%	42%	41%	45%	39%
Domestic Mid Cap Value	41%	35%	26%	42%	38%	54%	28%	20%
Domestic Small Cap Core	60%	43%	54%	27%	33%	28%	61%	59%
Domestic Small Cap Growth	58%	60%	69%	64%	74%	46%	70%	60%
Domestic Small Cap Value	63%	52%	42%	22%	22%	58%	30%	41%
Foreign Large Core	57%	60%	39%	24%	43%	32%	42%	39%
Foreign Large Growth	33%	57%	36%	44%	53%	32%	47%	41%
Foreign Large Value	91%	68%	31%	23%	21%	59%	26%	32%
Global Equity	47%	52%	47%	39%	51%	47%	40%	38%
Emerging Markets	62%	72%	62%	35%	28%	44%	55%	48%
Intermediate Core Bond	41%	48%	38%	39%	35%	36%	70%	71%
World Bond	10%	42%	39%	70%	44%	24%	79%	90%
Municipal - Short Term	38%	42%	37%	43%	5%	52%	63%	63%
Municipal - Intermediate	18%	16%	8%	14%	16%	15%	89%	96%
Municipal - Long Term	14%	18%	12%	10%	16%	12%	88%	90%
Municipal - High Yield	78%	80%	22%	80%	57%	87%	20%	54%
High Yield Bond	30%	27%	25%	16%	38%	32%	61%	53%
Bank Loan	43%	21%	21%	11%	25%	28%	62%	55%
Short Govt/Corp	15%	24%	9%	56%	28%	75%	84%	87%
Emerging Markets Bond	13%	15%	10%	53%	34%	73%	33%	34%
Specialty - TIPS	18%	20%	16%	30%	31%	40%	61%	70%
Multisector Bond	13%	38%	4%	81%	30%	92%	34%	53%
Real Estate	76%	79%	73%	57%	14%	67%	58%	87%
Global Real Estate	16%	21%	25%	53%	33%	94%	44%	77%
Specialty - Natural Resources	74%	26%	77%	36%	27%	66%	90%	79%
Equity Long/Short	8%	6%	24%	4%	40%	6%	94%	88%
Market Neutral	62%	47%	41%	57%	43%	68%	0%	0%
Managed Futures	75%	79%	43%	78%	31%	91%	46%	53%
Multialternative	15%	6%	25%	3%	64%	2%	89%	86%

Above 67%
Between 33% and 67%
Below 33%

Commentary

This chart shows the percentage of active managers beating their category benchmark in each of the Morningstar categories listed. We also show the percentage of active managers that have lower risk, or standard deviation, relative to their Morningstar category benchmark.

A darker background color indicates that actively managed funds are outperforming, with over 67% of non-index funds beating the category benchmark. The lightest color indicates that active management is lagging, with 33% or lower of active managers beating the category benchmark. The middle shade indicates close to average results. For risk, as measured by standard deviation, a darker color indicates risk lower than 67% of the peer group average risk, and the lightest color indicates risk higher than 33% of the peer group benchmark risk.

- In recent months, there has been solid outperformance for active managers in Small Cap Growth, Small Cap Core, Small Cap Value, Foreign Large Value, Emerging Markets, Real Estate, and Managed Futures.
- Asset classes that managers have struggled to outperform in the last three months include Large Cap Growth, World Bond, Multisector Bond, Municipal Bond-Intermediate, Short Govt/Corp Bonds, Equity Long/Short, and Multialternative.
- The relative advantage of actively managed funds is more evident when looking at risk levels. When comparing standard deviations to category benchmarks, active funds tend to more consistently show lower risk characteristics. At present, this is true for the one- and three-year timeframes shown here.

Source: Cetera Investment Management, Morningstar. Data as of 8/31/2019.

Asset Class Historical Return Heat Map

CETERA® INVESTMENT MANAGEMENT

Asset Class	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
US Large Cap	18.34	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46
US Large Cap Growth	20.71	-0.01	27.44	6.89	5.52	14.89	32.75	14.61	4.65	15.05	31.57
US Large Cap Value	15.68	-8.95	15.36	17.40	-3.13	12.36	31.99	17.68	-0.48	15.10	21.18
US Mid Cap	14.37	-11.08	16.24	20.74	-2.18	9.77	33.50	17.88	-1.73	26.64	37.38
US Small Cap	9.80	-8.48	13.23	26.56	-1.97	5.76	41.31	16.33	1.02	26.31	25.57
International Developed	10.14	-13.36	25.62	1.51	-0.39	-4.48	23.29	17.90	-11.73	8.21	32.46
Emerging Market Equities	4.21	-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.63	-18.17	19.20	79.02
REITs	21.35	-4.22	3.76	6.68	4.48	32.00	1.22	17.12	9.37	28.07	28.46
Commodities	1.93	-11.25	1.70	11.77	-24.66	-17.01	-9.52	-1.06	-13.32	16.83	18.91
Gold	18.39	-2.81	12.79	7.75	-10.88	-1.75	-28.65	6.08	9.63	28.72	22.86
Intermediate-Term Treasurys	11.06	0.90	2.55	1.05	1.63	9.00	-6.04	4.16	15.59	9.37	-6.03
Long-Term Treasurys	23.36	-2.00	8.98	1.43	-1.59	27.48	-13.88	3.36	33.84	9.38	-21.40
TIPS	9.06	-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41
Mortgage-Backed Securities	5.28	1.02	1.86	1.56	1.39	5.97	-2.12	2.42	7.90	6.67	5.37
Corporate IG Bonds	13.94	-2.51	6.42	6.11	-0.68	7.46	-1.53	9.82	8.15	9.00	18.68
High Yield Corporate Bonds	11.00	-2.08	7.50	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21
Emerging Market Debt	12.49	-4.61	9.32	10.19	1.23	5.53	-6.58	18.54	8.46	12.04	28.18
US Aggregate Bonds	9.10	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93
60-40 Allocation	14.64	-2.63	14.52	8.23	1.05	10.60	18.62	11.29	4.40	11.65	18.25

For each time frame, the heat map colors range from green (stronger relative performance) to red (weaker relative performance). There is a box around the return of the best performing asset class in each time period.

Source: Cetera Investment Management, Morningstar, Standard & Poor's, MSCI, Dow Jones, Bloomberg, Barclays, JPMorgan. The Index used for each asset class is listed on page 33. Data as of 8/31/2019.

S&P 500 Historical Returns

CETERA® INVESTMENT MANAGEMENT

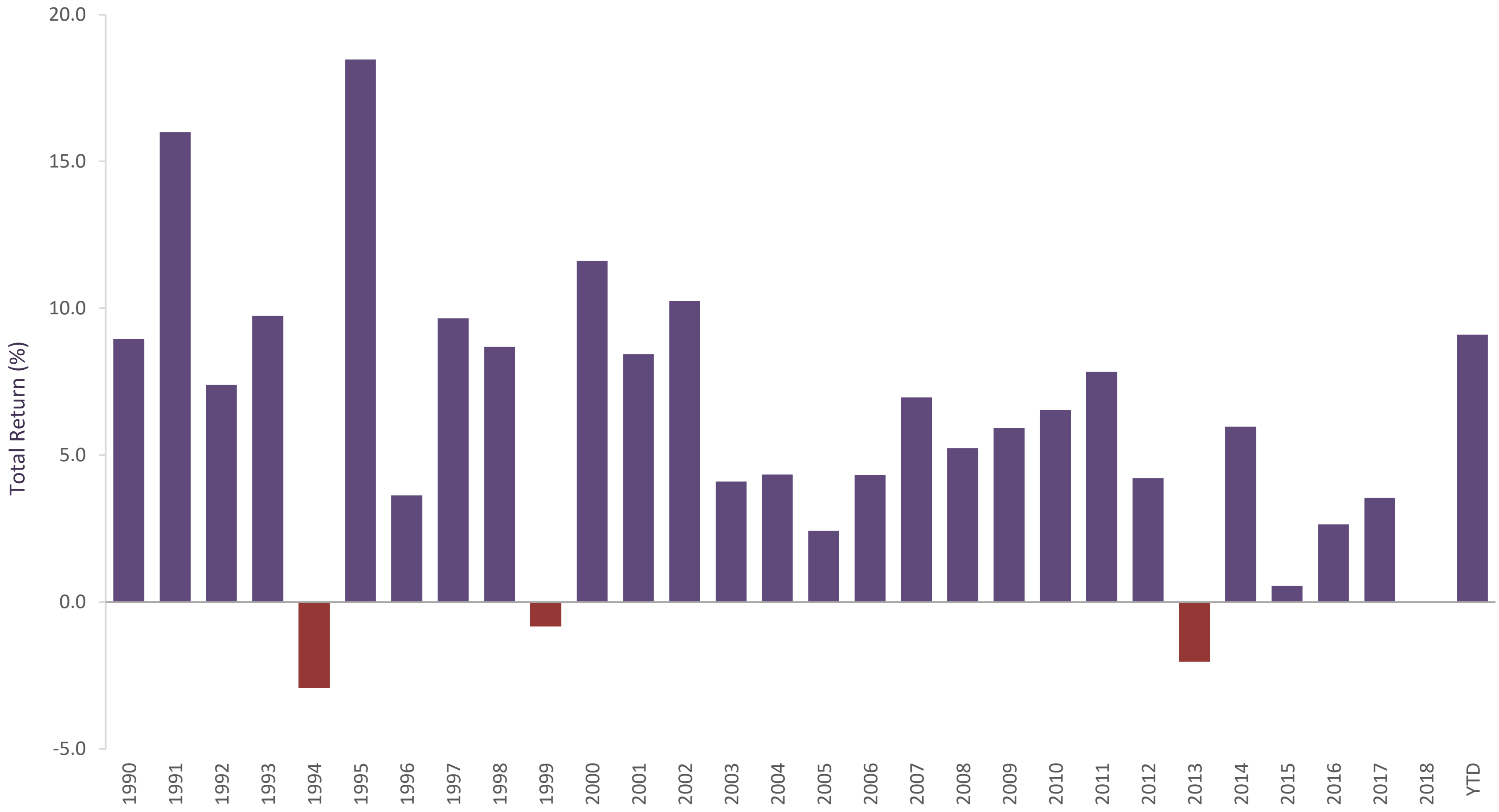
	January	February	March	April	May	June	July	August	September	October	November	December	Annual	
YTD	8.01	3.21	1.94	4.05	-6.35	7.05	1.44	-1.58					18.34	**YTD**
2018	5.72	-3.69	-2.54	0.38	2.41	0.62	3.72	3.26	0.57	-6.84	2.04	-9.03	-4.38	**2018**
2017	1.90	3.97	0.12	1.03	1.41	0.62	2.06	0.31	2.06	2.33	3.07	1.11	21.83	**2017**
2016	-4.96	-0.13	6.78	0.39	1.80	0.26	3.69	0.14	0.02	-1.82	3.70	1.98	11.96	**2016**
2015	-3.00	5.75	-1.58	0.96	1.29	-1.94	2.10	-6.03	-2.47	8.44	0.30	-1.58	1.38	**2015**
2014	-3.46	4.57	0.84	0.74	2.35	2.07	-1.38	4.00	-1.40	2.44	2.69	-0.25	13.69	**2014**
2013	5.18	1.36	3.75	1.93	2.34	-1.34	5.09	-2.90	3.14	4.60	3.05	2.53	32.39	**2013**
2012	4.48	4.32	3.29	-0.63	-6.01	4.12	1.39	2.25	2.58	-1.85	0.58	0.91	16.00	**2012**
2011	2.37	3.43	0.04	2.96	-1.13	-1.67	-2.03	-5.43	-7.03	10.93	-0.22	1.02	2.11	**2011**
2010	-3.60	3.10	6.03	1.58	-7.99	-5.23	7.01	-4.51	8.92	3.80	0.01	6.68	15.06	**2010**
2009	-8.43	-10.65	8.76	9.57	5.59	0.20	7.56	3.61	3.73	-1.86	6.00	1.93	26.46	**2009**
2008	-6.00	-3.25	-0.43	4.87	1.30	-8.43	-0.84	1.45	-8.91	-16.79	-7.18	1.06	-37.00	**2008**
2007	1.51	-1.96	1.12	4.43	3.49	-1.66	-3.10	1.50	3.74	1.59	-4.18	-0.69	5.49	**2007**
2006	2.65	0.27	1.24	1.34	-2.88	0.14	0.62	2.38	2.58	3.26	1.90	1.40	15.79	**2006**
2005	-2.44	2.10	-1.77	-1.90	3.18	0.14	3.72	-0.91	0.81	-1.67	3.78	0.03	4.91	**2005**
2004	1.84	1.39	-1.51	-1.57	1.37	1.94	-3.31	0.40	1.08	1.53	4.05	3.40	10.88	**2004**
2003	-2.62	-1.50	0.97	8.24	5.27	1.28	1.76	1.95	-1.06	5.66	0.88	5.24	28.68	**2003**
2002	-1.46	-1.93	3.76	-6.06	-0.74	-7.12	-7.80	0.66	-10.87	8.80	5.89	-5.87	-22.10	**2002**
2001	3.55	-9.12	-6.34	7.77	0.67	-2.43	-0.98	-6.26	-8.08	1.91	7.67	0.88	-11.89	**2001**
2000	-5.02	-1.89	9.78	-3.01	-2.05	2.47	-1.56	6.21	-5.28	-0.42	-7.88	0.49	-9.10	**2000**
1999	4.18	-3.11	4.00	3.87	-2.36	5.55	-3.12	-0.49	-2.74	6.33	2.03	5.89	21.04	**1999**

	January	February	March	April	May	June	July	August	September	October	November	December	Annual
10 Yr. Avg.	1.26	2.59	1.87	1.34	-0.99	0.46	2.31	-1.05	1.01	2.02	2.12	0.53	12.84
25 Yr. Avg.	0.55	0.36	1.73	2.09	0.56	0.31	0.87	-0.71	0.03	1.59	1.89	1.04	11.36
40 Yr. Avg.	1.27	0.68	1.28	1.80	1.13	0.46	1.06	0.26	-0.35	1.11	1.96	1.43	12.81
% Positive (10 Yrs.)	60%	80%	80%	90%	60%	60%	80%	50%	70%	60%	90%	70%	90%
% Positive (25 Yrs.)	60%	60%	72%	80%	64%	68%	56%	60%	60%	64%	80%	76%	80%
% Positive (40 Yrs.)	63%	63%	70%	73%	70%	63%	53%	63%	55%	65%	75%	75%	83%

Source: Cetera Investment Management, Morningstar, Standard & Poor's. Data based on S&P 500 Index total return as of 8/31/2019.

Historical Bond Returns

CETERA® INVESTMENT MANAGEMENT

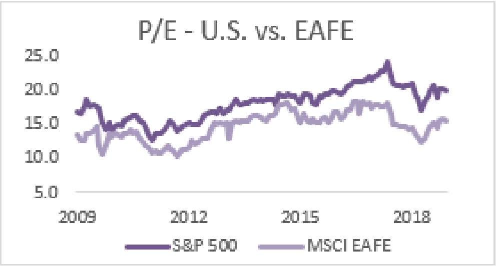


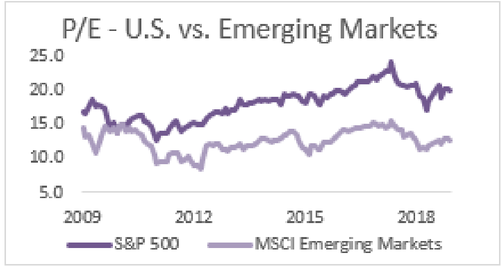
Bonds are on pace for their best year since 2002. The Barclays Agg Index was up 9.1% YTD through the end of August, benefitting from the sharp decline in yields this year. Last year, the Barclays Agg Index was up only 0.01%, narrowly avoiding a decline for only the fourth time in the last 40 years. A weaker inflation and growth outlook coupled with a global decline in yields has aided bond returns in 2019.

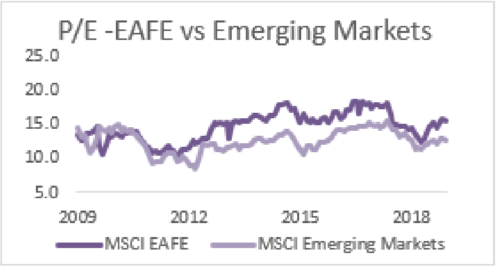
Source: Cetera Investment Management, Morningstar, Barclays. Bond returns are based on the BBgBarc US Aggregate Bond Index. Data as of 8/31/2019.

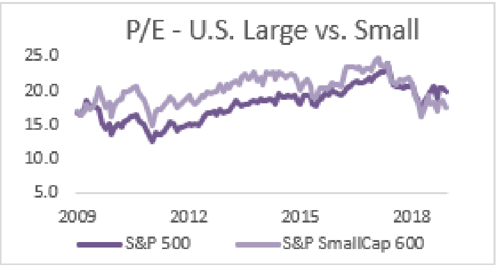
CETERA® INVESTMENT MANAGEMENT

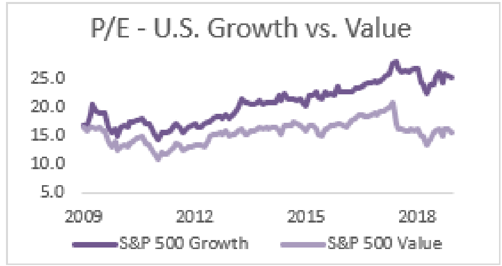
Equity Valuation Charts

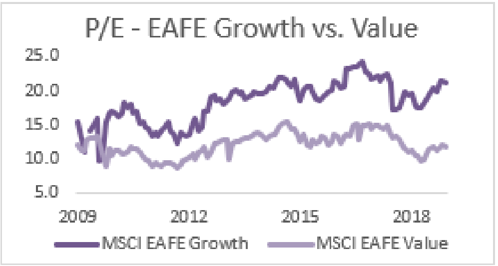


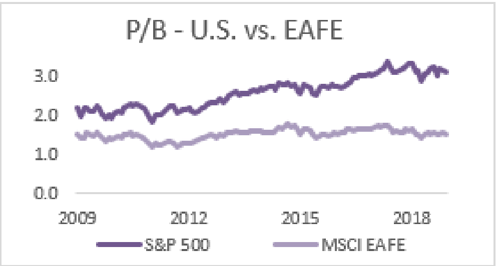


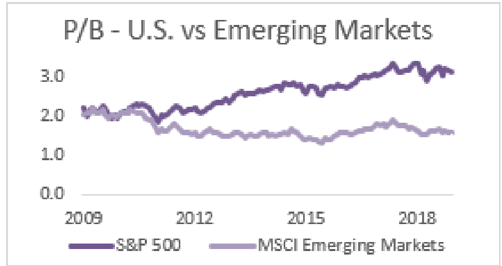


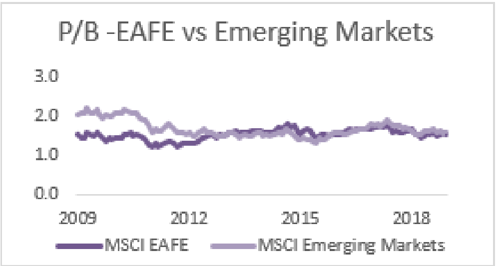


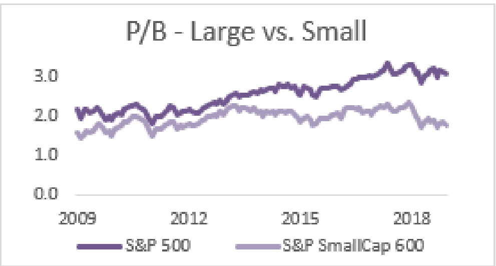


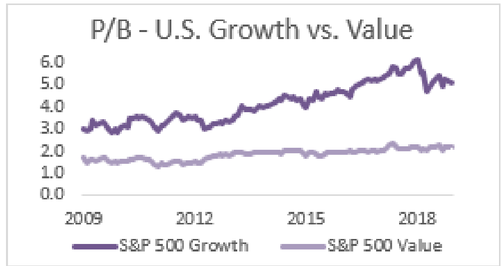


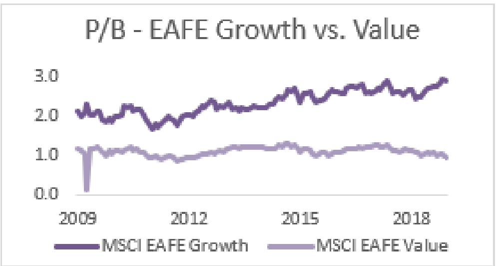








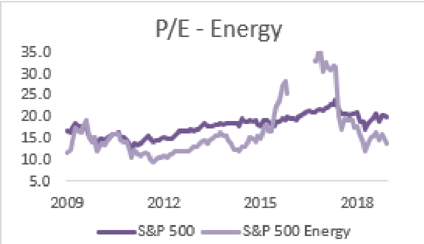


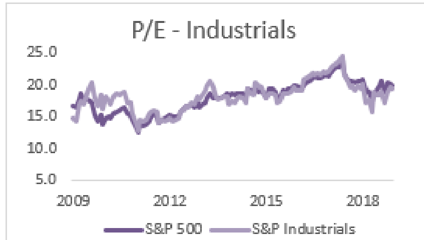


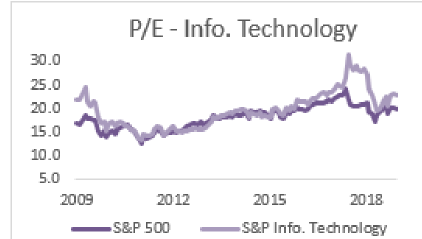
Source: Cetera Investment Management, Morningstar, MSCI, and Standard & Poor's. Data as of 8/31/2019.

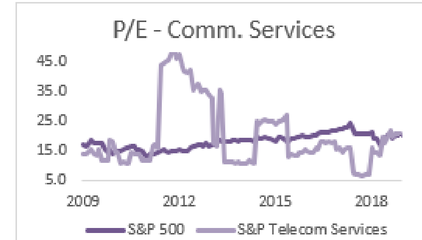
Sector Valuation Charts

Economically Sensitive Sectors

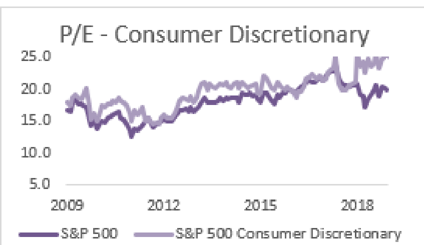


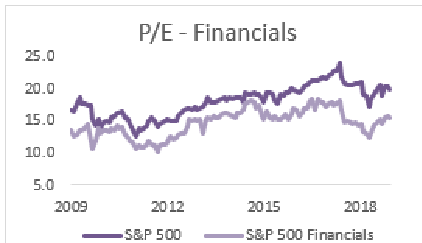


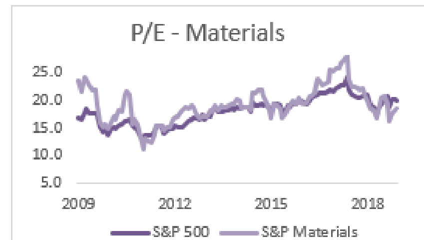




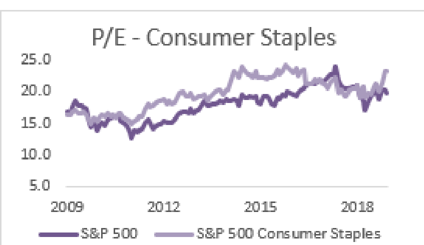
Cyclical Sectors

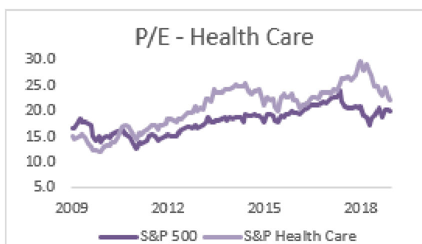


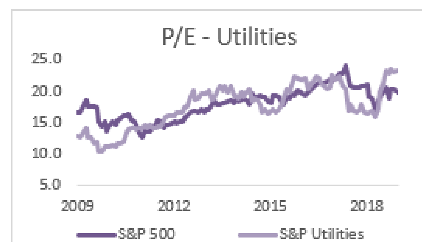




Defensive Sectors



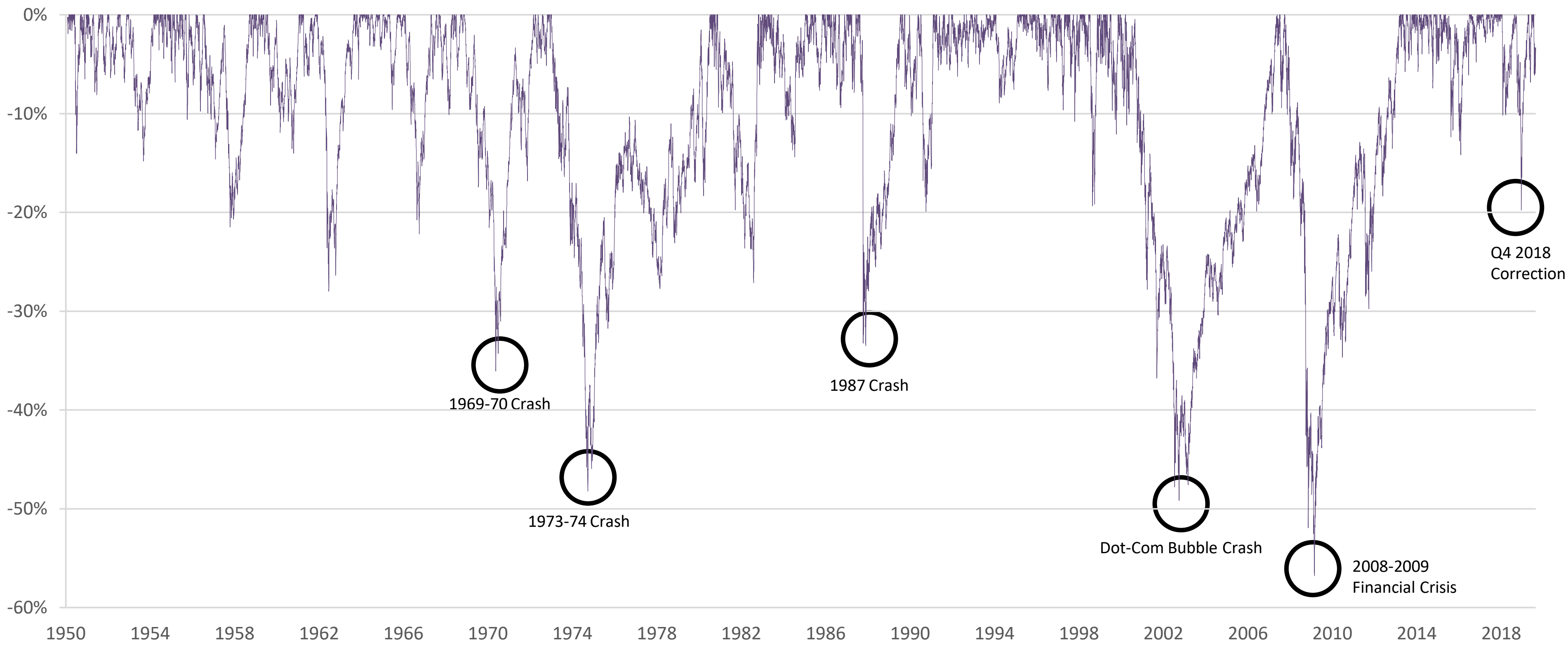




Source: Cetera Investment Management, Morningstar, and Standard & Poor's. Data as of 8/31/2019.

S&P 500 Drawdowns (1950-2019)

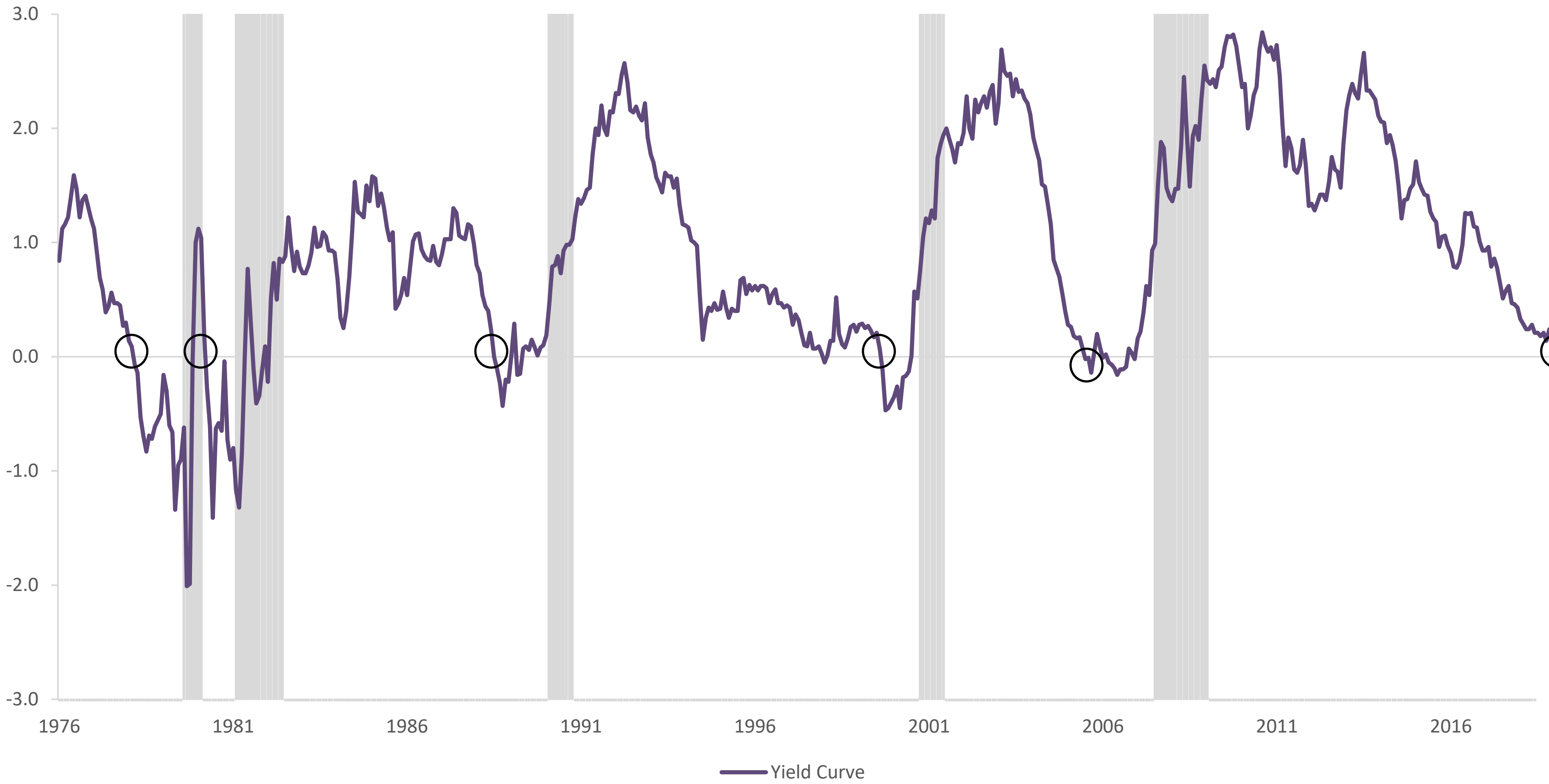
CETERA® INVESTMENT MANAGEMENT



Source: Cetera Investment Management, Yahoo Finance, Standard & Poor's. Data as of 8/31/2019. Based on closing prices.

Treasury Yield Curve (10Yr. – 2Yr.)

CETERA® INVESTMENT MANAGEMENT

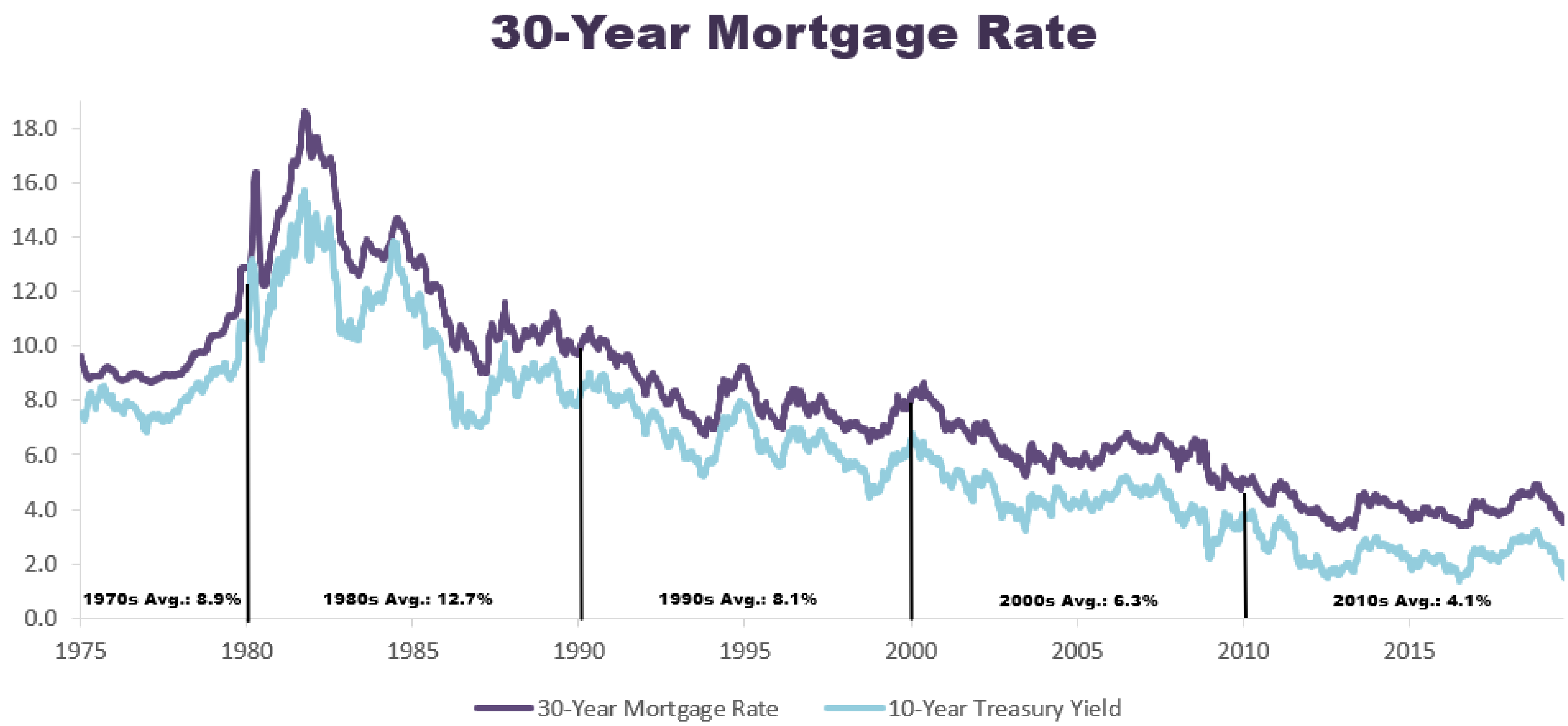


The spread between the 10-Year and 2-Year Treasury yield briefly inverted in late August. A yield curve inversion has preceded the last 5 recessions by an average of 17 months. Other parts of the yield curve are also inverted and this is a signal that growth is expected to slow. In aggregate, our recession riskometer is still signaling a low risk of recession in the near-term.

Source: Cetera Investment Management, FactSet, Standard & Poor's. Data as of 8/31/2019.

Mortgage Rates Versus 10-Year Treasury Yield

CETERA®
INVESTMENT
MANAGEMENT

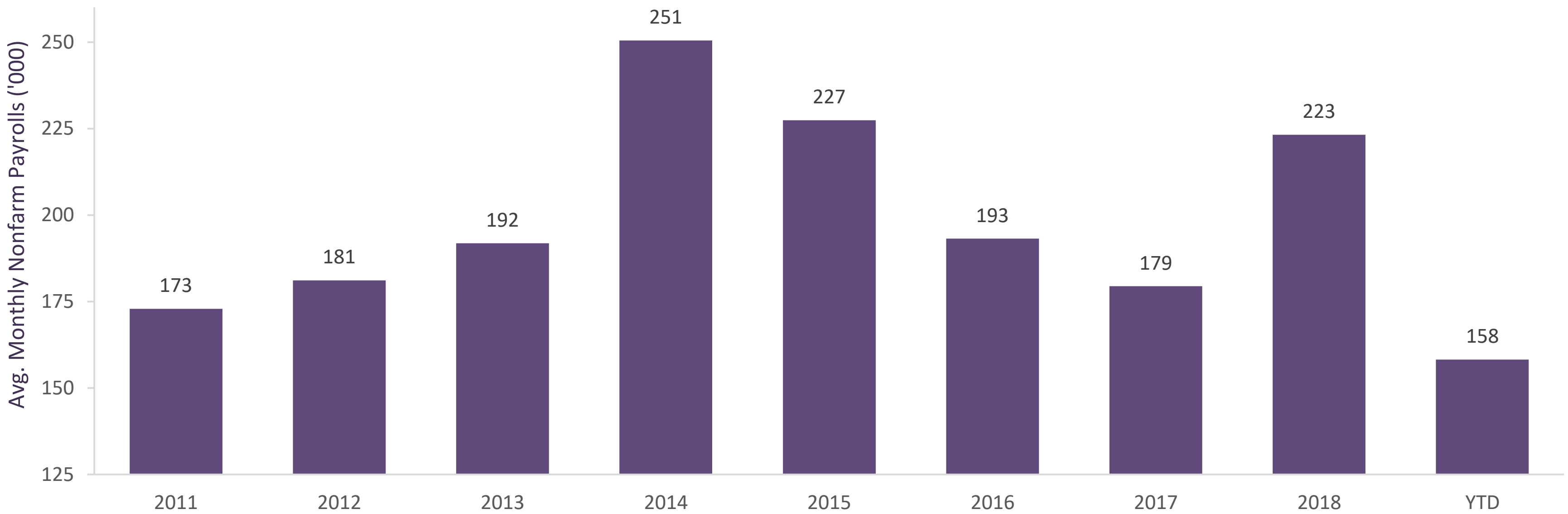


A huge tailwind for housing prices since the early 1980s has been falling mortgage rates. Lower mortgage rates reduce borrowing costs and elevate housing demand. This results in higher home prices. The 30-year mortgage rate moves closely with the 10-year Treasury yield and mortgage rates have fallen in unison with bond yields this year. Mortgage rates dropped from 4.5% at the start of the year to as low as 3.55% in August.

Source: Cetera Investment Management, Federal Reserve Bank of St. Louis, Freddie Mac, Board of Governors of the Federal Reserve System. Data as of 8/29/2019.

Pace of Jobs Growth Slowing

Average Monthly Nonfarm Payrolls



The pace of jobs growth has slowed to a monthly average of 158,000 nonfarm payrolls this year from 223,000 in 2018. The jobs market is on pace for its weakest level of growth since 2010. Jobs growth at this level is still strong enough to keep the unemployment rate from rising, but it is a concern if labor market growth weakens further.

Source: Cetera Investment Management, Federal Reserve Bank of St. Louis, and U.S. Bureau of Labor Statistics. Data as of 8/31/2019.

Disclosures

CETERA® INVESTMENT MANAGEMENT

About Cetera® Investment Management
Cetera Investment Management LLC is an SEC registered investment adviser owned by Cetera Financial Group. Cetera Investment Management provides market perspectives, portfolio guidance and other investment advice to its affiliated broker-dealers, dually registered broker-dealers and registered investment advisers.

About Cetera Financial Group®
Cetera Financial Group ("Cetera") is a leading network of independent firms empowering the delivery of professional financial advice to individuals, families and company retirement plans across the country through trusted financial advisors and financial institutions. Cetera has re-defined the delivery of financial advice through the establishment of a truly Advice-Centric Experience™ for both advisors and their clients. Cetera is the second-largest independent financial advisor network in the nation by number of advisors, as well as a leading provider of retail services to the investment programs of banks and credit unions.

Through its multiple distinct firms, Cetera offers independent and institutions-based advisors the benefits of a large, established broker-dealer and registered investment adviser, while serving advisors and institutions in a way that is customized to their needs, thus providing a personalized experience for their clients. Among the award-winning advisor support resources offered through Cetera are wealth management and advisory platforms, comprehensive broker-dealer and registered investment adviser services, practice management support and innovative technology. For more information, visit cetera.com.

"Cetera Financial Group" refers to the network of independent retail firms encompassing Cetera Advisors, Cetera Advisor Networks, Cetera Investment Services (marketed as Cetera Financial Institutions), Cetera Financial Specialists, First Allied Securities and Summit Brokerage Services. All firms are members FINRA/SIPC .

Disclosures (cont.)

CETERA® INVESTMENT MANAGEMENT

The material contained in this document was authored by and is the property of Cetera Investment Management LLC. Cetera Investment Management provides investment management and advisory services to a number of programs sponsored by affiliated and non-affiliated registered investment advisers. Your registered representative or investment adviser representative is not registered with Cetera Investment Management and did not take part in the creation of this material. He or she may not be able to offer Cetera Investment Management portfolio management services.

Nothing in this presentation should be construed as offering or disseminating specific investment, tax, or legal advice to any individual without the benefit of direct and specific consultation with an investment adviser representative authorized to offer Cetera Investment Management services. Information contained herein shall not constitute an offer or a solicitation of any services. Past performance is not a guarantee of future results.

For more information about Cetera Investment Management strategies and available advisory programs, please reference the Cetera Investment Management LLC Form ADV disclosure brochure and the disclosure brochure for the registered investment adviser your adviser is registered with. Please consult with your adviser for his or her specific firm registrations and programs available.

No independent analysis has been performed and the material should not be construed as investment advice. Investment decisions should not be based on this material since the information contained here is a singular update, and prudent investment decisions require the analysis of a much broader collection of facts and context. All information is believed to be from reliable sources; however, we make no representation as to its completeness or accuracy. The opinions expressed are as of the date published and may change without notice. Any forward-looking statements are based on assumptions, may not materialize, and are subject to revision.

All economic and performance information is historical and not indicative of future results. The market indices discussed are not actively managed. Investors cannot directly invest in unmanaged indices. Please consult your financial advisor for more information.

Additional risks are associated with international investing, such as currency fluctuations, political and economic instability, and differences in accounting standards. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume.

Definitions

The **Recession Riskometer** is the average reading of ten economic indicators – Unemployment, ISM Manufacturing and Non-Manufacturing Indexes, Industrial Production Growth, Building Permits Growth, Temporary Staffing Employment Growth, Real Retail Sales Growth, Consumer Confidence as measured by the University of Michigan, Philadelphia Federal Reserve's Leading Indicator for the U.S. Index, as well as the difference between 10- and 2-year Treasury rates.

The Economic Trend Signal measures the average of whether each of the ten indicators in the **Recession Riskometer** are improving, neutral or declining in their most recent reading as compared to historical data.

The U3 Unemployment Rate measures the percentage of people without jobs who are actively seeking work. This is often the officially quoted unemployment rate. The U6 Unemployment Rate expands the definition of U3 by including "discouraged workers", or those who have stopped looking for work because current economic conditions make them believe that no work is available for them, other "marginally attached workers", or those who would like and are able to work, but have not looked for work recently, as well as part-time workers who want to work full-time, but cannot due to economic reasons.

The ISM Manufacturing Index is based on surveys of over 400 manufacturing firms across 20 industries by the Institute of Supply Management. Equal weight is given to responses in five areas - new orders, production, supplier deliveries, employment and inventories. Generally, a reading over 50 indicates expansion, and a reading in the low 40's suggests recessionary conditions. Changes in the index are also helpful in gauging the direction of economic growth.

The ISM Non-Manufacturing Index is based on surveys of over 350 non-manufacturing firms in 17 industries representing over 80% of the U.S. economy by the Institute of Supply Management. The survey shows the percentage of managers reporting higher activity, lower activity or no change in the following areas: business activity, new orders, employment, supplier deliveries, backlog of orders, new export orders, inventory change, inventory sentiment, imports, and prices.

Industrial Production and Capacity Utilization is measured monthly by the United States Federal Reserve, based on hours worked by industrial-sector employees. The report shows total amount of US industrial production as a percentage compared to a baseline year. It also offers percentage changes from month to month and year to year, and a breakdown of production by industry grouping.

Building Permits are a measure of the issuance of permits to build new housing units (single and multi-family units). Building Permits Growth is a measure of the total year-over-year percentage change of the 3-month average of building permits. This indicator leads housing construction and provides a signal for potential weakness in the housing sector when it is declining.

Definitions (cont.)

CETERA® INVESTMENT MANAGEMENT

The US Bureau of Labor Statistics surveys the temporary staffing industry is surveyed in its Professional and Business Services. They produce a report on Temporary Help Employment - changes in this figure are often used as a predictor of changes in future employment. Changes in Temporary Help Employment is a coincident economic indicator.

Real Retail Sales Growth is a measure of the total year-over-year change in retail and food sales adjusted for inflation using the Consumer Price Index. Real Retail Sales figures provided are the year-over-year change of the 3-month average. By neutralizing the impact of inflation, the year-over-year change in retail and food sales provides a better view into consumer spending strength because growth in this figure indicates stronger demand without the impact of rising prices. Real Retail and Food Sales typically decline heading into recession, and a weaker read is a concern for the economy.

The University of Michigan Consumer Sentiment Index is survey of consumer confidence conducted via telephone surveys to gather information on consumer expectations regarding the overall economy.

The Philly Fed U.S. Leading Index is a composite index of several U.S. economic indicators that lead the economy including housing permits, initial unemployment insurance claims, and Treasury yield spreads. This index is often used as a proxy to gauge where the economy is heading over the next several months because it measures the strength of leading indicators. The Leading U.S. Index historically has declined into negative territory during recessions and rises back into positive territory during expansions.

The difference (spread) between the yields of the 10-Year and 2-Year maturity Treasury bonds. Often referred to as the 10-Year/2-Year spread, this metric is one of the early and reliable predictors of recession. Under normal conditions the 10-Year/2-Year spread is positive, as investors demand higher risk premium for longer -term bonds. Spreads are usually wider early in an economic recovery and narrow as growth sets in. As recession becomes more likely, spreads tend to move toward zero or turn negative - this occurs because in periods when economic growth slows inflation decreases and demand for credit declines, pushing long term rates lower.

A Price/Earnings (P/E) ratio is a measure for equity analysis. It is calculated by dividing the current market price of a stock by its earning per share.

A Price/Book (P/B) ratio is a measure for equity analysis. It is calculated by dividing the current market price of a stock by the most recent book value per share.

The yield curve is a graphical representation of several yields or interest rates across different bond maturities. Typical maturities include 3-month, 6-month, 1-year, 2-year, 5-year, 10-year and 30-year.

The High-Yield - US Treasury spread is the percentage difference in current yields of various classes of high-yield bonds compared against U.S. Treasury bonds.

Definitions (cont.)

Percentile is a method of ranking a metric versus its history by measuring the percentage of group observations equal to or lower than it. As an example, if a metric scores in the 80th percentile, it is greater than 80% of all other group observations over the stated time period and lower than 20% of the group observations.

Standard deviation is a statistical method used to gauge asset risk based on measuring the dispersion in returns relative to the average over a specified period of time.

The Global Industry Classification Standard (GICS) is a classification system for equities, it is used by various equity indexes to classify domestic and international stocks and breaks equites down to 11 sectors, which Morningstar breaks down into three groups as described below. Stocks in Energy, Industrials, Information Technology and Telecommunication Services are classified as Sensitive. Consumer Discretionary, Financials and Materials are defined as Cyclical, and Consumer Staples, Health Care and Utilities are classified as Defensive.

Sensitive - The sensitive super sector includes industries which ebb and flow with the overall economy, but not severely so. Sensitive industries fall between the defensive and cyclical industries as they are not immune to a poor economy but they also may not be as severely impacted by a poor economy as industries in the cyclical super sector. In general, the stocks in these industries move closely to the direction of the economy.

Cyclical - The cyclical super sector includes industries significantly impacted by economic shifts. When the economy is prosperous these industries tend to expand and when the economy is in a downturn these industries tend to shrink. In general, the stocks in these industries expand faster when the economy is growing and also contract faster in a recession.

Defensive - The defensive super sector includes industries that are relatively immune to economic cycles. These industries provide services that consumers require in both good and bad times, such as healthcare and utilities. In general, the stocks in these industries are not very sensitive to the direction of the economy.

A drawdown is a measure of the decline from a peak point for an investment or an index. It is typically quoted for a specified period of time, and measured as the percentage between the peak and the subsequent trough in value. The duration of a drawdown indicates the time elapsed before the investment returns to the starting peak value.

A simple moving average of an investment or an index calculates its average price for a set period to the most recent price. The moving average is updated each successive period by deleting the price from the earliest date and adding the newly available most recent price. The result is a trend line for price movements, which may be an indicator of market sentiment. Generally, if the moving average is trending higher and the investment or index price rises above the moving average, sentiment is considered to be bullish, as prices are likely to continue higher, and it may be a good time to buy. If the moving average trend slopes downward, and the investment price is below the moving average, this may be a bearish, or sell signal, as prices may continue to move down.

Index Definitions

CETERA® INVESTMENT MANAGEMENT

The S&P 500 is an index of 500 stocks chosen for market size, liquidity and industry grouping (among other factors) designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe.

The S&P Growth Index is a float adjusted, market capitalization weighted index of 317 stocks drawn from the S&P 500 Index that exhibit strong growth characteristics. S&P Dow Jones Indexes uses three factors to measure growth: sales growth, the ratio of earnings change to price, and momentum.

The S&P Value Index is a float adjusted, market capitalization weighted index of 364 stocks drawn from the S&P 500 Index that exhibit strong value characteristics. S&P Dow Jones Indexes uses three factors to measure value: the ratios of book value, earnings and the sales to price sales metric.

The S&P MidCap 400 provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500®, measures the performance of 400 mid-sized companies, representing more than 7% of available market cap.

The S&P MidCap 400 Growth Index represents the growth companies of the S&P MidCap 400 Index which itself is composed of mid-cap stocks from the broad U.S. equity market. Growth companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P MidCap 400 Value Index represents the value companies of the S&P MidCap 400 Index which itself is composed of mid-cap stocks from the broad U.S. equity market. Value companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P SmallCap 600 measures the small-cap segment of the U.S. equity market. Introduced in 1994, the index is designed to track the performance of 600 small-size companies in the U.S, reflecting this market segment's distinctive risk and return characteristics. The index measures a segment of the market that is typically known for less liquidity and potentially less financial stability than large-caps, the index was constructed to be an efficient benchmark composed of small-cap companies that meet investability and financial viability criteria.

Index Definitions (cont.)

CETERA® INVESTMENT MANAGEMENT

The S&P SmallCap 600 Growth Index represents the growth companies of the S&P S&P SmallCap 600 Index which itself is composed of small cap stocks from the broad U.S. equity market. Growth companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P SmallCap 600 Value Index represents the value companies of the S&P SmallCap 600 Index which itself is composed of small-cap stocks from the broad U.S. equity market. Value companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The MSCI EAFE is designed to measure the equity market performance of developed markets (Europe, Australasia, Far East) excluding the U.S. and Canada. The Index is market-capitalization weighted.

The MSCI EAFE Growth index represents large and mid-cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the U.S. and Canada.

The MSCI EAFE Value index represents large and-mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the U.S. and Canada.

The MSCI Emerging Markets is designed to measure equity market performance in global emerging markets. It is a float-adjusted market capitalization index.

The MSCI Europe Index is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The MSCI Pacific Index captures large and mid-cap representation across five Developed Markets (DM) countries in the Pacific region. With 470 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Index Definitions (cont.)

The MSCI ACWI is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The S&P 500® Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.

The S&P 500® Consumer Staples Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Staples sector.

The S&P 500® Energy Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Energy sector.

The S&P 500® Financials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Financials sector.

The S&P 500® Health Care Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Health Care sector.

The S&P 500® Industrials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Industrials sector.

The S&P 500® Information Technology Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Information Technology sector.

Index Definitions (cont.)

CETERA® INVESTMENT MANAGEMENT

The S&P 500® Materials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Materials sector.

The S&P 500® Real Estate Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.

The S&P 500® Telecommunication Services Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Telecommunication Services sector.

The S&P 500® Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Utilities sector.

The Bank of America Merrill Lynch U.S. Treasury Bill 3 Month index measures the performance of a single issue of outstanding treasury bill which matures closest to, but not beyond, three months from the rebalancing date. The issue is purchased at the beginning of the month and held for a full month; at the end of the month that issue is sold and rolled into a newly selected issue.

The Bloomberg Barclays U.S. Treasury: 1-3 Year Index measures the performance of U.S. Treasury securities with remaining maturities of one to three years.

The Bloomberg Barclays U.S. Treasury: 7-10 Year Index measures the performance of U.S. Treasury securities that have a remaining maturity of at least seven years and less than 10 years.

The Bloomberg Barclays U.S. Treasury: U.S. TIPS Index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have $250 million or more of outstanding face value.

The Bloomberg Barclays U.S. Municipal Bond Index is an unmanaged, market-value-weighted index of investment-grade municipal bonds with maturities of one year or more.

The Bloomberg Barclays GNMA Index measures the performance of Government National Mortgage Association (GNMA or “Ginnie Mae”) bonds. It is a subset of the Bloomberg Barclays U.S. Aggregate index.

Index Definitions (cont.)

CETERA® INVESTMENT MANAGEMENT

The Bloomberg Barclays U.S. Corporate (Investment Grade) Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by U.S. and non-US private-sector industrial, utility and financial issuers. Certificates of deposit are also included. Launched in July 1973, securities included must be rated investment grade (Baa3/BBB-/BBB- or higher). Eligible senior and subordinated corporate securities must have at least one year until final maturity, but in practice the index holdings has a fluctuating average life of around 10.75 years. The index is unhedged and rebalances monthly.

The Bloomberg Barclays U.S. Corporate High-Yield Index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high-yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.

The Bloomberg Barclays U.S. Aggregate 1-3 Years Index consists of publicly issued investment grade corporate, US Treasury and government agency securities with remaining maturities of one to three years.

The Bloomberg Barclays Capital U.S. Aggregate Bond Index, which was originally called the Lehman Aggregate Bond Index, is a broad based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government–related and corporate debt securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency) debt securities that are rated at least Baa3 by Moody’s and BBB- by S&P. Taxable municipals, including Build America bonds and a small amount of foreign bonds traded in U.S. markets are also included. Eligible bonds must have at least one year until final maturity, but in practice the index holdings has a fluctuating average life of around 8.25 years. This total return index, created in 1986 with history backfilled to January 1, 1976, is unhedged and rebalances monthly.

The Bloomberg Barclays Global Treasury ex U.S. Bond Index consists of those securities included in the Barclays Global Aggregate Bond Index that are Treasury securities, with the U.S. excluded. The Barclays Global Aggregate Bond Index is comprised of several other Barclays indexes that measure fixed income performance of regions around the world.

The JP Morgan Emerging Markets Bond Index (EMBI) Global Diversified measures the performance of fix-rate for external-currency denominated debt instruments including Brady bonds, loans, Eurobonds in emerging markets. Countries covered are Argentina, Brazil, Bulgaria, Mexico, Morocco, Nigeria, the Philippines, Poland, Russia, and South Africa. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.

Index Definitions (cont.)

CETERA® INVESTMENT MANAGEMENT

The Bloomberg Commodity Index is a broadly diversified index that measures 22 exchange-traded futures on physical commodities in five groups (energy, agriculture, industrial metals, precious metals, and livestock), which are weighted to account for economic significance and market liquidity. No single commodity can comprise less than 2% or more than 15% of the index; and no group can represent more than 33% of the index. However, between rebalancings, group weightings may fluctuate to levels outside the limits. The index rebalances annually, weighted 2/3 by trading volume and 1/3 by world production.

The Bloomberg Barclays US Treasury 20+ Year index represents the 20+ Year component of the Barclays US Treasury Index. Included securities must have at least 20 years to final maturity regardless of call features, and least $250 million par amount outstanding. They must be rated investment grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch.

The Dow Jones U.S. Select REIT Index tracks the performance of publicly traded REITs and REIT-like securities and is designed to serve as a proxy for direct real estate investment, in part by excluding companies whose performance may be driven by factors other than the value of real estate. The index is a subset of the Dow Jones U.S. Select Real Estate Securities Index (RESI), which represents equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the U.S.

The S&P GSCI Gold Index, a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark tracking the COMEX gold future. The index is designed to be tradable, readily accessible to market participants, and cost efficient to implement. The more widely tracked S&P GSCI index is recognized as a leading measure of general price movements and inflation in the world economy. The index represents commodity market beta is world-production weighted and is designed to be investable by including the most liquid commodity futures.

Federal funds rate is the interest banks charge one another when lending reserve balances on an overnight basis. Typically banks with reserve capital above the minimum required to be held at the Federal Reserve will lend the excess to banks who need to meet minimums.

Treasury yield is the return on investment of U.S. government's debt obligations. Short-term Treasury bills offer no interest payments and are issued at discount from face value. The yield of the three-month Treasury bill is the difference between the discount price and face value, expressed as an annualized percentage rate.

Longer-term Treasury notes are issued for maturities from 1-10 years and offer an interest (or coupon) payment. They may be purchased at premium or discount from face value. The yield on 1- and 2- year Treasury notes is based on their coupon payment and face value, adjusted upward if the note was purchased at discount, and downward if the note was purchased at a premium. It is also expressed as an annualized percentage rate.

Asset Class Indexes

CETERA® INVESTMENT MANAGEMENT

Asset Class	Index
US Large Cap	S&P 500
US Large Cap Growth	S&P 500 Growth
US Large Cap Value	S&P 500 Value
US Mid Cap	S&P Midcap 400
US Small Cap	S&P SmallCap 600
International Developed	MSCI EAFE
Emerging Market Equities	MSCI Emerging Markets
REITs	DJ US Select REIT
Commodities	Bloomberg Commodities
Gold	S&P GSCI Gold
Intermediate-Term Treasurys	Bloomberg Barclays US Treasury 7-10 Yr
Long-Term Treasurys	Bloomberg Barclays US Treasury 20+ Yr
TIPS	Bloomberg Barclays US Treasury US TIPS
Mortgage-Backed Securities	Bloomberg Barclays GNMA
Corporate IG Bonds	Bloomberg Barclays US Corporate IG
High Yield Corporate Bonds	Bloomberg Barclays US Corporate High Yield
Emerging Market Debt	JPM EMBI Global
US Aggregate Bonds	Bloomberg Barclays US Aggregate Bond
60-40 Allocation	60% S&P 500, 40% Bloomberg Barclays US Aggregate Bond

Data Sources

CETERA® INVESTMENT MANAGEMENT

Economic Indicator	Source
Nonfarm Monthly Payrolls ('000)	U.S. Bureau of Labor Statistics
Total Nonfarm Payrolls - YoY Change	U.S. Bureau of Labor Statistics
U3 Unemployment Rate	U.S. Bureau of Labor Statistics
U6 Unemployment Rate	U.S. Bureau of Labor Statistics
Quit Rate	U.S. Bureau of Labor Statistics
Job Openings: Total Nonfarm Payroll	U.S. Bureau of Labor Statistics
Initial Jobless Claims ('000) 4 Wk. MA - Month End	U.S. Employment and Training Administration
KC Fed LMCI Momentum Indicator	Federal Reserve Bank of Kansas City
Labor Force Participation Rate	U.S. Bureau of Labor Statistics
Employment to Population Ratio	U.S. Bureau of Labor Statistics
Temporary Help Employment	U.S. Bureau of Labor Statistics
Retail Sales - YoY Change	U.S. Bureau of the Census
Vehicle Sales (Mil. Units, annualized)	U.S. Bureau of Economic Analysis
Personal Savings Rate	U.S. Bureau of Economic Analysis
Real Retail Sales (3MMA) - YoY Change	Federal Reserve Bank of St. Louis
Industrial Production - YoY Change	Board of Governors of the Federal Reserve System (US)
Capacity Utilization	Board of Governors of the Federal Reserve System (US)
Core Capital Goods Orders - YoY Change	U.S. Bureau of the Census
Building Permits ('000)	U.S. Bureau of the Census
Housing Starts ('000)	U.S. Bureau of the Census

Data Sources (cont.)

CETERA® INVESTMENT MANAGEMENT

Economic Indicator	Source
New Home Sales	U.S. Bureau of the Census
S&P/Case-Shiller Home Price Index (20 city) - YoY Change	S&P Dow Jones Indices LLC
Total Construction Spending - YoY Change	U.S. Bureau of the Census
ISM Manufacturing Composite PMI	Institute for Supply Management
ISM Manufacturing New Orders	Institute for Supply Management
ISM Non-Manufacturing Composite PMI	Institute for Supply Management
ISM Non-Manufacturing New Orders	Institute for Supply Management
U. of Michigan Consumer Sentiment	University of Michigan
Consumer Price Index (CPI) - YoY Change	U.S. Bureau of Labor Statistics
Personal Consumption Expenditure (PCE) - YoY Change	U.S. Bureau of Economic Analysis
Producer Price Index (PPI) - YoY Change	U.S. Bureau of Labor Statistics
Average Hourly Earnings - YoY Change	U.S. Bureau of Labor Statistics
Real GDP – QoQ (SAAR)	U.S. Bureau of Economic Analysis
Real GDP – YoY Change	U.S. Bureau of Economic Analysis
Treasury Yield Curve (10-Yr. Minus 2-Yr.)	Federal Reserve Bank of St. Louis
Philly Fed Leading U.S. Index	Federal Reserve Bank of Philadelphia