

# First Quarter 2020 Chartbook

Data as of November 30, 2019

# First Quarter 2020 Outlook

## Economy – When Growth Doesn't Feel Like Growth



- GDP growth is slowing from high 2018 levels, but 2020 expected growth is near expansion averages.
- Manufacturing data is contracting, but the much larger servicing sector is still in expansion.
- Labor markets remain healthy, although the pace of jobs growth has trended slightly lower than a year ago.

## Equities – Will High Valuations Lower Returns in 2020?



- Stocks enter 2020 with above-average valuations in most major equity categories.
- Inflated valuations could cause more volatility in the year ahead.
- Low interest rates, a rebound in earnings growth, and rising deficit spending will be supportive for stocks.

## Fixed Income – After Best Year in 17 Years, What's Next?



- High yield credit spreads are at relatively lower levels again, after widening at the end of last year.
- After the Treasury yield curve inverted, it is now starting to steepen.

# U.S. Economic Risk Overview

Indicator	Recession Risk	Trend Signal	Trend <span>→</span> Latest											
ISM Manufacturing PMI	MODERATE	↓	54.3	56.6	54.2	55.3	52.8	52.1	51.7	51.2	49.1	47.8	48.3	48.1
ISM Non-Manufacturing PMI	LOW	↓	58.0	56.7	59.7	56.1	55.5	56.9	55.1	53.7	56.4	52.6	54.7	53.9
Industrial Production YoY Growth	HIGH	↓	3.8%	3.6%	2.7%	2.3%	0.7%	1.7%	1.0%	0.4%	0.4%	-0.2%	-1.3%	-0.8%
Building Permits YoY Growth (3 Mo. Avg.)	LOW	↑	-0.6%	-0.6%	-2.4%	-5.8%	-6.2%	-5.5%	-4.5%	-2.4%	2.2%	6.8%	11.5%	11.0%
Unemployment Rate	LOW	↑	3.9%	4.0%	3.8%	3.8%	3.6%	3.6%	3.7%	3.7%	3.7%	3.5%	3.6%	3.5%
Temporary Help Employment YoY	MODERATE	↓	2.8%	1.9%	1.8%	1.5%	1.2%	1.1%	1.0%	0.5%	0.4%	0.3%	-0.1%	0.0%
Real Retail Sales YoY Growth (3 Mo. Avg.)	LOW	↑	1.2%	0.8%	0.3%	1.1%	1.4%	1.6%	1.5%	1.5%	2.0%	2.1%	2.1%	1.6%
U. of Michigan Consumer Sentiment	LOW	→	98.3	91.2	93.8	98.4	97.2	100.0	98.2	98.4	89.8	93.2	96.0	96.8
Philly Fed Leading U.S. Index	LOW	→	1.13	1.10	1.13	1.18	1.26	1.48	1.44	1.15	1.28	1.33	1.48	1.27
Treasury Yield Curve (10yr - 2yr)	MODERATE	→	0.21%	0.18%	0.21%	0.14%	0.24%	0.19%	0.25%	0.13%	0.00%	0.05%	0.17%	0.17%

## Recession Riskometer



LOW

## Economic Trend Signal



STABLE

Sources are listed on pages 34-35. Data as of 11/30/2019.

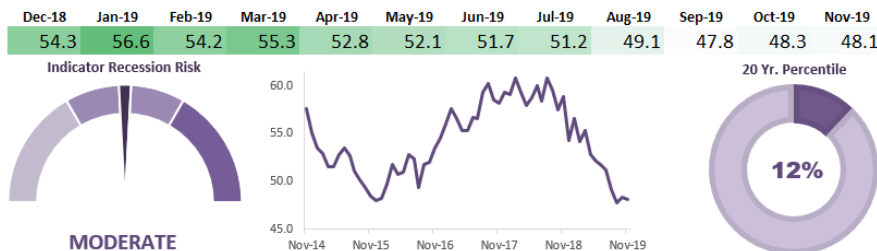
## Commentary

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. Three indicators are signaling a moderate risk of a recession and one indicator is signaling a high risk of recession. Overall, the Recession Riskometer is signaling a low risk of recession in the near-term.
- The overall economic trend signal is stable. At present, four of the indicators are in a negative trend, three indicators have a stable trend, and three indicators have a positive trend. Although the pace of economic growth slowed this year, there are signs that growth will stabilize in 2020. Manufacturing activity appears to be bottoming, while services activity remains in expansion territory.

## U.S. Economic Risk Indicators

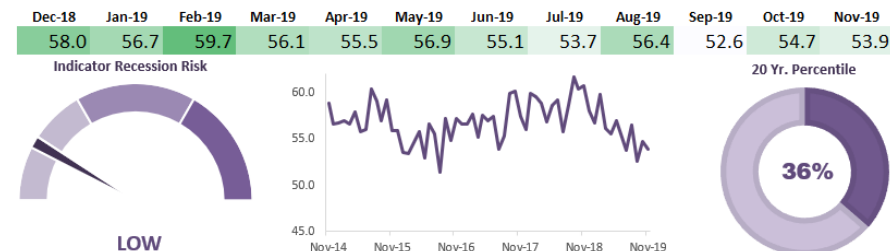
### ISM Manufacturing PMI



The ISM Manufacturing PMI index fell narrowly in November. This indicator is trending lower and contracting. The index is in the 12<sup>th</sup> percentile.

A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.

### ISM Non-Manufacturing PMI

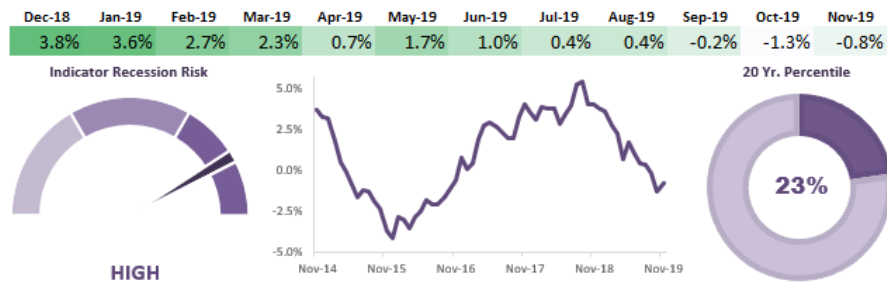


The ISM Non-Manufacturing Index, a barometer for services activity, dropped to 53.9 in November. This indicator is still in expansion territory, but is trending lower

A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.

# U.S. Economic Risk Indicators

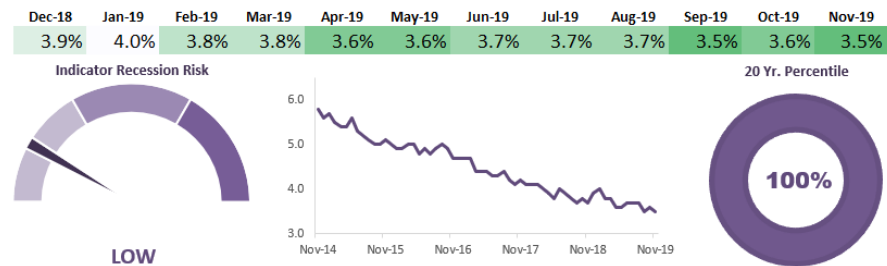
## Industrial Production - YoY Change



YoY Industrial Production growth declined by -0.8% in November and remains in a downward trend since reaching an intermediate-term peak last fall. The most recent YoY figure is lower than 77% of all monthly readings over the last 20 years. This level has indicated a high recession risk historically.

*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%.*

## U3 Unemployment Rate



The unemployment rate fell to a 50-year low of 3.5% in November, as jobs growth accelerated to a 10-month high last month. 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.*

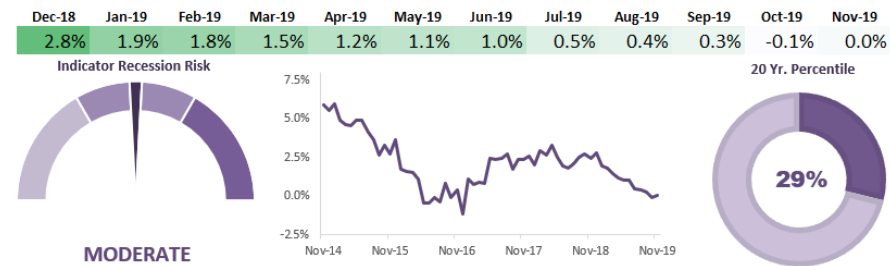
## Building Permits YoY Growth (3 Mo. Avg.)



The 3-month average of building permits narrowly slowed to 11.0% YoY in November. The current reading is higher than 81% of all monthly readings over the past 20 years and is signaling a low risk of recession. After a pullback in housing earlier this year, there are signs that activity is accelerating.

*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.*

## Temporary Help Employment - YoY Change

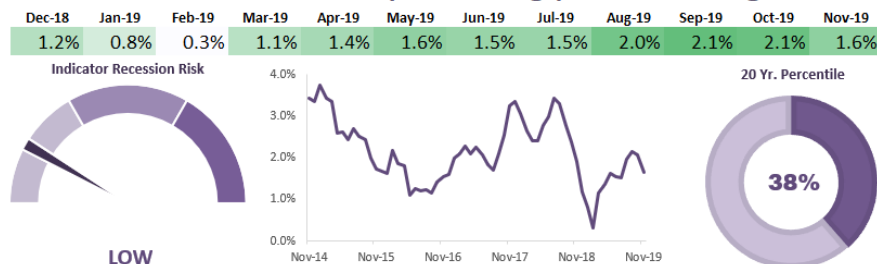


The year-over-year change in temporary help employment has trended lower this year and is currently flat YoY as of November. The current reading is currently higher than 29% of all months over the past 20 years. Caution is warranted if this indicator falls towards flat or negative YoY growth.

*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

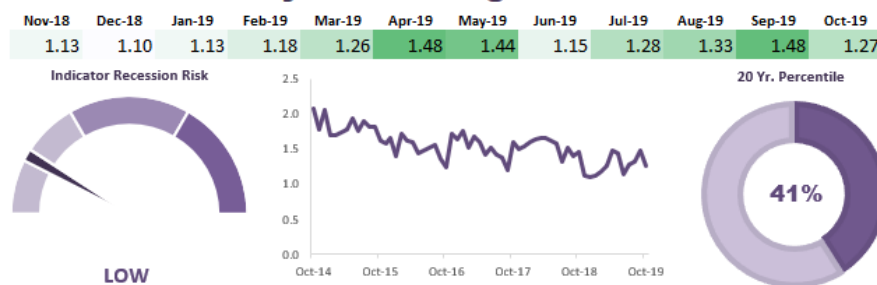
## Real Retail Sales (3 Mo. Avg.) - YoY Change



The three-month average of Real Retail Sales fell to 1.6% YoY through November. This reading is higher than 38% 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.*

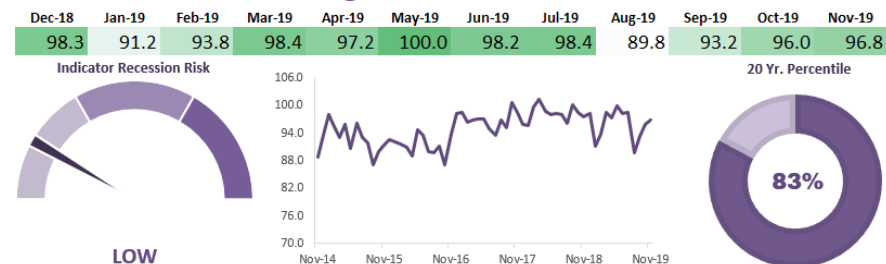
## Philly Fed Leading U.S. Index



The Philly Fed Leading Index dropped to 1.27 in October from 1.48 in September. The leading index remains at a level that indicates stable economic growth in future months. The Philly Fed Leading Index is in the 41<sup>st</sup> percentile – it is higher than 41% 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.*

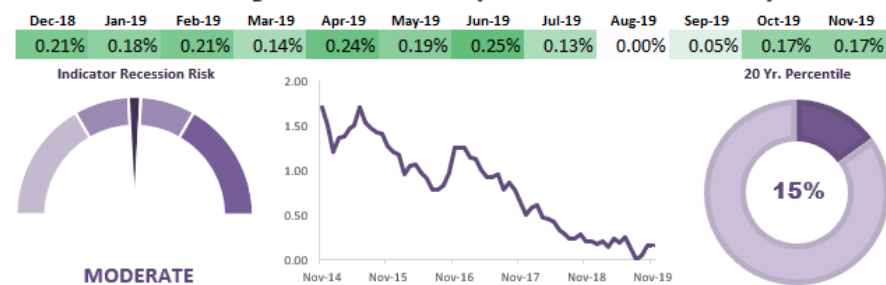
## U. of Michigan Consumer Sentiment



The University of Michigan Consumer Sentiment index increased slightly in November to 96.8. This indicator is currently in the 83<sup>rd</sup> percentile, meaning it is higher than 83% 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.*

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



The 2-10 yield curve spread was 0.17% at the end of November and has trended slightly higher after briefly inverting over the summer.

*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.*



# Equity Valuation Overview

Price/Earnings (P/E)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	21.9	17.4	1.8	97%
S&P 500 Growth	26.9	19.9	1.9	98%
S&P 500 Value	18.0	15.3	1.4	93%
S&P MidCap 400	20.0	19.0	0.4	66%
S&P MidCap 400 Growth	24.9	21.5	1.0	87%
S&P MidCap 400 Value	16.5	17.0	-0.3	34%
S&P SmallCap 600	18.6	19.3	-0.3	37%
S&P SmallCap 600 Growth	21.3	21.1	0.1	53%
S&P SmallCap 600 Value	16.5	17.8	-0.6	23%
MSCI EAFE	17.1	14.4	1.1	90%
MSCI EAFE Growth	24.4	17.9	2.0	100%
MSCI EAFE Value	13.1	12.1	0.5	66%
MSCI Emerging Markets	13.5	12.7	0.4	63%
MSCI Europe	18.2	14.3	1.3	90%
MSCI Pacific	15.6	15.0	0.2	63%
MSCI ACWI	18.8	15.6	1.4	94%

Price/Book Value (P/B)				
Index	Current	15 Yr. Avg.	St. Dev. From 15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	3.3	2.6	1.7	98%
S&P 500 Growth	5.1	4.0	1.2	84%
S&P 500 Value	2.4	1.9	1.6	97%
S&P MidCap 400	2.2	2.2	-0.1	41%
S&P MidCap 400 Growth	3.2	3.1	0.2	50%
S&P MidCap 400 Value	1.6	1.7	-0.3	40%
S&P SmallCap 600	1.8	2.0	-0.6	28%
S&P SmallCap 600 Growth	2.4	2.7	-0.5	24%
S&P SmallCap 600 Value	1.5	1.6	-0.5	32%
MSCI EAFE	1.6	1.8	-0.4	59%
MSCI EAFE Growth	3.2	2.7	0.9	77%
MSCI EAFE Value	1.1	1.4	-0.6	27%
MSCI Emerging Markets	1.6	1.9	-0.7	36%
MSCI Europe	1.8	2.0	-0.4	63%
MSCI Pacific	1.4	1.5	-0.3	51%
MSCI ACWI	2.2	2.1	0.2	71%

Price-To-Earnings (P/E)



Price-To-Book (P/B)



## Commentary

- As measured by Price-to-Earnings, U.S. large cap stocks have an elevated valuation level compared international and U.S. small cap stocks. The P/E ratio for U.S. large cap growth stocks is 1.9 st. dev's above the 15-year average. U.S. small cap stocks are trading at a discount vs their 15-yr avg. P/E.
- Emerging market and international value stocks are slightly above their historical valuations, while international developed and international growth stocks have elevated valuations vs their 15-yr avg.
- Based on Price-to-Book, U.S. large cap and growth stocks have a valuation premium compared to other categories.
- 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.

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.

# Sector Valuation Overview

Price/Earnings (P/E)				
Index			St. Dev. From	
			15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	21.9	17.4	1.8	97%
S&P 500 Consumer Discretionary	25.4	19.0	2.1	99%
S&P 500 Consumer Staples	25.6	19.3	2.3	100%
S&P 500 Energy	15.7	14.6	0.2	76%
S&P 500 Financials	14.3	14.4	0.0	54%
S&P 500 Health Care	24.6	20.6	1.0	87%
S&P 500 Industrials	21.7	17.9	1.3	93%
S&P 500 Information Technology	26.0	20.2	1.4	92%
S&P 500 Materials	20.0	18.0	0.6	75%
S&P 500 Real Estate*	32.6	N/A	N/A	N/A
S&P 500 Utilities	22.9	17.1	1.7	97%
S&P 500 Communication Services	22.7	18.9	0.4	79%

Price/Book Value (P/B)				
Index			St. Dev. From	
			15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	3.3	2.6	1.7	98%
S&P 500 Consumer Discretionary	5.7	3.5	1.8	97%
S&P 500 Consumer Staples	5.2	4.0	1.9	98%
S&P 500 Energy	1.5	2.1	-1.3	3%
S&P 500 Financials	1.5	1.4	0.3	73%
S&P 500 Health Care	4.2	3.4	1.3	97%
S&P 500 Industrials	4.4	3.3	1.6	92%
S&P 500 Information Technology	7.3	4.2	2.9	98%
S&P 500 Materials	2.4	2.9	-0.8	13%
S&P 500 Real Estate*	3.6	N/A	N/A	N/A
S&P 500 Utilities	2.2	1.8	1.3	90%
S&P 500 Communication Services	3.4	2.4	1.8	97%

## Commentary

### Cyclical sectors:

- Valuations for consumer discretionary stocks are well above their historical average for P/E (2.1 standard deviations) and P/B (1.8 standard deviations). Financial stocks are trading near their historical average valuation levels. The Materials sector is trading at a premium versus its historical average P/E level, but is below its average P/B level.

### Economically-sensitive sectors:

- Energy stocks have struggled this cycle and their valuation levels are discounted based on their historical P/B level. Meanwhile, the technology sector is trading significantly above its historical average based on P/E and P/B. Industrial stocks are also trading at a premium versus their historical valuation levels.

### Defensive sectors:

- The defensive sectors have stretched valuation levels following strong performance earlier this year. The P/E ratio for the consumer staples sector is at its highest level in the last 15 years. The P/E ratio for the utilities sector is 1.7 standard deviations above its 15-year average.

*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.*

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

# Fixed Income Overview

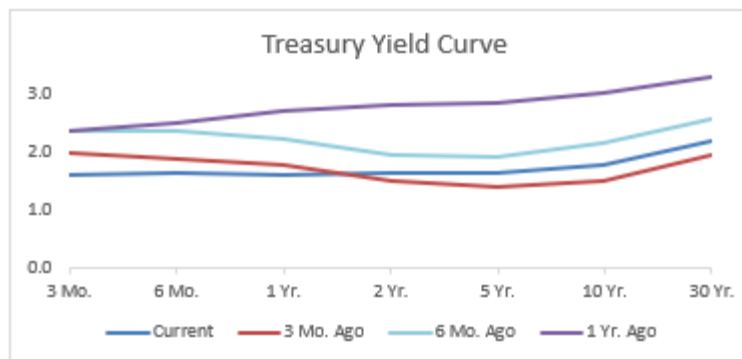
Yield					
Index	Yield		St. Dev. From		Percentile (15 Yrs.)
	Current	15 Yr. Avg.	15 Yr. Mean		
BofAML US Treasury Bill 3 Mon USD	1.56	1.31	-0.2		35%
BBgBarc Treasury 1-3 Yr USD	1.65	1.70	0.0		37%
BBgBarc US Treasury 7-10 Yr USD	1.76	2.84	1.0		84%
BBgBarc US Treasury US TIPS USD	1.95	2.98	0.6		73%
BBgBarc Municipal USD	1.81	3.04	1.5		97%
BBgBarc GNMA USD	2.48	3.67	1.0		84%
BBgBarc US Corp IG USD	2.87	4.22	1.0		91%
BBgBarc US Corporate High Yield USD	5.59	7.84	0.8		93%
BBgBarc US Aggregate 1-3 Yr USD	1.81	2.18	0.2		45%
BBgBarc US Agg Bond USD	2.30	3.28	0.8		76%
BBgBarc Global Treasury Ex US USD	0.51	1.79	1.4		96%
JPM EMBI Global Diversified USD	5.13	6.22	1.0		91%

Treasury Spreads					
Index	Treasury Spreads		St. Dev. From		Percentile (15 Yrs.)
	Current	15 Yr. Avg.	15 Yr. Mean		
BBgBarc Municipal USD	-0.80	0.62	1.9		97%
BBgBarc GNMA USD	-0.13	1.25	1.9		97%
BBgBarc US Corp IG USD	0.26	1.80	2.7		100%
BBgBarc US Corporate High Yield USD	2.98	5.42	1.2		100%
BBgBarc US Agg Bond USD	-0.31	0.86	1.6		94%
BBgBarc Global Treasury Ex US USD	-2.10	-0.63	2.0		96%
JPM EMBI Global Diversified USD	2.52	3.80	1.5		93%

## Commentary

- Bond yields moved slightly higher QTD after reaching a three-year low in Q3.
- Most bond categories have a yield that is well below their averages due to low growth prospects.
- Short-term bonds remain attractive, in our view, at these levels. 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 growth exceeds expectations or global trade relations improve.

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.



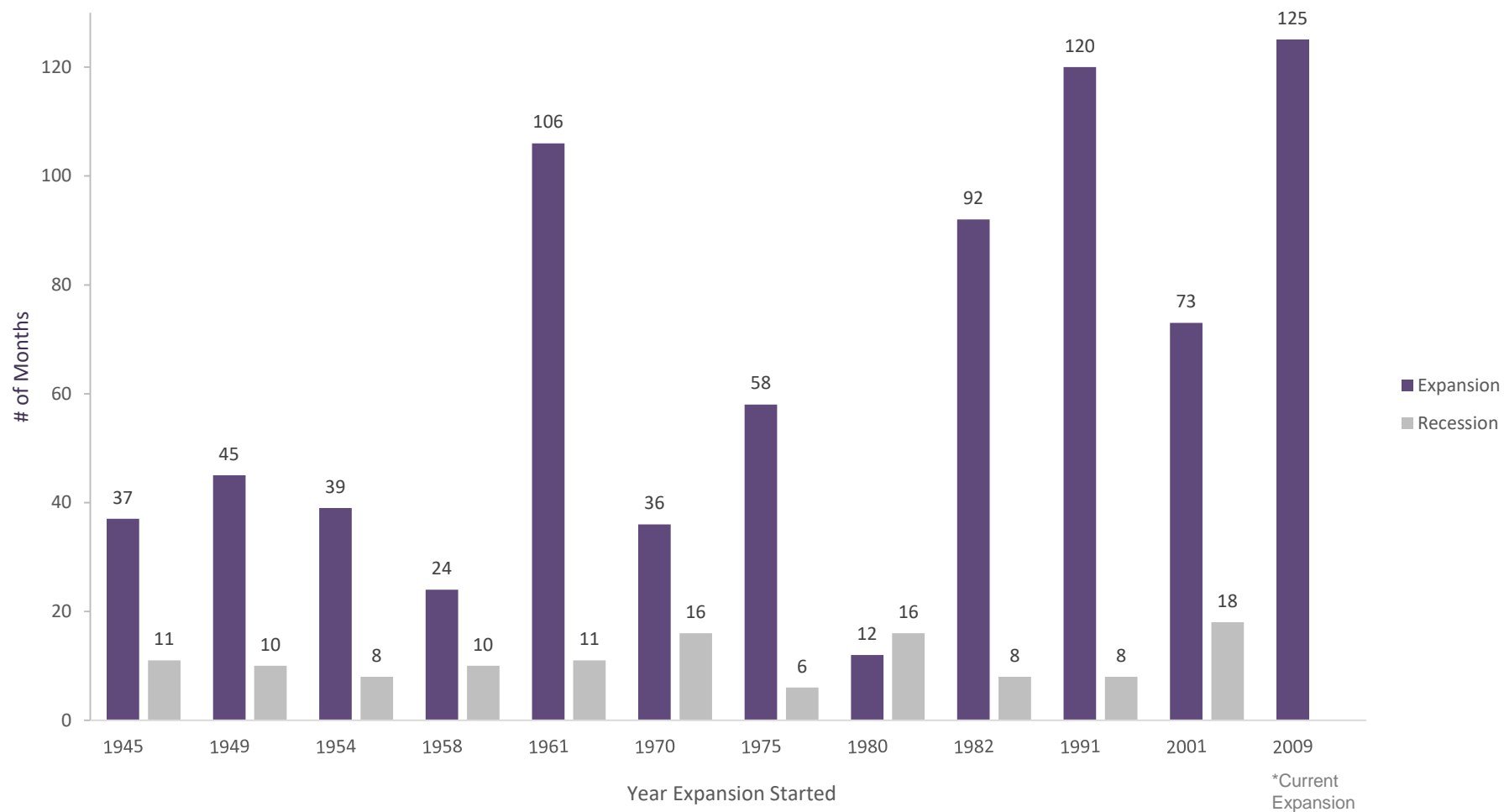


# Appendix

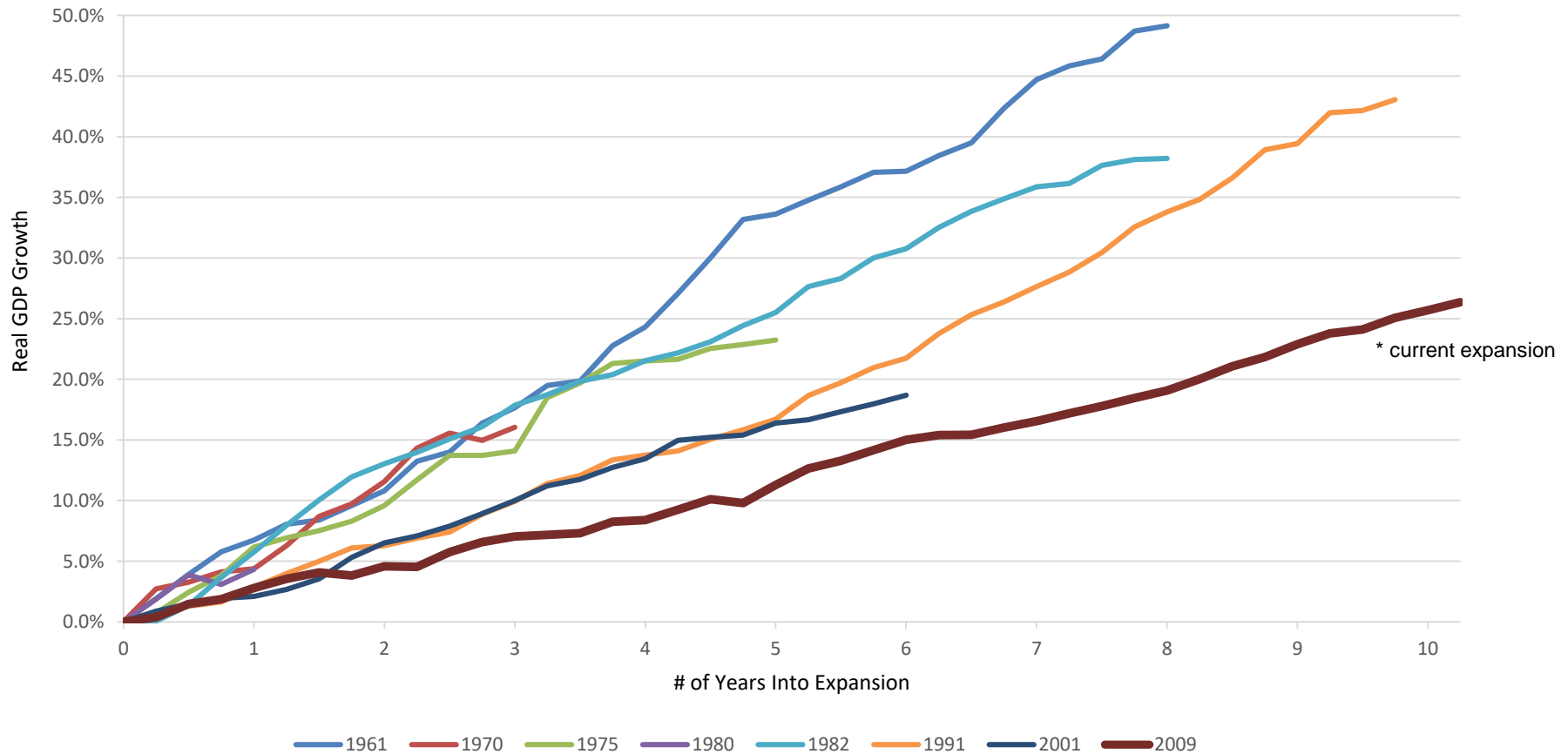
# U.S. Economic Overview

Employment										Trend		Latest	
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			
US Nonfarm Monthly Payrolls ('000)	Nov-19	266	156	196	205	184	110	70	80%			178	166
US Total Nonfarm Payrolls - YoY Change	Nov-19	1.5%	1.4%	1.8%	1.5%	1.6%	0.0%	-0.3%	22%			1.5%	1.5%
U3 Unemployment Rate	Nov-19	3.5%	3.6%	3.7%	3.5%	3.7%	-0.1%	-0.2%	100%			3.7%	3.7%
U6 Unemployment Rate	Nov-19	6.9%	7.0%	7.6%	6.9%	7.2%	-0.1%	-0.7%	100%			7.2%	7.0%
Quit Rate	Oct-19	2.3%	2.3%	2.3%	2.3%	2.3%	0.0%	0.0%	87%			2.3%	2.3%
Job Openings: Total Nonfarm ('000)	Oct-19	7,267	7,032	7,593	7,200	7,344	235	-326	90%			7,384	7,248
Initial Jobless Claims ('000) 4 Wk. MA - Month End	Nov-19	218	215	225	215	218	3	-7	91%			223	212
KC Fed LMCi Momentum Indicator	Oct-19	0.6	0.6	1.2	0.6	0.9	0.0	-0.6	23%			1.0	0.9
Labor Force Participation Rate	Nov-19	63.2%	63.3%	62.9%	63.2%	63.1%	-0.1%	0.3%	57%			62.9%	63.0%
Employment to Population Ratio	Nov-19	61.0	61.0	60.6	61.0	60.8	0.0	0.4	98%			60.6	60.7
Consumer										Trend		Latest	
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			
Retail Sales - YoY Change	Nov-19	3.3%	3.2%	4.1%	3.5%	3.2%	0.1%	-0.7%	30%			3.3%	3.5%
Vehicle Sales (Mil. Units, annualized)	Nov-19	17.1	16.5	17.4	16.9	17.0	0.6	-0.3	66%			17.2	16.9
Personal Savings Rate	Oct-19	7.8%	8.1%	7.3%	8.0%	8.1%	-0.3%	0.5%	78%			7.8%	7.8%
Production										Trend		Latest	
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			
Industrial Production - YoY Change	Nov-19	-0.8%	-1.3%	4.1%	-0.7%	1.2%	0.5%	-4.8%	17%			1.0%	0.4%
Capacity Utilization	Nov-19	77.3%	76.6%	79.6%	77.1%	77.9%	0.7%	-2.3%	66%			77.7%	77.4%
Core Capital Goods Orders - YoY Change	Oct-19	-0.9%	-0.9%	4.1%	-0.9%	1.5%	0.0%	-5.0%	33%			1.1%	0.9%
Housing & Construction										Trend		Latest	
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			
Building Permits ('000)	Nov-19	1,482	1,461	1,334	1,445	1,344	21	148	100%			1,232	1,317
Housing Starts ('000)	Nov-19	1,365	1,323	1,202	1,318	1,257	42	163	99%			1,233	1,204
New Home Sales ('000)	Oct-19	733	738	557	726	667	-5	176	99%			598	729
S&P/Case-Shiller Home Price Index (20 city) - YoY Change	Sep-19	2.1%	2.1%	5.2%	2.1%	2.9%	0.1%	-3.1%	27%			2.5%	2.3%
Total Construction Spending - YoY Change	Oct-19	1.1%	-1.4%	1.5%	-0.3%	-1.6%	2.4%	-0.4%	29%			-2.7%	-2.5%
Survey Data										Trend		Latest	
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			
ISM Manufacturing PMI Composite	Nov-19	48.1	48.3	58.8	48.1	51.8	-0.2	-10.7	2%			51.7	51.2
ISM Manufacturing PMI New Orders	Nov-19	47.2	49.1	62.1	47.9	51.7	-1.9	-14.9	0%			50.0	51.2
ISM Non-Manufacturing PMI Composite	Nov-19	53.9	54.7	60.7	53.7	55.9	-54.7	-60.7	32%			55.1	53.7
ISM Non-Manufacturing PMI New Orders	Nov-19	57.1	55.6	62.5	55.5	58.2	1.5	-5.4	40%			55.8	54.1
U. of Michigan Consumer Sentiment	Nov-19	96.8	96.0	97.5	95.3	95.9	0.8	-0.7	80%			98.2	98.4
Inflation										Trend		Latest	
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			
Consumer Price Index (CPI) - YoY Change	Nov-19	2.1%	1.8%	2.2%	1.8%	1.8%	0.3%	-0.1%	65%			1.6%	1.8%
Personal Consumption Expenditure (PCE) - YoY Change	Oct-19	1.3%	1.3%	2.0%	1.4%	1.5%	0.0%	-0.7%	28%			1.4%	1.4%
Producer Price Index (PPI) - YoY Change	Nov-19	1.1%	1.0%	2.7%	1.2%	1.8%	0.1%	-1.6%	N/A			1.5%	1.6%
Average Hourly Earnings - YoY Change	Nov-19	3.1%	3.2%	3.3%	3.1%	3.2%	0.0%	-0.2%	90%			3.2%	3.2%
GDP										Trend		Latest	
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			
Real GDP - QoQ (SAAR)	Q3-19	2.1%	2.0%	2.9%	2.1%	2.1%	0.1%	-0.8%	41%			3.5%	2.9%
Real GDP - YoY Change	Q3-19	2.1%	2.3%	3.1%	2.2%	2.4%	-0.2%	-1.1%	41%			3.2%	3.1%
Other										Trend		Latest	
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			
Treasury Yield Curve (10 Yr. Minus 2 Yr.) - Month End	Nov-19	0.17%	0.17%	0.21%	0.13%	0.16%	0.00%	-0.04%	3%			0.25%	0.13%
Philly Fed Leading U.S. Index	Oct-19	1.27	1.48	1.45	1.36	1.27	-0.21	-0.18	15%			1.44	1.15

# Post-WWII Economic Expansions and Subsequent Recession Length



# Slow Expansion



Source: Cetera Investment Management, Federal Reserve Bank of St. Louis, U.S. Bureau of Economic Analysis. The chart shows the level of Real GDP growth for U.S. economic expansions since 1961. Data as of 9/30/2019.

# Percent of Active Managers Beating Category Benchmark

Category	Performance						Standard Deviation	
	3 Mo.	YTD	1 Yr.	3 Yr.	2018	2017	1 Yr.	3 Yr.
Domestic Large Cap Core	40%	23%	23%	19%	35%	34%	43%	49%
Domestic Large Growth	26%	20%	21%	27%	44%	35%	57%	56%
Domestic Large Cap Value	46%	35%	39%	50%	41%	79%	46%	59%
Domestic Mid Cap Core	62%	16%	17%	16%	31%	24%	44%	34%
Domestic Mid Cap Growth	40%	31%	29%	33%	42%	42%	47%	41%
Domestic Mid Cap Value	70%	43%	42%	36%	37%	58%	33%	23%
Domestic Small Cap Core	31%	39%	41%	25%	34%	28%	53%	54%
Domestic Small Cap Growth	21%	47%	52%	59%	76%	47%	64%	52%
Domestic Small Cap Value	41%	45%	49%	29%	22%	59%	32%	36%
Foreign Large Core	69%	66%	58%	38%	43%	31%	43%	40%
Foreign Large Growth	62%	63%	51%	38%	55%	33%	42%	38%
Foreign Large Value	63%	86%	71%	52%	21%	59%	36%	35%
Global Equity	38%	47%	44%	41%	50%	47%	45%	40%
Emerging Markets	44%	67%	65%	38%	28%	44%	61%	53%
Intermediate Core Bond	39%	38%	31%	32%	35%	37%	63%	69%
World Bond	100%	77%	60%	51%	36%	28%	92%	83%
Municipal - Short Term	32%	37%	34%	41%	5%	51%	72%	75%
Municipal - Intermediate	80%	19%	13%	10%	17%	16%	93%	97%
Municipal - Long Term	37%	14%	14%	6%	16%	12%	88%	92%
Municipal - High Yield	98%	90%	78%	78%	57%	87%	49%	85%
High Yield Bond	68%	38%	37%	17%	38%	33%	62%	56%
Bank Loan	47%	29%	31%	13%	25%	30%	62%	56%
Short Govt/Corp	86%	34%	15%	48%	28%	77%	91%	86%
Emerging Markets Bond	75%	21%	11%	38%	35%	74%	29%	32%
Specialty - TIPS	71%	20%	12%	29%	33%	38%	69%	73%
Multisector Bond	87%	53%	15%	68%	31%	94%	45%	49%
Real Estate	43%	82%	82%	54%	14%	67%	79%	85%
Global Real Estate	61%	26%	42%	51%	33%	94%	65%	70%
Specialty - Natural Resources	13%	13%	23%	14%	27%	66%	87%	79%
Equity Long/Short	5%	5%	8%	0%	39%	5%	93%	89%
Market Neutral	57%	49%	51%	57%	43%	70%	0%	0%
Managed Futures	72%	95%	70%	88%	29%	94%	54%	53%
Multialternative	4%	2%	5%	1%	65%	2%	89%	84%

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

## Commentary

- In recent months, there has been solid outperformance for active managers in Mid Cap Value, Foreign Large Core, World Bond, Municipal – High Yield, Short Govt/Corp, Emerging Market Bonds, Multisector Bond, and Managed Futures.
- Asset classes that managers have struggled to outperform in the last three months include Large Cap Growth, Small Cap Core, Small Cap Growth, Municipal – Short Term, Natural Resources, 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 many categories in the one- and three-year timeframes shown here.

*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.*



# Asset Class Historical Return Heat Map

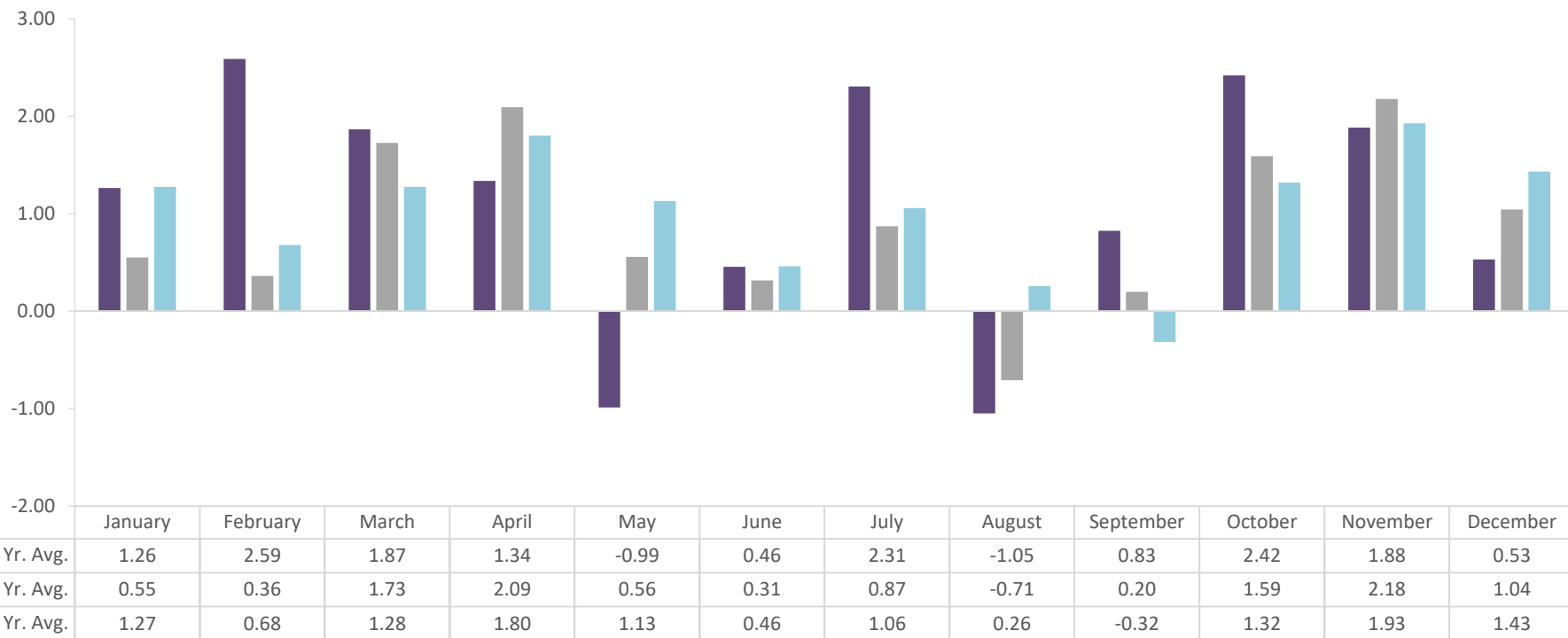
Asset Class	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
US Large Cap	27.63	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46
US Large Cap Growth	27.40	-0.01	27.44	6.89	5.52	14.89	32.75	14.61	4.65	15.05	31.57
US Large Cap Value	27.94	-8.95	15.36	17.40	-3.13	12.36	31.99	17.68	-0.48	15.10	21.18
US Mid Cap	22.75	-11.08	16.24	20.74	-2.18	9.77	33.50	17.88	-1.73	26.64	37.38
US Small Cap	19.22	-8.48	13.23	26.56	-1.97	5.76	41.31	16.33	1.02	26.31	25.57
International Developed	18.78	-13.36	25.62	1.51	-0.39	-4.48	23.29	17.90	-11.73	8.21	32.46
Emerging Market Equities	10.57	-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.63	-18.17	19.20	79.02
REITs	24.27	-4.22	3.76	6.68	4.48	32.00	1.22	17.12	9.37	28.07	28.46
Commodities	2.52	-11.25	1.70	11.77	-24.66	-17.01	-9.52	-1.06	-13.32	16.83	18.91
Gold	13.96	-2.81	12.79	7.75	-10.88	-1.75	-28.65	6.08	9.63	28.72	22.86
Intermediate-Term Treasurys	9.30	0.90	2.55	1.05	1.63	9.00	-6.04	4.16	15.59	9.37	-6.03
Long-Term Treasurys	18.53	-2.00	8.98	1.43	-1.59	27.48	-13.88	3.36	33.84	9.38	-21.40
TIPS	8.02	-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41
Mortgage-Backed Securities	5.71	1.02	1.86	1.56	1.39	5.97	-2.12	2.42	7.90	6.67	5.37
Corporate IG Bonds	14.17	-2.51	6.42	6.11	-0.68	7.46	-1.53	9.82	8.15	9.00	18.68
High Yield Corporate Bonds	12.08	-2.08	7.50	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21
Emerging Market Debt	12.31	-4.61	9.32	10.19	1.23	5.53	-6.58	18.54	8.46	12.04	28.18
US Aggregate Bonds	8.79	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93
60-40 Allocation	20.10	-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.

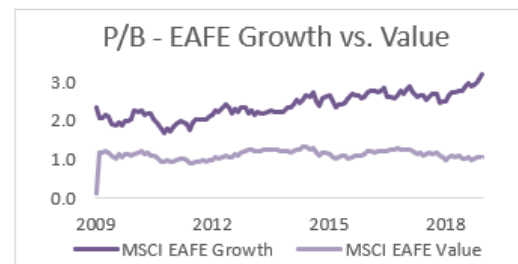
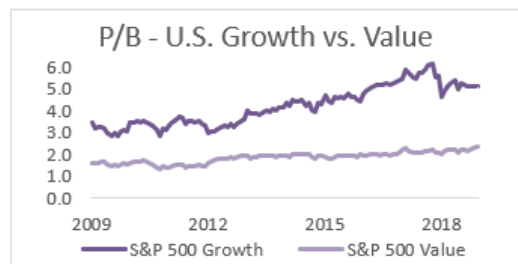
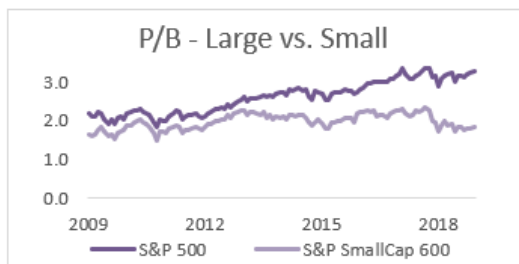
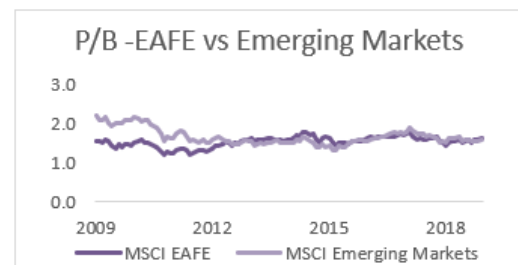
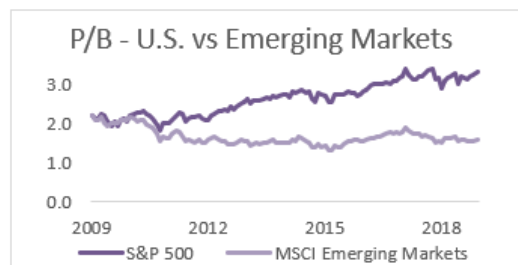
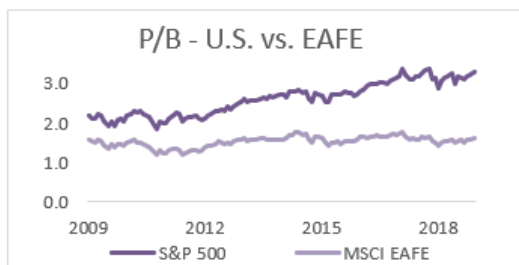
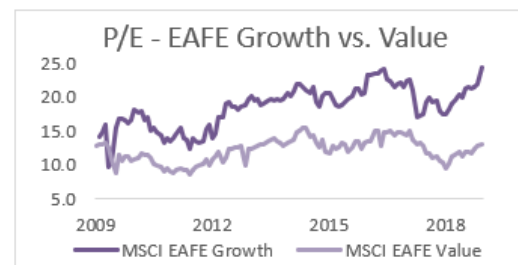
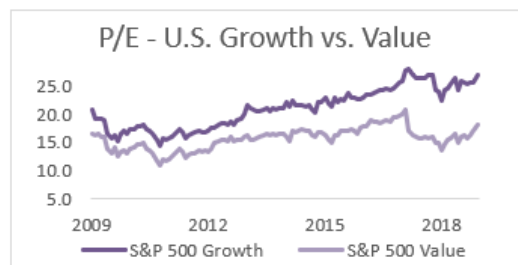
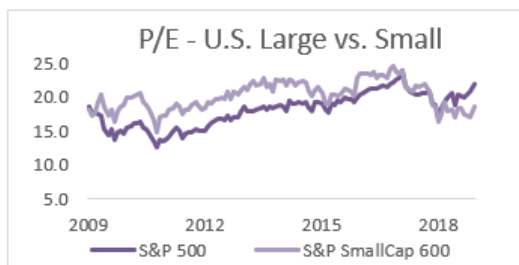
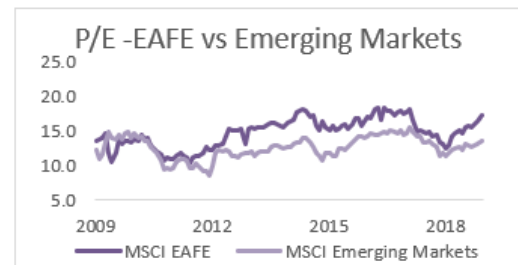
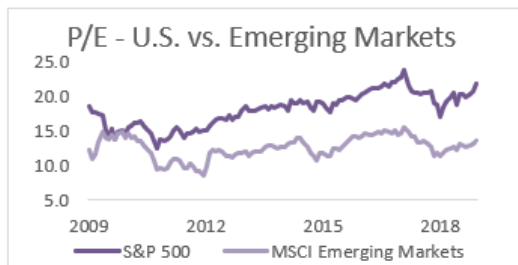
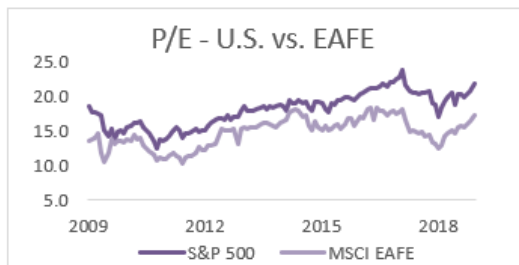
# S&P 500 Historical Returns

	January	February	March	April	May	June	July	August	September	October	November	December	Annual	
<b>YTD</b>	8.01	3.21	1.94	4.05	-6.35	7.05	1.44	-1.58	1.87	2.17	3.63		27.63	<b>YTD</b>
<b>2018</b>	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	<b>2018</b>
<b>2017</b>	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	<b>2017</b>
<b>2016</b>	-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	<b>2016</b>
<b>2015</b>	-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	<b>2015</b>
<b>2014</b>	-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	<b>2014</b>
<b>2013</b>	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	<b>2013</b>
<b>2012</b>	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	<b>2012</b>
<b>2011</b>	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	<b>2011</b>
<b>2010</b>	-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	<b>2010</b>
<b>2009</b>	-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	<b>2009</b>
<b>2008</b>	-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	<b>2008</b>
<b>2007</b>	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	<b>2007</b>
<b>2006</b>	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	<b>2006</b>
<b>2005</b>	-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	<b>2005</b>
<b>2004</b>	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	<b>2004</b>
<b>2003</b>	-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	<b>2003</b>
<b>2002</b>	-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	<b>2002</b>
<b>2001</b>	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	<b>2001</b>
<b>2000</b>	-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	<b>2000</b>
<b>1999</b>	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	<b>1999</b>
<b>10 Yr. Avg.</b>	1.26	2.59	1.87	1.34	-0.99	0.46	2.31	-1.05	0.83	2.42	1.88	0.53	13.77	
<b>25 Yr. Avg.</b>	0.55	0.36	1.73	2.09	0.56	0.31	0.87	-0.71	0.20	1.59	2.18	1.04	11.73	
<b>40 Yr. Avg.</b>	1.27	0.68	1.28	1.80	1.13	0.46	1.06	0.26	-0.32	1.32	1.93	1.43	13.04	
<b>% Positive (10 Yrs.)</b>	60%	80%	80%	90%	60%	60%	80%	50%	70%	70%	90%	70%	90%	
<b>% Positive (25 Yrs.)</b>	60%	60%	72%	80%	64%	68%	56%	60%	64%	64%	84%	76%	80%	
<b>% Positive (40 Yrs.)</b>	63%	63%	70%	73%	70%	63%	53%	63%	55%	68%	75%	75%	83%	

# S&P 500 Average Monthly Returns

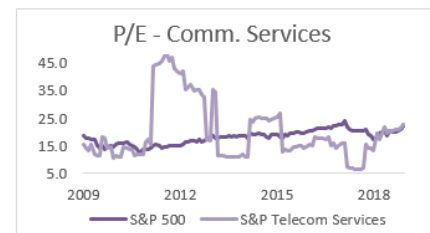
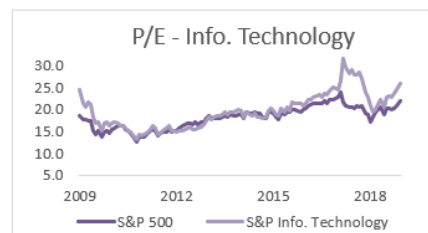
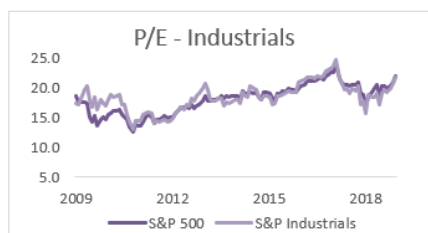
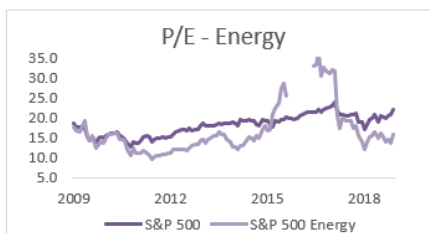


# Equity Valuation Charts

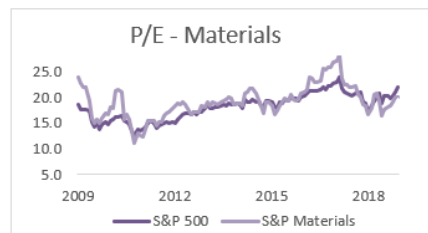
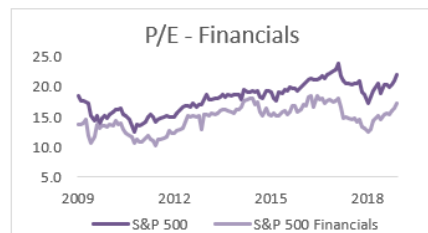
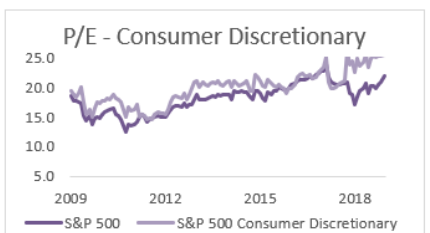


# Sector Valuation Charts

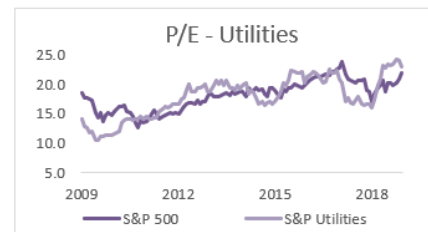
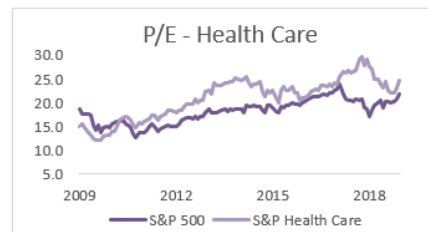
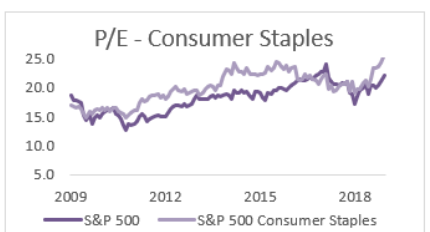
## Economically Sensitive Sectors



## Cyclical Sectors

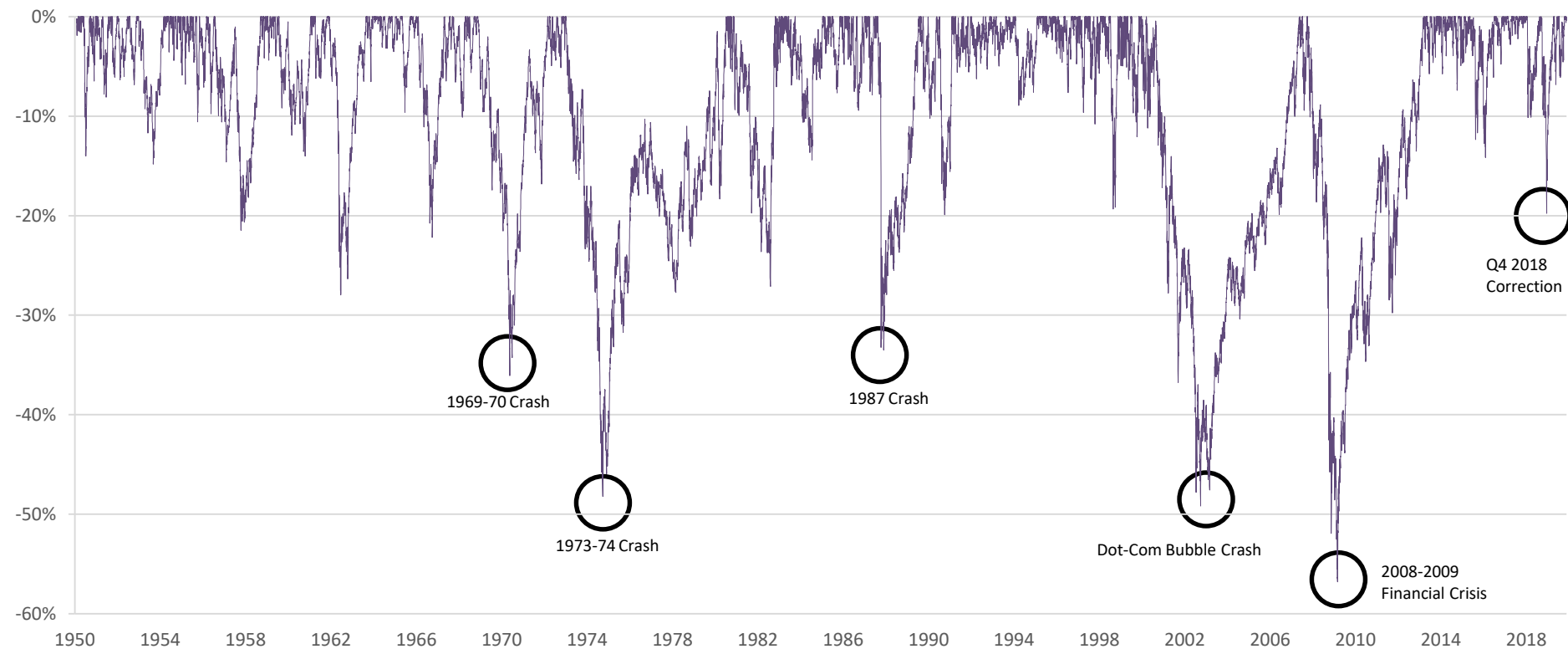


## Defensive Sectors

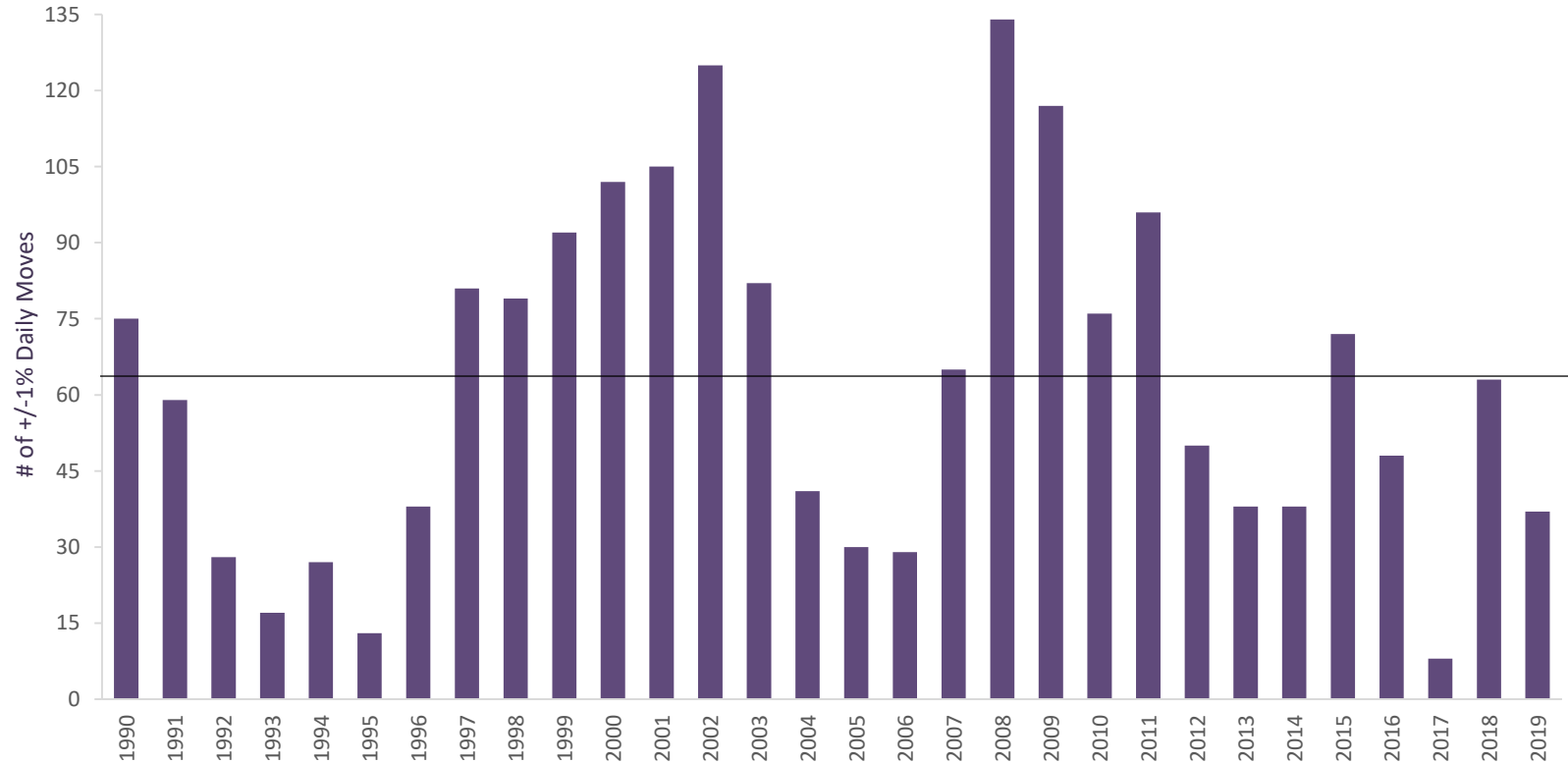




# S&P 500 Drawdowns (1950-2019)

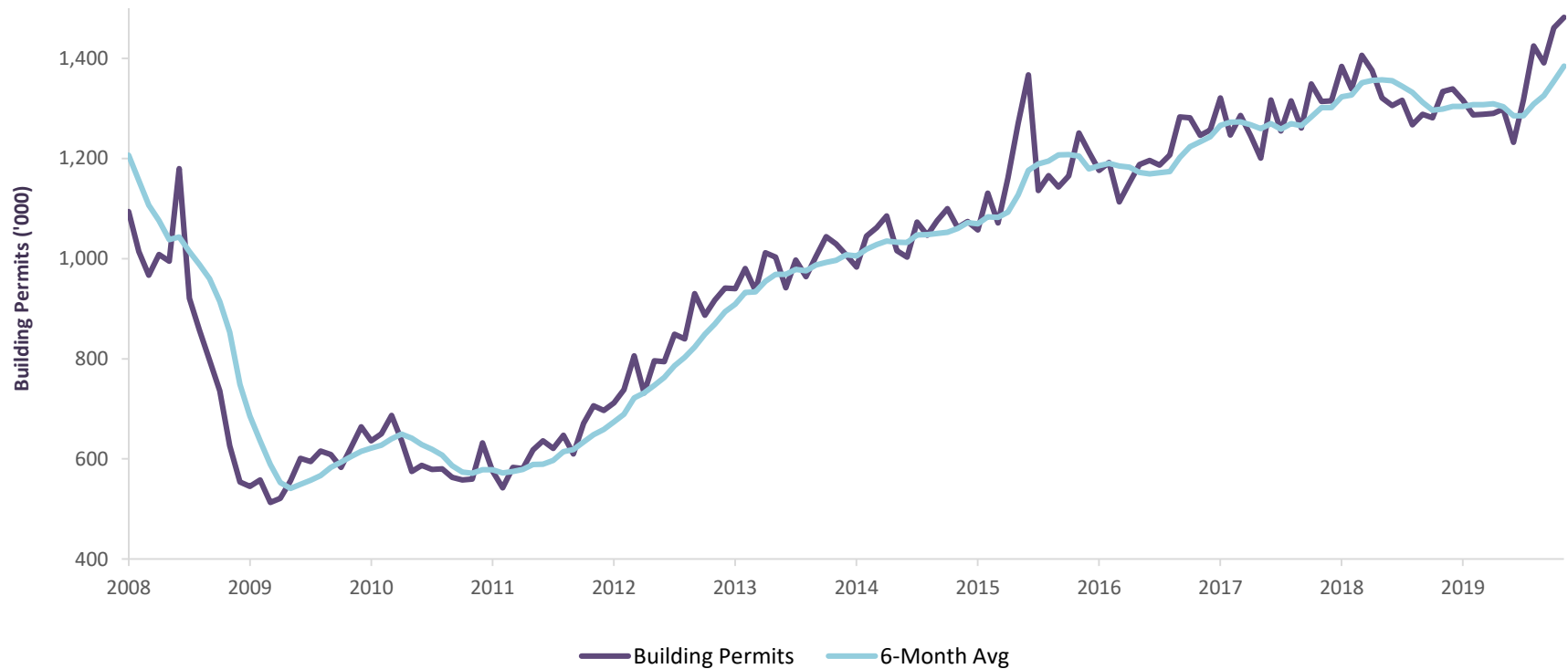


## S&P 500: +/- 1% Daily Moves



Market volatility has been subdued throughout 2019 and there have only been 37 days where the S&P 500 closed plus or minus 1%. That is well below the average of 63 since 1990. As seen in the chart, markets go through low and high volatility phases. The last high volatility phase was from 2008 to 2011. Market volatility, for the most part, has been relatively limited since.

# Building Permits



Housing activity is strengthening as we head into 2020. Building permits, a leading indicator for housing activity, are at a 12-year high and in a clear uptrend. The drop in mortgage rates, combined with a 50-year low in unemployment, have boosted housing activity after a lackluster year in 2018.

# Disclosures

## 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, model management, and other investment advice to its affiliated broker-dealers, dually registered broker-dealers and registered investment advisers.

## About Cetera Financial Group®

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# 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.)

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 80<sup>th</sup> 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 equities 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

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.)

The S&P SmallCap 600 Growth Index represents the growth companies of the 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<sup>®</sup> Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS<sup>®</sup> Consumer Discretionary sector.

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

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

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

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

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

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

# Index Definitions (cont.)

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

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

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

The S&P 500<sup>®</sup> Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS<sup>®</sup> 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.)

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.)

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<sup>®</sup>  
INVESTMENT  
MANAGEMENT

## Asset Class

US Large Cap  
US Large Cap Growth  
US Large Cap Value  
US Mid Cap  
US Small Cap  
International Developed  
Emerging Market Equities  
REITs  
Commodities  
Gold  
Intermediate-Term Treasurys  
Long-Term Treasurys  
TIPS  
Mortgage-Backed Securities  
Corporate IG Bonds  
High Yield Corporate Bonds  
Emerging Market Debt  
US Aggregate Bonds  
60-40 Allocation

## Index

S&P 500  
S&P 500 Growth  
S&P 500 Value  
S&P Midcap 400  
S&P SmallCap 600  
MSCI EAFE  
MSCI Emerging Markets  
DJ US Select REIT  
Bloomberg Commodities  
S&P GSCI Gold  
Bloomberg Barclays US Treasury 7-10 Yr  
Bloomberg Barclays US Treasury 20+ Yr  
Bloomberg Barclays US Treasury US TIPS  
Bloomberg Barclays GNMA  
Bloomberg Barclays US Corporate IG  
Bloomberg Barclays US Corporate High Yield  
JPM EMBI Global  
Bloomberg Barclays US Aggregate Bond  
60% S&P 500, 40% Bloomberg Barclays US Aggregate Bond

# Data Sources

## Economic Indicator

Nonfarm Monthly Payrolls ('000)  
Total Nonfarm Payrolls - YoY Change  
U3 Unemployment Rate  
U6 Unemployment Rate  
Quit Rate  
Job Openings: Total Nonfarm Payroll  
Initial Jobless Claims ('000) 4 Wk. MA - Month End  
KC Fed LMCI Momentum Indicator  
Labor Force Participation Rate  
Employment to Population Ratio  
Temporary Help Employment  
Retail Sales - YoY Change  
Vehicle Sales (Mil. Units, annualized)  
Personal Savings Rate  
Real Retail Sales (3MMA) - YoY Change  
Industrial Production - YoY Change  
Capacity Utilization  
Core Capital Goods Orders - YoY Change  
Building Permits ('000)  
Housing Starts ('000)

## Source

U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Employment and Training Administration  
Federal Reserve Bank of Kansas City  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of the Census  
U.S. Bureau of Economic Analysis  
U.S. Bureau of Economic Analysis  
Federal Reserve Bank of St. Louis  
Board of Governors of the Federal Reserve System (US)  
Board of Governors of the Federal Reserve System (US)  
U.S. Bureau of the Census  
U.S. Bureau of the Census  
U.S. Bureau of the Census



# Data Sources (cont.)

## Economic Indicator

New Home Sales  
S&P/Case-Shiller Home Price Index (20 city) - YoY Change  
Total Construction Spending - YoY Change  
ISM Manufacturing Composite PMI  
ISM Manufacturing New Orders  
ISM Non-Manufacturing Composite PMI  
ISM Non-Manufacturing New Orders  
U. of Michigan Consumer Sentiment  
Consumer Price Index (CPI) - YoY Change  
Personal Consumption Expenditure (PCE) - YoY Change  
Producer Price Index (PPI) - YoY Change  
Average Hourly Earnings - YoY Change  
Real GDP – QoQ (SAAR)  
Real GDP – YoY Change  
Treasury Yield Curve (10-Yr. Minus 2-Yr.)  
Philly Fed Leading U.S. Index

## Source

U.S. Bureau of the Census  
S&P Dow Jones Indices LLC  
U.S. Bureau of the Census  
Institute for Supply Management  
Institute for Supply Management  
Institute for Supply Management  
Institute for Supply Management  
University of Michigan  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Economic Analysis  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Labor Statistics  
U.S. Bureau of Economic Analysis  
U.S. Bureau of Economic Analysis  
Federal Reserve Bank of St. Louis  
Federal Reserve Bank of Philadelphia