The Anatomy of a Recession: What to Look for and Where We’re Headed

Second Quarter 2019

Past performance is no guarantee of future results. Financial term and index definitions are available in the appendix.
Probabilities vs. Possibilities
The Wall of Worry

- Rising U.S. Debt Burden
- U.S. Economy Slows
- Trade Wars
- North Korea Escalation
- Fed Tightens
- Inflation Overshoot
- Peak Earnings
- Dollar Strengthens
- Eurozone Breakup
- China Hard Landing
- EM Problems Intensify
S&P 500 & Panic Attacks

“The definition of insanity is doing the same thing over and over again and expecting a different result.”
- Attributed to Albert Einstein

Data as of March 29, 2019. Source: Standard & Poor’s.
Effects of Panic Attacks on Average Investors
30 Years Annualized Returns (1987-2016)

Source: Bloomberg, Dec. 31, 2016. Average asset allocation investor return is based on an analysis by DALBAR, Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Indices shown are as follows: REITs are represented by the Wilshire Index, U.S. Stocks are represented by the S&P 500 Index, International Equities are represented by the MSCI EAFE Index, Government-Related Bonds are represented by the Bloomberg Barclays U.S. Aggregate Bond Index, Homes are represented by U.S. existing home sales median price, Gold is represented by the U.S. dollar spot price of one troy ounce, Inflation is represented by the Consumer Price Index. Indices are unmanaged and cannot be purchased directly by investors. Index performance is shown for illustrative purposes only and does not predict or depict the performance of any investment. Past performance is no guarantee of future results.
S&P 500 Market Crashes vs. Pullbacks

**Market Crashes**

<table>
<thead>
<tr>
<th>Peak</th>
<th>Trough</th>
<th>Days</th>
<th>S&amp;P 500</th>
<th>Recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 1968</td>
<td>May 1970</td>
<td>543</td>
<td>-36%</td>
<td>Yes</td>
</tr>
<tr>
<td>Nov. 1980</td>
<td>Aug. 1982</td>
<td>621</td>
<td>-27%</td>
<td>Yes</td>
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<tr>
<td>Aug. 1987</td>
<td>Dec. 1987</td>
<td>101</td>
<td>-34%</td>
<td>No</td>
</tr>
<tr>
<td>March 2000</td>
<td>Oct. 2002</td>
<td>929</td>
<td>-49%</td>
<td>Yes</td>
</tr>
<tr>
<td>Oct. 2007</td>
<td>March 2009</td>
<td>517</td>
<td>-57%</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td>557</td>
<td>-42%</td>
<td>83%</td>
</tr>
</tbody>
</table>

**Pullbacks**

<table>
<thead>
<tr>
<th>Peak</th>
<th>Trough</th>
<th>Days</th>
<th>S&amp;P 500</th>
<th>Recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 1976</td>
<td>March 1978</td>
<td>531</td>
<td>-19%</td>
<td>No</td>
</tr>
<tr>
<td>Feb. 1980</td>
<td>March 1980</td>
<td>43</td>
<td>-17%</td>
<td>Yes</td>
</tr>
<tr>
<td>July 1990</td>
<td>Oct. 1990</td>
<td>87</td>
<td>-20%</td>
<td>Yes</td>
</tr>
<tr>
<td>April 2010</td>
<td>July 2010</td>
<td>70</td>
<td>-16%</td>
<td>No</td>
</tr>
<tr>
<td>April 2011</td>
<td>Oct. 2011</td>
<td>157</td>
<td>-19%</td>
<td>No</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td>162</td>
<td>-18%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Market Crashes defined as decline of 20% or greater in S&P 500 lasting at least 1 year. Pullbacks defined as declines of 15% or greater in S&P 500 (no time component). 1987 decline persisted at 20% or greater loss 1 year after Aug. 1987 peak despite trough coming in Dec. 1987.

Source: S&P, NBER, and Bloomberg.
1929 vs. 1987

The Great Depression: 1929

Black Monday: Truly an Outlier?
Strength of Economic Expansions

Data as of Dec. 31, 2018, most recent available as of March 31, 2019.
Just How Long Can The Cycle Continue?

Extended economic expansions are more common outside of the U.S.
# U.S. Recession Risk Indicators

- 12 variables have historically foreshadowed a looming recession
- Yield curve, money supply, wage growth and commodities signal risk right now

<table>
<thead>
<tr>
<th>Category</th>
<th>March 2019</th>
<th>February 2019</th>
<th>Fourth Quarter 2018</th>
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<tbody>
<tr>
<td><strong>Financial</strong></td>
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<tr>
<td>Yield Curve</td>
<td>✗</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Credit Spreads</td>
<td>↑</td>
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<td>○</td>
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<tr>
<td>Money Supply</td>
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<tr>
<td><strong>Inflation</strong></td>
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<tr>
<td>Wage Growth</td>
<td>○</td>
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<tr>
<td>Commodities</td>
<td>○</td>
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<tr>
<td><strong>Consumer</strong></td>
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<tr>
<td>Housing Permits</td>
<td>↑</td>
<td>↑</td>
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<tr>
<td>Jobless Claims</td>
<td>↑</td>
<td>↑</td>
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<tr>
<td>Retail Sales</td>
<td>↑</td>
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<tr>
<td>Job Sentiment</td>
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<tr>
<td><strong>Business</strong></td>
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<tr>
<td>Activity</td>
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<tr>
<td>ISM New Orders</td>
<td>↑</td>
<td>↑</td>
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<tr>
<td>Profit Margins</td>
<td>↑</td>
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<tr>
<td>Truck Shipments</td>
<td>↑</td>
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<tr>
<td><strong>Overall Signal</strong></td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
</tbody>
</table>

Data as of March 31, 2019.
Source: BLS, Federal Reserve, Census Bureau, ISM, BEA, American Chemistry Council, American Trucking Association, Conference Board, and Bloomberg.
U.S. Recession Risk Indicators

- 12 variables have historically foreshadowed a looming recession
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<td>Yield Curve</td>
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<td>Business Activity</td>
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<td>•</td>
<td>n/a</td>
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<tr>
<td>Overall</td>
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<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Data as of March 31, 2019.
Source: BLS, Federal Reserve, Census Bureau, ISM, BEA, American Chemistry Council, American Trucking Association, Conference Board, and Bloomberg.
# U.S. Recession Dashboard

**Case Study: 2006-2009**

## Source:
- BLS, Federal Reserve, Census Bureau, ISM, BEA, American Chemistry Council, American Trucking Association, Conference Board, and Bloomberg.

## Financial Indicators
- **Yield Curve**
- **Credit Spreads**
- **Money Supply**

## Inflation Indicators
- **Wage Growth**
- **Commodities**

## Consumer Indicators
- **Housing Permits**
- **Jobless Claims**
- **Retail Sales**
- **Job Sentiment**

## Business Activity Indicators
- **ISM New Orders**
- **Profit Margins**
- **Truck Shipments**

## Graph:

Overall Signal:
- June 2006: Up
- Q2 2007: Neutral
- Q2 2008: Down
- Market Top: 1,503
- Recession Starts: 1,468
- Bear Steams Bankruptcy: 1,280
- Lehman Bankruptcy: 1,280

## S&P 500:

- Q2 2006: 1,270
- Q4 2006: 1,418
- Q2 2007: 1,503
- Q4 2007: 1,468
- Q2 2008: 1,280

### Overall Signal:
- Q2 2007: Neutral

**Legend:**
- **●**: Up
- **X**: Down
- **○**: Neutral
Yield Curve Spread
10-Year Treasury Bonds Minus 3-Month T Bills

Yield curve spread less than zero (inverted) occurs prior to recessions.

Data as of March 31, 2019. BPS = Basis Points, one hundredth of one percent.
Source: Fed Reserve Bank of St. Louis, retrieved from FRED. Compiled: econpi.com
At the peak in 2009, there were seven unemployed people for every job opening.

Today, the ratio is less than 1:1.
Households Assets vs. Liabilities

- American households are in a strong financial position with robust balance sheets.
- Household leverage is the lowest it has been since 1Q 1985.

1As of Date: Dec. 31, 2018, latest available as of March 31, 2019.
Source: Federal Reserve.
Assets vs. Liabilities of households and nonprofit organizations.
Market Outlook: Where We’re Headed
Third Greatest Decline in P/Es in Past 40 Years

- S&P 500 valuations are much more compelling after the market derating.
- Near-term recession risks remain muted. This should support returns in 2019.
## Buy The Dip?
Non-Recessionary Corrections Tend to be Followed by Strong Rebounds

<table>
<thead>
<tr>
<th>Year</th>
<th>Correction</th>
<th>6 Months After Low</th>
<th>12 Months After Low</th>
<th>Central Bank Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>-14%</td>
<td>+20%</td>
<td>+30%</td>
<td>Rate Cut</td>
</tr>
<tr>
<td>1988</td>
<td>-34%</td>
<td>+19%</td>
<td>+21%</td>
<td>Rate Cut</td>
</tr>
<tr>
<td>1998</td>
<td>-19%</td>
<td>+40%</td>
<td>+39%</td>
<td>Rate Cut</td>
</tr>
<tr>
<td>2010</td>
<td>-16%</td>
<td>+24%</td>
<td>+31%</td>
<td>PBoC Eased</td>
</tr>
<tr>
<td>2011</td>
<td>-19%</td>
<td>+29%</td>
<td>+32%</td>
<td>“Operation Twist” Announced</td>
</tr>
<tr>
<td>2016</td>
<td>-13%</td>
<td>+20%</td>
<td>+27%</td>
<td>Pause</td>
</tr>
<tr>
<td>2018</td>
<td>-20%</td>
<td>???</td>
<td>???</td>
<td>???</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>-19%</strong></td>
<td><strong>+25%</strong></td>
<td><strong>+30%</strong></td>
<td></td>
</tr>
</tbody>
</table>
Two Important Historical Analogues

S&P 500 Annual Returns, Recession Risk Indicators, and Select Economic Data as of December 31

- Both 1984 and 1994 saw strong earnings, a robust economy, and P/E contraction that led to disappointing market performance.
- In each case, the following year did not see a recession and markets rallied substantially.
Post-Midterm Election Performance
Midterm Year Since 1950

In the 12 months following a midterm election, the S&P 500 has been up 15.3% on average, historically.

Every period historically has had a positive return.

Source: FactSet, S&P.
The Philly Fed Index Suggests Slowing U.S. GDP

The Philly Fed tends to lead GDP by three months suggesting a coming slowdown.

Data as of March 31, 2019.
First Quarter Has Disappointed This Cycle
2010 - 2018

Data as of Dec. 31, 2018
Source: FactSet.

Average Real GDP Growth by Quarter

Q1: 1.7%
Q2: 3.0%
Q3: 2.3%
Q4: 2.2%

The first quarter has disappointed this cycle with a typically strong rebound later in the year.
Taiwanese Activity Tends to Lead U.S.

- Leading indicators suggest the slowdown in global growth could continue during Q2.
- Taiwan has the largest revenue exposure of any country to China at 18%.
Global Stock Markets Lead Earnings

- In 2016, global equities turned higher 10 months before earnings revisions turned positive.
- The current environment could be similar with stocks rallying before a clear turn in earnings.
Chinese Stimulus

Similar to 2015-16, China is taking steps to stimulate their economy including:

- Lower interest rates (Shibor -200 bps, 350 bps cuts of RRR)
- Yuan devaluation
- Looser credit standards: New bank loans +10% in 1Q2019, +28% in 4Q18
- Fiscal stimulus (Government spending, tax cuts)
- Capital injections via medium term lending facility (MLF) and expansion of MLF scope

Sources: JPMorgan, National Statistics Bureau of China, Bloomberg.
*Note: China Monetary Conditions Index advanced six months.
One Year Outlook
Themes That Will Drive the Market Over the Next 12 Months

- Trump’s Presidential Agenda
- Earnings
- International
- Central Bank Policy
- Oil
- U.S. Dollar
- Debt
- Valuations
Trump’s Presidential Agenda
Number of recessions starting per year of the presidential cycle 1948 – 2016

Since 1948, no recession has started in the 3rd year of a presidential administration.

Presidential Cycle: The Economy
Presidential Cycle: The Stock Market

S&P 500 Annual Performance by Presidential Term Year
Inclusive of First & Second Term vs. First Term Only, Since 1949

- Year 1: 7.0%
- Year 2/Midterm: 6.4%
- Year 3: 16.1%
- Presidential Election Year: 11.7%

S&P Historical Average Since 1949: 9.0%

Source: Strategas Research Partners.
Fiscal Stimulus as a Percent of GDP

A common misconception is that the fiscal stimulus package dries up in 2019. This is hardly the case.
Capex Surged in 2018

- Last year was the second largest increase in S&P 500 capex on the back of strong earnings and repatriation of overseas cash.
Fiscal Stimulus > Trade Concerns
Tariffs vs. Fiscal Policy

Data as of Dec. 31, 2018.
Source: Strategas Research Partners.

$251 Billion
Incremental Tariffs

$372 Billion
Incremental Fiscal Stimulus

Steel & Aluminum Tariffs: $6.3 B
Auto Tariffs: $40 B
Existing China Tariffs: $44 B
China 301/Retaliation (2nd Round): $50 B
China 301/Retaliation (3rd Round): $111 B

Repatriation: $250 B (estimated)
Spending: $52 B
Tax Cuts: $70 B
Manufacturing PMI and S&P 500 EPS

Data as of March 31, 2019.
Source: Bloomberg.
Buybacks & Dividends

S&P 500 as of March 31, 2019.
Remainder as of Dec. 31, 2018, most recent available as of March 31, 2019.
Source: Credit Suisse, S&P, Bloomberg.
# Peak Earnings A Reason To Sell?
S&P 500 Returns Following Peak EPS Growth Since 1962

<table>
<thead>
<tr>
<th>EPS Peak (S&amp;P 500)</th>
<th>Recession</th>
<th># Months</th>
<th>S&amp;P 500 Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Q62</td>
<td>4Q69</td>
<td>87</td>
<td>63.6</td>
</tr>
<tr>
<td>1Q66</td>
<td>4Q69</td>
<td>45</td>
<td>3.2</td>
</tr>
<tr>
<td>4Q68</td>
<td>4Q69</td>
<td>12</td>
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</tr>
<tr>
<td>4Q73</td>
<td>4Q73</td>
<td>-1</td>
<td>1.7</td>
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<tr>
<td>4Q76</td>
<td>1Q80</td>
<td>37</td>
<td>6.2</td>
</tr>
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<td>3Q79</td>
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<td>3Q81</td>
<td>3Q81</td>
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<td>3Q02</td>
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<td>3Q06</td>
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<td>15</td>
<td>9.9</td>
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<tr>
<td><strong>Average (1962-2006)</strong></td>
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<td><strong>39</strong></td>
<td><strong>39.8</strong></td>
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<td>4Q10</td>
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<td>99</td>
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<td>2Q14</td>
<td>-</td>
<td>57</td>
<td>44.6</td>
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<tr>
<td>3Q18?</td>
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<tr>
<td><strong>Average Including Current Cycle (1962-Present)</strong></td>
<td><strong>43</strong></td>
<td><strong>44.8</strong></td>
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</tbody>
</table>

Note: Peak EPS based on YoY trailing EPS growth. Source: Credit Suisse, S&P, NBER, and Bloomberg.

Peak earnings do not necessarily mean the end of the economic or market cycle.
International investments are subject to special risks, including currency fluctuations and social, economic and political uncertainties, which could increase volatility. These risks are magnified in emerging markets.
Home Country Bias

Investors tend to over-allocate to their home country.

The U.S. represents 74% of U.S. investor portfolios

The U.S. represents only 32% of Global GDP

The U.S. represents 39% of Global Market Cap
U.S. vs. International Equity Performance

Geographic leadership tends to persist for multiple years.

S&P 500 vs. MSCI EAFE.
Data as of March 31, 2019.
Source: FactSet.
IFO Expectations vs. DAX

When IFO expectations are at current levels, returns tend to be above average.
German Stocks Historically Cheap

- German stocks are at 50 year lows relative to the U.S.

Data as of March 31, 2019.
Source: FactSet.
Proportion of Revenues from Emerging Markets

- European equities are more exposed to Emerging Markets than U.S. equities.

Source: J.P. Morgan, FactSet.
Central Bank Policy

The Federal Reserve, the central bank of the U.S., is responsible for the country's money supply and maintaining stability in its financial systems.
Historical Rate Hikes By Cycle

At nine hikes, we've already exceeded the historical average.
When considering the impact of QE and forward guidance, Fed policy is much tighter than indicated by the Fed Funds rate alone.
History Suggests Fed May Cut

Historically, the first cut comes, on average, less than five months after the final hike.
Fed Inflation Target

- Inflation has consistently undershot the Fed’s target this cycle, prompting a review of their inflation framework.
- Many expect them to adopt a 2% “average” inflation rate over the medium term.
Global Oil Supply vs. Demand

- The oil market shifted back to a (modest) surplus, which weighed on oil prices late last year.
- Importantly, the market is now close to equilibrium suggesting a more stable pricing environment.

Source: Energy Intelligence & Bloomberg.
Note: 6-Month Moving Average. Data as of March 31, 2019.
OPEC spare capacity has been in secular decline since the 1980s.

- Tight spare capacity means the impact from any supply disruptions would be magnified.
The energy sector has outperformed the market in the later stages of every economic cycle going back to the 1960s.
U.S. Dollar
U.S. Dollar Cycle

Trade-Weighted U.S. Dollar

- U.S. dollar cycles typically last approximately 15 years.
- The dollar’s peak in 2016 may have started a longer downtrend.

As of Feb. 28, 2019.
Source: Federal Reserve Bank of St. Louis, Federal Reserve and FactSet.
Major Currencies, Index Mar 1973=100, Monthly, Not Seasonally Adjusted.
U.S. Dollar Positioning

- U.S. dollar positioning today vs. start of year
- Investor sentiment has shifted

Dollar positioning has changed from net short to net long, suggesting much of the dollar’s appreciation may have already occurred.
Twin Deficits: Budget and Trade

Data as of Dec. 31 2018, most recent available as of March 31, 2019.
Source: BEA, Federal Reserve, FactSet.

Twin deficits show the dollar should modestly weaken over the next several years.
The greenback is firmly entrenched as the world's reserve currency.
Debt
Student Loans Not a Macro Issue

- There are 44 million student loans outstanding
- 84% have a balance smaller than $50k
- 16% hold 56% of outstanding student loan balances

Data as of Dec. 31, 2017, most recent available as of March 31, 2019.
 Corporations have taken advantage of low rates and have termed out their debt. 

The weighted average maturity for S&P 500 companies is 10 years.
In 1973, only 9% of credits were rated BAA versus nearly 44% today.
U.S. is the Only Country with Growing Debt Levels

Change in Government Debt-to-GDP Ratio
2018 - 2023

Source: IMF Forecasts, Haver Analytics, Deutsche Bank Research.
Market Annual Returns
Distribution of S&P 500 Total Returns Since 1926

Source: Strategas Research Partners.
Strength of U.S. Bull Markets

The current bull market is the ninth strongest since WW2.
Price/Earnings Is Not The Only Indicator To Watch

Data as of March 31, 2019.
Source: Bloomberg.
Earnings Price Yield
Interest Rates: S&P 500 Minus YTM of 10-Year Treasuries

Valuation levels at end of the three longest U.S. economic cycles based on quarter end values:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>E/P Yield</th>
<th>YTM 10-Year Treasuries</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 1968</td>
<td>5.5%</td>
<td>6.2%</td>
<td>-0.7</td>
</tr>
<tr>
<td>Q2 1990</td>
<td>6.4%</td>
<td>8.4%</td>
<td>-2.0</td>
</tr>
<tr>
<td>Q1 2000</td>
<td>3.6%</td>
<td>6.0%</td>
<td>-2.4</td>
</tr>
<tr>
<td>Current</td>
<td>5.4%</td>
<td>2.4%</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Source: FactSet. Data as of March 31, 2019.
YTM: Yield to maturity. E/P Yield: The earnings yield refers to the earnings per share for the most recent 12-month period divided by the current market price per share.
New Secular Bull Market?

Data as of March 31, 2019.
Source: Standard & Poor’s and Bloomberg.
## Biographies

<table>
<thead>
<tr>
<th>Name and Position</th>
<th>Industry Experience</th>
<th>ClearBridge Tenure</th>
<th>Education, Experience and Professional Designations</th>
</tr>
</thead>
</table>
| **Jeffrey Schulze, CFA**  
Director, Investment Strategist | 14 years | • Joined ClearBridge in 2014 | • Member of the CFA Institute  
• Lord Abbett & Co., LLC – Portfolio Specialist  
• BS in Finance from Rutgers University |
| **Josh Jamner, CFA**  
Vice President, Investment Strategy Analyst | 10 years | • Joined ClearBridge in 2017 | • Member of the CFA Institute  
• RBC Capital Markets - Assistant Vice President, Associate Strategist  
- U.S. Equity  
• Bessemer Trust - Assistant Vice President, Client Portfolio Analyst  
• BA in Government from Colby College |
Glossary of Terms

**Capex:** Capital expenditure; payment for goods or services recorded on the balance sheet instead of expensed on the income statement.

**ECB:** European Central Bank

**EPS:** Earnings Per Share

**GDP:** Gross Domestic Product

**P/E Ratio:** Price/Earnings ratio

**PMI:** Purchasing Manager’s Index

**Quantitative easing (QE):** Monetary policy implemented by a central bank in which it increases the excess reserves of the banking system through the direct purchase of debt securities.

**Yield Curve:** Comparison of interest rates at a point in time of bonds with equal credit quality but different maturity dates.

**YoY:** Year Over Year

**U.S. Treasurys:** Direct debt obligations issued and backed by the “full faith and credit” of the U.S. government. The U.S. government guarantees the principal and interest payments on U.S. Treasurys when the securities are held to maturity. Unlike U.S. Treasury securities, debt securities issued by the federal agencies and instrumentalities and related investments may or may not be backed by the full faith and credit of the U.S. government. Even when the U.S. government guarantees principal and interest payments on securities, this guarantee does not apply to losses resulting from declines in the market value of these securities.

**S&P 500 Index:** Unmanaged index of 500 stocks that is generally representative of the performance of larger companies in the U.S.

**Shibor:** Shanghai Interbank Offered Rate
Additional Important Information

Past performance is no guarantee of future results.

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