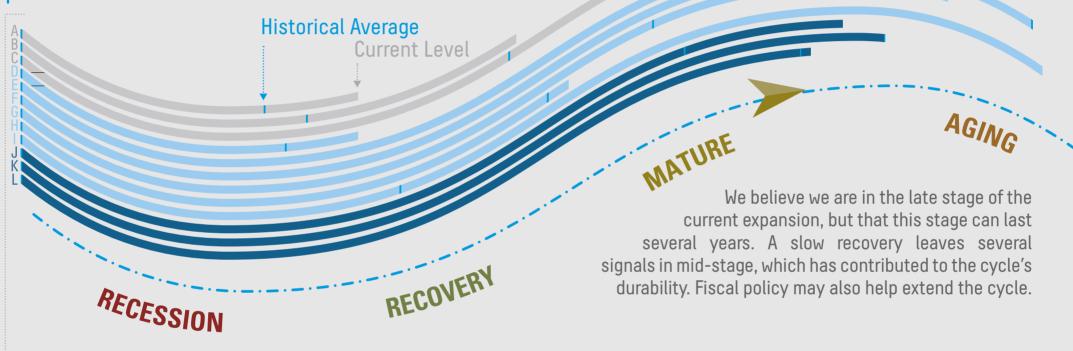
RECESSION WATCH Updated Second Quarter 2018

Our Recession Watch Dashboard is showing an overall low risk of recession starting within the next year.

Because data for the components of this dashboard are available with varying frequencies, some will be more current than others. In all cases, we have used the latest data available.

DEFINITIONS



A 3-Month Treasury Bill, Low B Civilian Employment, Passes Prior Peak C CPI, Year-over-Year, Low

D 10-Year Treasury Yield, Low G E Housing Starts, Expansion Total H F GDP, % Above Prior Peak I

G Commodity Prices, Low
H Yield Spread, BAA, 20-Year Treasury, Low
I Average Hourly Earnings, Year-over-Year, Low

Profitability, Peak Real S&P 500 Price Index, % Above Prior Peak Real Earnings Peak

TIPI RESEARCH

RECESSION

WAIGH

DASHBOARD

Data for all series is as of July 17, 2018. Starting point for all series is June 1954 except housing starts (March 1961), hourly earnings (December 1970), and commodity prices (December 1970). Real prices and real earnings determined using the Consumer Price Index for all urban consumers (CPI-U). Commodity prices are based on the GSCI Total Return Index. Profitability is based on real profit per unit value added for non-financial corporate business based on current production as calculated by the BEA.

The 10-year Treasury yield hit a new low for the current cycle in July 2016 (based on the daily average), shifting us to earlier in the cycle by that metric.

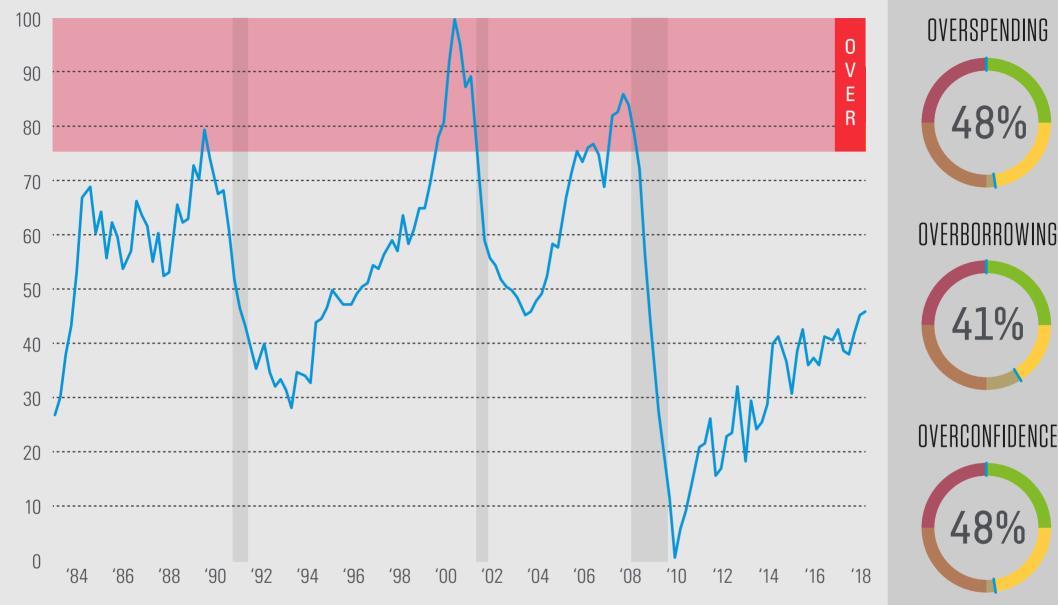
Sources: LPL Research, Federal Reserve, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, U.S. Bureau of the Census, Standard and Poor's, Robert Shiller, National Bureau of Economic Research, Haver Analytics, Thomson Reuters

The opinions voiced in this material are for general information only and are not intended to provide or be construed as providing specific investment advice or recommendations for your clients.

Any economic forecasts set forth in the presentation may not develop as predicted and there can be no guarantee that strategies promoted will be successful. All indexes are unmanaged and cannot be invested into directly.

For more details on any of the components of this dashboard, please see the links embedded within the graphic (marked with a + symbol).

<u>, The over index</u>



Spending is measured by the

selected criteria: real home

prices, big ticket purchases, business spending, and

Borrowing is measured by the selected criteria: credit card

payments, business debt, and

commercial loan growth.

Confidence is measured by the selected criteria: consumer confidence.

valuations, wage growth, and

commodity prices.

debt, consumer debt

business leverage.

To complete the Over Index, LPL Research measures trends in three broad economic drivers: spending, borrowing, and confidence. For each of these three drivers, we found four diverse components that reflect the economic activity of that subindex from a different angle. The Over Index takes each of the subcomponents and uses a sophisticated statistical process to normalize and index each data series into an overall score for each of the three drivers. The combined aggregated data help to measure the likelihood that the economy is showing signs of overactivity and that we may be approaching a cyclical peak.

As of 06/29/18. Shaded areas indicate recession.

5 FORECASTERS: LATE CYCLE WARNING?

There is no magic formula for predicting recessions and bear markets — every cycle is different. But we believe the Five Forecasters cover a variety of perspectives and help capture a more complete view of the economic and market environment. They are meant to be considered collectively, not individually.

The PE ratio (price-to-earnings ratio) is a valuation ratio of a company's current share price compared with its per-share earnings. A high PE suggests that investors are expecting high earnings growth in the future, compared with companies with a lower PE.

The Standard & Poor's 500 Index is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

The Purchasing Managers' Index (PMI) is an indicator of the economic health of the manufacturing sector. The PMI is based on five major indicators: new orders, inventory levels, production, supplier deliveries, and the employment environment.

TREASURY YIELD CURVE



As of 06/30/18. Shaded areas indicate recession.

LEADING ECONOMIC INDICATORS



As of 06/30/18. Shaded areas indicate recession.

MARKET BREADTH



As of 07/24/18. White arrows indicate trends. Divergences signal bear markets.

PURCHASING MANAGERS' SENTIMENT (PMI)



As of 06/30/18. Clear peak in ISM PMI signals likely peak in earnings growth rate.

MARKET VALUATION



As of 06/30/18. White bar indicates post-1980 average.





TREND CONFIRMATION: NYSE Composite Index (Left) and Cumulative Advance-Decline for NYSE Stocks (Right)







<u>CURRENT CONDITIONS INDEX</u>



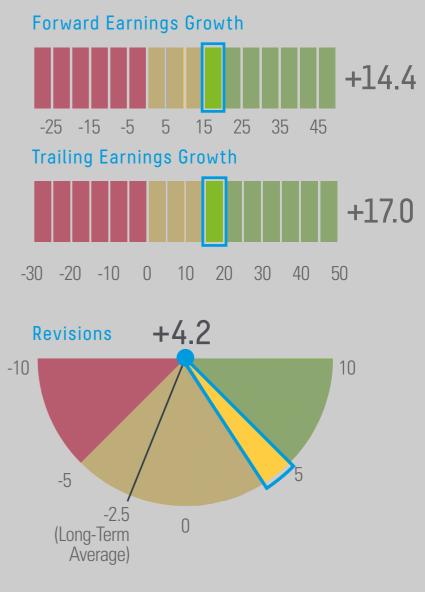
As of 06/30/18. A CCI score of zero represents the baseline conditions in 2009, and subsequent CCI scores should be interpreted as a coincident measure of economic health in relation to this starting year.

BEIGE BOOK BAROMETER Mentions of "Strong" and Variations Minus "Weak" and Variations



As of 07/17/18; will be updated on next monthly edition. The Beige Book is a commonly used name for the Federal Reserve's (Fed) report called the Summary of Commentary on Current Economic Conditions by Federal Reserve District. It is published just before the Federal Open Market Committee (FOMC) meeting on interest rates and is used to inform the members on changes in the economy since the last meeting.

<u>**EARNINGS BAROMETER**</u>



As of 06/30/18. Earnings growth statistics are a blend of actual S&P 500 company results and consensus forecasts for S&P 500 companies yet to report. Trailing earnings cover the four quarters ending Q2 2018, while forward earnings cover the four quarters beginning Q3 2018. Revisions reflect 3-month estimate changes for forward four quarters estimates.

Investing in stock includes numerous specific risks including: the fluctuation of dividend, loss of principal, and potential illiquidity of the investment in a falling market.

NYSE Composite Index measures the performance of all stocks listed on the New York Stock Exchange. The NYSE Composite Index includes more than 1,900 stocks, of which over 1,500 are U.S. companies.

This research material has been prepared by LPL Financial LLC.

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