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U.S. Business Cycle Report

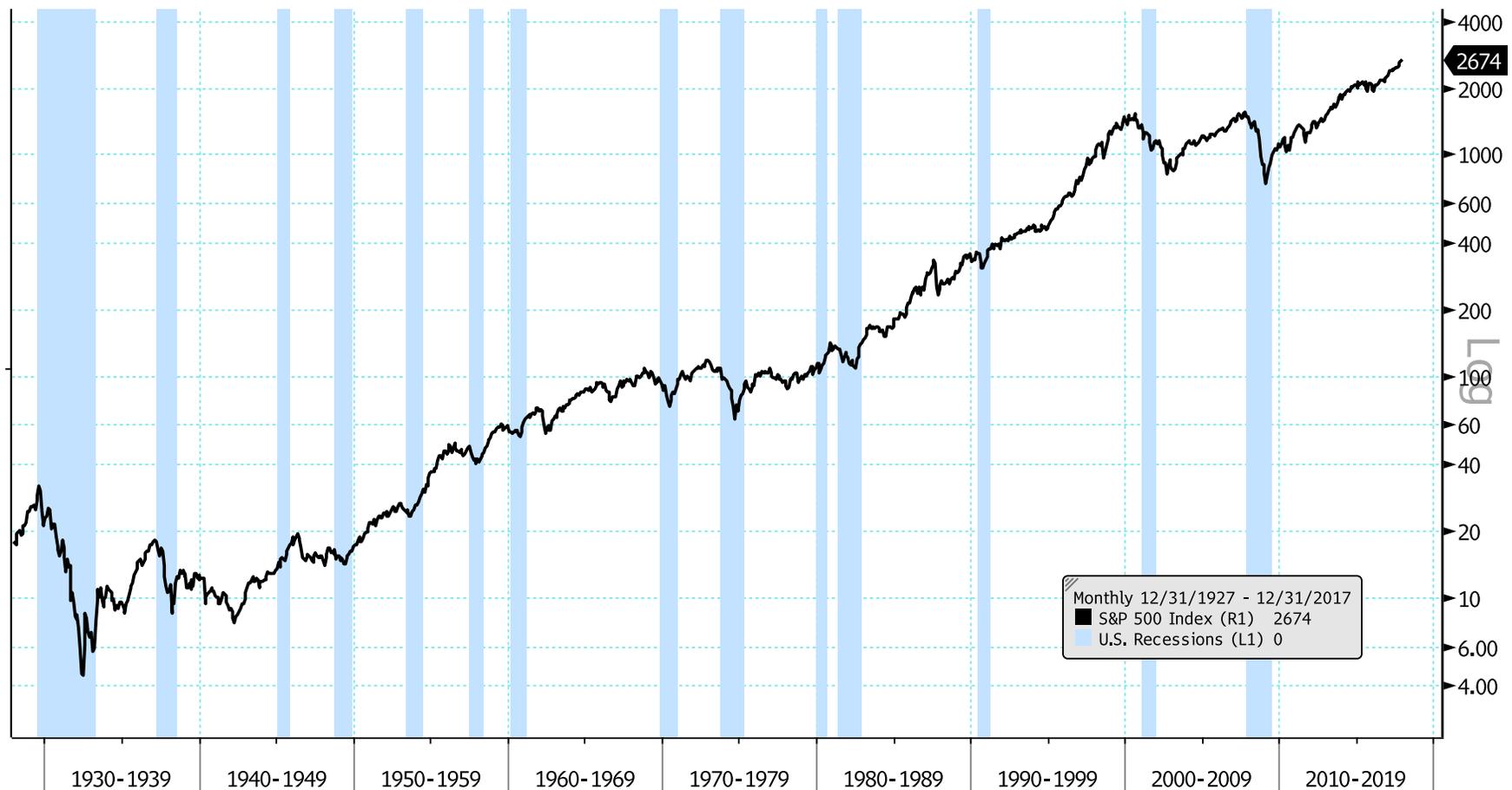
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Why is the Business Cycle Important?

S&P 500 (log scale) and official National Bureau of Economic Research (NBER) U.S. Recessions

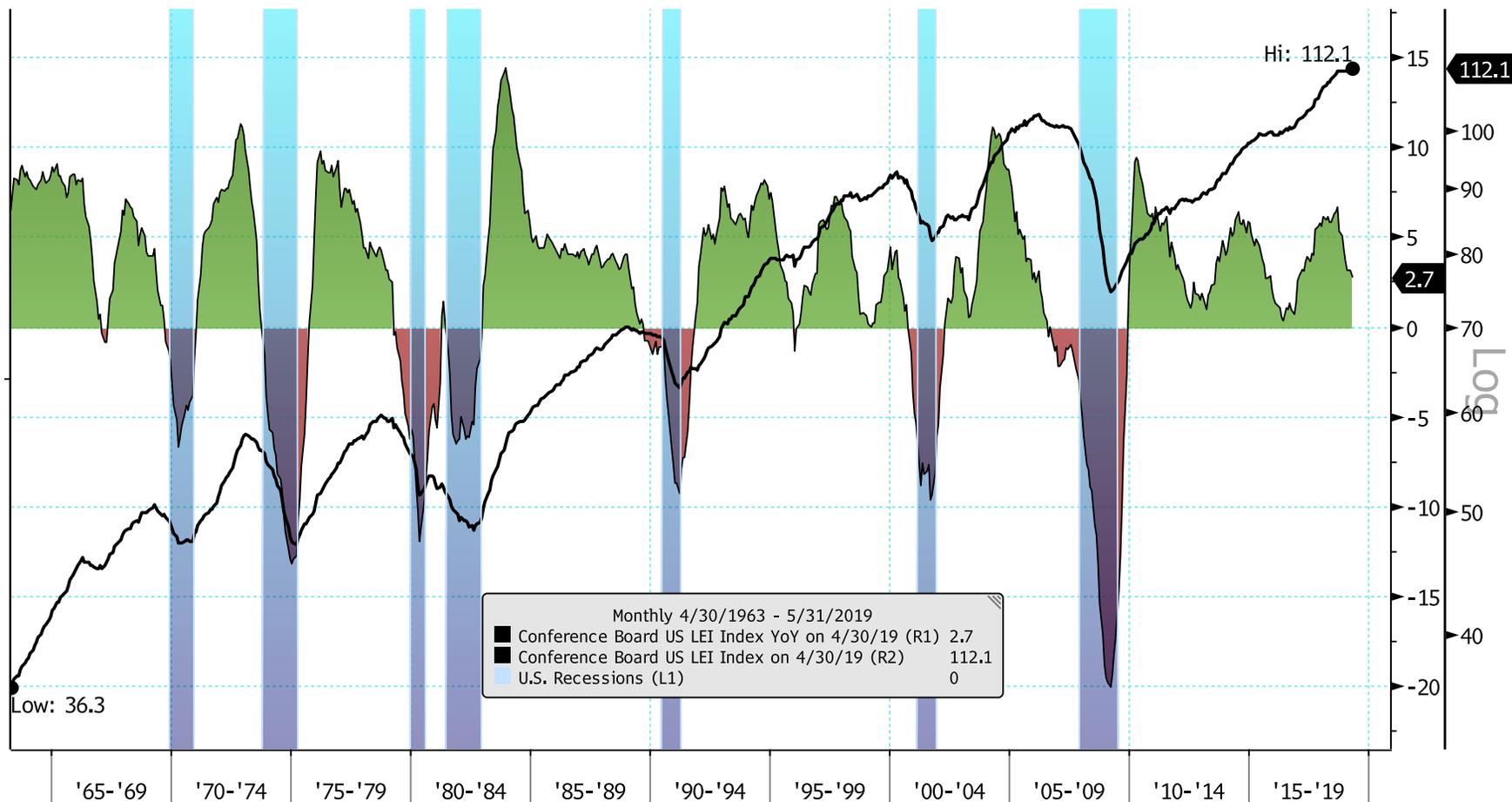


Source: © Merk Investments, Bloomberg

*Analysis: Over the 90 years between 1927 and 2017, the average S&P 500 monthly return during expansions was +0.89% (889 months), compared to an average S&P 500 monthly return during recessions of -0.71% (191 months). In terms of proportions of time: expansion months account for about 80% and recession months about 20%. The business cycle also has important implications for Fed policy. *Note that recessions are not announced by the NBER until well after their start dates**

U.S. Leading Economic Indicators (LEIs) Index

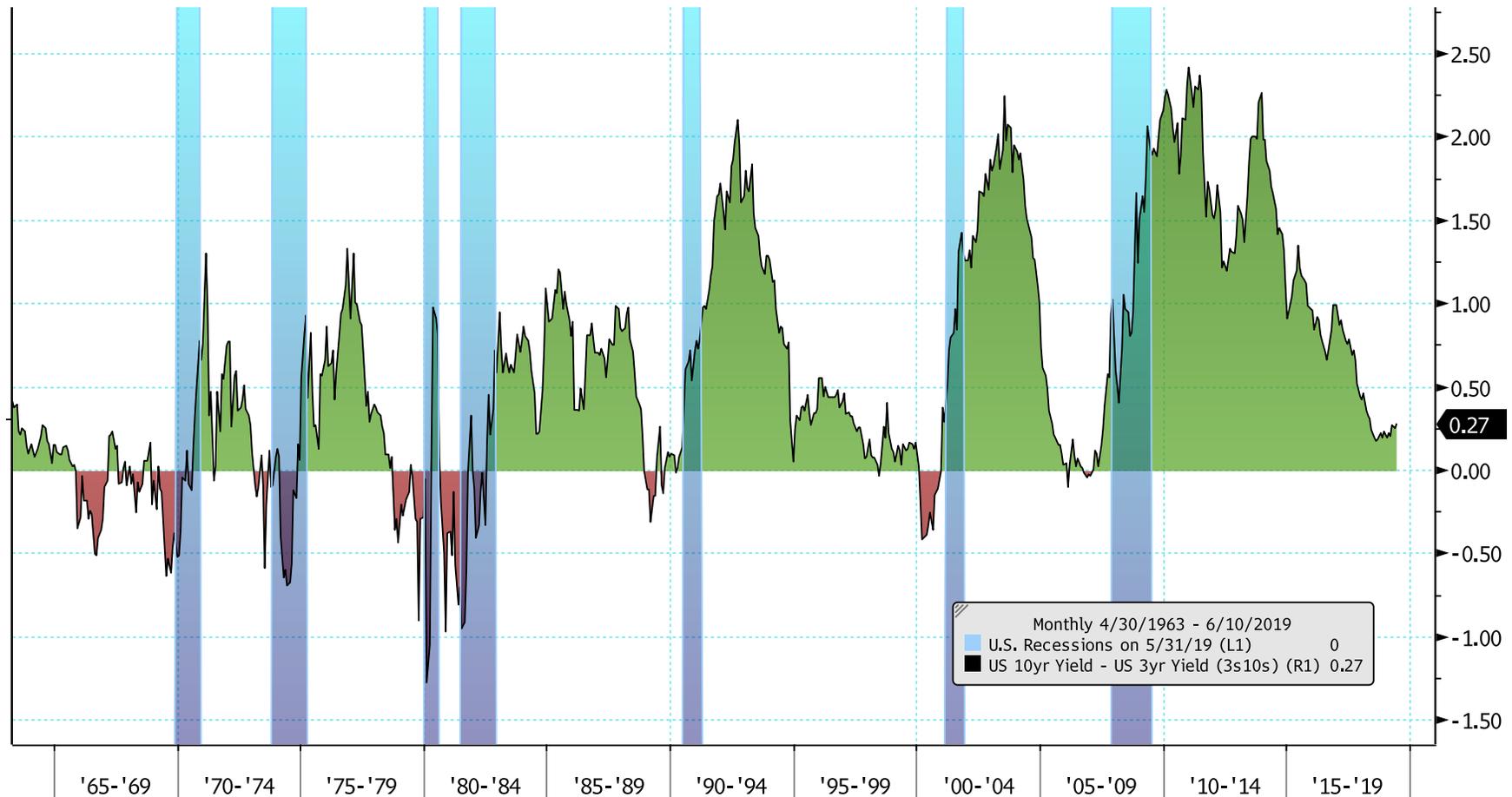
Conference Board's LEI Index and YoY Rate of Change



Source: © Merk Investments, Bloomberg

Analysis: Since last month's report the LEI YoY rate of change decreased: from +3.1 to +2.7. Over the past several months momentum has generally slowed, but given that the YoY rate of change remains positive, history suggests a recession is unlikely to start within the next six months. Also, the index continues to make new highs for the cycle, at 112.1. This picture keeps me generally positive on the outlook for the U.S. economy. Chart Framework: I'd get incrementally negative on the business cycle outlook if the LEI YoY went negative.

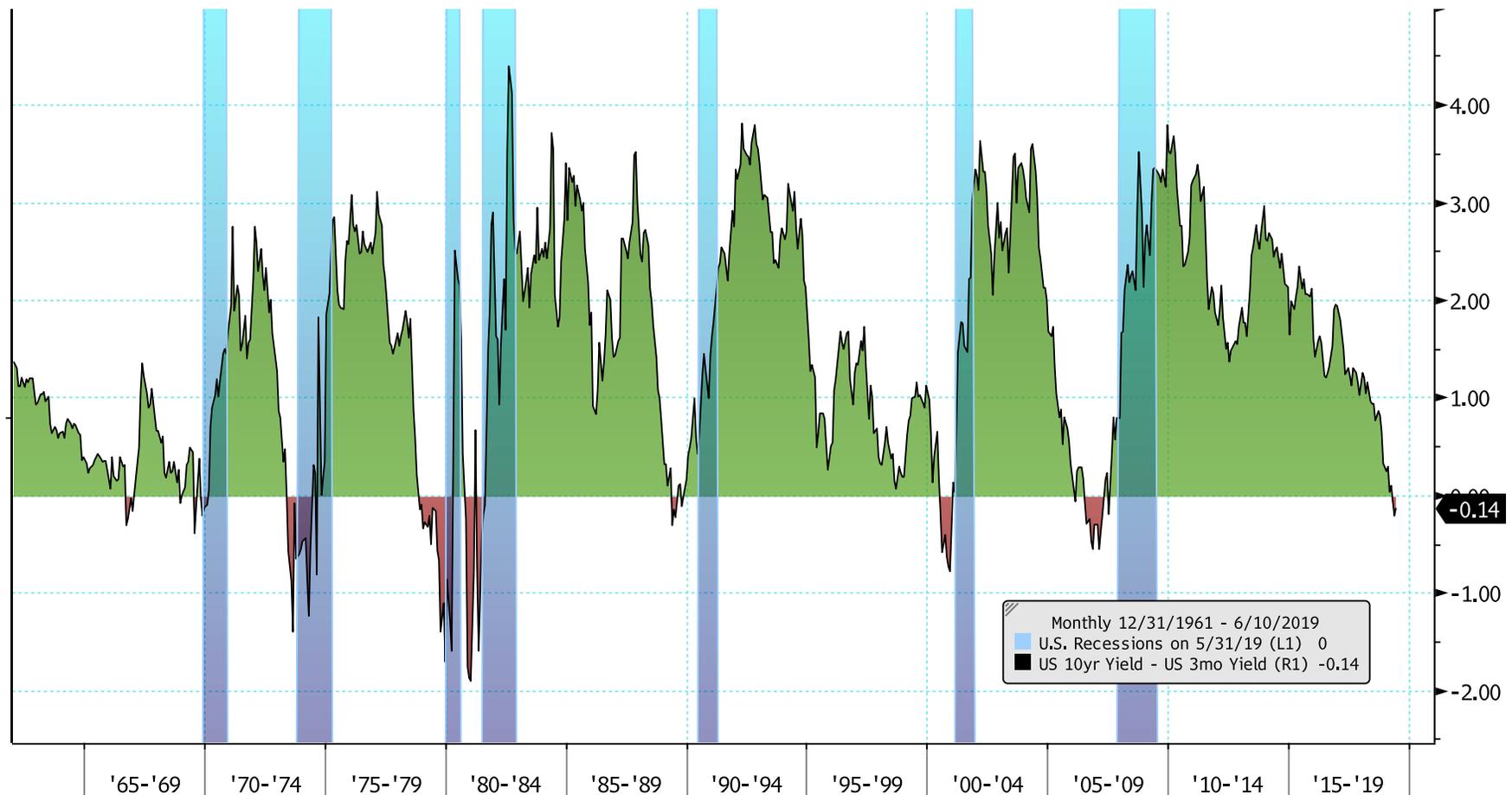
U.S. Yield Curve Steepness (10yr yield – 3yr yield)



Source: © Merk Investments, Bloomberg

Analysis: The 10yr-3yr yield curve is still positively sloped, meaning the 10yr yield is higher than the 3yr yield. The yield curve steepness is little changed since last month's report, but the bigger picture flattening trend appears to continue and the 10yr-3yr curve may invert in the coming quarters. Chart Framework: I'd get incrementally negative on the medium term business cycle outlook if the yield curve inverted (i.e., 3yr yield > 10yr yield).

U.S. Yield Curve Steepness (10yr yield – 3mo yield)

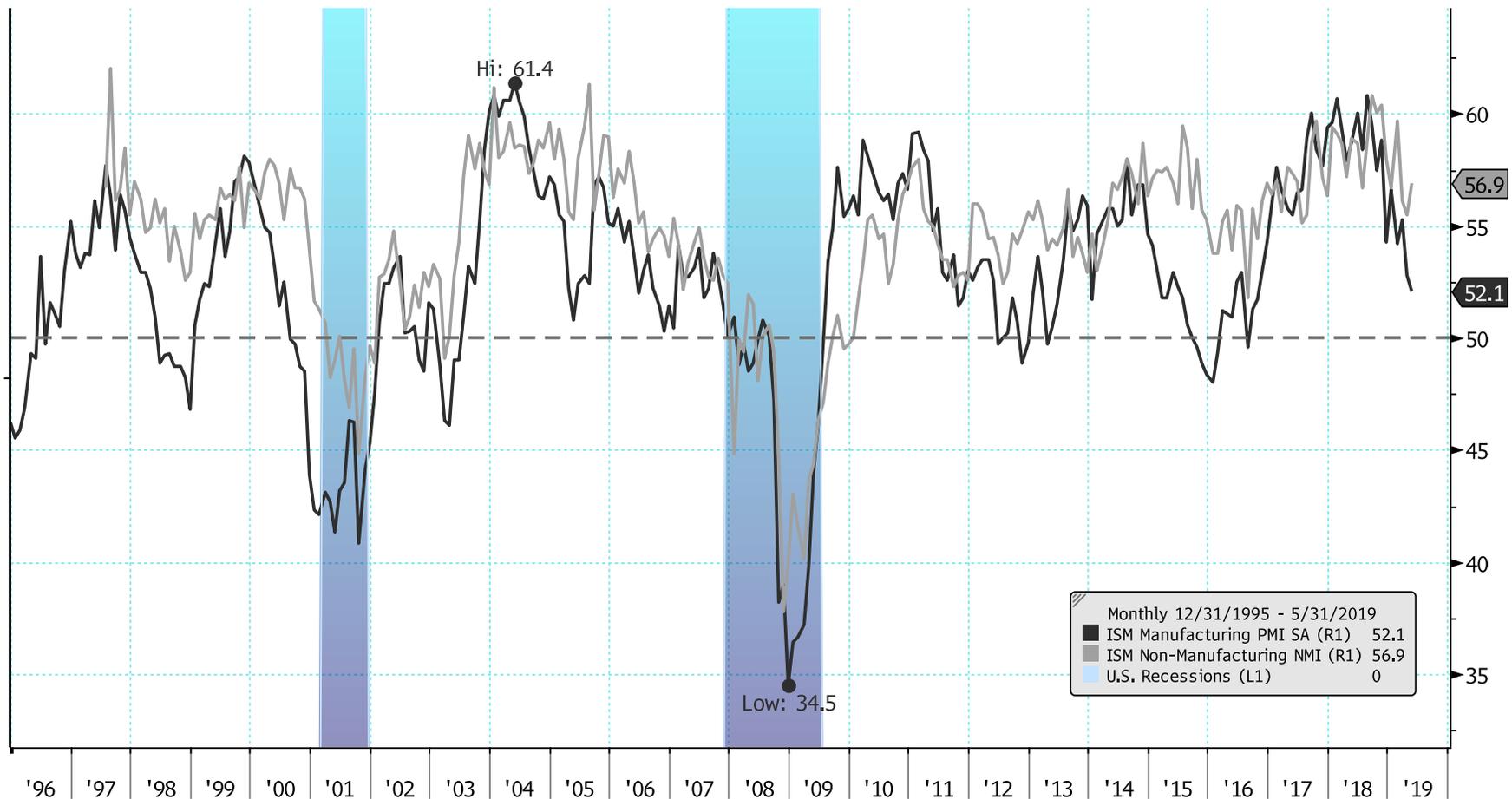


Source: © Merk Investments, Bloomberg

Analysis: A cross reference to the 10yr-3m yield curve shows a more concerning picture, inverted at -14bps. As with the 10yr-3yr, 10yr-3m inversion has been a strong recession warning signal— however, it is worth noting that the 10yr-3yr (shown on the previous page) has always inverted prior to recessions and still has not (yet) inverted.

U.S. PMIs

Manufacturing and Non-manufacturing (aka Services) PMIs (Purchasing Managers Index)

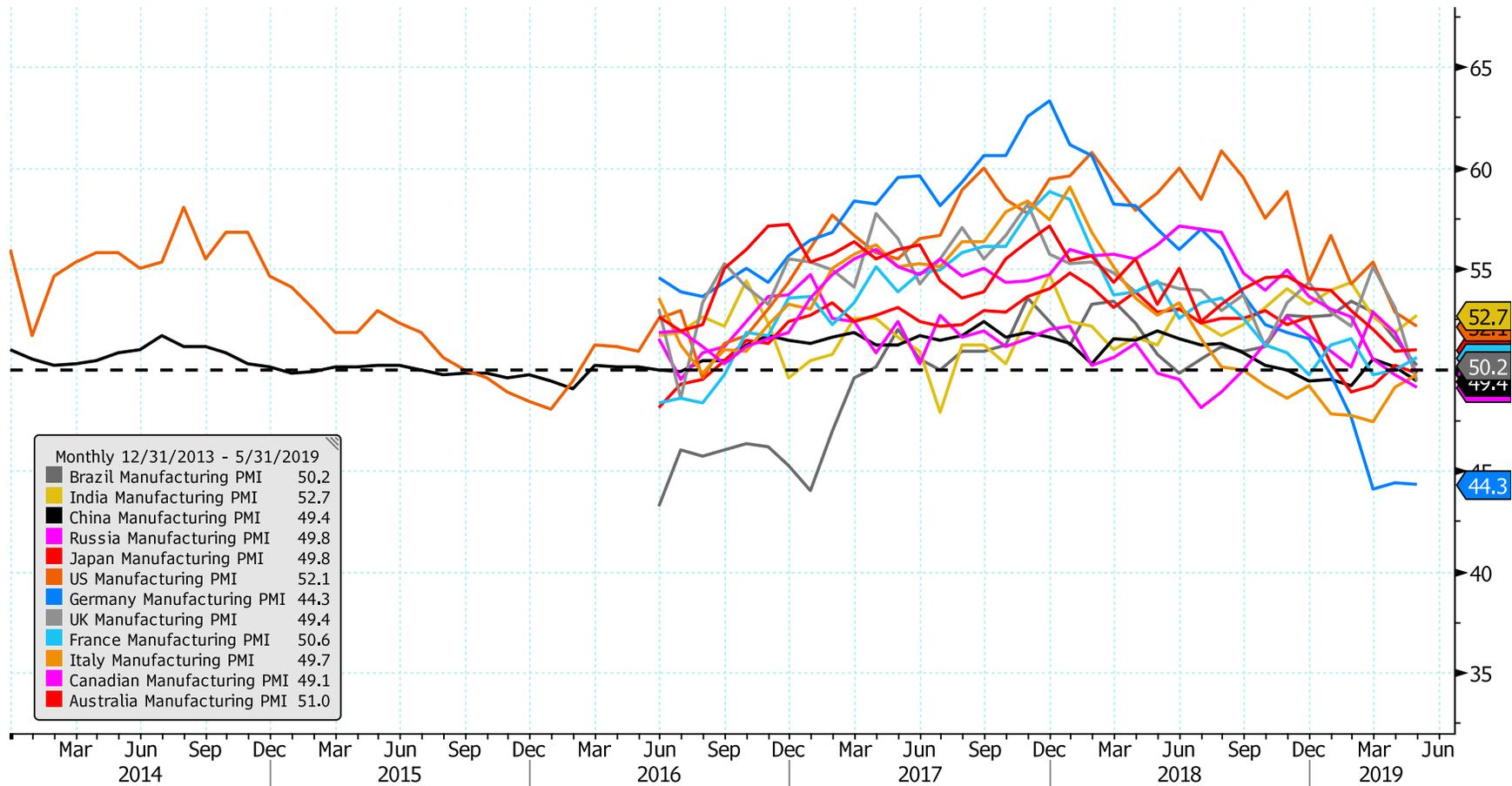


Source: © Merk Investments, Bloomberg

Analysis: Manufacturing PMI ticked down over the past month, from 52.8 to 52.1, but is still generally at a level consistent with a growing economy. Chart Framework: I'd get incrementally negative on the business cycle outlook if the manufacturing PMI fell below 50.

Global Manufacturing PMIs

Largest twelve global economies' Manufacturing PMIs (Purchasing Managers Index)

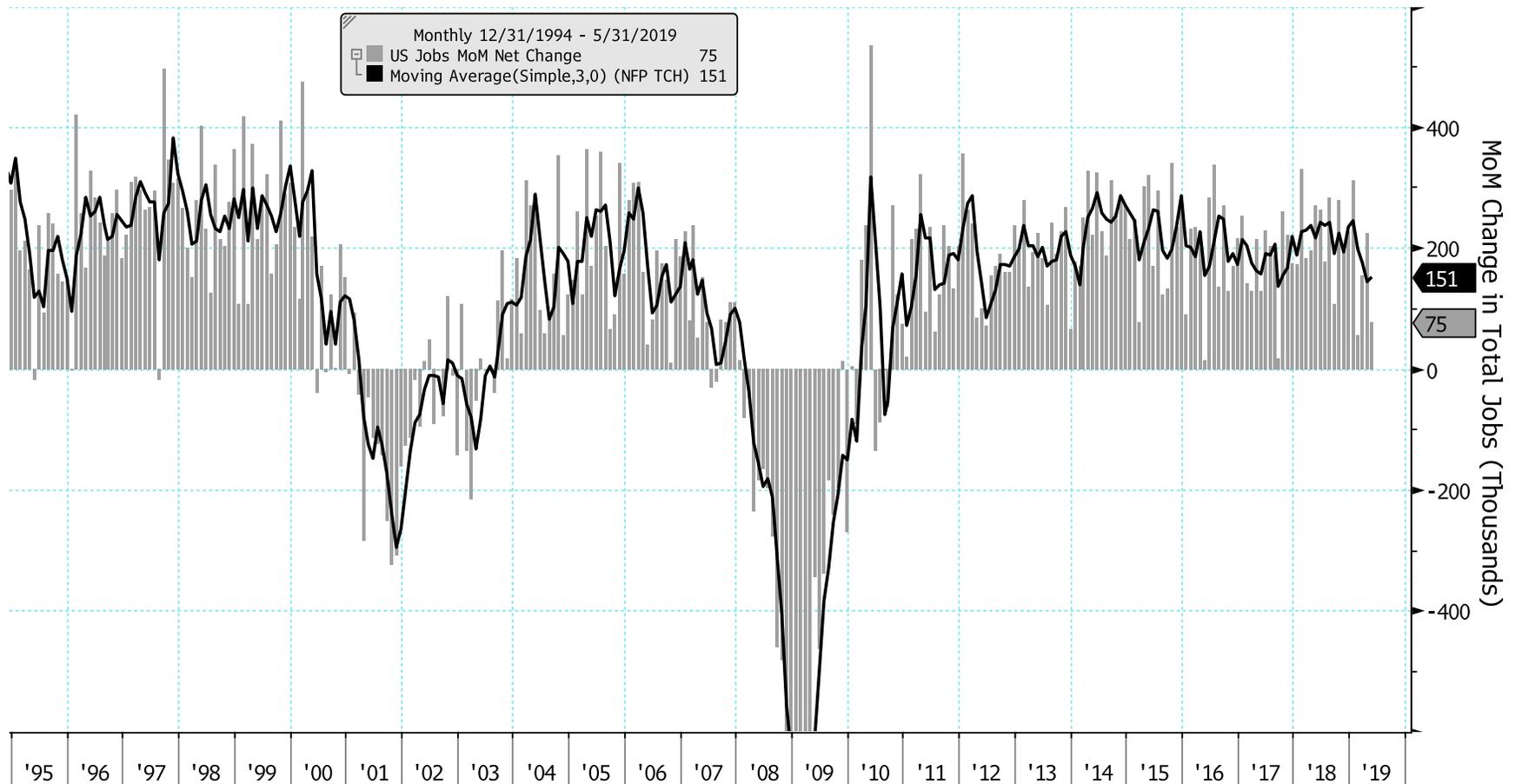


Source: © Merk Investments, Bloomberg

Analysis: Global economic momentum was mostly negative over the past month. Notably China's manufacturing PMI fell back below 50 and Germany's PMI remains near the lows. Given my framework I'm negative on this picture. Chart Framework: to get positive on this picture all PMIs would have to be above 50.

Job Gains

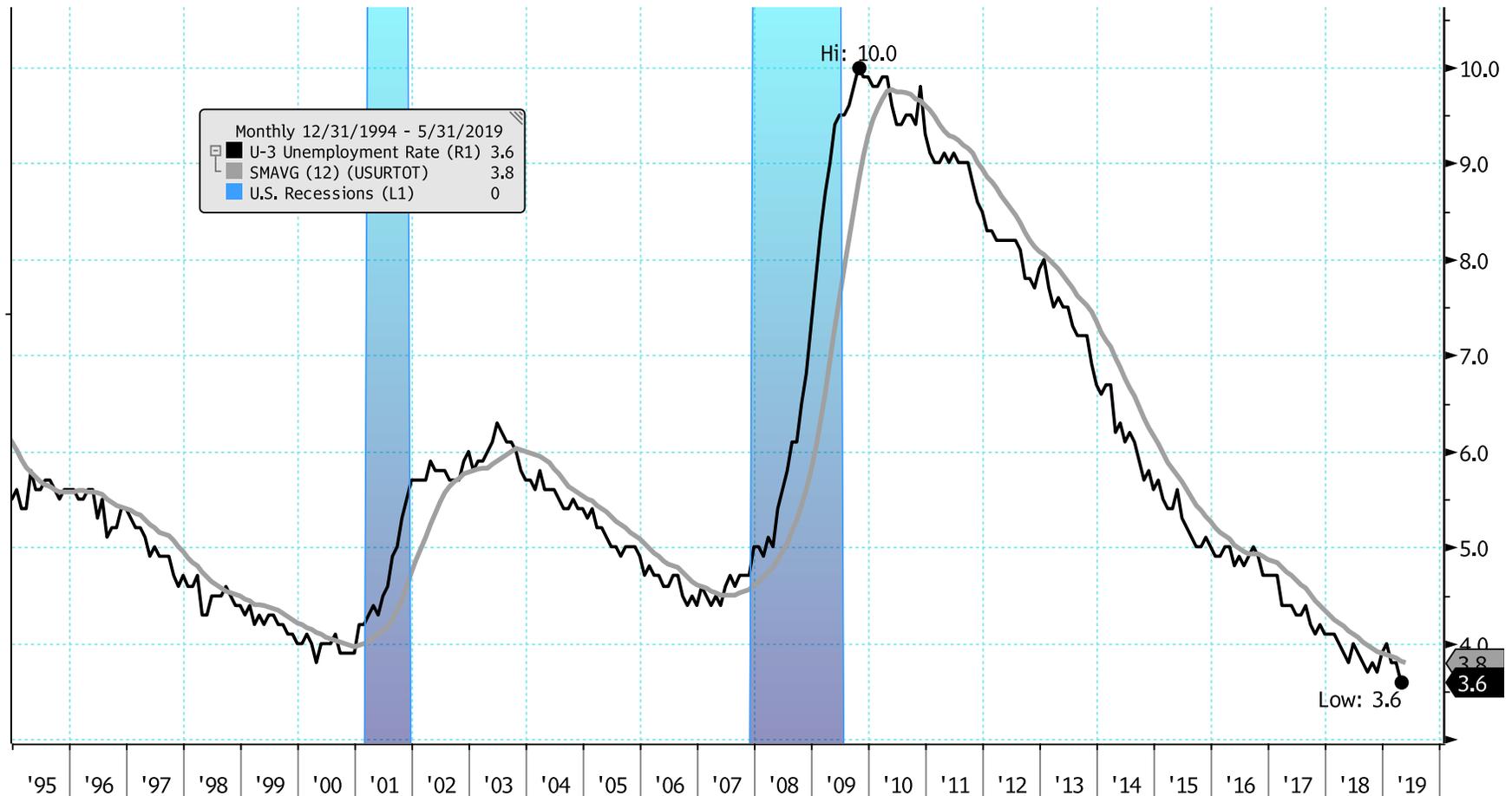
The Net Monthly Change in Non-farm Payrolls (grey) with 3-month Moving Average (black)



Source: Bloomberg, © Merk Investments LLC

Analysis: The 3-month moving average of the change in non-farm payrolls is 151k, likely above the pace needed to provide jobs to new entrants into the labor force. This picture currently suggests strength in the U.S. labor market, however, there has been a down trend of the 3m MA so far this year and is close to the warning level. Framework: I'd get incrementally negative on this picture if the 3-month average for job gains fell below 135k.

U.S. Unemployment Momentum U-3 Rate and U-3 12 month Moving Average

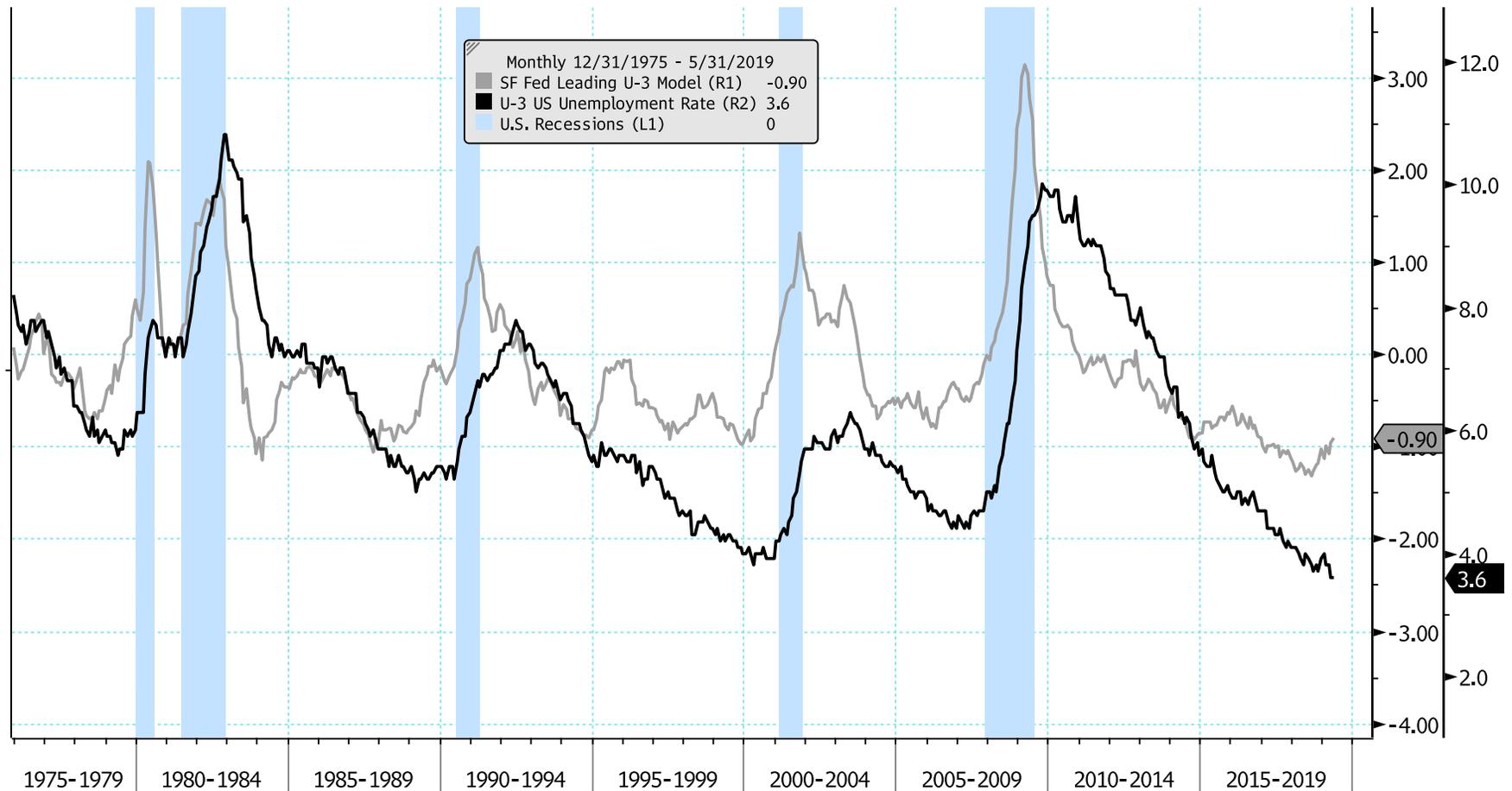


Source: © Merk Investments, Bloomberg

Analysis: The unemployment rate remained stable at 3.6% (the cycle low), and is below the 12-month moving average (labor force participation rate remained stable– not shown). Chart Framework: I'd get incrementally negative on the business cycle outlook if the unemployment rate moved above its 12m MA while the labor force participation rate trended lower.

SF Fed Leading Unemployment Rate (U-3) Model

Replica of San Francisco Fed Model (grey) and U-3 Unemployment Rate (black)

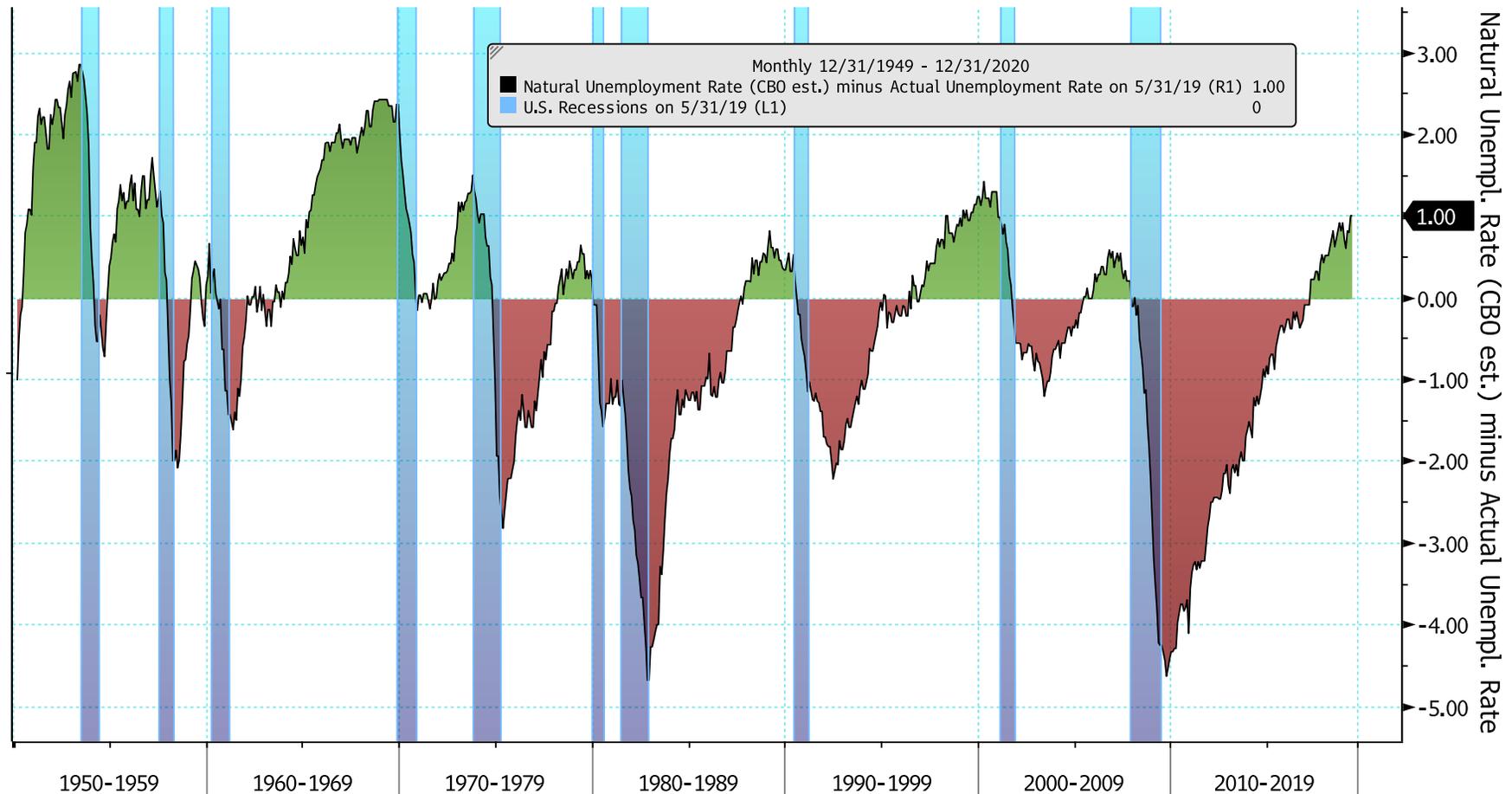


Source: © Merk Investments, Bloomberg

Analysis: The SF Fed unemployment rate model (grey line) has moved higher in recent months, which warrants caution as it might signal that a cyclical turning point in the labor market is coming. Given my chart framework I'm currently negative on this picture. Chart Framework: I'd get incrementally positive on the business cycle outlook if the SF Fed model line started trending lower again on a YoY basis.

U.S. Labor Market Capacity Utilization

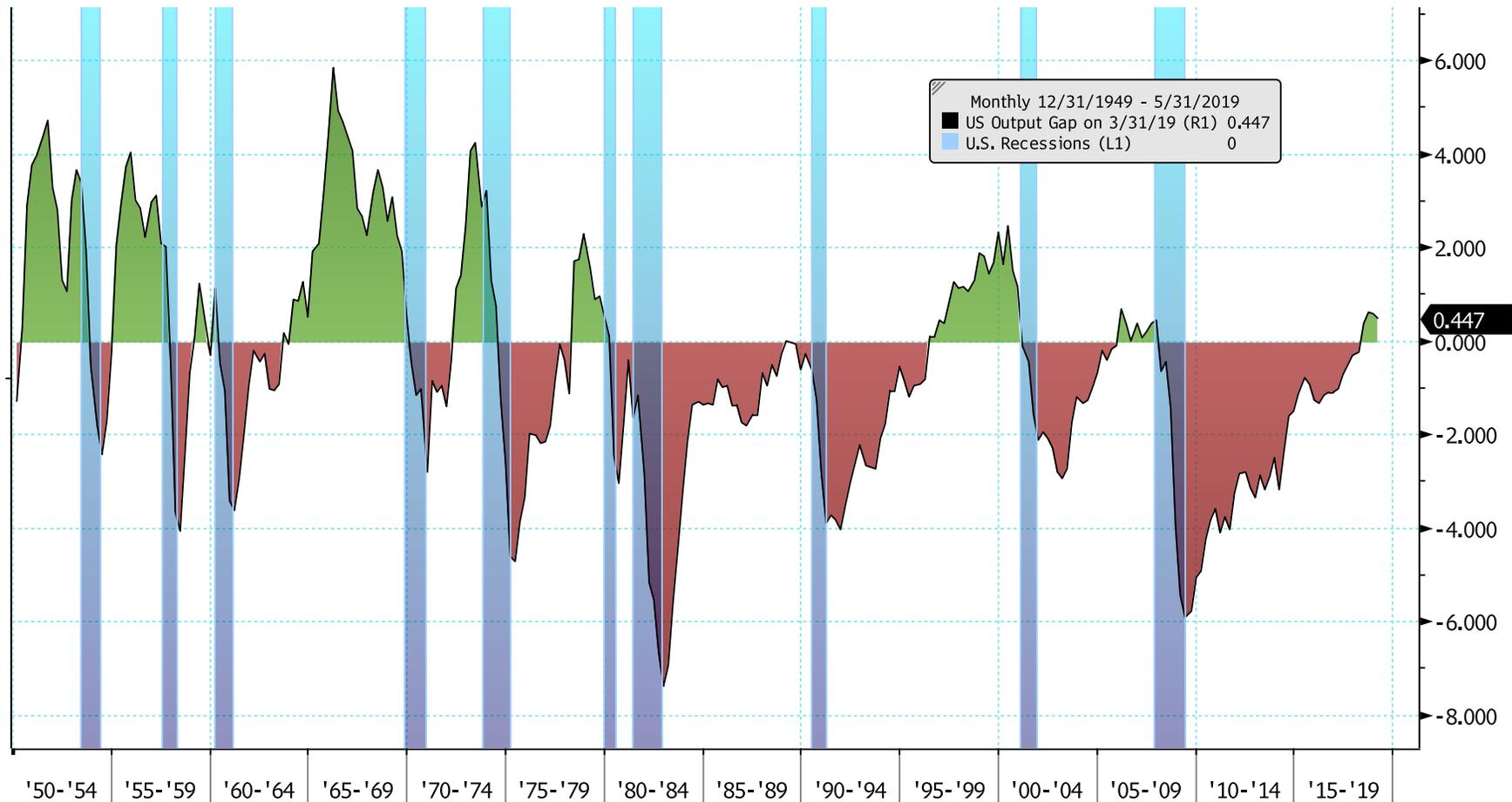
Natural Rate of Unemployment (CBO est.) – Actual Rate of Unemployment



Source: © Merk Investments, Bloomberg

Analysis: The estimated natural rate of unemployment is higher than the current unemployment rate (4.6% estimate – 3.6% current reading), meaning the U.S. economy is potentially running above capacity, which likely increases the risk of a recession roughly 1-5 years out. It is worth noting that the estimate of the natural rate of unemployment is debated, and some think it is lower than the 4.6% estimated by the CBO. Chart Framework: I'm currently incrementally negative on the business cycle outlook medium/longer term based on this picture, I'd get incrementally positive medium/longer term around -1.00 on the chart, which would likely only be during or after a recession. It's worth noting that despite the current picture above many other metrics seem to indicate that some slack remains in the labor market.

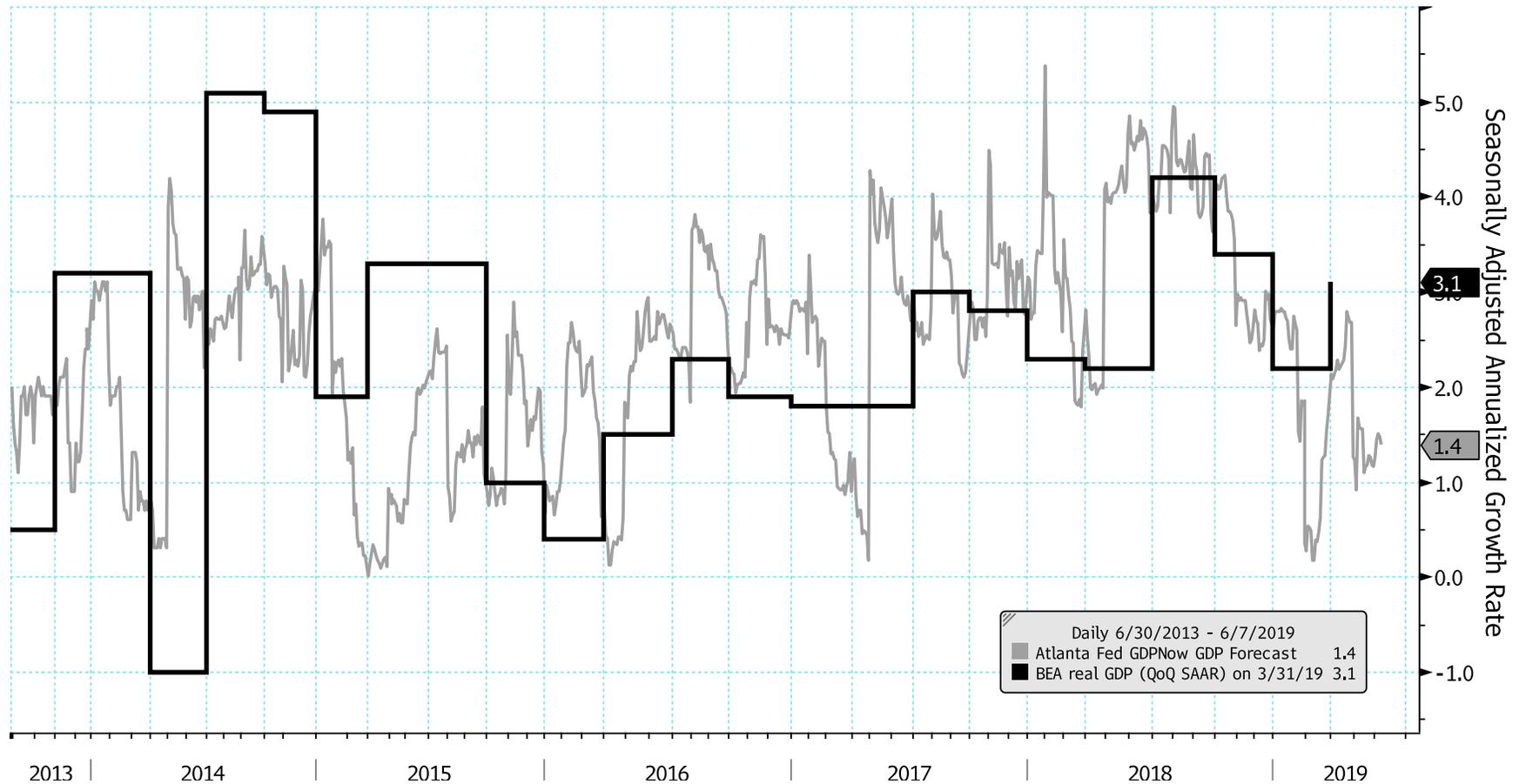
U.S. GDP Output Gap Actual GDP minus Potential GDP (CBO est.)



Source: © Merk Investments, Bloomberg

Analysis: Actual GDP is more than potential GDP (as estimated by the CBO), which suggests the expansion may be in its final stages. As with the unemployment rate on the previous page, there is debate about what potential GDP should be. I'm currently incrementally negative on the business cycle outlook medium/longer term based on this picture. Chart Framework: I'd get incrementally positive medium/longer term around -2.0 on the chart, which would likely only be during or after a recession.

Atlanta Fed GDPNow GDP Forecast GDPNow Forecast and the official QoQ SAAR from BEA

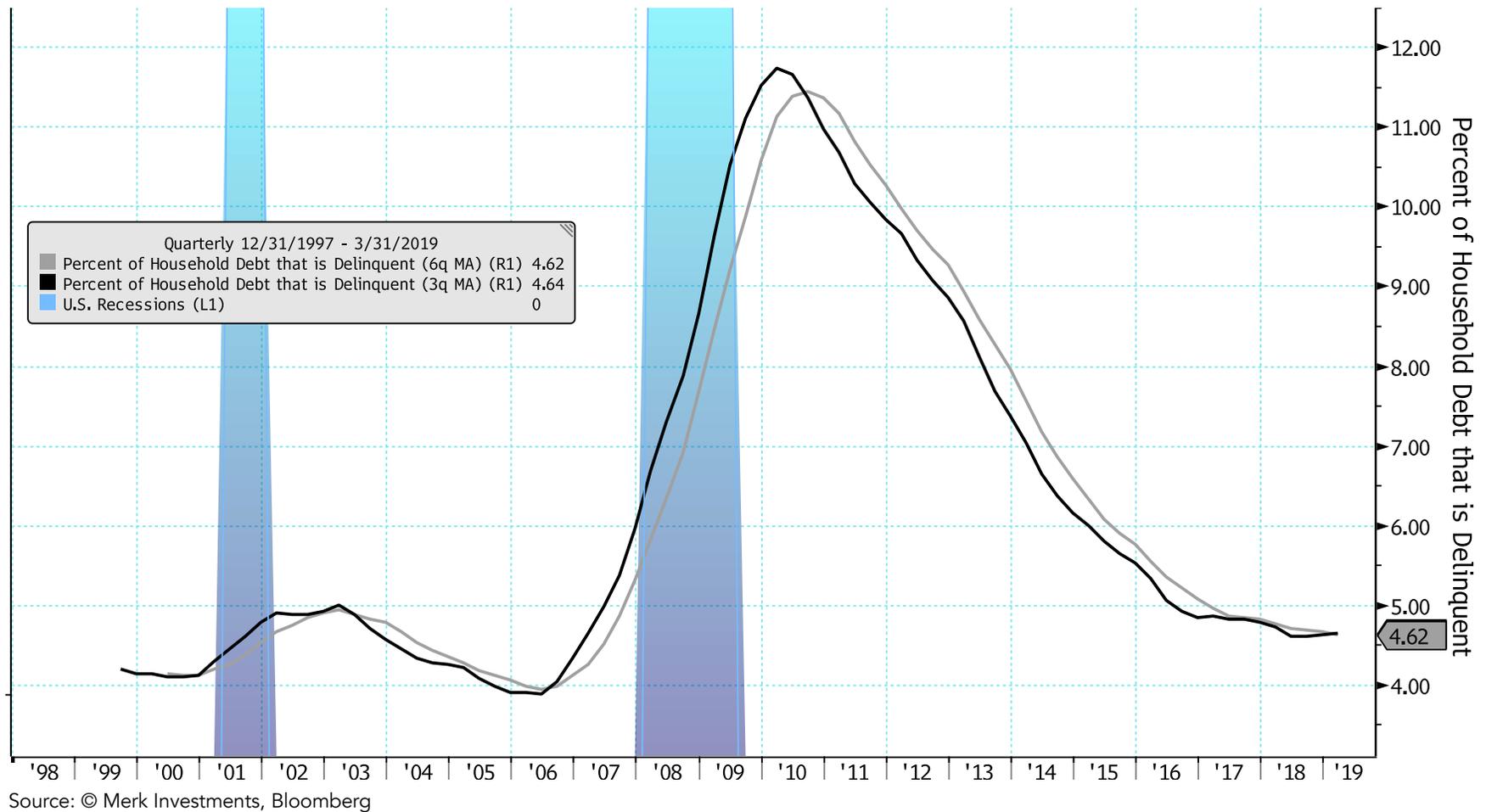


Source: © Merk Investments, Bloomberg

Analysis: The revised Q1 2019 GDP reading (black line) came in at 3.1%, the current forecast for Q2 2019 GDP is around 1.4%. Chart Framework: I'd get incrementally negative on the business cycle outlook if the Atlanta Fed GDP indicator fell below zero.

U.S. Household Credit Cycle

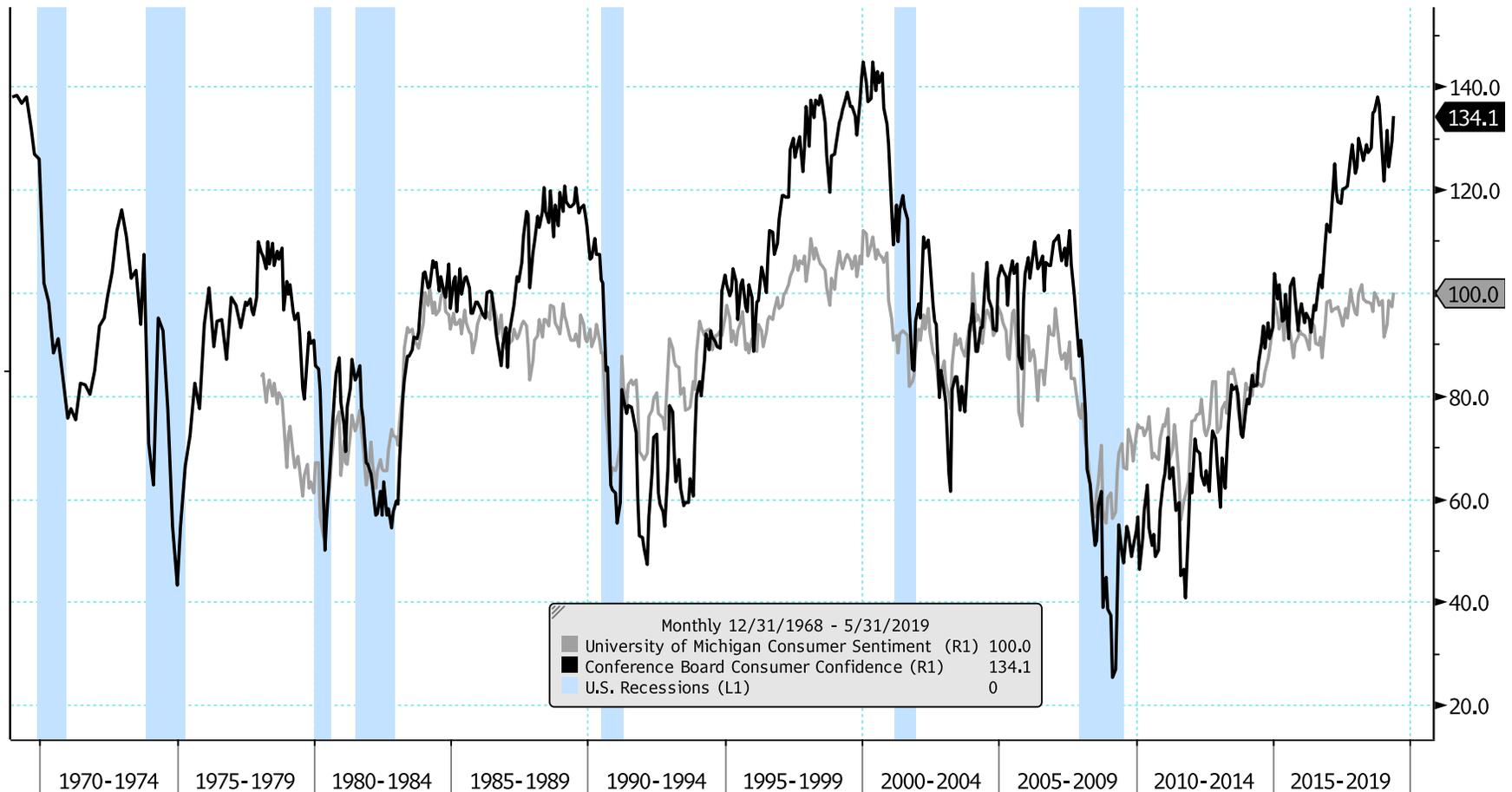
Percent of Household Debt that is Delinquent (3 quarter and 6 quarter moving averages)



Analysis: The Q1 2019 data showed another downtick in the household delinquency rate (generally a positive); however, the 3-quarter moving average (black) moved just above the 6-quarter moving average (grey), which warrants concern and potentially signals the end of the credit cycle. Given my chart framework I'm currently neutral/negative on this picture. Chart Framework: I'd get incrementally positive if the 3q MA fell back below the 6q MA. The Q2 2019 data comes out in late August.

U.S. Consumer Confidence

Michigan Consumer Sentiment and Conference Board Consumer Confidence

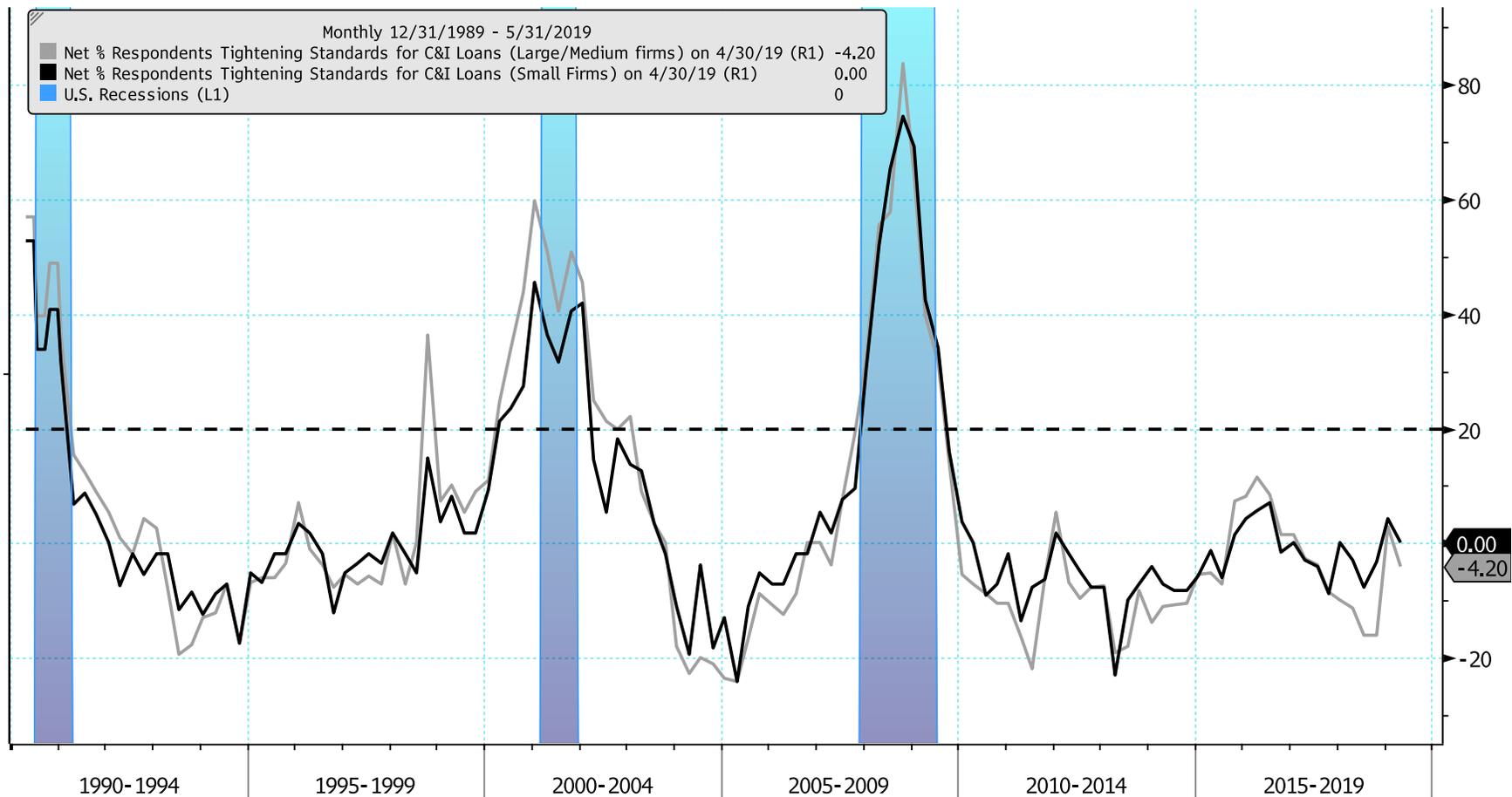


Source: © Merk Investments, Bloomberg

Analysis: Both measures of consumer confidence are trending higher. Given my framework, I'm currently positive on this picture. Chart Framework: I'd get incrementally negative if both measures are trending lower on a YoY basis.

Bank Lending Standards

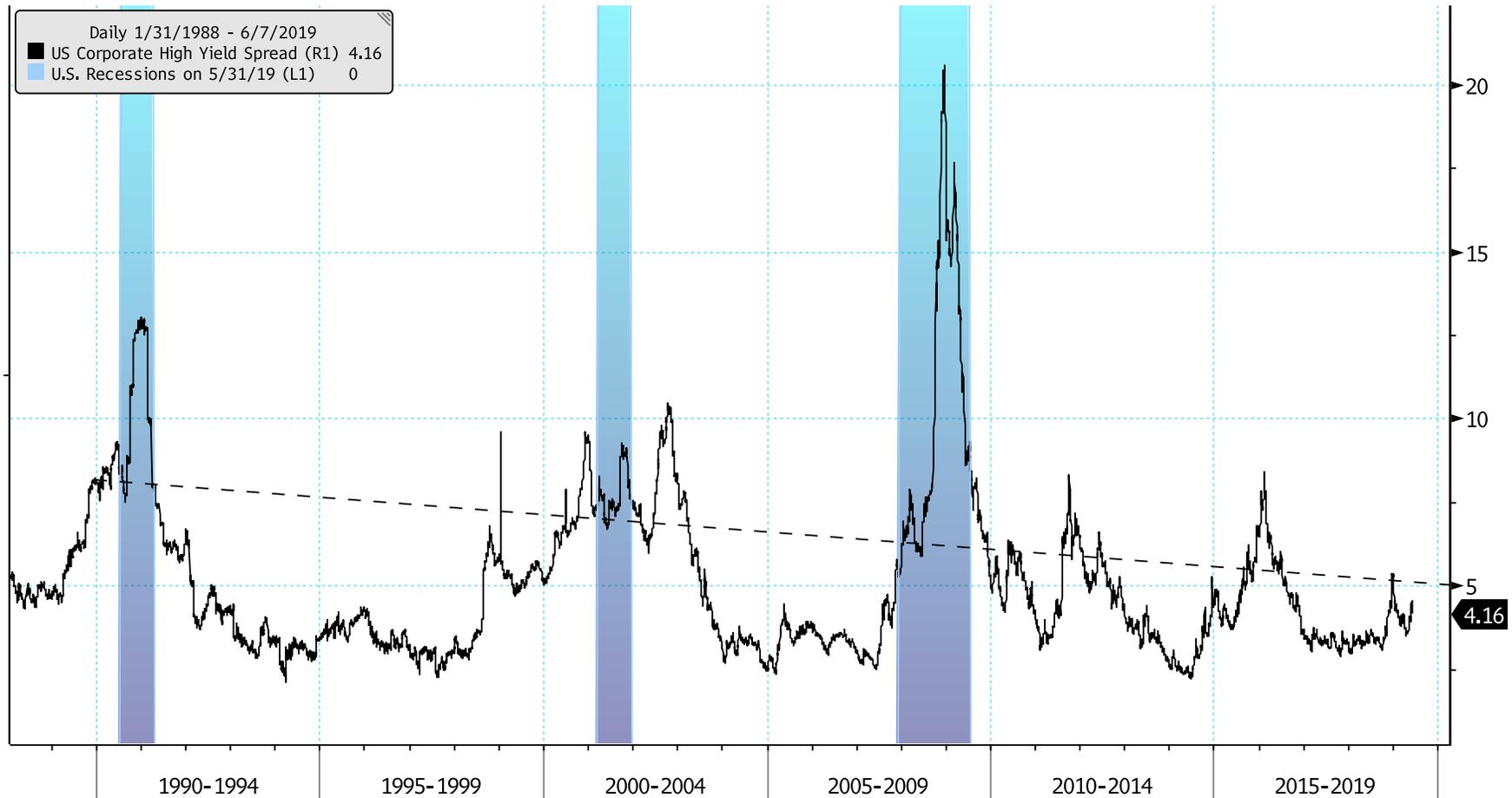
Senior Loan Officer Opinion Survey (SLOOS): Net % of Respondents that are Tightening Lending Standards for Commercial and Industrial (C&I) Loans



Source: © Merk Investments, Bloomberg

Analysis: Data from the Fed's Senior Loan Officer Opinion Survey suggest bank lending standards generally continue to be supportive of economic activity. Chart Framework: I'd get incrementally negative on the business cycle outlook if 20% of respondents report tightening lending standards.

High Yield Spread US High Yield Spread with Trend Line

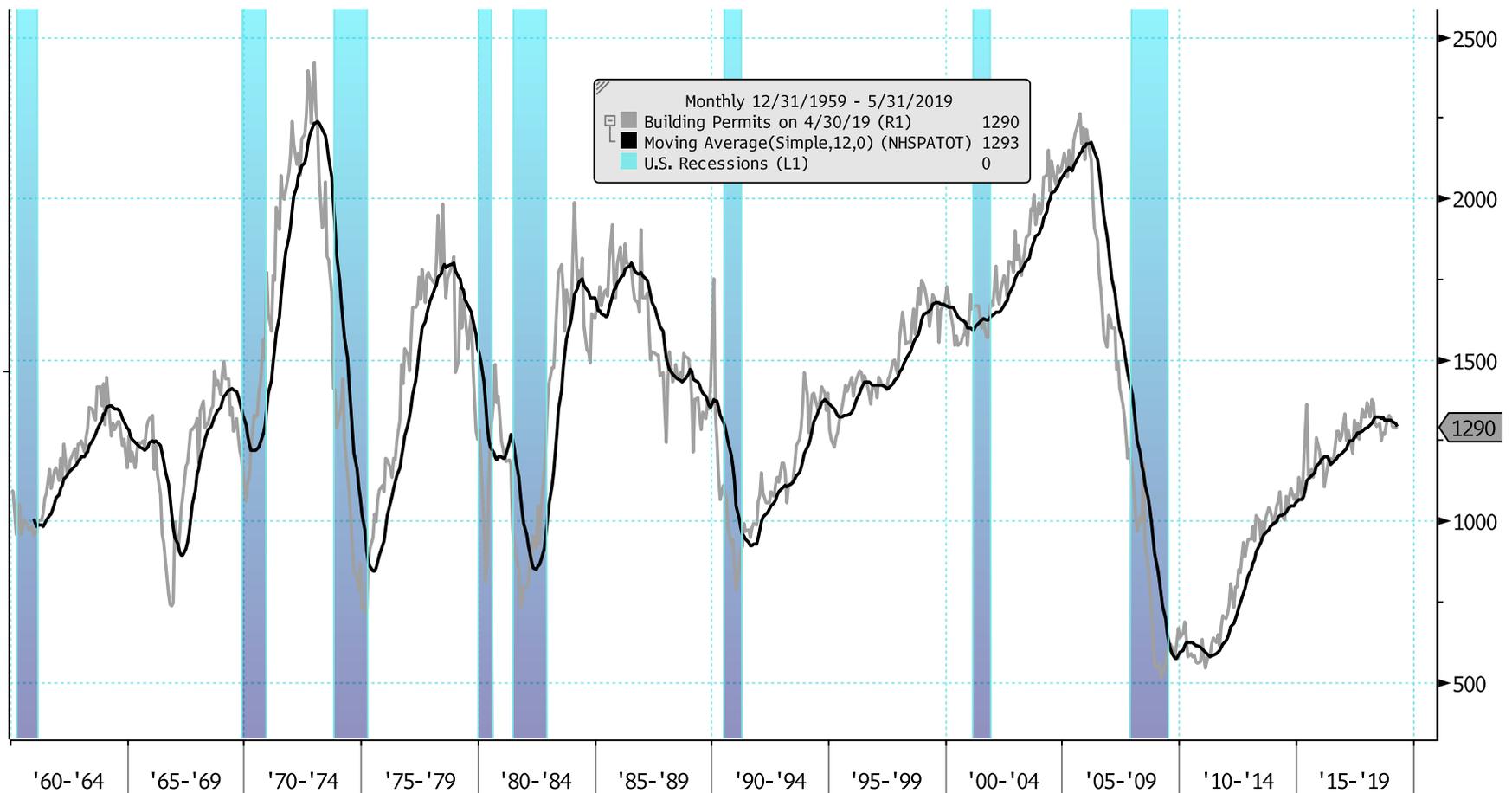


Source: © Merk Investments, Bloomberg

Analysis: The high yield credit spread increased since last month's report but remains below what I consider to be the warning level. Chart Framework: I'd get incrementally negative on the business cycle outlook if the spread moves above 5.

U.S. Building Permits

U.S. Building Permits and 12-month Moving Average



Source: © Merk Investments, Bloomberg

Analysis: Building permits, historically a long leading indicator, are starting to look like they may have topped for the cycle- another potential late cycle indicator if they begin to trend lower in earnest. Framework: I would get negative if the 12-month moving average is trending down for several consecutive months.

Checklist

Chart	Time Horizon	Per Framework Outlook on Business Cycle
LEIs	Short/Medium Term	Positive
Yield Curve	Medium Term	Neutral (conflicting signals)
U.S. PMIs	Short/Medium Term	Positive
Global PMIs	Short/Medium Term	Negative
Job Gains	Medium Term	Positive
U-3 v 12m MA	Medium Term	Positive
SF Fed U-3	Medium Term	Neutral/Negative
Labor Force Capacity Util.	Medium/Longer Term	Negative
Output Gap	Medium/Longer Term	Negative
GDP Forecast	Short Term	Positive
Household Credit	Medium Term	Neutral/Negative
U.S. Consumer	Short/Medium Term	Positive
Lending Standards	Medium Term	Positive
High Yield Spread	Short/Medium Term	Positive
U.S. Building Permits	Medium/Longer Term	Neutral/Negative
	Time Horizon	Overall Outlook on Business Cycle
	Short Term (<6 months)	Neutral/Positive with high uncertainty
	Medium/Longer Term (6m - 5 years)	Neutral/Negative with high uncertainty

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Conclusion/Thoughts

This is an extremely challenging economic environment to analyze. The various indicators paint a very mixed picture.

I would say that the probability of a recession starting in the coming six months is as high as it's been in the past few years, and would estimate it to be between a 20-30% chance. Nevertheless, my base-case view—meaning on balance more likely than not—remains that the U.S. economic expansion will likely continue over the next several months, and in general until further notice.

Of greatest concern is the inversion of the 10yr-3m yield curve. Overall, the yield curve analysis shows conflicting signals: the 10yr-3m is inverted, but the 10yr-3yr is not. As far as the data goes back there has not been a recession without prior 10yr-3yr inversion, however false signals from 10yr-3m inversion have been very rare. A cross check against other leading indicators is needed, and the balance of remaining evidence suggests to me that the probability of an imminent recession is elevated but still below 50%.

On the positive side, the LEI index continues to trend higher YoY and to make new cycle highs on the index level. Financial conditions, including bank lending standards, continue to be supportive of the expansion. The labor market continues to be relatively strong, with respect to both job gains and the unemployment rate. Even given some of the late cycle indications, some slack seems to remain in the labor market, which may further suggest that the economic cycle can continue for a while longer.

While uncertainty around the outlook has increased greatly, based on my checklist approach I think the U.S. business cycle picture near-term is overall still slightly more positive than negative. On balance, based on the charts and frameworks presented (which inevitably may not capture all possible risk factors in real-time), it seems more likely than not that the U.S. economic expansion continues in the coming several months. The longer term outlook remains negative as we are likely in the late part of this economic expansion.

All of the presented charts and concepts are somewhat inter-related, as is the economy in general, so the idea is to have some different data points to cross-reference. In my view no one indicator can be looked at in isolation.

-Nick Reece, CFA

Disclosure

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