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U.S. Equity Market Chart Book

January 2019

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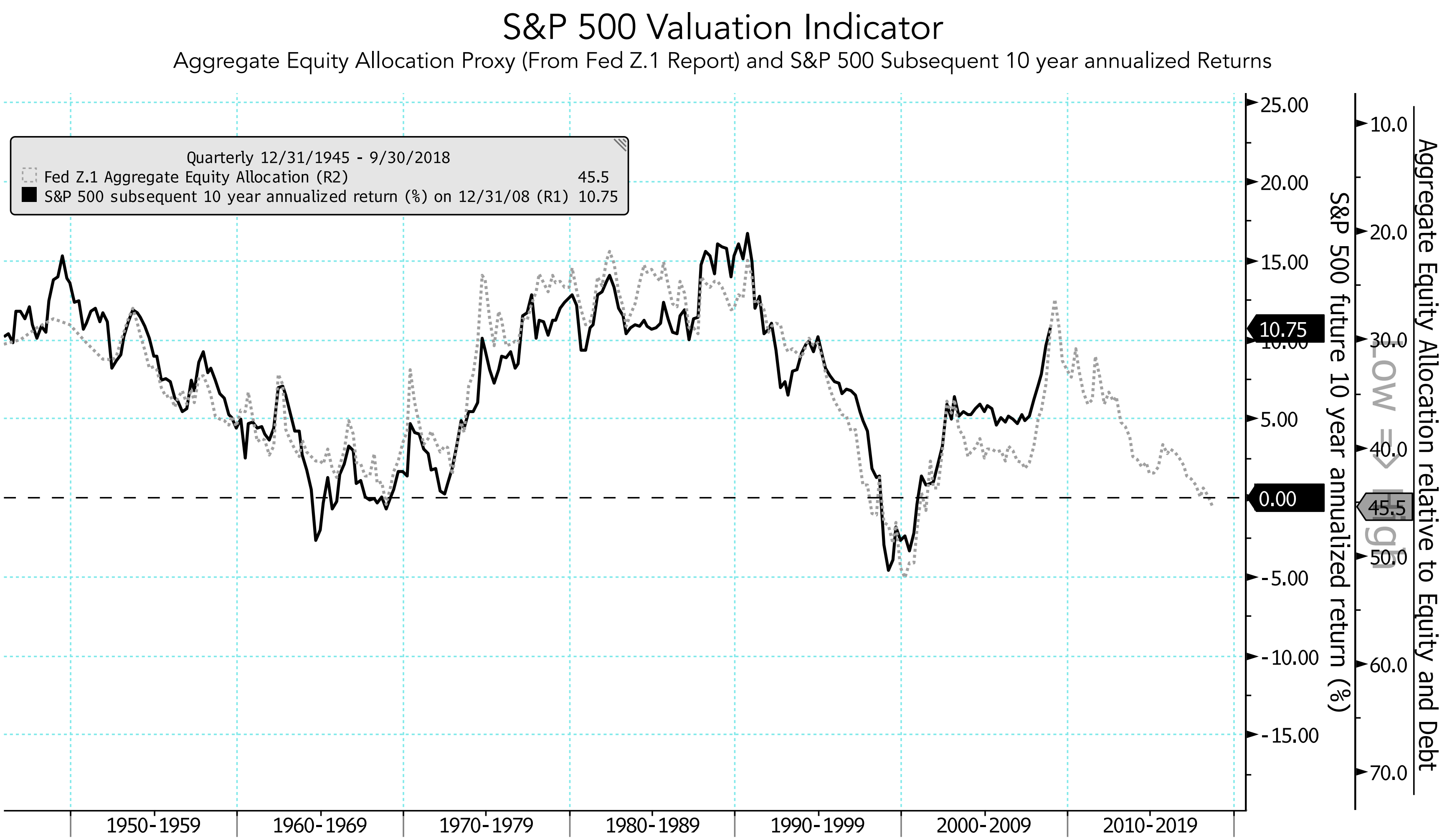

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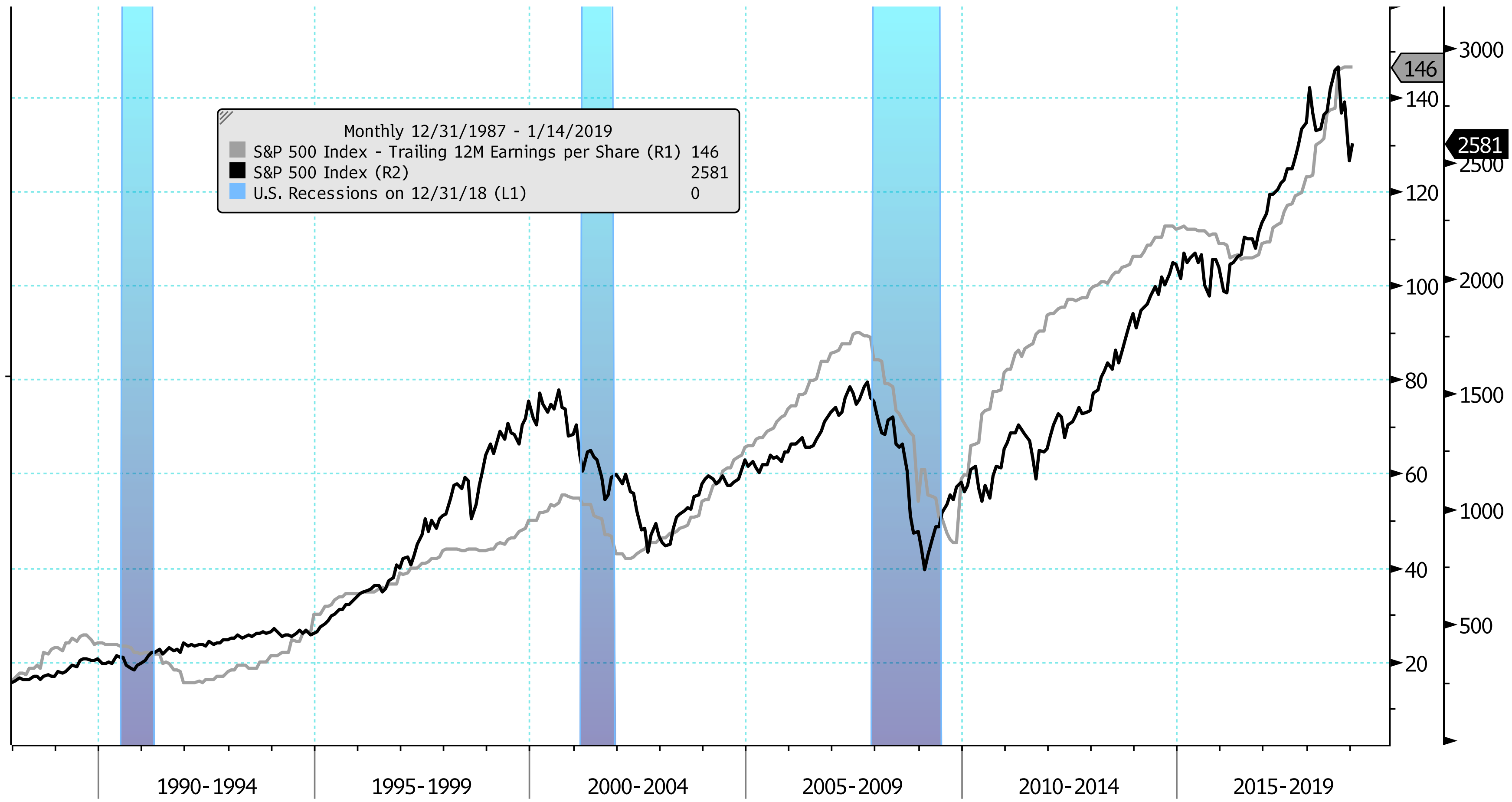
Analysis: If history is any guide, this chart suggests annualized S&P 500 returns (w/o dividends) might be close to 0% over the coming 10 year period. The grey dotted line is the market value of US equity divided by the total market value of US equity and debt, which is used as a proxy for aggregate equity allocation. The data comes from the quarterly Federal Reserve Z.1 report, the series will be updated next in late March. At 45.5% the equity allocation is relatively high currently. Chart Framework: I'd likely get positive on the longer term outlook for the S&P at an allocation below 30%, which would likely only be after a substantial bear market in the S&P 500.

Earnings Backdrop

S&P 500 Trailing 12-month Earnings per Share and the S&P 500



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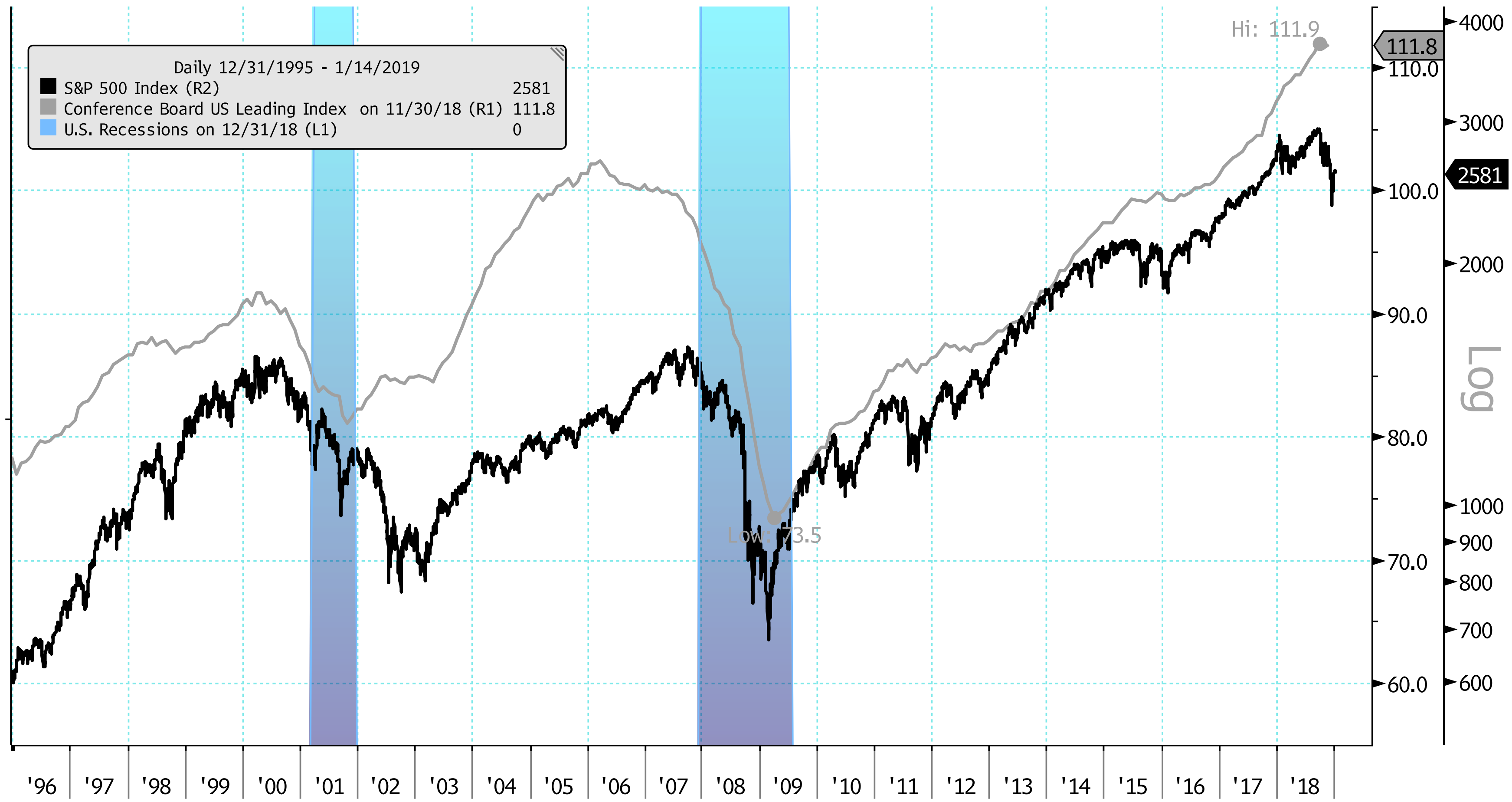
Analysis: S&P 500 trailing earnings continue to look consistent with an ongoing bull market. According to Factset: analysts are projecting earnings growth of 7% for calendar year 2019, a slightly lower growth forecast relative to last month's report. Chart Framework: I'd get incrementally negative if the trailing 12-month earnings move sideways/down over consecutive quarters (QoQ). It's worth noting that this framework may be more of a coincident or confirmatory rather than a leading indicator with respect to a major market top.

Business Cycle Backdrop

Leading Economic Indicators (LEI) Index and the S&P 500



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Analysis: The LEI Index is just below its highs for the cycle. Chart Framework: I'd get incrementally negative on the outlook for the S&P if the LEI Index began trending sideways to down while the S&P was at or near bull market highs.

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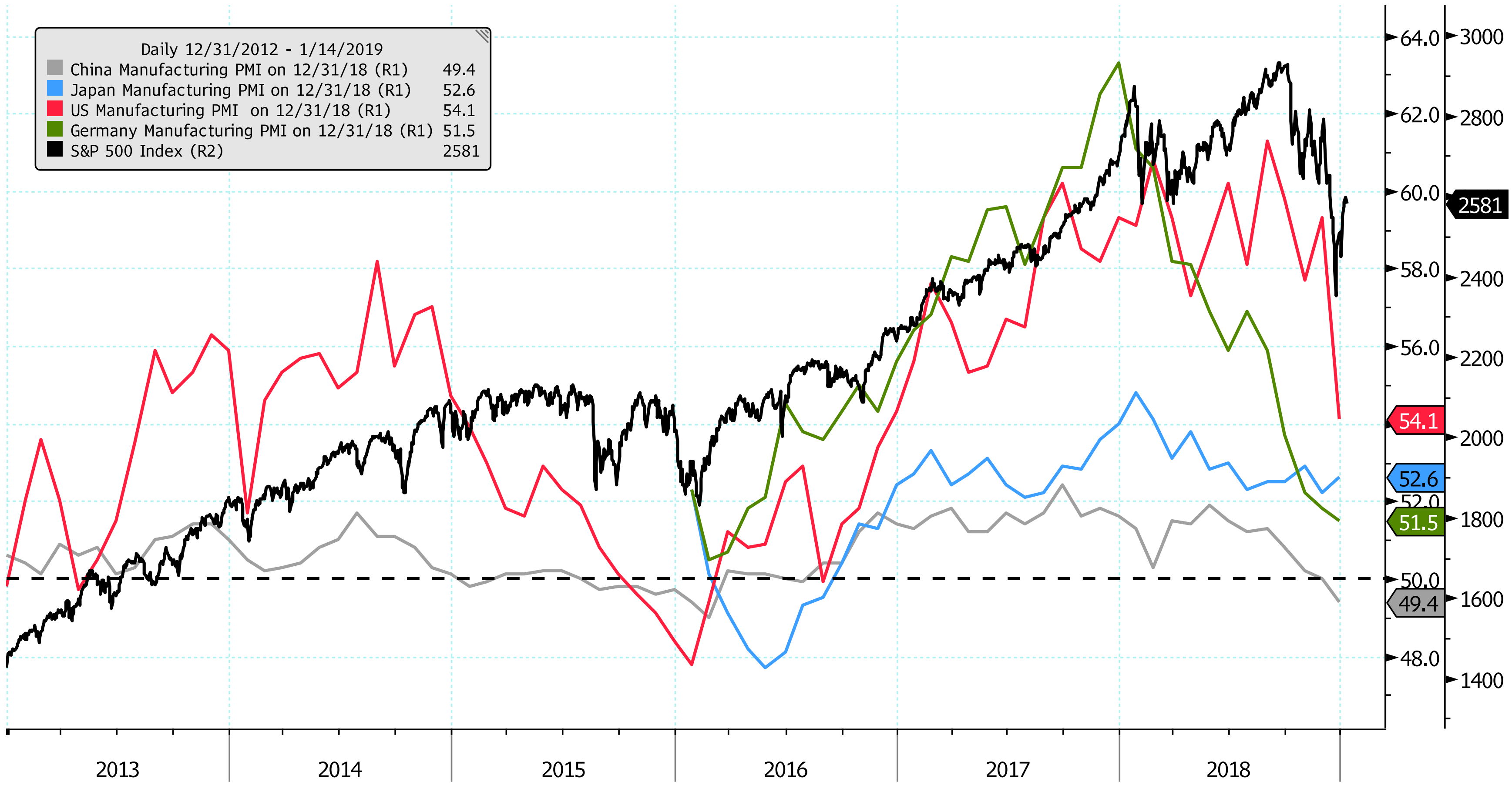
Global Growth Backdrop

Large Economy Manufacturing PMIs (Purchasing Managers Index) and the S&P 500



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Analysis: The China PMI is now below the 50 level, which divides expansion from contraction. I'm currently neutral/negative on this picture given my framework. Chart Framework: I'd get incrementally negative on the S&P outlook if any of these PMIs fell below 50. Would get positive if all readings are above 50.

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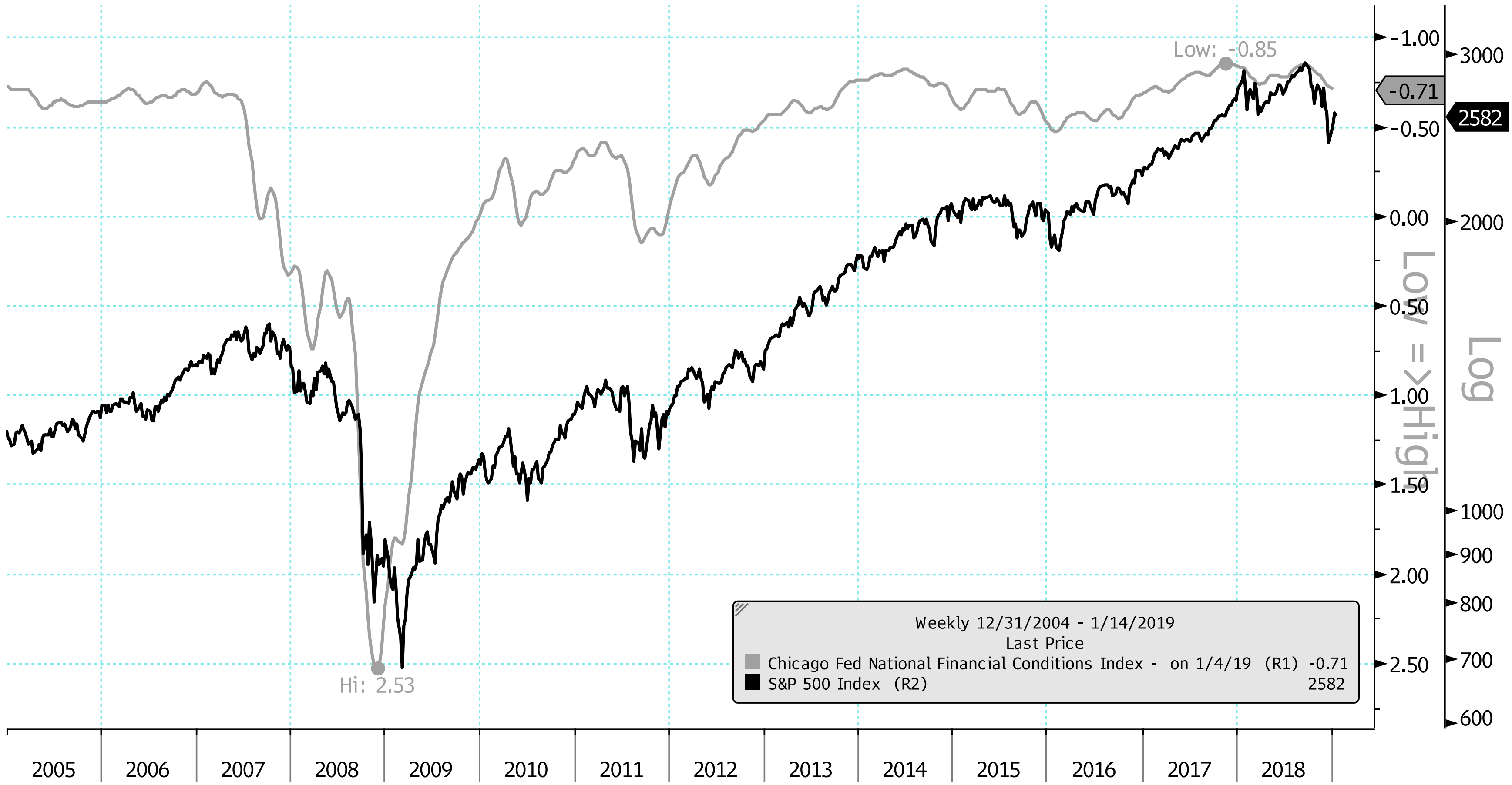
U.S. Financial Conditions

Chicago Fed National Financial Conditions Index and the S&P 500

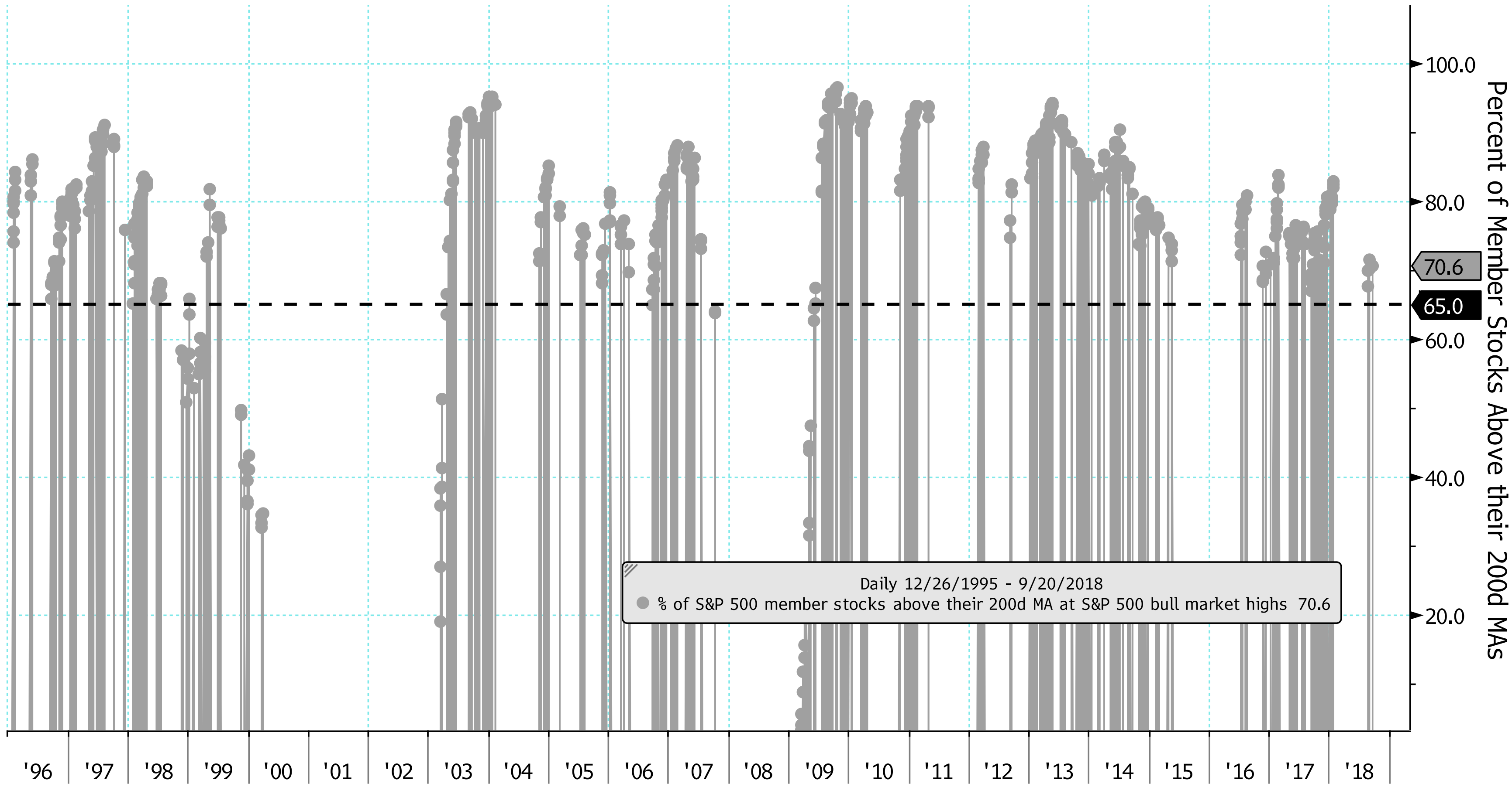


Source: Bloomberg, © Merk Investments LLC www.merkinvestments.com/research

Analysis: Financial conditions have tightened slightly since last month's report, from -0.76 to -0.71, as of the week ending 1/4/2019. Financial conditions are generally still at an accommodative level. Loose financial conditions are generally a positive for the stock market. Chart Framework: I'd get incrementally negative on the outlook for the S&P if financial conditions moved through the -0.50 level.

Market Breadth

Percent of S&P 500 member stocks above their 200d Moving Averages when the S&P 500 Makes a New Bull Market High



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Analysis: Breadth at the previous high (9/20/2018) was at 71%, which was slightly lower than the 72% from August's S&P 500 all time high but still above the 65 level. There is a gradual long term decline in breadth that is apparent in this picture, from 2009 to present, which is to be expected as the bull market ages. Chart Framework: I'd get incrementally negative on the outlook for the S&P if the S&P made new bull market highs with breadth below 65%.

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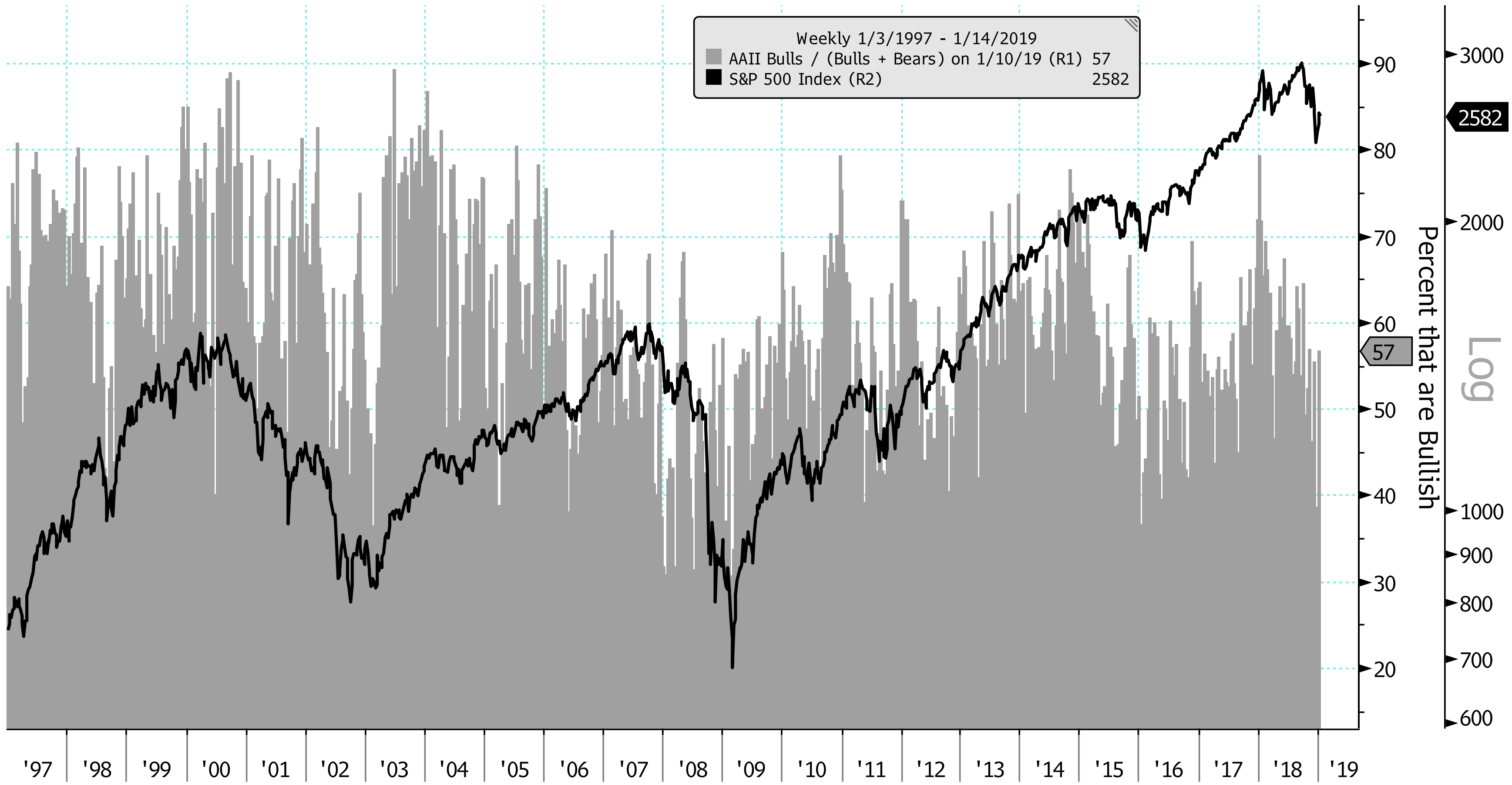
Market Sentiment

Percent that are Bullish (bulls / bulls+bears) and S&P 500



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Analysis: Bullishness is currently near the long term average. In my view this chart should be looked at from a contrarian perspective. Given that sentiment is near the average my current interpretation of this chart is neutral. Chart Framework: I'd get incrementally negative on this picture with sentiment at or above 70 and incrementally positive with sentiment at or below 30.

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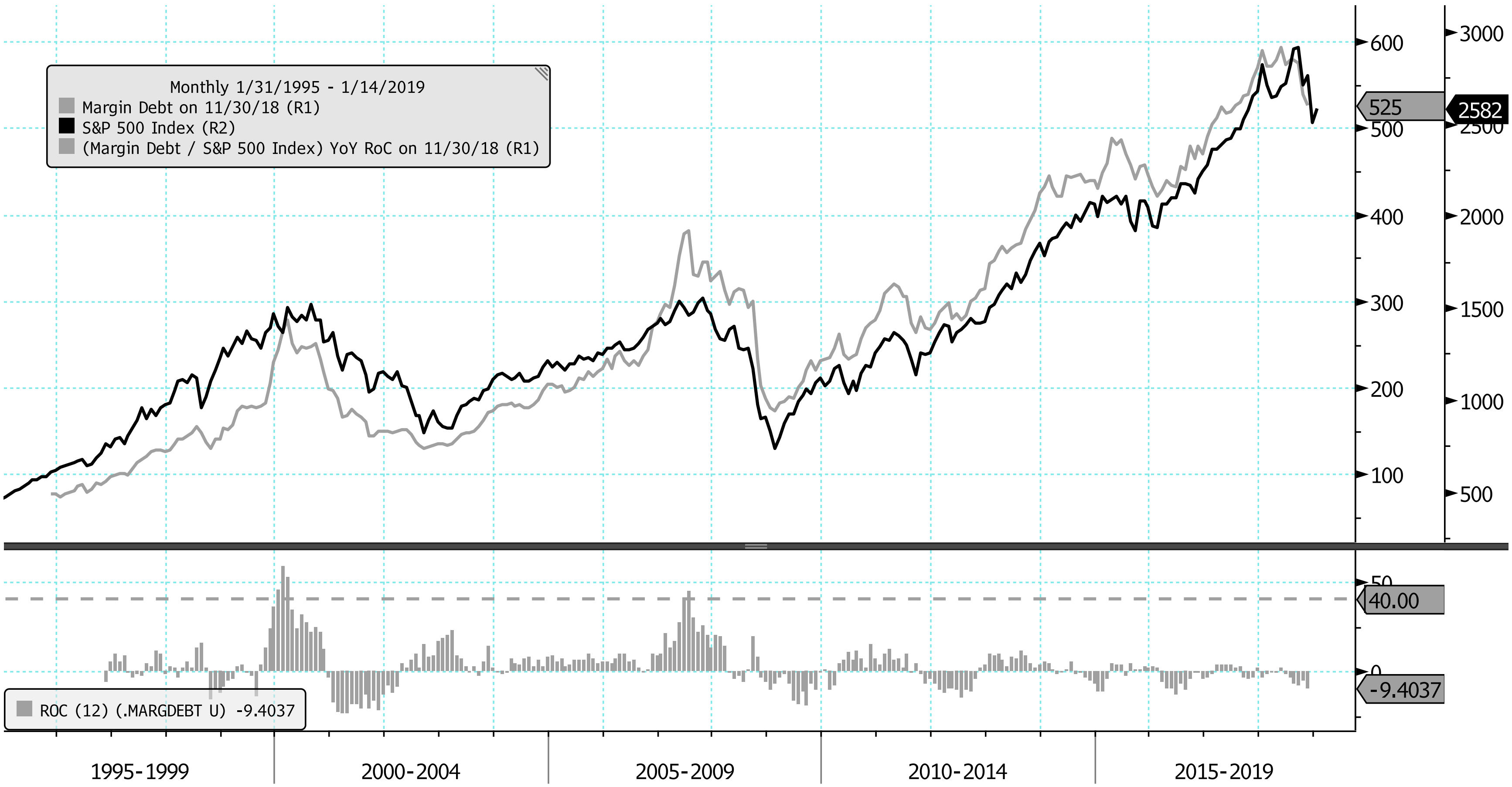
Margin Debt

Margin Debt and S&P 500 (top panel), 12 month change in Ratio of Margin Debt / S&P 500 (bottom panel)



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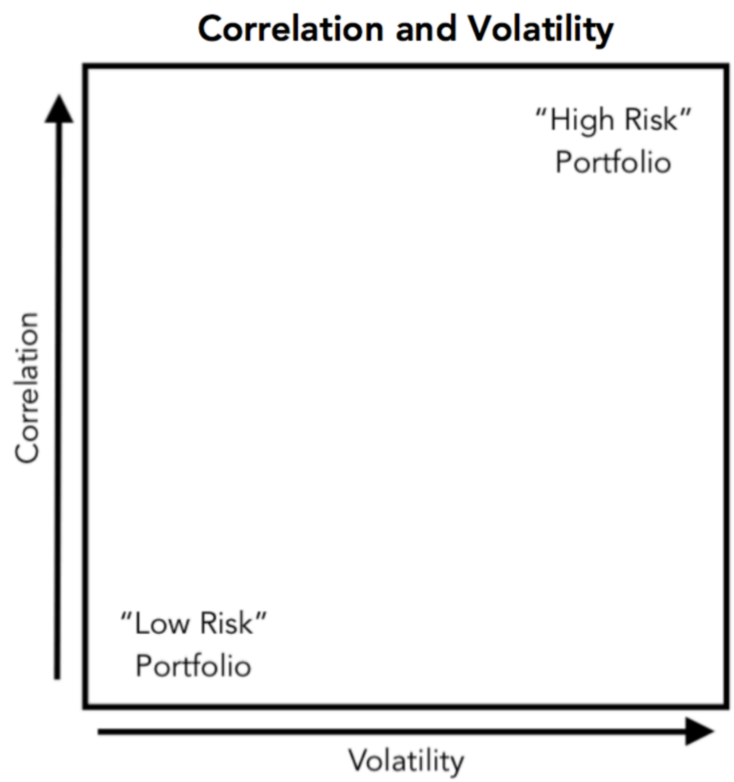
Analysis: In the previous two major market tops for the S&P 500 (2000 and 2007), margin debt rose significantly relative to the equity market, possibly reflecting the euphoric phase of the bull market or long positions switching from strong hands (unlevered) to weak hands (levered). Currently margin debt is not rising relative to the stock market (bottom panel), perhaps supportive of the idea that the bull market isn't over. Chart Framework: I'd get incrementally negative on the outlook for the S&P if YoY rate of change of the ratio (bottom panel) moved above 40.

Correlation and Volatility Framework

On the below diagram Correlation rises along the vertical axis from bottom to top, and Volatility rises on the horizontal axis from left to right

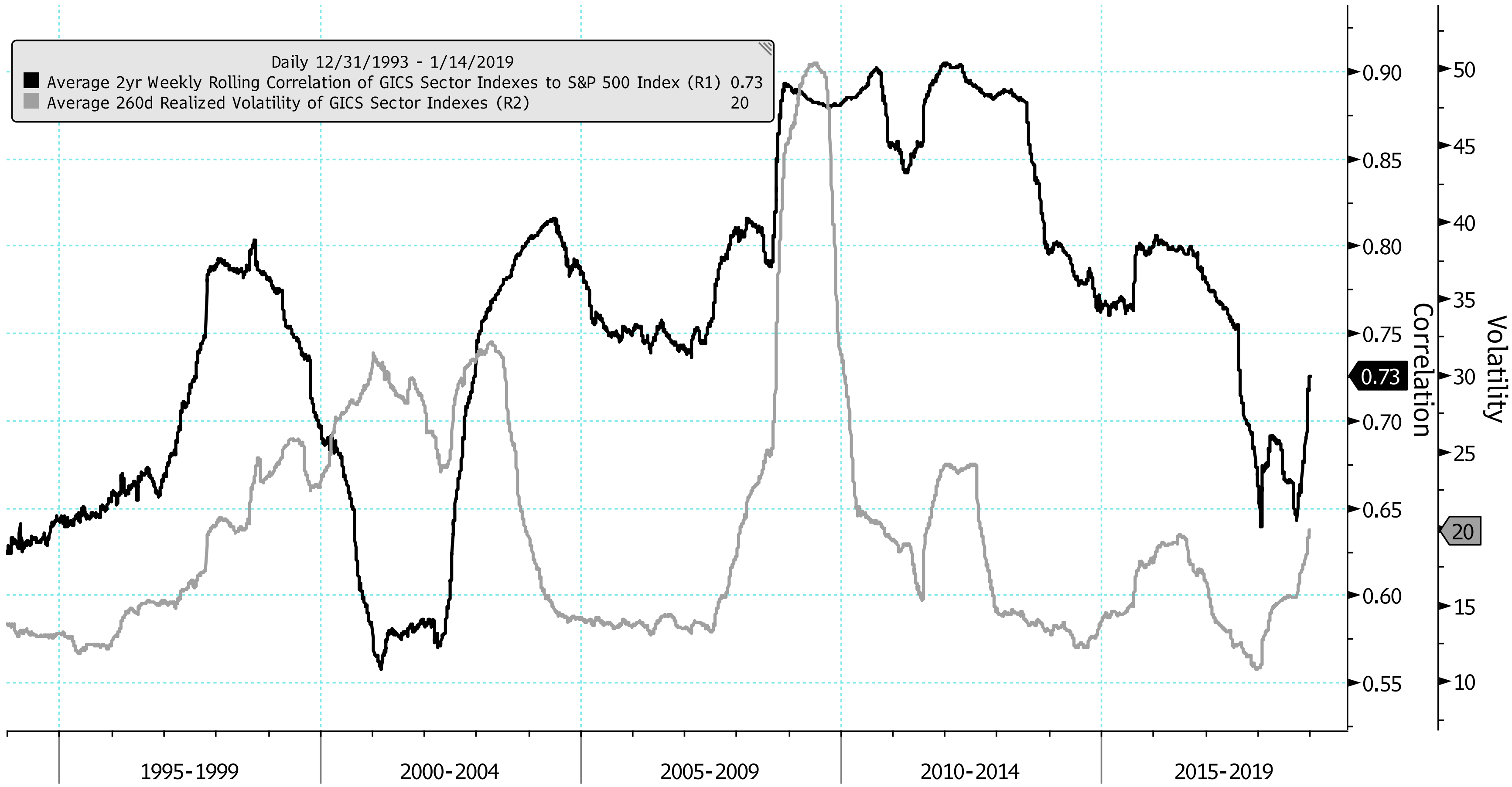


Source: © Merk Investments LLC www.merkinvestments.com/research

Analysis: This is a very simple diagram to help visualize how volatility and correlation relate to the conventional concept of portfolio risk. Volatility measures how much movement an individual asset has relative to itself, and correlation measures how much movement an individual asset has relative to other assets in a portfolio. For a given portfolio, the lower the volatility of each individual asset and the lower the correlation between the assets, the "lower risk" the portfolio will be, as measured by portfolio standard deviation—and vice versa for high volatility and high correlation. Counter-intuitively I would argue that longer-term investors might actually want to think the opposite way—that is to become cautious when asset portfolios appear low risk and consider opportunities when asset portfolios appear high risk. To paraphrase Warren Buffett: it's better to be fearful when others are greedy and greedy when others are fearful.

S&P 500 Correlation and Volatility

Avg. 2-yr Correlation of GICS* Sector Indexes to the S&P 500 Index and Avg. GICS Sector Index 1-yr realized volatility



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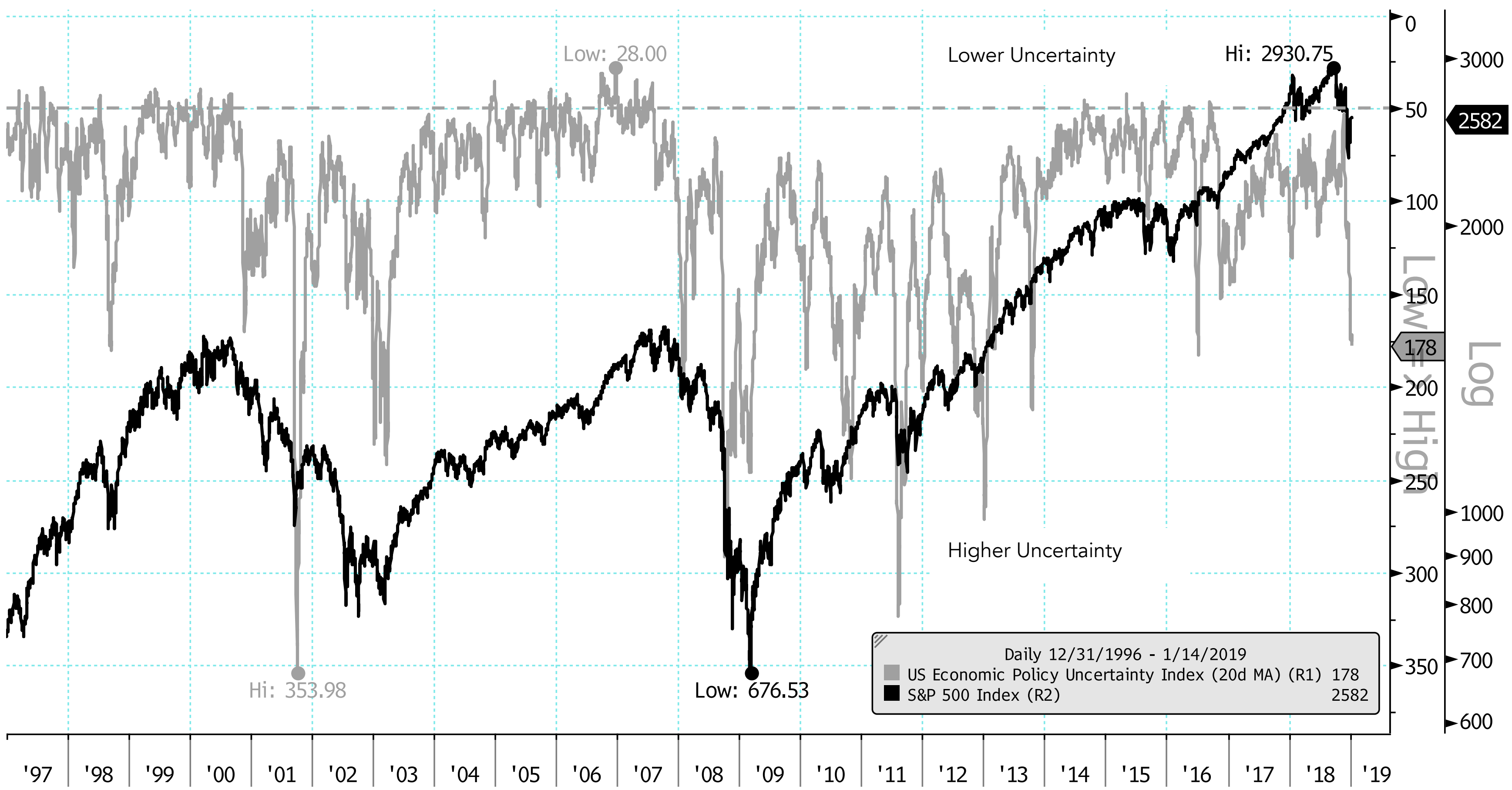
*Analysis: Both correlation and volatility are relatively low in a longer-term context, although both have been moving higher in recent months. In my view this chart should be looked at from a contrarian perspective, and suggests a negative outlook medium-term. S&P 500 subsequent medium-term returns are likely to be most attractive when both correlation and volatility are high and have lots of room to decline, for example in 2009. *GICS = Global Industry Classification Standards. The 10 sectors used for this analysis are: Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Telecommunication Services, and Utilities. In 2016 Real Estate was added as an 11th GICS Sector, which had been part of the Financials sectors. The S&P 500 stocks are each assigned to a sector. The correlation reading (black line) represents the average of all sector correlations to the S&P 500 (i.e., Correlation between Financials and S&P 500 + Correlation between Energy and S&P 500 etc., divided by 10). The volatility reading (grey line) represents the average the sector volatilities (i.e., Volatility of Financials + Volatility of Energy etc…., divided by 10)*

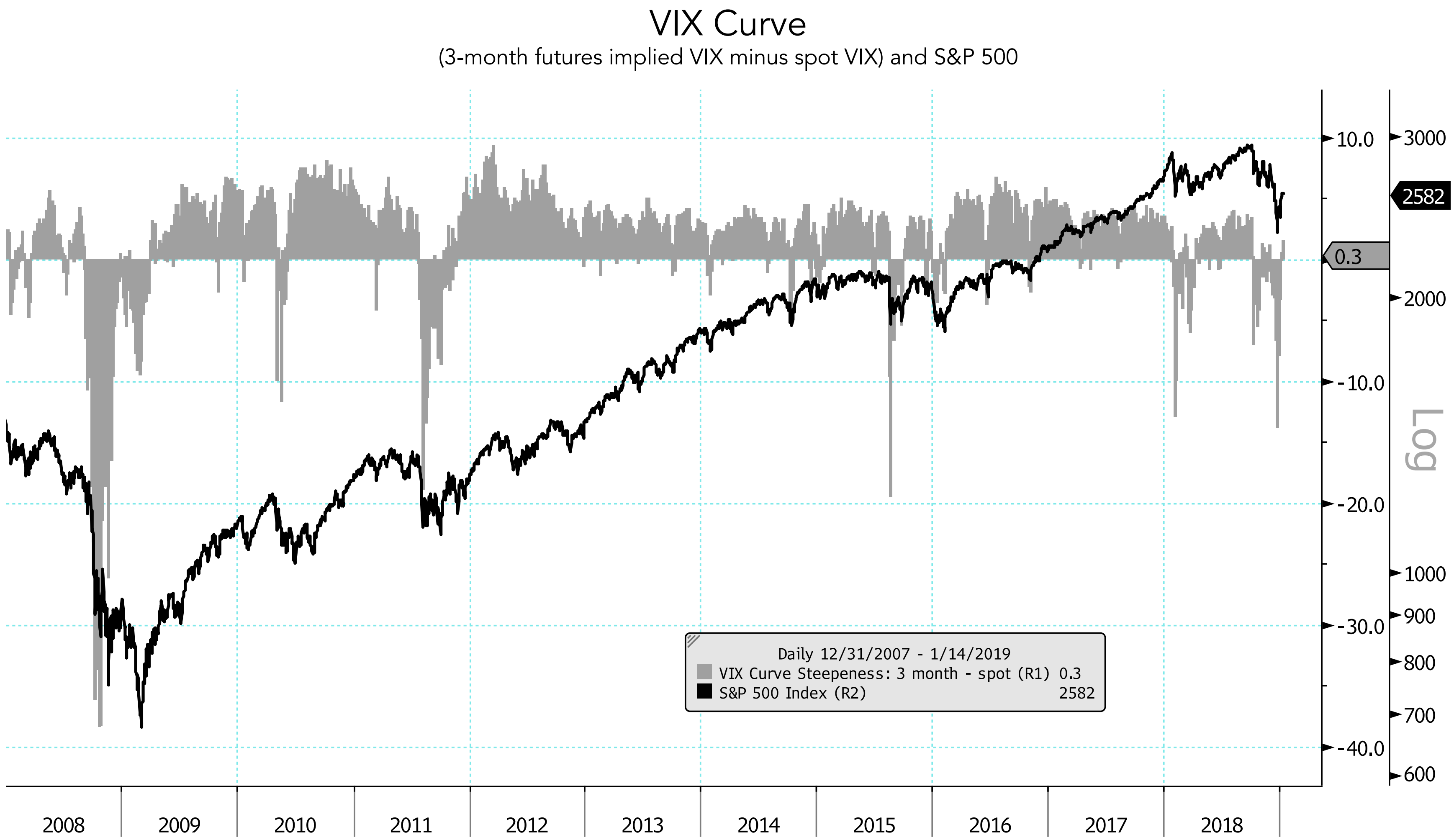
Uncertainty

U.S. Economic Policy Uncertainty Index and S&P 500



Source: Bloomberg, © Merk Investments LLC www.merkinvestments.com/research

Analysis: There may still be some "wall-of-worry" left to climb before the bull market ends. Uncertainty has increased since last month's report; counter-intuitively I would argue that increased uncertainty is generally a positive for the market on a forward looking basis as it gives uncertainty more room to decline going forward. Chart Framework: I'd get incrementally negative on the outlook for the S&P around the 50 level on policy uncertainty.



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Analysis: The VIX curve is currently positively sloped, meaning future expected VIX is higher than the current VIX (VIX represents an estimate of the 30 day implied volatility of the S&P 500). In my view when the VIX curve is negative the drawdown phase is still ongoing, when positive it may suggest the correction is over for the time being. Chart Framework: this chart is best used for judging when drawdown periods might be over. If a negatively sloped VIX curve (i.e., grey area below zero) persisted that could be a sign of stress remaining in the market.

S&P 500 Technicals

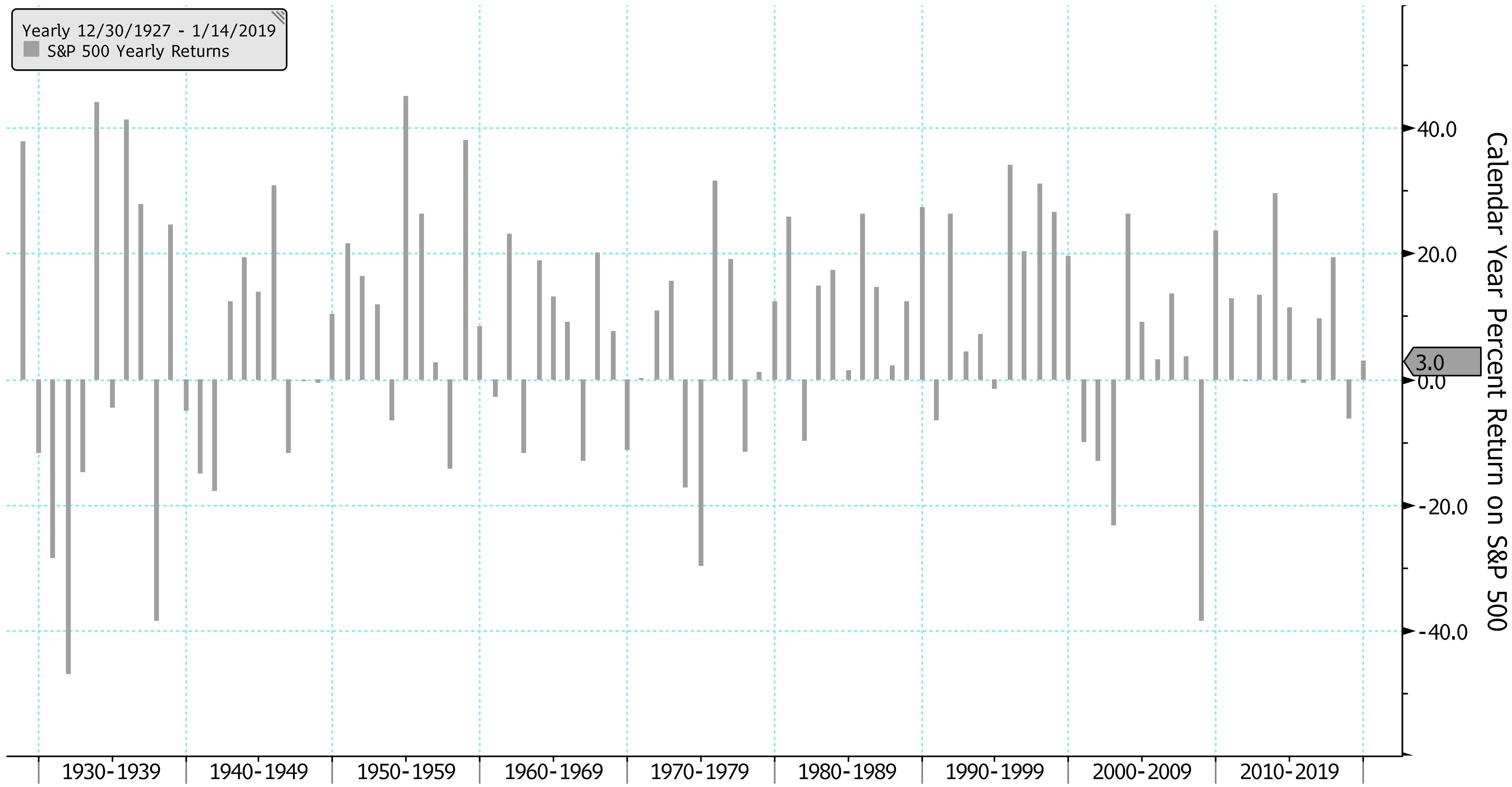
S&P 500 daily open-high-low-close chart with 50-day and 200-day Moving Averages (MA)

Source: Bloomberg, © Merk Investments LLC www.merkinvestments.com/research

Analysis: The 50-day moving average (grey line) has crossed below the 200-day moving average (black line) and the market is generally making lower highs and lower lows. My current interpretation is negative. Chart Framework: I'd get positive if the S&P 500 appeared to be making higher highs and higher lows and if the 50d MA crossed above the 200d MA.

Calendar Year S&P 500 Returns

1928-to-Present Calendar Year Returns (dividends not included)



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Analysis: For 2018 the S&P 500 was down 6.2%. As of 1/11/2019 the S&P 500 is about +3% year-to-date. Coming into 2019 sell-side forecasts were for a 10-20% return this year. From 1928 to 2017 the S&P 500 average annual return was 5.7%, but the S&P 500 returned between 0-10% in only 15 of those 90 years (17% of the time); in other words average years are actually rare. 51% of years had returns above 10%, and 32% of years had negative returns. It may be worth noting that the S&P 500 is up over 10% in the majority of years.

Checklist (January 2019)

Page	Chart	Time Horizon	Per Framework Characterization
2	Valuation	Long Term	Negative
3	Earnings	Short/Medium Term	Neutral/Positive
4	Business Cycle	Short/Medium Term	Positive
5	Global growth	Short/Medium Term	Neutral/Negative
6	Financial Conditions	Short/Medium Term	Neutral/Positive
7	Market Breadth	Medium/Longer Term	Neutral
8	Market Sentiment	Short/Medium Term	Neutral
9	Margin Debt	Medium/Longer Term	Neutral/Positive
11	Correlations/Volatility	Medium/Longer Term	Negative
12	Uncertainty	Medium/Longer Term	Neutral/Positive
13	VIX Curve	Short Term	Positive
14	S&P 500 50d v 200d MA	Medium Term	Negative
		Time Horizon	**Overall Characterization**
		Short Term (<6 months)	Neutral/Positive with high uncertainty
		Medium/Longer Term (6m-5years)	Neutral/Negative with high uncertainty

Conclusion/Thoughts

The S&P 500 is currently in a drawdown, as of 1/11/2019 the S&P 500 is about 11% below the previous all time high close on 9/20/2018. The market has recently rebounded substantially from being down 19.8% from the the September high, which was at the close on Christmas eve.

The main items that seem to be continuing to cause volatility in the markets: China/US Trade, Brexit, and economic weakness in the Eurozone. Of these three I think by far the most important is China. China is the second largest economy in the world, and together the US and China account for about 40% of world GDP. I think Brexit will continue to make headlines, but I think the Brexit news coverage is disproportionate to its actual economic importance (although it is not entirely unimportant). The UK only accounts for about 3% of world GDP, although the Brexit uncertainty may be having a negative knock-effect to the Eurozone as both French and Italian Manufacturing PMIs remain below 50, which is in contractionary territory.

Another contributing factor may be that the market is digesting the inflection point in global QE, for which we don't have any historical analog. The European Central Bank ended QE in December, the Fed is, as of October 2018, at its full run rate of QT (quantitative tightening), i.e., Fed balance sheet reduction. The Bank of Japan, under their yield curve control program, hasn't needed to buy as many Japanese Government Bonds annually as they had been. This inflection point may also be causing jitters in the markets.

The business cycle backdrop and continued earnings growth still look positive for the U.S. equity market. Also, sentiment had gotten very weak and it might not take much for the glass to look half full again. The most likely catalyst for a renewed uptrend in US and global equity markets would be a resolution (and tariff reduction) on the US/China trade dispute, and any announcements on meaningful Chinese fiscal stimulus. My base case scenario is that this is a normal, albeit scary, correction in an ongoing bull market and that the S&P 500 will recover to make new all time highs before the next bear market.

What keeps me cautious on the medium to longer-term (roughly 1-5 year) outlook is the high overall equity allocation, which suggests high valuation and low expected returns on average over the next ten years.

-Nick Reece, CFA

Disclosure
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