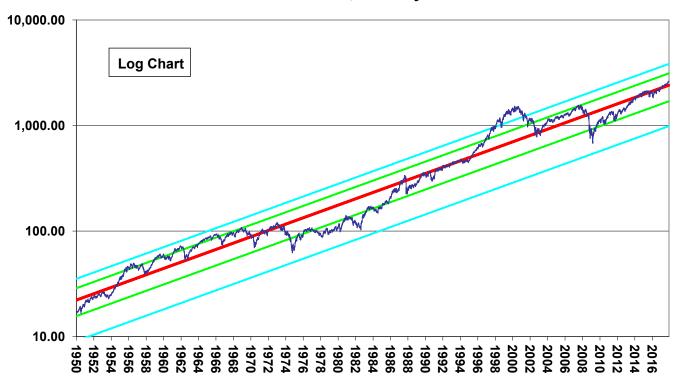
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Swimming the Market Channel: 2017 Updated Analysis

S&P 500 Stock Index, January 1950 - December 2017



As students of stock market history, we're always interested in long-term market trends. So as we close the book on 2017, we thought it a good time to update our series "Swimming the Market Channel" (previously updated in 2009) to see where trends in stock prices and volatility stand. The chart above shows the daily S&P 500 price history from the start of 1950 through the end of 2017. Equity markets existed prior to 1950, of course, but there is a limited amount of daily data for those periods. For our study, we selected the time period and S&P 500 index in order to have reliable, daily price data from a broad-based index. In addition to the daily closing prices for the S&P 500, the chart contains two sets of "channel" lines, green and blue. The green-lined channel contains the actual S&P 500 index approximately two-thirds of the time, while the blue-lined channel contains the S&P 500 index approximately 95% of the time. Statistically speaking, we used the price volatility of the index to create a one-standard-deviation band (the green lines) and a two-standard-deviation band (the blue lines). The red line represents the market's central growth trend over this period. To better depict percentage changes over a wide range of values, we charted this data on a logarithmic scale.

Looking at the chart, one of the first things you may notice is the strong upward price trend of the index over time. The primary reasons for the upward march in prices are the real growth of the U.S. economy and the impact of inflation. Economists combine them using a statistic known as "nominal" Gross Domestic Product (GDP). Because earnings growth of the companies in the S&P 500 generally tracks nominal GDP growth, the index of prices may be seen as a reflection of the long-term growth of the economy. While the U.S. economy experiences fluctuations in growth rates and even shrinks a bit from time to time, you may wonder why prices in the chart seem much more volatile than the overall economy. The reason is that prices

reflect not only actual and anticipated economic growth, but they also reflect investor sentiment. Swings in investor sentiment can create swings in prices that are often disproportionate to the facts on the ground, economically speaking. In fact, the chart shows a number of examples of extreme optimism and pessimism on the part of investors.

As we wrote our March 2009 update, we felt confident we were near a point of extreme pessimism. At the time, the U.S. economy was in a deep economic contraction that began in December 2007 and lasted through June 2009. During this period, which came to be known as the Great Recession, home prices fell rapidly, and within two years the U.S. unemployment rate more than doubled to 10%. Due to a liquidity crisis, the credit market was effectively closed to many borrowers, and a number of creditworthy companies—including some notable financial institutions—were unable to refinance their debt. The U.S. Treasury and Federal Reserve responded aggressively with a number of unconventional measures to repair the broken lending system and help mend the economy. The end result of the Great Recession was a 5.1% decline in nominal GDP.

Looking at the chart, it is easy to find the stock price reaction to the Great Recession, because it was so extreme. The S&P 500 declined about 50% from October 9, 2007 to March 9, 2009 when prices bottomed. While a 5.1% decline in GDP was surely bad, the sentiment of investors was clearly much worse. Partly because most investors are unfamiliar with stock market history and its extremes, it's easy to see how deep pessimism came to rule the market. For our part, we updated our original 2004 study in March of 2009, and things looked pretty extreme to us—attractively so. We noted that current prices were "far below the long-term trend line," and March 2009 prices were "nearly indistinguishable from the all-time low (relative to the trend line) reached in August of 1982." With history as our guide, we noted that during such extremes, one "can clearly see that patient investors were richly rewarded over time." When we wrote these words, we had no way of knowing that March 2009 would be the bottom of the bear market, but our faith in the value of understanding market history was richly rewarded. Similar periods of below-trend economic growth and accompanying pessimism include the 1950s (when there was widespread fear that the wind down of the World War II economy would trigger another depression), the 1970s (when Business Week magazine's infamous cover story proclaimed the "Death of Equities"), and the 1980s (which included a double-dip recession). These were also excellent times for long-term investors to put funds to work.

The chart also depicts periods of extreme optimism, none better than the dot-com bubble of the late 1990's. During this period, new technologies increased productivity and helped nudge nominal GDP growth above trend. Investors not only recognized this, but they became outright euphoric in their enthusiasm for technology shares, regardless of profitability or price. On our chart, this is by far the most extreme price move (relative to the trend line) in either direction. For investors who indiscriminately chased the herd, the results were likely very disappointing. Even those investors with enough foresight to avoid disasters like Pets.com or eToys.com in favor of survivors like eBay or Amazon.com, it would be many years before those companies would reach new highs. Once again, understanding the stock market's history and its long-term trends proved valuable.

It's pretty clear that buying shares when prices are below the trend line has typically been more advantageous than buying when prices are above the trend line, but we don't advocate using this or any other tool to time markets. Instead, we hope to illustrate that investor emotions can and do reach extremes resulting in volatility unjustified by economic reality. Additionally, we want to point out that investors can benefit when, first, they understand and recognize these extremes, and second, they have the courage to act in a manner contrary to the widespread opinion responsible for creating extreme prices. Experience tells us that the former (recognition) is much easier than the latter (taking action).

Let's now revisit long-term trends in share prices and volatility as they relate to the current market. Not surprisingly, the market's long-term uptrend (represented by the heavy red line) is still intact. In fact, as a result of the bull market that followed the Great Recession, the long-term rate of growth (excluding dividends) increased to a more historically-normal rate of 7.87% after falling to 6.78% in March of 2009. This fairly big change in the long-term rate of growth over a relatively short period of time is a good illustration of how advantageous the last eight years have been for stock investors. Looking back, the March 2009 lows were a truly historic buying opportunity. As our analysis shows, the rate of growth does vary over time, and sometimes the shifts happen fairly rapidly. This makes it very difficult to predict the rate of future returns. However, we are comfortable predicting that future long-term

growth will continue on a similar trajectory, and that corporations—and their shareholders—will benefit.

Turning to volatility, we noted in 2009 that markets had become more volatile than in previous periods. Not surprisingly, things have calmed down some. In 2009, when the S&P 500 stood at just 798, the one-standard-deviation channel was about 890 points wide. At the close of 2017, the one-standard-deviation channel is just 716 points wide, despite the S&P 500 trading at 2650. In some ways, the 2009 – 2017 bull market, with its annual gains and lower volatility, seemed to be the investment fulfillment of the familiar infomercial promise to "eat all you want and still lose weight." It's not clear what caused this period of relative calm nor when or how it may end, but history suggests it is somewhat unusual. As always, long-term investors should expect some volatility and prepare accordingly. Investors like us, who employ a careful fundamental analysis of companies to estimate intrinsic value, welcome some volatility as a potential source of opportunity, since larger fluctuations in prices are more likely to create opportunities to buy and sell advantageously when prices drift from our estimates of value.

Today, prices are modestly above the historical trend, although they are nowhere near the extremes of previous periods. This implies an increased chance of somewhat below-trend stock returns going forward. It's possible that recent policy changes in taxes, regulation and other areas might nudge the rate of nominal GDP growth higher in the short term, but we think such changes are unlikely to provide a dramatic or lasting change in the long-term trend of economic growth and earnings. We believe the historical long-term trend will likely remain the best gauge to determine expectations going forward. With this in mind and in consideration of the low returns offered by alternatives such as bonds or cash, we remain convinced stocks offer the best risk/reward opportunity for long-term investors, even if those returns are somewhat more likely to slip below the 7.87% price trend. To put it plainly, we prefer to own shares of favored businesses that will benefit from the persistent long-term growth of the economy than to lend money to the U.S. government at less than 2.50% annually for the next 10 years.

We closed our 2009 update by comparing our approach to that of indexing, which was gaining in popularity at the time. Since indexing has become ever more popular (you might say the business of passive index investing is booming), we believe this topic is even more relevant today. In 2009, we made the case that because the market was trading at a discount, it provided a rare opportunity to buy excellent companies at unusually attractive prices. In retrospect, that was indeed the case. Today, with the market priced a bit above its long-term trend line, we believe that increased caution is warranted. Pouring more and more cash into index-based investments—which are required to buy more and more shares of the same companies—doesn't strike us as particularly cautious. Instead, we prefer to carefully select businesses using detailed, independent research to create a portfolio of attractively-priced securities. We believe our commitment to this approach gives us the best chance of realizing above-market returns over the long term.

Patrick Labbe, CFA January 2018