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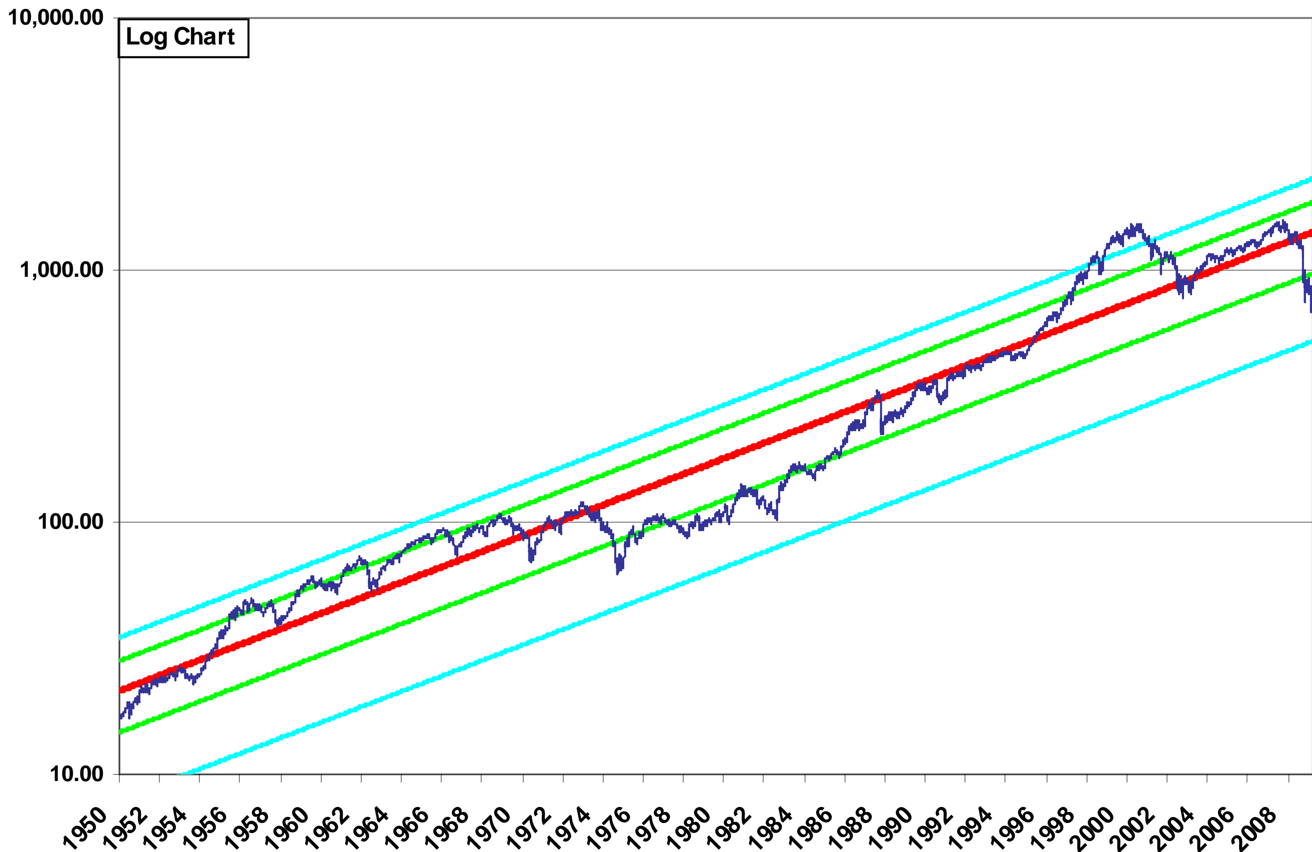
Swimming the Market Channel, Updated and Expanded



Given the stock market's volatility over the past year, we thought it would be a good time to update our 2004 study of long-term market trends and volatility. Above, we show the history of the S&P 500 stock index since 1950, together with a red line showing the S&P 500's central trend over this period. In addition, there are 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, and the blue-lined channel contains the S&P 500 index approximately 95% of the time. Statistically

oriented readers will recognize that the green lines represent a one standard deviation band and the blue lines reflect a two standard deviation band. Both the index and the time period selected for this study were based on our desire to use reliable daily data representative of the broader U.S. stock market. And for clarity, we've used a logarithmic scale to chart the data, because it better illustrates percentage changes over a wide range of values.

As we noted in 2004, U.S. stock market indices like the S&P 500 have risen meaningfully over the years. The primary catalysts for the rise are the real growth in the U.S. economy and the impact of inflation. The combined impact of the nation's real growth and inflation is reflected in the statistical measure known as "nominal" Gross Domestic Product (GDP). Since investors often value stocks in terms of earnings, you may consider the market's rise a reflection of nominal earnings growth, which follows nominal GDP growth. Interestingly, while the long-term growth of nominal earnings and GDP has fluctuated within a relatively narrow range, stock prices have fluctuated much more dramatically. This is primarily due to swings in investor sentiment—at times reflecting pessimism or optimism, occasionally in the extreme. Although these swings in investor sentiment are largely unrelated or disproportionate to short-term changes in nominal GDP growth, the fact remains that investor sentiment has been quite volatile.

For example, in 1979, a *BusinessWeek* cover story warned investors, quite literally, that the "death of equities" was at hand—the days of buying shares with a positive return expectation were undoubtedly over. While it's true that nominal GDP was below its long-term trend in the early 1980's, we can see from the above chart that the early 1980's was actually a ***good*** time for long-term investors to buy stocks. The late 1990's shows the other side of the coin, extreme optimism. Yes, new technologies helped fuel real gains in productivity during this period, lifting nominal GDP growth somewhat above the long-term trend, but investor optimism, as reflected in stock prices, was clearly off the charts. For investors happy to follow the herd by indiscriminately buying stocks during this period of euphoria, the results were likely very disappointing. The point here is not that one should use investor sentiment as a way of precisely timing the market, but that investor emotions do reach extremes, creating much more stock price volatility than is justified by the underlying economic reality.

In our original study, we discussed the long-term uptrend in share prices, the volatility reflected in the width of the channels, the current index level relative to the trend and some of the more extreme periods of volatility. We'll revisit these, using the latest data.

First, the good news is that the market's long-term uptrend is ***still*** clearly evident. However, prices remain quite volatile. In 2004, we stated that the trend line had increased at a 7.3% average annual rate, exclusive of dividends. With the addition of more recent price action, especially 2008's sharp decline, this annual rate has dropped to 6.78%. So although the long-term growth rate remains favorable, the rate has flattened some. Returning to our chart, the 6.78% growth is depicted as the red line trending upward over time (on a logarithmic scale).

Volatility, on the other hand, has increased. The one standard deviation channel was around 600 points wide in 2004. Today, it's closer to 890 points wide. Adjusting for changes in the level of the trend line, that's an increase in volatility of over 8.5%. Obviously, a combination of lower returns and higher volatility at present is disappointing for investors. Interestingly, once the collapse of the internet bubble was completed in 2002, the market was uncharacteristically calm, making the extreme market-price fluctuations in 2008 a surprise for many investors. However, historically speaking, market prices are normally more volatile than the 2002-2007 period alone might suggest.

Our initial study pointed to the possible presence of valuation risk in 2004, since the S&P 500 at that time was priced above its 1950-2004 trend. Our goal then, as now, was not to predict future market prices, but to make the point that overall market prices ***on average*** might have been a bit inflated, or fairly priced at best. We also stated that it's generally advantageous to invest in stocks when prices are below their long-term trend, and it's best to be cautious when prices are above their long-term trend.

Today, prices are ***far*** below the long-term trend line. In fact, the March 2009 period is nearly indistinguishable from the all-time low (relative to the trend line) reached in August of 1982. So is this a good time to make long-term investments in stocks? History suggests it is. For example, based on subsequent price movements of the S&P 500, $10,000 invested in August 1982 would have been worth $32,488 after 5 years, $40,828 after 10 years and $88,090 after 20 years. That's ***without*** considering dividends. Keep in mind, though, that investor sentiment doesn't suddenly become optimistic and remain that way after reaching a bottom. Consider the fate of the 20-year investor in our 1982 example: first of all, the initial investment would have taken some courage, as the nation was in the midst of a known recession at the time; then he/she would have faced numerous crises such as the sky-high interest rates of the early 1980's, 1987's "Black Monday" crash (when the S&P 500 fell more than 20% in a single day), the 1997-1998 Asian currency crisis, quickly followed by Russia's sovereign debt default and the subsequent collapse of the mega-hedge fund Long Term Capital Management, the collapse of the internet bubble starting in March of 2000, the

9/11 terror attacks the following year, not to mention two more domestic recessions and less dramatic slowdowns of varying degree. At the time, any one of these events might have created a seemingly credible sense of panic among the investing public, yet we can clearly see that patient investors were richly rewarded over time.

Moving away from extremes, consider the average annual returns from earlier periods when prices initially fell below the lower one standard deviation channel line. You might view these as reflecting mild pessimism on the part of investors.

Time Period	**5 Year Return**	**10 Year Return**	**20 Year Return**
July 1974	3.46%	5.94%	9.20%
January 1980	9.35%	13.02%	14.01%
January 1984	10.91%	10.99%	10.02%

These periods contained a wide variety of market, economic and political conditions, but in most cases, returns going forward beat the 6.78% long-term average. And remember, those returns exclude dividends.

Next, consider a purely statistical exercise in trend reversion. In order for the S&P 500 to return to its current long-term trend line (a wholly plausible scenario), it would need to reach about 1,415. From its March 31, 2009 level of around 800, that would be an increase of more than 76%. And this incorporates the 1950-2008 average annual growth rate of 6.78%, not the 1950-2004 growth rate of 7.3%. A return to the 7.3% growth rate would require an increase of more than 130%.

We remain confident that when investors become increasingly pessimistic, pushing prices below their long-term trend, it's generally a good time to invest. As of March 2009, we consider investor pessimism to be near an extreme. Not surprisingly, some others have reached the same conclusion. If you've wondered what prompted Warren Buffett to pen a rare *New York Times* editorial announcing to the world "I'm buying," or why 84-year old money manager Marty Whitman called the current market "a once in a lifetime opportunity; better than the '70's," or why even a seeming perma-bear like Jeremy Grantham acknowledged that stocks are becoming attractive, consider the chart at the beginning of this article a graphic illustration why.

We'll conclude with a discussion of equity indexing versus our approach. In 2004, we cautioned investors against expecting too much from indexed portfolios, given that the S&P 500 was trading above its long-term trend. Given the prices seen in March 2009, we acknowledge that indexed portfolios might provide very satisfying returns. After all, historical average returns generated when stocks were trading

significantly below their long-term trend have generally been attractive. However, we continue to emphasize that investors should endeavor to be selective in all environments. In fact, if the market itself is trading at a discount, it's likely that many great companies with excellent prospects can be purchased at unusually attractive prices. The concept of focusing on attractively priced securities, along with careful, detailed, independent research, is the foundation of our effort to generate above-average returns over the long haul.

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