



# THE SENTINEL

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Stock Market Forecast Supplement

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## Stock Market Forecast

In the last two years, approximately \$7 Trillion in stock market “wealth” evaporated. An average investor might have a portfolio or 401(k) account worth 35-40% less than at the top of the market in 2008. How is an investor to cope with such losses? What is in the stock market’s future?

This supplement addresses the US stock market. Three indices (Dow Jones Industrial Average, S&P 500, and the NASDAQ) are the primary scorekeepers for the US stock market. These indices represent different segments of companies whose stocks trade on exchanges in the United States. There are other indices, not addressed in this text. The supplement will make the case for a long-term market decline of multi-generational proportions and it will refute any notion that we are near an absolute market bottom.

## Historical Milestones

Noticeable highs and lows occurred in the stock market in the 20<sup>th</sup> and 21<sup>st</sup> century. The adjoining table lists, the most important highs and lows, forming tops and bottoms respectively.

The 1929 top ushered in the Great Depression. The corresponding bottom to the ensuing bear market occurred in 1932, though it was not until 1954 that the market achieved the same level as 1929.

| Year | Historical Characteristic |
|------|---------------------------|
| 1929 | Top                       |
| 1932 | Bottom                    |
| 1974 | Bottom                    |
| 1982 | Bottom                    |
| 2000 | Top                       |
| 2002 | Bottom                    |
| 2007 | Top                       |

Given the fortunes that were lost in the bear market after 1929 and how the country’s economy reacted to it, it seems plausible to have an unconfident public for what amounts to an entire generation (25 years).

The 1974 and 1982 bottoms coincided with recessionary periods in the US. This is important since recessions speak to confidence issues in the economy and the stock market is an expression of confidence. The 1982 bottom fostered the launching point for the greatest bull market in history.

In 1998, there was a top appearing to be final in nature. The top proved temporary since a definitive top occurred two years later (2000). The 1998 top, however, foreshadowed what was to come - a top in 2000 and a bottom in 2002.

Without delving into much analysis, the tops of 2000 and 2007 were in some sense, the same top. They simply occurred 7 years apart. If a true measure of wealth, such as gold, is used as our “money” to buy stocks, we quickly discover that the top of the market actually occurred in 2000. Since 2000, the stock market, priced in terms of gold, has been in a precipitous decline. While this appears counterintuitive, it highlights the effect of dollar inflation on common indices like the Dow Jones Industrial Average.

## The Saeculum and Generation

A generation is the period between a mother giving birth and her offspring doing the same. Presently an average for this is 25 years. The period from 1982 to 2007 represents one generation of human life and is within the rough boundaries of the “millennial generation”. The millennial generation encompasses those born within that time. The period from 1982 to 2007 also represents the greatest bull market in history. There is a relationship between the generational period and the bull market. The years corresponding to the generation are overlaid on the greatest bull market period to provide a foundation for analyzing what has and will occur in the market.

Examining different generational periods reveals an archetype or model of each generation that tends to repeat. Therefore, a model from 100 years before the millennial generation may exhibit similar characteristics. The Sentinel utilizes this cyclical behavior to analyze market movements and societal trends.

To expand the concept of cyclical behavior, we introduce the term saeculum. A saeculum is a length of time roughly equal to a human lifetime, progressing through four stages or seasons (youth, rising adulthood, midlife, and old age). Each one of these seasons parallels an archetype or model. A saeculum’s time length is arguable, though we can use 80-85 years as a good measure of a human lifetime.

The concept of the saeculum and generation illustrate the present cyclical point of the stock market and its “age”. Cycles are never precise to the year, but they are excellent guides in assessing overall trends. The year 2007 (coinciding with the last market top) represents two important cyclical points. First, 2007 represents a 25-year period (generation) of the greatest bull market in history (1982-2007). Secondly, 2007 is roughly one saeculum from the stock market top of 1929. Consider 1929 as the beginning of a cycle (youth) that is concluding now in 2009 (old age). The Sentinel uses the cyclical confluence (generation and saeculum) to conclude the stock market top in 2007 is of multi-generational significance - meaning that it will not be exceeded for quite some time.

The cyclical concepts are provided in a high level of detail in order to set the foundation for the argument that the US stock market has undergone and will continue to progress through a **vicious bear market of multi-generational dimensions**. It will be a bear market unlike anything we have witnessed in several generations, which is why it has seemed so sudden, why so many “professionals” were caught off-guard, and why there is the belief that a bull market is just around the corner. The generation and saeculum time cycles are the basis of a longer-term forecast of the stock market. These time cycles have other significant implications relating to our economy and other sociological factors. The Sentinel will infuse these concepts into future issues.

## Stock Investment Psychology

A common refrain the author heard during the 1990s and early 2000s was to invest in stocks “for the long haul.” When I asked what “long haul” meant, I faced blank stares on people’s faces. People are conditioned to accept the “buy and hold” approach for stock investing. The approach advocated buying stocks and holding them without concern when market dips occurred. In fact, market dips appear as opportunities to buy more! A term used to describe this type of investing was “dollar cost averaging”. For the preceding generation (1982-2007), this type of investing was successful. Studies have shown investors moving in and out of stocks in those years fared poorly. “Buy and hold” was the mantra of investing.

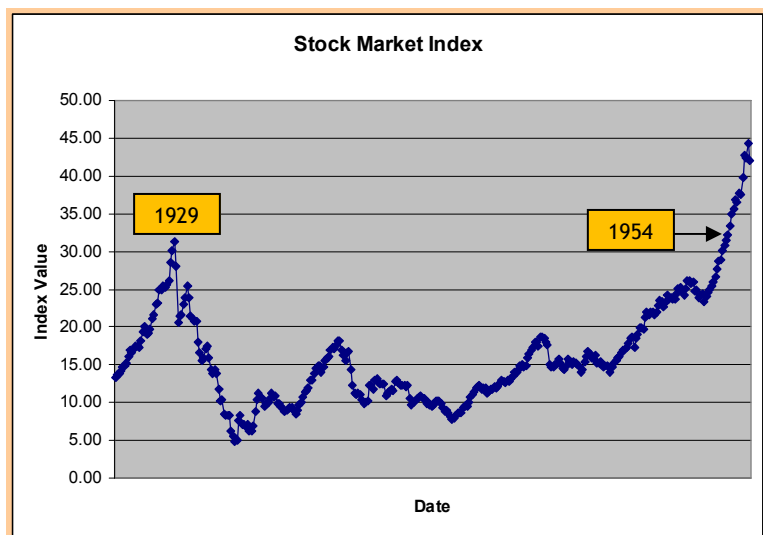
What happens to “buy and hold” when investors face a “multi-generational” bear market? There is evidence the public continues to “hold” with some pundits recommending to “buy” based on the perception of cheap stock prices. Fidelity Investments is a custodian for 401(k) accounts. They have reported very little movement out of stocks despite significant losses in the value of 401(k) accounts. Confidence remains with 401(k) investors; otherwise, there would be a massive stampede out of stocks.

The most difficult aspect of stock investing, and perhaps investing in general, is to know when to take a loss. Take a loss? My experience in dealing with investors of all stripes is that they have no plan to exit a stock after it experiences losses. The most common response is to buy and hold since the market always “comes back” - or at least that is what they hear. Unfortunately, during a protracted bear market, the point at which the market “comes back” can be many years in the future.

Significant downward movements in price averages such as the Dow Jones Industrials or the S&P 500 categorize a “multi-generational” bear market. These averages did experience large percentage downward movements concluding in 1974 and again in 1982. We have not experienced movements of that magnitude until recently. A multi-generational bear market considers periods prior to 1974 and 1982. The best example of a multi-generational bear market occurred during the Great Depression. During the Great Depression, the top of the market occurred in 1929 and the bottom came in 1932. The top of 1929 remained for another 25 years!

The accompanying chart shows the amusement park ride an average investor experienced in 1929. First the value of their stock portfolio plummeted by 85% in 3 years. Then, the stock values they witnessed in 1929 remained until 1954. How did “buy and hold” feel for those investors? Would you feel comfortable seeing your stock portfolio behave in a similar manner for 25 years? Starting in 2007, could you continue to “buy and hold” until the year 2032?

A field of study called “neurofinance”, a marriage of biology, psychology and economics sheds new light on the propensity to buy and hold. It also attempts to explain what happens when fear takes hold. Humans have two brains.



One brain, called the limbic system, is our survival brain. It controls emotion and is prone to herding or following the crowd. The other brain is the pre-frontal cortex, which is our logic center. Most investors believe they use the pre-frontal cortex to make investment decisions. Scientific research suggests the opposite. The collective limbic system of the investing public will change and when it does, there will be less interest in stocks.

The current bear market will be at least as devastating as the one that began in 1929. One aspect of this conclusion is the psychological condition existing at a market bottom. The author is a student of a 20<sup>th</sup> century commodity trader by the name of W.D. Gann. Gann described the bottom of a market as one where there was little interest and an utterly destroyed psychological foundation for further buying. In a “multi-generational” bear market, the lack of interest and the destruction of the psychology increase proportionately. The effects of this destruction will be evident in the lack of confidence the public has in stock market participation. We are not at this point.

## Put/Call Ratio

A rudimentary bullish/bearish measure of market sentiment illustrates the absence of a long-term market bottom. The measure is the put/call ratio. At a high level, a “put” option is a time-based financial instrument that is a bet on a stock going down in value. A “call” option is a time-based bet on a stock going up in value. Both instruments expire at a future point in time. For example, buying a “call” is a bet the stock will increase in value before the expiration of the “call” option. Conversely, buying a “put” option is a bet for the stock to decrease in value before expiration. The put/call ratio is the total number of puts divided by the total number of calls. If the number of puts is equivalent to the number of calls, the ratio equals one. Ratios less than one (fewer puts than calls), implies an overall market bias towards higher stock prices since a greater number of participants are betting on stocks increasing in value. Likewise, ratios greater than one (more puts than calls) imply an overall market bias towards lower stock prices. In a market with confidence, the ratio is less than one.

# of Put Options / # of Call Options = Put/Call Ratio

Put-Call Ratio Less than 1.0 = CONFIDENCE

Put-Call Ratio Early Feb 09 = 0.65

Unlike Vegas, there are no odds-makers establishing betting lines, meaning that a large number of bets (puts and calls) are on one side versus another. A Vegas odds-maker tries to balance the bets, such that an equal number of bets are on both sides. You may feel strongly about betting for one team but when the betting line changes, the odds-maker wants to influence you into betting for the other team.

There is no one like an odds-maker influencing bets with options. The ratio becomes a “sentiment” or confidence indicator composed of option buyers whether they are puts or calls. The ratio illustrates how the participants feel about the market.

The Chicago Board Options Exchange provides put/call ratio data for stock options. The included graph illustrates daily put/call ratios over the last year. The dark blue line going through the middle of the wavy pattern is the 50-day moving average. This value is the average of the previous 50 days of data on a particular day (i.e.) the sum of the previous 50 days of the ratio divided by 50. The purpose of this line is to smooth the variability of the daily pattern. The reader will note the downward trend in this line since December 2008. This downward trend indicates an increase in confidence among option holders. In fact, as recently as early February, the ratio experienced a lower value than at any time in the last year! Once again, despite all that has occurred in the stock market the last year, there is still CONFIDENCE. Because the ratio indicates confidence, there is more room for market decline.



Data provided courtesy of StockCharts.com

## Dividend Yield

Let us examine another measure of market confidence. The average dividend yield of the stock market, using the Dow Jones Industrial Average, is the sum of the dividends paid by the companies in the Average divided by the sum of the stock prices for the same companies. Companies pay dividends to the shareholders as a way of distributing the earnings. When the public buys a stock, the expectation is for there to be dividends, for the stock to increase in price, or both. The dividend is a “reward” for the stockholder for partial ownership of the company. An investor who buys stock wants to see a return for their investment. The dividend is the return for buying and holding the stock.

During times of extreme confidence, the public is mostly interested in seeing their stock price increase and the dividend is less important. Confidence extreme was evident in 2000 when the dividend yield was barely over 1%. A one percent (1%) dividend yield implies that stock owners were content with being paid 1% on their money. It became a badge of honor for some companies not to pay a dividend yield.

During times of diminished confidence, an investor demands a high return on their money since the interest in owning stocks has lessened. Investors in bear markets have far less interest in owning stock when they have taken a beating on their stock ownership. The loss of confidence due to falling stock prices makes stock ownership a more risky proposition implying the need to compensate investors for the increased risk. The increase in dividends provides some of that compensation.

In two of the most recent bear market bottoms (1974 and 1982), the dividend yield was between 6% and 7%. At the bottom of the 1932 bear market, the yield was near 14%. The dividend yield as of 2/9/2009 is 3.86%. When there is fear in the market, an investor expects a higher return for the potential risk of seeing their stock investment decline in value. A rough example would be extending a loan to someone who you feared might not be able to repay the loan in full. For this loan, you demand a higher interest rate to compensate for the perceived risk.

To reach the dividend yield of the bottoms of 1974 and 1982, a couple of cases could arise:

- a) Dividends would have to nearly double with the stock prices staying the same
- b) Dividends would remain the same with the stock prices falling by 50%.

**Case a)**

Increases in company dividends in the current deflationary environment are unlikely. A dividend is a reflection of earnings not retained by the company (shareholders receive dividends). When companies lose money, dividends may not be paid. This negates case a).

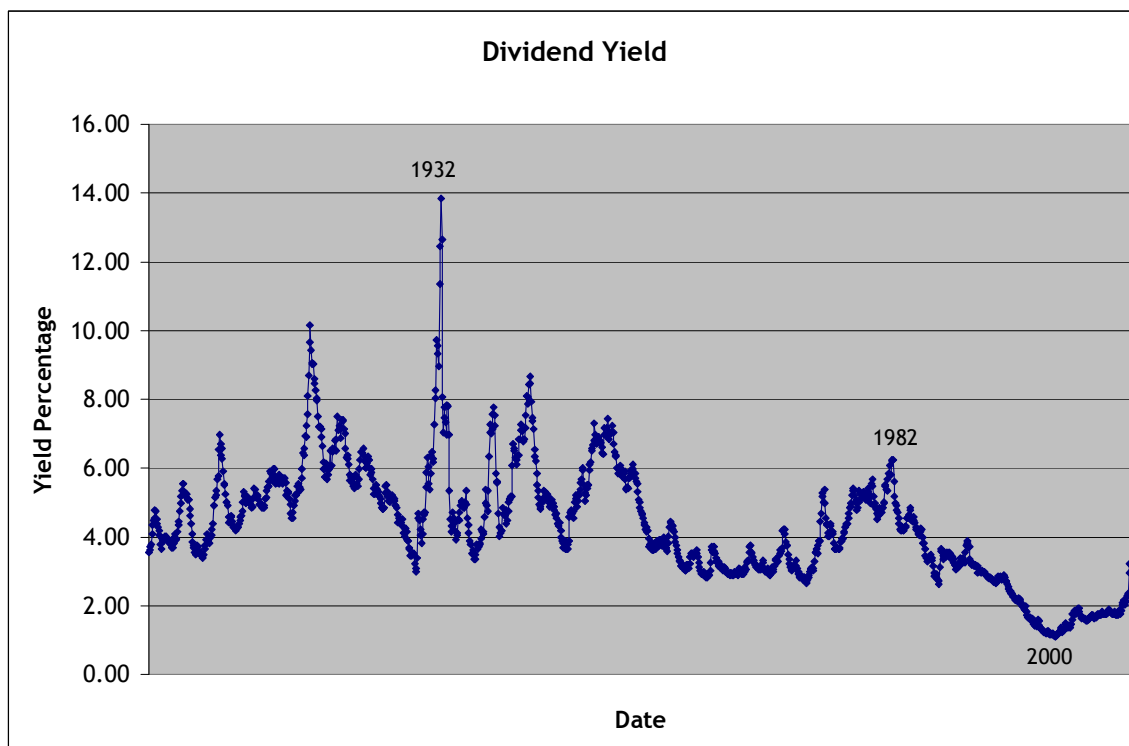
**Case b)**

This case is more plausible since dividends are not likely to increase and could in fact fall.

The analysis considers the bottoms of 1974 and 1982. Our supposition is of a bear market of multi-generational dimensions. If so, the dividend yield of 1932 (14%) is a better target for a bear market bottom. Using a 14% dividend yield as a target implies a fall in stock prices by a more significant amount than we have seen.

On the basis of dividend yield, we are not close to a market bottom equivalent to 1974 or 1982. Moreover, we are quite distant from a bottom such as 1932.

Sum of Dividends / Sum of Stock Prices = Dividend Yield %  
 Dividend Yield % Less than 4 = CONFIDENCE  
 Dividend Yield % Above 7 = FEAR  
 Current Dividend Yield = 3.86%



*Data courtesy of Professor Robert Shiller*

## Price/Earnings (P/E) Ratio

For companies issuing stock, the Price/Earnings Ratio (P/E Ratio) is the price of the stock divided by their net income or earnings on a per share basis. The ratio is a financial metric designed to show how much investors are paying for each unit of earnings. A higher P/E ratio for a stock implies investors paying more for a unit of earnings and is considered more “expensive” than one with a lower ratio. Consider the P/E Ratio the number of years of earnings required to equal the price paid for the stock.

P/E Ratio = Stock Price / Earnings  
 Stock Price = \$100  
 Earnings Per Share = \$5  
 P/E Ratio = \$100/\$5 = 20

When looking at an entire market, like the S&P 500 index, the ratio of the index looks at the weighted average of all companies in the index. Those companies having a higher capitalization (stock price x shares issued) are given more weight in calculating the ratio.

The higher the P/E Ratio, the more confidence investors have in the market. Investors are willing to place less importance on the company’s earnings and more importance on the increase in the stock’s value. The all-time high in this ratio came in 2000 when the P/E Ratio nearly reached 45. Just before the stock market crash of 1929, the ratio was nearly 33. Parenthetically, the 45 ratio of 2000 was a harbinger of a stock market fall given how much it exceeded the ratio of 33 in 1929. The market bottom of 1932 exhibited a P/E ratio of 5.5. Our current P/E ratio is 15.

A ratio of 15 is nearly 3 times as high as the ratio of the market bottom of 1932. A value of 15 is arguably the AVERAGE of the last 130 years. A P/E Ratio of 15 is not reflective of a market bottom, indicating this market still has a long way to go downward. A stock market drop of 2/3 of its present value would usher a P/E Ratio of approximately 5 (roughly equal to the 1932 bottom). Nevertheless, for this ratio to be 5, the “E” portion of the ratio (earnings per share) would have to remain the same.

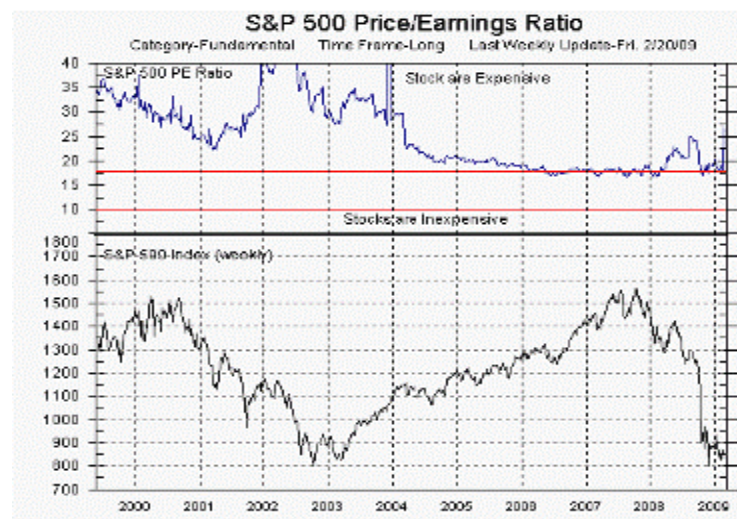
It is highly unlikely that company earnings (E) will maintain their current levels as we progress further into the deflation - they are likely to fall.

If earnings (E) fall, it will require a greater fall in the price (P) in order to reach the ratio of 5 experienced in 1932. The Sentinel’s forecast is for the eventual market bottom to have a P/E ratio less than or equal to the 1932 bottom. The implication is a minimum 2/3 drop in current stock market prices (P) to reach levels of the historic 1932 bottom.

Current P/E Ratio = 15

P/E Ratio at 1932 bottom = 5

Reduction in current (P) of ratio with a constant value of (E) required to match 1932 bottom = 2/3 (66%)



Data courtesy of Data View LLC

## Public Cash Holdings

Another measure of investor confidence is the amount of cash or cash equivalents the general public or professional investors hold. During a deflation, cash is king. If the public or professional investors fully recognized the deflationary condition there would be a universal stampede into cash. As noted in earlier the Stock Investment Psychology description, the market's collective limbic system has not fully kicked into gear. The fear component has not materialized fully.

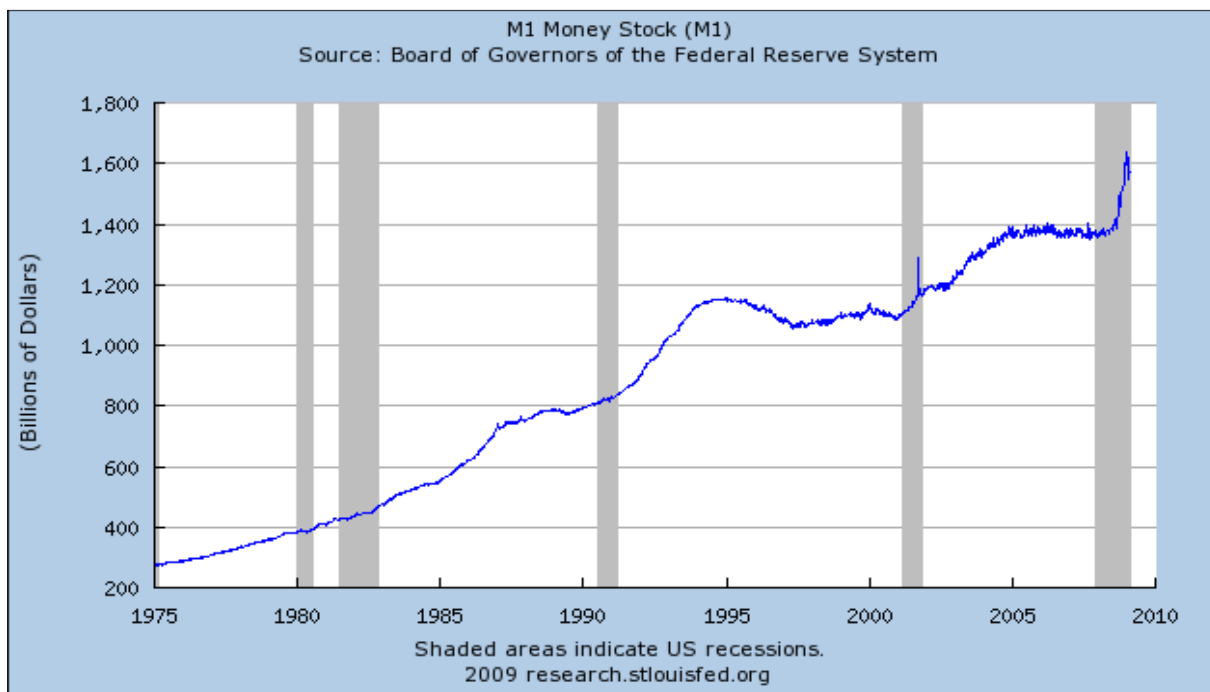
There are a couple of measures indicating public cash holding:

- a) Money stock (M2) as measured by the Federal Reserve System
- b) Cash and equivalents held in mutual fund accounts

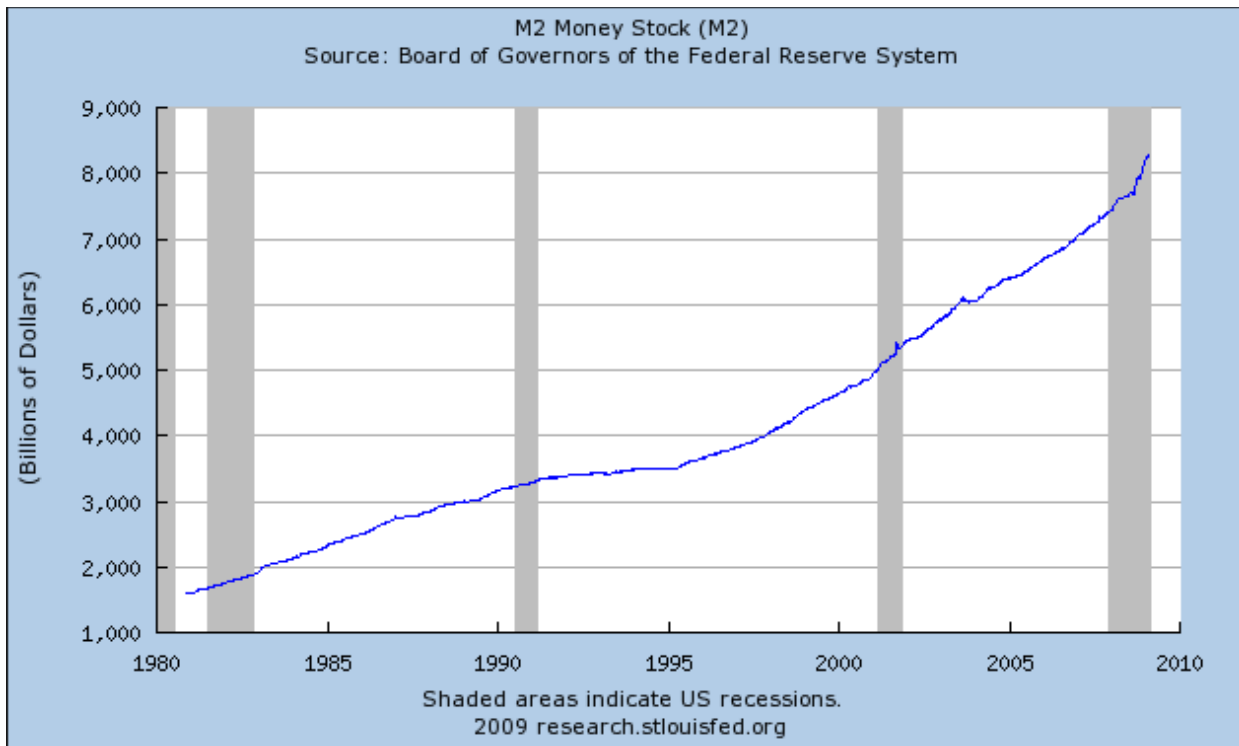
The Federal Reserve Bank provides various statistical measures of the money supply. One such measure is M2.

M2 = M1 plus savings deposits, certificate of deposits less than \$100k, individual money market accounts.  
M1 = Currency in circulation, checking deposits, traveler checks

Together, M1 and M2 represent fairly liquid measures of cash. Recent increases in these money statistics provide an illustration of the public beginning to recognize deflationary characteristics in the economy. A dramatic view of this recognition appears in the M1 chart provided. Notice how steeply the curve rises in late 2008 and early 2009. The chart manifests significant increases in currency, checking deposits and traveler checks over a relatively short period. This is a reflection of a lack of confidence in the market since individuals are inclined to hold more cash.



Likewise, the chart of M2 shows a similar steep increase over the course of the last few months. The chart manifests the increases in M1 (since M1 is a part of M2) and increases in savings deposits, certificate of deposits (CDs) and individual money market accounts. The public is beginning to shift their investments away from stock and other markets and into safer cash alternatives. Stock market confidence is eroding as these charts indicate.



Yet despite the recent increase in cash holdings by the general public, stock mutual fund managers continue to hold very light cash positions. Stock mutual funds, by their nature, have a greater percentage of their investments in stocks than cash or cash equivalents. During times of less confidence, it is prudent for stock mutual fund managers to lighten their stock investments in favor of cash investments. The Investment Company Institute provides figures on cash holdings by stock mutual funds. For the stock market lows of 1974 and 1982 cash holdings by stock mutual funds were in the neighborhood of 12%. The current figure is approximately 5%. This is very near a historical low. The historical low occurred in the year 2000 which we positioned as an important stock market top. Despite sharp decreases in the stock market, the professional mutual fund managers have cash amounts comparable to the stock market top of 2000!

Thus, if a low cash percentage is evident near tops, we are closer to a stock market top than a bottom. As these fund managers lose more confidence in the market, their cash holdings will increase. Their cash holdings are presently so low that these managers can pull a great deal of money from the stock market. The removal of invested stock market funds will depress the market and lower prices.

## Summary

This supplement presents a case for a bear market of multi-generational dimensions. The extent of the bear market cannot be understated. As a multi-generational bear market, it will plumb depths that have been witnessed by few, if any, alive today.

The saeculum and generational model presented an outline, at a high level, of the confluence of two important time cycles in defining the end of the bull market and a stock market in “old age”. The model appears in future issues of *The Sentinel* as we weave social and political happenings into our analysis.

Stock investment psychology continues to exhibit overall signs of at least some confidence. The field of Neurofinance introduces a pattern of investor behavior. The brain’s limbic system governs emotions and even though the public does not see themselves as emotional with their investment decisions, scientific research suggests otherwise. The present emotion appears to be the continuation of the buy and hold script followed for many years. Once this emotion changes, stocks will fall further and perhaps more dramatically.

Four relatively common statistical measures (Put/Call Ratio, Dividend Yield, P/E Ratio, and Cash Holdings) provided a framework comparing the present market to bear market bottoms. None of the measures conveyed the sense that the present market is anywhere near a bottom.

The progression to a final bear market bottom will not be a straight move down. Bear markets often exhibit very strong rallies. Since the stock market top of October of 2007 some very strong rallies have occurred. October of 2008 saw a rally in the S&P 500 moving 26% from high to low over a period of 3 days! Psychologically, the rallies serve to create final positive sentiments on the path to eventual oblivion. Rallies will succeed in fooling investors by presenting mere interruptions to the eventual outcome.

*The Sentinel*