

HFG Trust White Paper Series

■ Tapering or Tampering

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In mid June Federal Reserve Chairman Ben Bernanke signaled to the markets that the Federal Reserve (Fed) would consider tapering bond purchases sooner rather than later. Originally, the markets believed that bond purchasing by the Fed (known as Quantitative Easing-QE) would continue into 2014 uninterrupted. (The objective of QE is to reduce interest rates by reducing the available supply of bonds that can be purchased by the private sector.) The Chairman was trying to alert the markets that as the economy improved the Fed would start withdrawing from purchasing bonds. Currently, the Fed has been purchasing up to \$80 billion of treasury securities and mortgages every month. To put this into perspective, over the last 12 months the U.S. Federal deficit is averaging about \$70-\$80 billion per month. In other words the Fed is soaking up a significant amount of the available investment grade securities. The Fed's purchasing is creating a huge distortion in the supply of bonds. This sent the bond and stock markets into a tizzy. In Chart I we see the Treasury Yield curve as of 7/12/13 (blue line) and the 6/12/13 (red line). Rates for maturities beyond 5 years increased by .25% in rapid fashion. In Chart II you can see how rates have changed over the last 12 months. Rates over the last year are up around 1% for maturities 5 years and beyond. Bond investors should know that there is an inverse relationship of interest rate and bond prices. As interest rates increase the price of bonds decline and vice versa. The percentage change in price is a function of the bonds maturity. Longer maturities have a greater price change. For example, a 10 year treasury will decline in value by 7-8% for every 1% increase in interest rates. While 30 year treasuries will decline by 15-20% for every 1% increase in rates. The month of June was a poor period for intermediate to long term bond holders. The last month is the primary reason that HFG's bond strategy has been to stay in the short to intermediate part of the curve. It is interesting to note in Chart III how the Dow Jones Industrial Average as a proxy for the stock market declined about 5% during this period before making a month end recovery. Chairman Bernanke calmed the stock market by taking back some of his initial comments about tapering. I think this illustrates how shallow the stock markets underpinnings are. The Fed can't keep QE going indefinitely. At some point in time it will need to reverse course and sell bonds into the market or it will run the risk of creating inflation. Once it reverses course it is almost certain rates will rise.

Chart I: Treasury Yield Curves | July 12, 2013

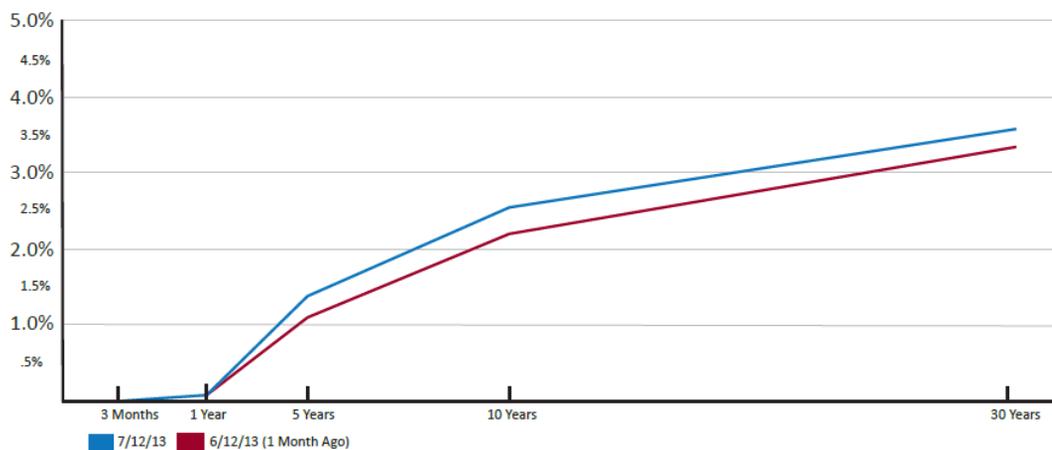


Chart II: Treasury Yield Curves | July 12, 2013

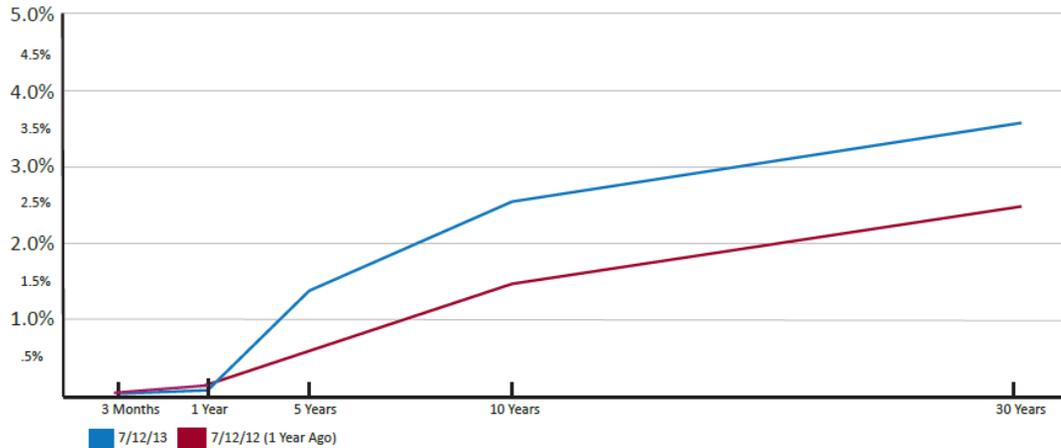


Chart III: 2nd Quarter 2013

■ S&P 500 Price % Change



Jul 31 2013, 4:47PM UTC. Powered by **YCHARTS**

Investment Climate Update

Price vs. Valuation

We define the investment climate not from an economic point of view but from a price or valuation perspective. We have emphasized that the current value investors pay for an asset has a significant correlation with returns over the next 7-10 years. We do not define value as the absolute price of the asset. Rather we define price in the form of a valuation metric. Furthermore we measure valuations through multiple metrics to be certain our findings are consistent. For example, if you were comparing two homes with home A priced at \$250,000 and home B priced at \$400,000 these prices would be called the absolute price for each home. However, we do not think this tells you much about the value of each home. We believe that you should look at the amount of square footage with all other factors being equal such as age, quality of construction and location. If home A had 2500 square feet we would define the price for home A as \$100 per foot. If home B had 3000 square feet we would define the price of this home to be ($\$400,000$ divided by 3,000 feet)=\$133 per foot. This is a very simplistic example but the point should be understood that the absolute price tells us very little about the value of an investment.

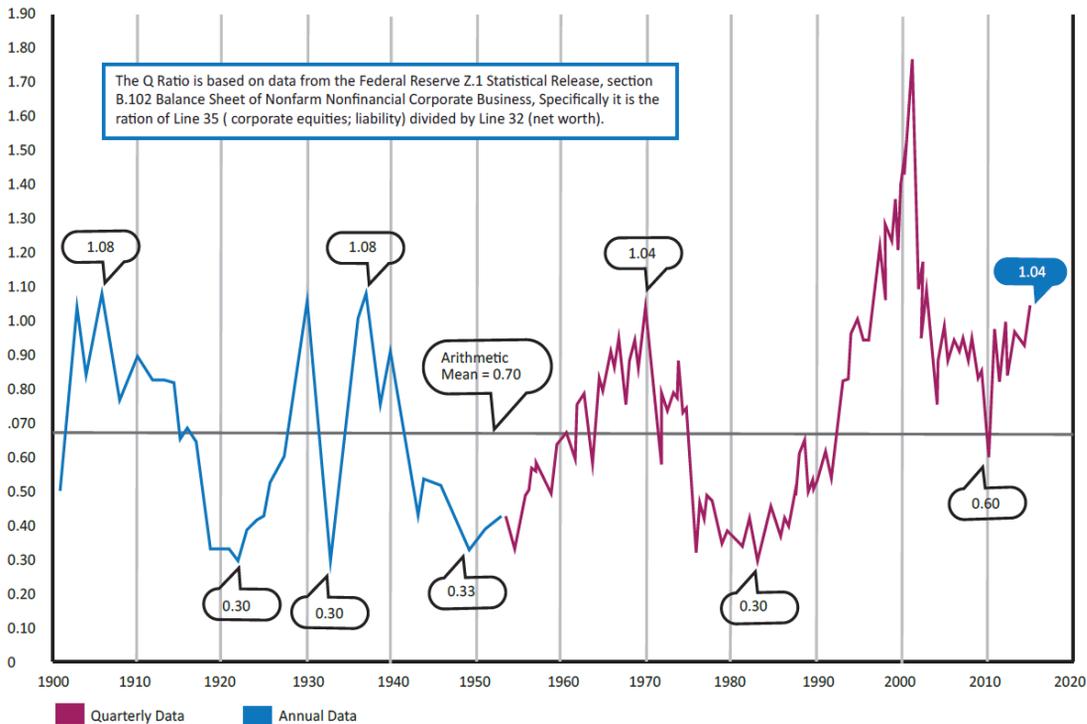
Stock Market Valuations

Stocks are nothing more than certificates of ownership of a business. Stocks have value if the business generates predictable profits. Businesses can be valued based upon book value (this is similar to the price per square foot analogy for real estate), earnings and sales. Generally, the common method is to examine the valuation of the investment based upon its earning capacity or its past earnings. We've written extensively about the fact that rich or high valuations are strongly associated with weak future returns; however, the correlation is only reliable over periods of time of 7-10 years or more. Current excessive valuations do not predict or accurately forecast short to intermediate term market returns. Our recent quarterly investment discussions have been on informing our clients how overvalued stocks are based upon the Shiller earnings ratio. In this paper we'll examine other valuation methods to see if they have the same conclusion.

Q-Ratio Valuation Method (Valuation from the Balance Sheet)

The Q-Ratio is a method of estimating the fair value of the stock market developed by Nobel Laureate James Tobin. The Q Ratio is the total price of the market divided by the replacement cost of all its companies. The government does the work of accumulating the data for the calculation. The numbers are supplied in the Federal Reserve Z.1 Flow of Funds Accounts of the United States, which is released quarterly. This process looks at the balance sheet to determine value. This is different than evaluating earnings to determine value. Earnings are reported on the income statement. In the chart below the data starts in 1900 and runs to this year. The first chart illustrates the ratio over the last 100 plus years. You can see that the average is about .70 with the high being 1.78 in 2000 (All time stock market high based upon P/E ratios) and a low of .30 on multiple occasions.

Q Ratio Since 1900



<http://advisorperspectives.com/dshort/updates/Q-Ratio-and-Market-Valuation.php>

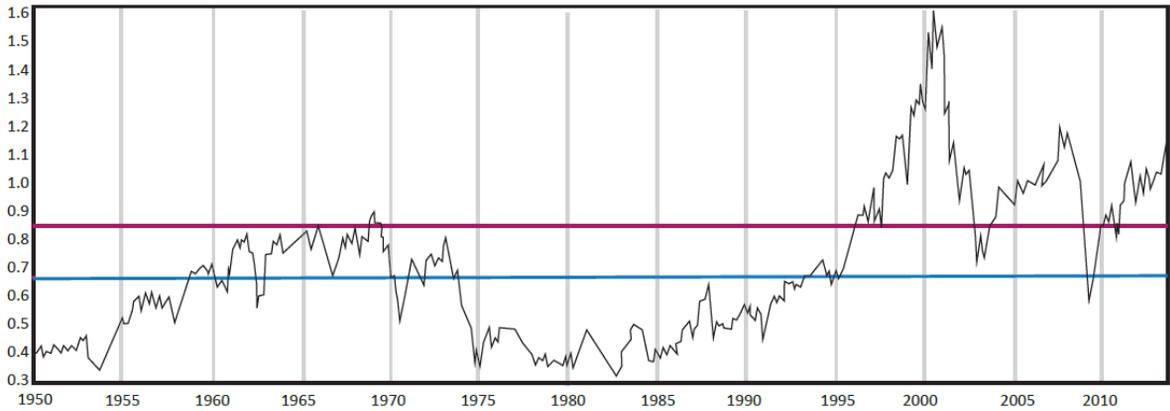
If we use the Q as our valuation metric we conclude that the stock market is 34% overvalued today. We get this from comparing the current ratio of 1.04 to the historical average of .70.

The logic of the Q value is that if the ratio is below average, corporations would prefer to purchase competitors because it would be cheaper than trying to produce additional inventory or purchase additional plant & equipment. Thus, if the Q ratio is low it is an indicator that stock prices could be supported by mergers and acquisitions. In the early 1980's and 90's we saw a significant number of companies being acquired and taken private when the Q-ratio was below average.

Stock Market Value to GDP (Price-to-Sales Ratio)

Another method of examining the value of stocks (businesses) from the income statement is the Price to Sales ratio. Since data for sales for the S&P 500 is spotty prior to 1995 an alternative method is to substitute GDP for sales. GDP is the measurement of economic activity whereas sales are the measurement of activity for a business. For our price metric we will use the aggregate value of common stocks in the US. This is called the Market Cap to GDP ratio. In 2001, Warren Buffett wrote an article in Fortune where he states, "The ratio has certain limitations in telling you what you need to know. Still, it is probably the best single measure of where valuations stand at any given moment."

Market Cap/ GDP | Median: 0.67 | Current 1.14



Source: Board of Governors of the Federal Reserve System and U.S. Bureau of Economic Analysis

The data in the chart above is from 1950-2013. It illustrates that the current ratio is 1.14 with the median at .67. This means the market would need to decline 41% to get back to the historical ratio of market cap to GDP.

Shiller P/E Ratio (10 year Cyclically Adjusted Price Earnings Ratio)

Now let's go back and review the Shiller P/E to see where it stands and where it is in comparison to its historical average. Since 1881 the average Shiller P/E ratio is 15.5 times earnings. Today it stands at 23. The S&P 500 would need to decline by 33% to get to its historical average.

Shiller S&P 500 Cyclically Adjusted Price-Earnings Ratio



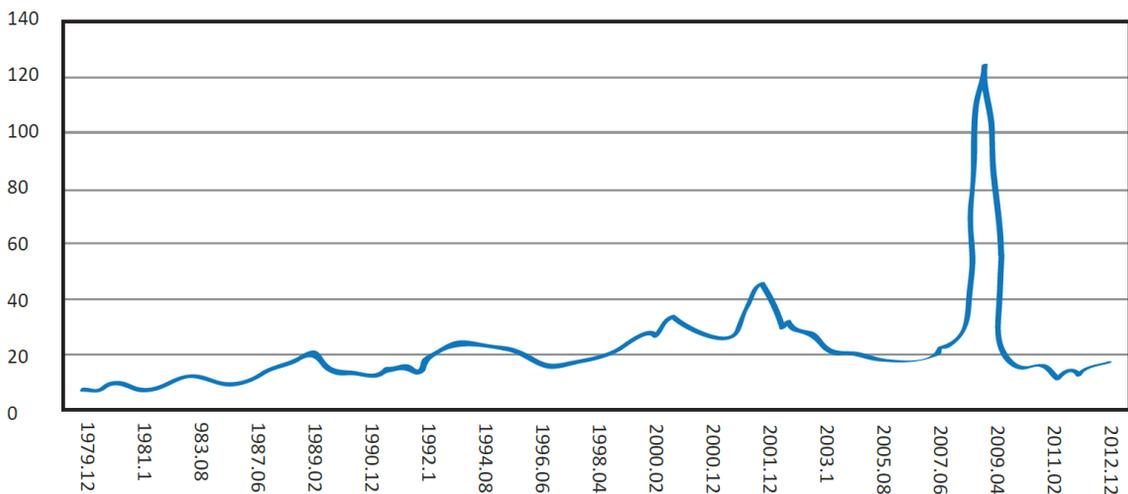
Source: Robert Shiller

Conventional Opinion

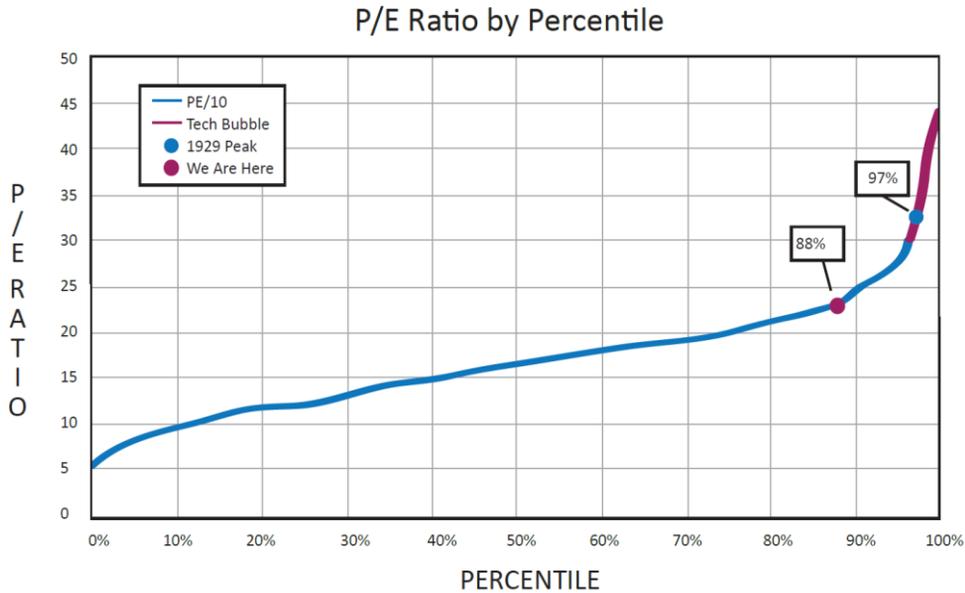
The method of using one year earnings to assess the market at a reasonable valuation seems to be Wall Street's preferred tool. But what credibility should we give this method? The problem with trailing or forward looking earnings is that it can give us inaccurate signals. Using the conventional method of one year earnings, the average P/E ratio since 1980 has been about 20. If we go back to the beginning of the data in 1870 it is 15. Let's look at a chart to illustrate the mixed messages a one year trailing earnings can communicate. As you examine the chart it is easy to see the outlier. In the 2008-09 economic recession earnings plunged further than the price of the S&P 500 index. Earnings went from \$80 to \$7 while the S&P 500 price index went from 1520 to 757. The P/E ratio hit 120+. If we believe that high P/E ratios are a poor time to invest this would have provided a signal to sell in March of 2009. To the contrary it was a good time to buy. The S&P 500 has gone from 757 to over 1600 as of 6/30/13. In this same time period while the trailing P/E ratio was 120 the Shiller 10 P/E ratio was 13 sending a message that prices were below average. Let's examine another example. In the fall of 2007 during the previous market peak it appeared the market was "reasonably" priced because the trailing and forward earnings gave the index a P/E ratio of 20 and 17 respectively. However, the Shiller P/E had increased to 27. The Shiller reading was sounding an alarm of over value. The S&P 500, as stated previously, declined to 757 in March 2009 from 1520 in the fall of 2007.

As these examples illustrate, the conventional P/E ratio can lag and be an inaccurate tool as a valuation indicator.

P/E Ratio Using Trailing Earnings



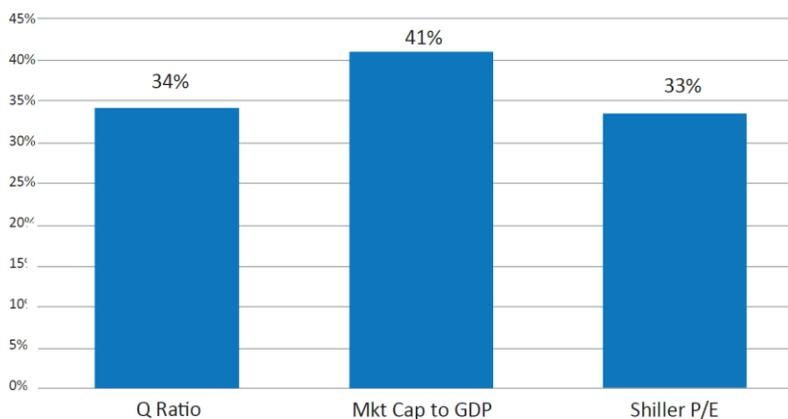
The next chart "P/E 10 Ratios by Percentile" is very telling. This chart sorts the P/E 10 (Shiller) from 1871 to 2013 from low to high and ranks them by percentile. The 1929 stock market crash appears to be no fluke. The valuation of the market in 1929 using the P/E 10 illustrates that it was in the 97% percentile. This means that over the 140 years of the history of the Shiller 10 P/E only 3% of the years had higher valuations. Note, that all of those valuations occurred in the 1998-2001 Tech Bubble. Today, we are at the 88% valuation rank. This means that only 12% of the past history has the market been higher. This is one of the primary reasons we remain cautious.



Summary

I direct you to the last chart. It compares the three different valuation methods we've discussed and illustrates the individual assessment of stock market overvaluation. Keep in mind that we do not believe there is any perfect indicator or valuation method that gives us direction of the market in the short run. However, we believe that correctly assessed markets can provide us a sense of what future returns are likely to be and protect us from being in overpriced markets. Crestmont Research calls this "Probable Outcomes". This is how HFG makes investment decisions. We believe that the price that you pay today has a strong correlation to your return in the next 7-10 years. We also believe that during periods of above average risk or high risk that capital preservation is critical.

Stock Market Overpriced by Method



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