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Are There Bubbles in Your Retirement Portfolio?

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Abstract
This article examines four previous stock bubbles: the South Sea Company bubble, the 1929 stock bubble, the 2000 Dot Com bubble, and the 2007 housing related stock bubble and compares today's stock market action to them. It appears the Shiller PE for the S&P 500 in May of 2017 is near the same elevated overbought bubble level as found in 2000 and 1929. The Market Capitalization to GDP of 127.7 percent has only been higher during the 2000 stock bubble. In addition, economist and market expert, John Hussman, analysis indicates that today the median stock in the US is the most overvalued in history. Is the stock market in the US in a valuation bubble? The statistics say yes but no one knows for sure. It may the time, however, for people with retirement accounts to consider if the stock market is the right place to have their money invested.

Key words: Financial bubbles, stock market, quantitative easing

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INTRODUCTION

With the stock market soaring, people planning their retirement may be wondering if we are in stock market bubble and if the stocks in their retirement portfolios are overpriced. John Hussman, an economist, fund owner, and analyst who actually predicted the crash in 2008 thinks that stocks right now are the most overvalued in history. This article examines previous stock bubbles and then compares the current market action to them.

BUBBLES

For a stock market bubble to happen investors have to be willing to suspend their disbelief and to ignore all the overbought signals that are normally flashing on along the way. History also shows that the larger the bubble than the greater the damage it will inflict when it finally burst. The following is a description of four stock market bubbles that have occurred throughout history.

1. The South Sea Company was established in 1711 and was promised a monopoly by the British government on trade with the Spanish colonies of South America and Mexico. The company received all rights to all trade in the South Seas from the British Government by assuming government debt of £10,000,000.00. By 1720 the directors of the company were able to convince the public that there a huge market in Mexico and South America for the sale of wool and fleece in exchange for jewels and gold. And the South Sea Company was able to grow its business thanks to a £70 million fund of credit that was granted by the King and Parliament for the purpose of commercial expansion. As the directors of the South Sea Company successfully marketed the company to the public citing all the riches in the South Seas, shares of the company surged more than eight-fold in 1720, from £128 in January to £1050 in June. Eventually the management team of the company realized that the value of their personal shares in no way reflected the actual value of the company or its sparse earnings. This prompted them to sell their stock in the summer of 1720 while the price was near all-time highs. The selling of shares by management along with the news of the poor economic fundamentals of the South Sea Company leaked out to the other shareholders and they reacted with panic selling, and eventually the stock became worthless. Then contagion followed and the overvalued stock of the Mississippi Company, a French company granted a monopoly for trade in the West Indies and North America, also crashed along with many other companies, causing a severe economic crisis.[1]
2. At the peak of the equity market bubble in 1929 the price to earnings ratio of publicly traded stocks was around 60, considerably higher than the historic average of 15 to 16. One reason for the overvalued stocks was margin buying. Investors could pay as little as 10 percent of the total value of the stocks at the time of buying compared to a 50 percent margin requirement today. Borrowers during that

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period often paid as much as 20 percent interest on the margin loans. All the borrowing fueled the stock market with cash that pushed prices higher. Between 1925 and 1929 the total value of the New York Stock Exchange increased from $27 billion to $87 billion. On September 4, 1929 the Dow Jones Industrial Average (DJIA) hit a high of 381.17 but reversed course and on October 29, 1929 there was a huge drop in the Dow of 11.5 percent. Eventually it made a low of 41.22 in July of 1932, a total drop of over 89 percent from the high.[2]

3. The Dot-Com Bubble of the 1990s was a massive stock bubble. The introduction of the Internet triggered a wave of speculation in high technology businesses. Many dot-com companies achieved multi-billion dollar valuations as soon as they went public during this period. The NASDAQ Composite, home to most of these technology companies, surged from a under a value of 500 at the beginning of 1990 to a peak of over 5,000 in March 2000.when the average price to earnings for Nasdaq companies was a sky-high 175. The index crashed shortly thereafter, plunging nearly 80 percent by October 2002 and the US fell into a recession.[3]

4. The US stock market hit a bubble top in 2007 and experienced a 17 month bear market, lasting from October 2007 to March 2009, during the financial crisis of 2007-2009. The DJIA peaked on October 9, 2007 with a closing price of 14,164.53. Then on September 29, 2008, the DJIA had a record breaking drop of 777.68 with a close at 10,365.45. The DJIA reached a market low of 6,443.27 on March 6, 2009, having lost over 54 percent from peak to bottom. The S&P 500 plunged 57 percent over the same period and the NASDAQ lost 54 percent during the bear market.[4]

The stock market bubble occurred at the same time as the housing bubble. Many think the overvaluation of housing and stocks was the result of government actions that began in 2001 as a reaction to the tech bubble bursting when the Federal Reserve reacted by printing money and slashing interest rates to try to combat an economic slowdown.

During the period from 2001 to 2005 much of the Federal Reserve's money expansion supplied funds for mortgages to individual families. This occurred because for one, interest rates were low and attracted borrowers. Second, there was an effort to encourage more families to own homes in the US so standards were lowered or eliminated on many mortgage loans that were purchased from banks by two quasi-government agencies, Freddie Mac and Fannie Mae. And, third, there was a growing market mortgage residential loans because investment banks were packaging the home loans into mortgage backed securities (MBS) and selling them to the public. The rating agencies also assisted by giving nearly all MBS ratings of AAA even though many of them contained loans of poor quality.

The packaging and selling of mortgages gave rise to an instrument called a credit default swaps. Investment banking firms wrote credit default swaps for 20 times the face value of the MBS in circulation which obligated them to pay off the face value of the bonds if they defaulted. When defaults on loans exploded, several financial institutions were put in a position of having to pay off on the billions of dollars of the swaps they had written. The stock market reacted to the housing market fiasco by crashing by over 50 percent. The equity markets may have fallen much further except the government stepped in and bailed out a number of failing institutions and the Federal Reserve supplied an abundance of liquidity through its Quantitative Easing Program to cushion the market's descent.

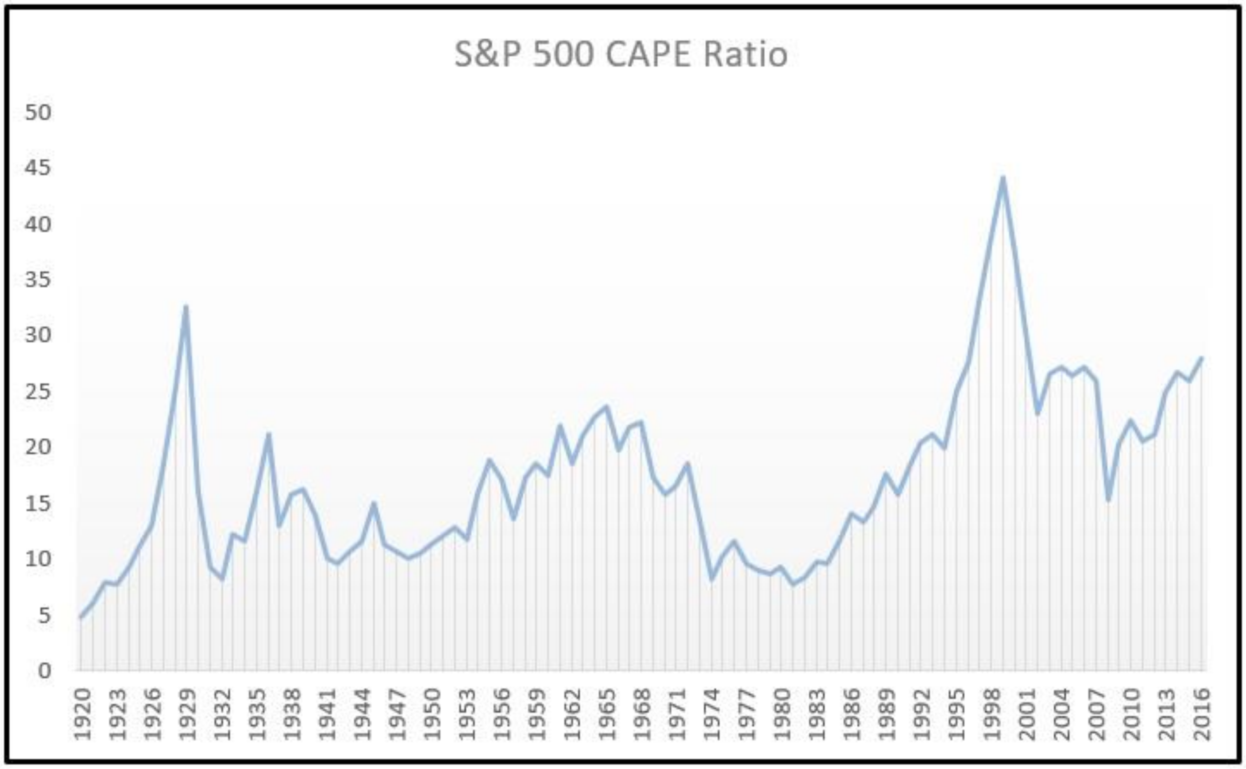
THE STOCK MARKET TODAY

According to several measures, today's stock market may be at bubble levels similar to the stock bubbles discussed previously. This bubble has most likely been induced by the very low interest rates and the Quantitative Easing program sponsored by the Federal Reserve from 2008-2014 and extended by the investing public's optimism over election of Donald Trump as President. The Shiller PE, Market Capitalization to GDP and a measure used by economist John Hussman all point to a stock bubble.

SHILLER PE RATIO

Economics Professor Robert Shiller of Yale University developed a stock price per share to earnings per share ratio (called the Shiller PE) to measure stock market valuation. The Schiller PE which is a Cyclically Adjusted PE Ratio, and also called (CAPE Ratio) calculates earnings by using a 10 year average of earnings adjusted for inflation. The average Shiller PE ratio for stocks over time is 16.6. Stocks are generally considered in bubble territory when the ratio is over 20-25 and undervalued when below 10 (Figure 1). The Shiller PE has moved under 10 after reaching bubble territory each time in the past before starting a new bull market. The ratio has been over 31 in 2017 but has yet to return to undervalued territory since the 2000 high of 44. According to the Shiller PE ratio the stock market is very overvalued.[5]

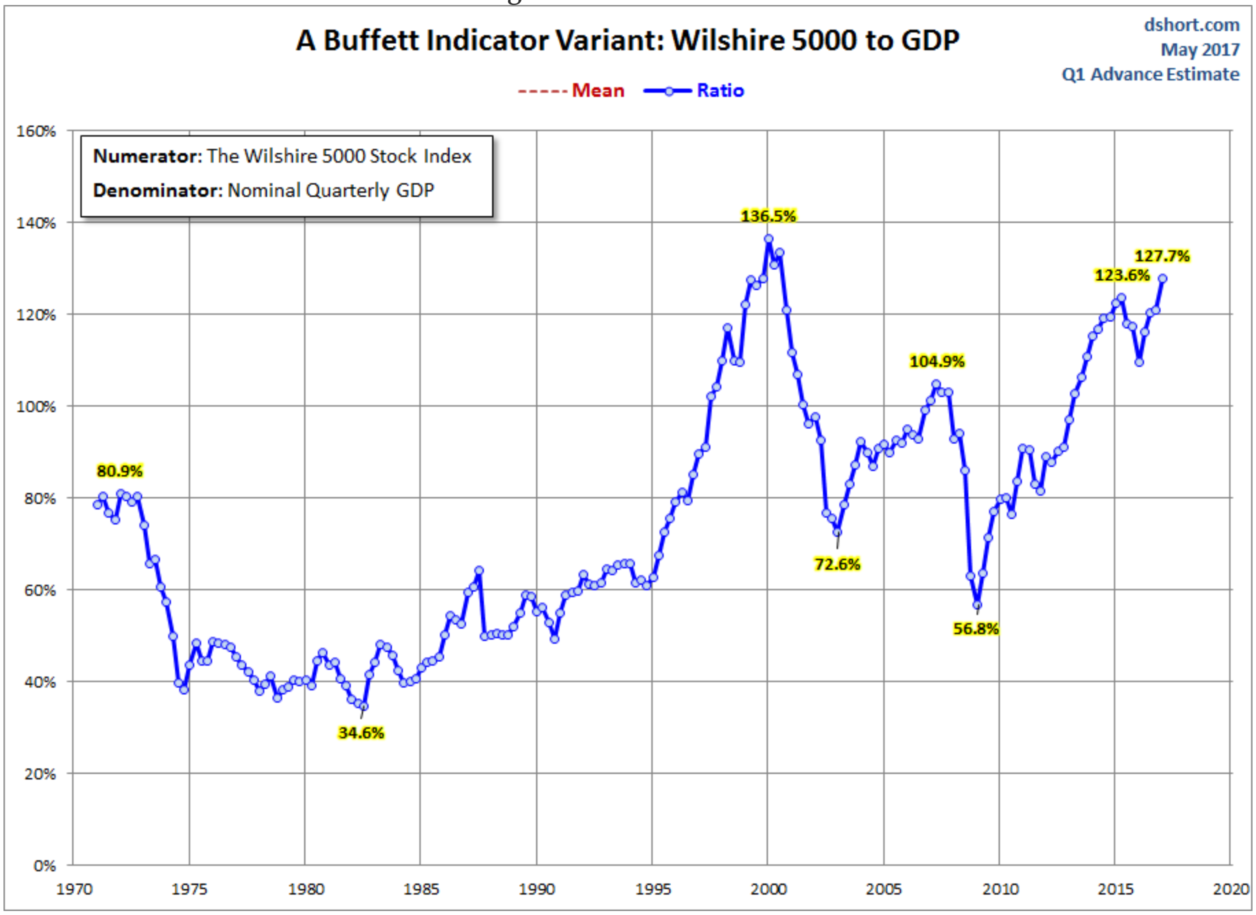
Figure 1



Total Market Capitalization to GDP

Market Capitalization to GDP is a long-term valuation indicator that has become popular in recent year due to Warren Buffett. Buffett thinks it is the best single measure of stock market valuation. Market Capitalization in the formula can be measured using the value of the Wilshire 5000 Index of publicly traded stocks. GDP stands for Gross Domestic Product which is the total market value of goods and services produced within the borders of the US.[6]

Figure 2



As of May 2017, the Total Market Index to GDP is about **127.7%.** Table 1 divides market capitalization to GDP ratio into five zones:

Table 1

Ratio = Total Market Cap / GDP	Valuation
Ratio < 50%	Significantly Undervalued
50% < Ratio < 75%	Modestly Undervalued
75% < Ratio < 90%	Fair Valued
90% < Ratio < 115%	Modestly Overvalued
Ratio > 115%	Significantly Overvalued
Where are we today (**05/02/2017**)?	Ratio = **127.7%**, **Significantly Overvalued**

The current reading of 127.7 percent (Figure 2) is only surpassed by the high made in 2000 of 136.5 percent and is in a significantly overvalued area. The US stock market is positioned at current prices, according to this measure, to yield an average annualized return of -1 percent, for many years to come. This includes the returns from the dividends, currently yielding at 1.9%.

HUSSMAN

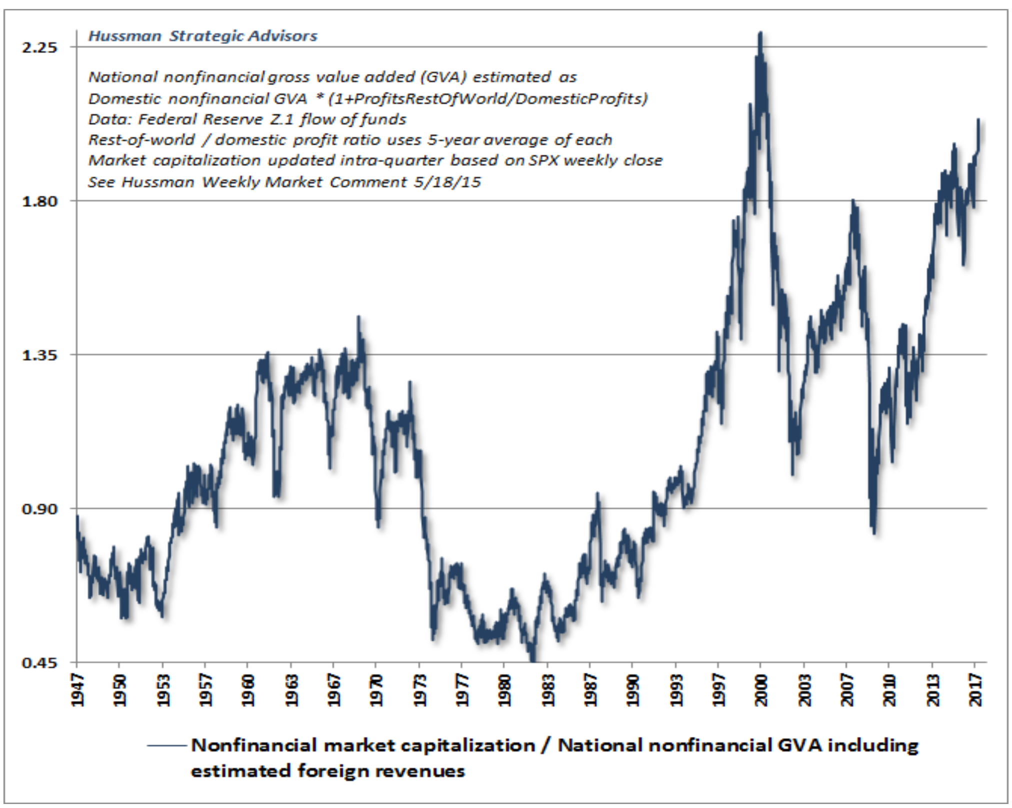
In March of 2017 John Hussman wrote, "The valuation of the median component of the S&P 500 is already *far* beyond the median valuations observed at the peaks of 2000, 2007 and prior market cycles, while our estimate for 10-12 year returns on a conventional 60/30/10 mix of stocks, bonds, and T-bills fell to a record low last week, making this the most broadly overvalued moment in market history."[7]

Hussman believes that every financial bubble rests on the presumption that there is still some greater fool available to purchase overvalued assets, regardless of how overvalued they might become. According to Hussman the US Federal Reserve along with other central banks around the world have intentionally extended this speculation by promising to be those greater fools. He thinks a collapse in the stock market is inevitable as the progression of the economic cycle takes its course, and investors move from risk seeking to risk averse behavior.

A key measure Hussman uses in his analysis of the stock market is nonfinancial Market Capitalization to nonfinancial Gross Value Added (GVA). GVA is essentially GDP plus sales taxes, minus subsidies. He makes a further adjustment in the numerator so it appears as GVA*(1+ rest of world profits/domestic profits) to account for profits made abroad by US companies.[8]

It is similar to the Market Capitalization to GDP ratio but his analysis uncovered that it forecasts future return of the stock market more accurately. This measure has a 93 percent correlation with subsequent S&P 500 market returns over a 12 year horizon (Figure 3), significantly exceeding that of the Federal Reserve's Model, price/forward operating earnings, the Shiller P/E, and Tobin's Q. According to the Hussman measure, conventional investment portfolios (a mix of 60 percent stocks, 30 percent Treasury bonds, and 10 percent Treasury bills) over the coming 10-12 year period total returns will average less than 1 percent annually with stock market at this level and the S&P 500 should plunge 60 percent from its high before rebounding.

Figure 3



CONCLUSION

This article examines four previous stock bubbles: the South Sea Company bubble, the 1929 stock bubble, the 2000 Dot Com, bubble, the South Sea bubble, and the 2007 housing related stock bubble and find the stock market today has a similar overvaluation as these prior bubbles. For instance, the Shiller PE for the S&P 500 in May of 2017 is near the same elevated overbought bubble level as found in 2000 and 1929. And the Market Capitalization to GDP of 127.7 percent has only been higher during the 2000 stock bubble. In addition, economist and market expert, John Hussman, analysis indicates that today the median stock in the US is the most overvalued in history. His stock market valuation measure of Nonfinancial Market Capitalization to GVA predicts an average return on a portfolio consisting of 60 percent stock, 30 percent Treasury Bonds and 10 percent Treasury Bills will be less than one percent annually for the next 10-12 years. Is the stock market in the US in a valuation bubble? The statistics say yes but no one knows for sure. It may be time, however, for people with retirement accounts to consider if the stock market is a place to have their money invested.

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