

OBSERVATIONS



January 17, 2017

THE GEOMETRICAL MAGIC OF THE STOCK MARKET

"We have two classes of forecasters: Those who don't know – and those who don't know they don't know."
– John Kenneth Galbraith

"I never think of the future – it comes soon enough."
– Albert Einstein

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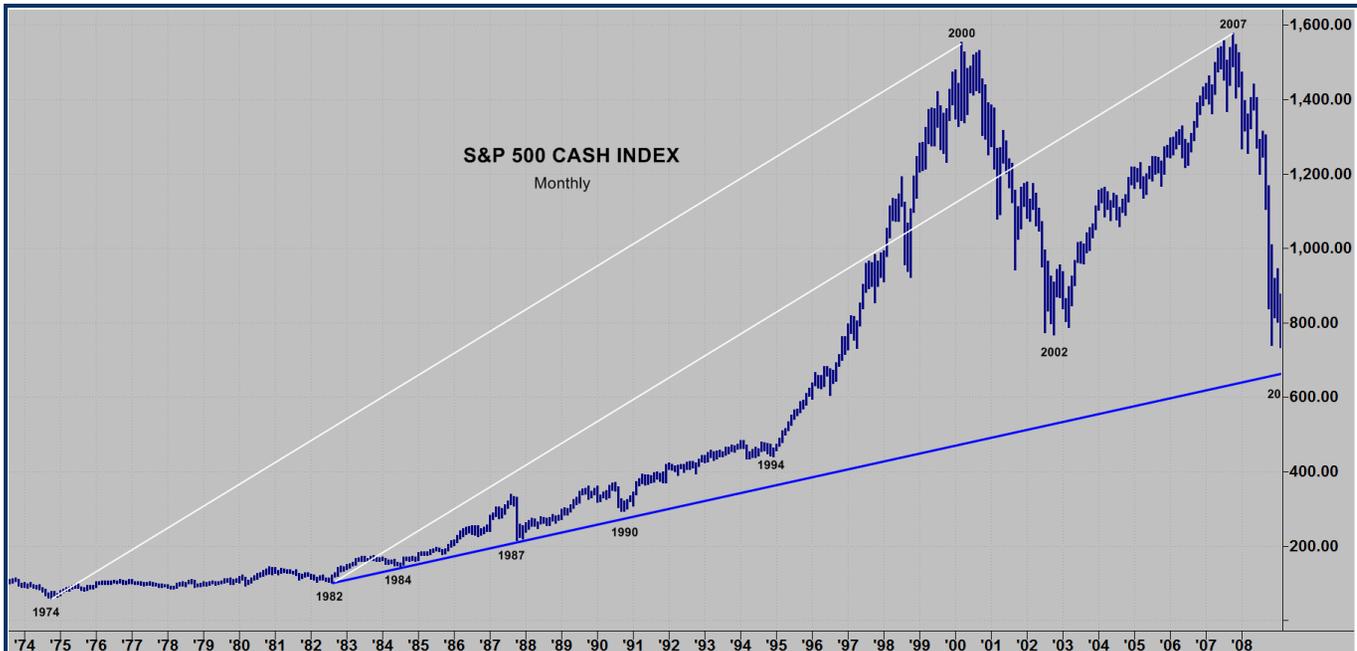
I chose the quotes on the cover page because of the simple brilliance of the comments. The comment by Galbraith simply states that no one knows the future. It is as simple as that. Prognostication is not a perfect game – neither is life ... but most of us still want to keep living. Einstein is one of my all-time favorites when it comes to quotes. He seems to capture the brilliance, but takes it to another level ... and, remarkably, making things simpler in the process. I've always maintained that true brilliance takes something difficult and challenging and communicates it in such a way as to make it simple. "I never think of the future – it comes soon enough" says it all.

There is nothing more difficult in stock market prognostication than to accurately call a market top. Even accurately anticipating a market top is a challenge that is failed by the vast majority. Market tops always come as a surprise. This fact, however, doesn't remove the reality that the 'market gods' provide serious clues. These clues are generally searched for with fundamental and technical analysis. Others utilize such things as astrology, mathematics, sunspots, psychology, etc. Strong opinions exist on each of the methodologies mentioned, but there is a simple and true answer. None of these methodologies will ever provide the answer on its own ... it is the student and practitioner of these methods who provides their validity i.e. it is not about 'what' you do, but 'how' you do what you do that determines value. Since we are in the seasonal time of the NFL Playoffs it brings to mind something that used to be said about quarterbacks. The great analysts of old said "Quarterbacks can run or pass, but they can't do both." This assumption was backed by a list of great running QBs who didn't pass well and another list of great passing QBs who couldn't run. Some years later, quarterbacks emerged who seemingly weren't smart enough to understand that they couldn't do both. Hence, we no longer hear that statement that used to define brilliance in QB analysts.

Like a QB who can run and pass, a good market prognosticator is just dumb enough to not be limited by knowing what he can't do. I believe this is true in virtually every field of endeavor. It is important to not be limited by accepting what others say you can't do ... simply because, in most cases, they are just saying that because they know it is something they can't do. Once you disallow believing what you can't do, the next step is to voraciously seek help. This simply means to do your research and continuously look for answers. Never assume that something doesn't work because it doesn't appear to be related to whatever you happen to be analyzing i.e. if, for example, there seems to be a correlation with sunspots, then look into it. Analysis in any area requires an open mind. By the way, regarding the market gods giving clues ... those clues are always more obvious after the fact i.e. after the market tops. With that, let's delve into a little geometric magic. GJ

Many years ago, I discovered something that amazed me. I happened to be looking at market valuation and comparing the low points with the high points. The most significant points were 1974, 1982 and 2000. Simply put, 1974 and 1982 were the two most recent times the stock market was at its most attractive valuations (low P/E ratios; high dividend yields; and selling at or near book value) and 2000 was the time when the market was at its most overvalued level. Not surprisingly, 1974 and 1982 were historic stock market lows and 2000 was an equally historic stock market high. Focusing on these three dates, I began to do some analysis on the charts and I came up with something quite interesting on my monthly S&P 500 Cash Index chart.

I remembered seeing that historic tops and bottoms over longer periods of time were frequently very helpful in defining future turning points. This observation became evident early on when I was gifted the book, *How Charts Can Help You in the Stock Market* by William L. Jiler. I used that book like a text book with numerous notes written in the margins, etc. I was fascinated how a properly drawn trend line could stop a crashing market seemingly "in mid air" ... or limit the advance of a strong bull market. I actually started drawing trend lines in various chart books because we didn't have the ease of simply pulling up a chart of anything we wanted on a computer – we didn't have computers then. In fact, we had to maintain and create our own charts with daily input. I believe that type of "forced focus" was very helpful in discovering how to properly draw trend lines. Those tedious hours of making charts with pencils and rulers from daily data was the process that created a lot of good technicians. It also gave us a serious appreciation for computers. Here is what I noticed using the three dates I mentioned:



My focus in this chart is on the three historic dates of 1974 and 1982 (the valuation low dates) and 2000 (the valuation high date). I connected the 1974 valuation low date with 2000 – the valuation high date. I then drew in a parallel line from the 1982 valuation low date.

I was amazed to see that this line did an incredible job of predicting the next historic market top in 2007. It hit the initial top in July 2007 and then also defined the ultimate high in October of 2007.

My initial assumption was that the next meaningful historic low after the 1982 low might be a logical place to begin another line that is parallel to the lines from the 1974 and 1982 lows. This proved not to be the case for a number of reasons.

I was so impressed with the exact geometry of the above two lines that I wanted to see if there was anything more to it than just coincidence. Decades ago, I was impressed with the red trend line you see in the chart below of the Dow Jones Industrials. The 1987 crash was in 'free fall' mode and the market stopped its decline in mid-air at 1616. There seemed to be no apparent reason ... until the trend line you see below was drawn in. That same line is in the chart above for the S&P.

Getting back to the long term lines in the chart above, I noticed that the 1974 and 1982 points were significant parts of the 16 year consolidation (1966 to 1982) that defined the 'transition period' from the first 40 year cycle of debt buildup after the Great Depression. 1974 was the major low and 1982 was the breakout point above the 1000 level resistance on the DJIA. Since both 1974 and 1982 were part of the transition period that moved us from one cycle of debt buildup into the next cycle of debt buildup, I thought that any new lines would now have to be in the current cycle.

Armed with new logic, I defined the next two major historic cycle turning points as 1987 and 2000. 1987 was the historic 'flash crash' low and 2000 was the all-time valuation high. With this realization, I drew in my new defining trend line from the 1987 low to the 2000 high. I immediately noticed that this was a





much more aggressively sloped trend line. This actually made a great deal of sense because the first 40 year period of debt buildup is slow coming out of the depression. The second 40 year period of debt buildup begins with a relatively high level of debt and then sees debt grow parabolically over the ensuing decades. As such, a trend line of significantly greater slope makes perfect sense. Let's fill in the lines on the first chart and see what it shows us: The initial white line takes the 1974 low to the 2000 high and parallels it off the 1982 low to produce the predictive top line that ultimately defined the 2007 market top. The new (red) line begins at the 1987 crash low (the next historic low in the progression after 1982) and connects it to the 2000 top (the next historic turning point). This also defined the longest bull market in US stock market history. Now we take that line and parallel it off the 2002 low (the first historic low following the dot.com collapse). This line was first reached in November 2014. It was then penetrated five times over the following six months. However, it only closed above the line one time and only by the smallest of margins i.e. it was virtually on the line. Therefore, this line confined and rejected the advances of late 2014 and 2015. I believe this line will

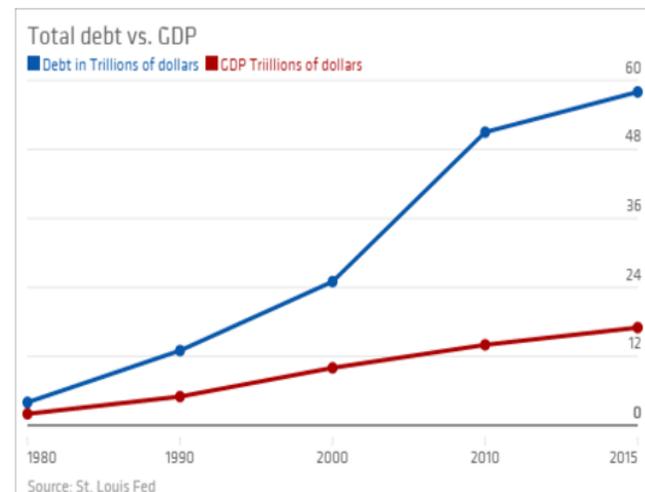
successfully confine any further advance in the current bull market and believe it will function in the same manner as the white line from the 1982 low to the 2007 high.

Note the solid blue line from 1982 to the 2009 low. This line was paralleled off the 2000 high, but did not stop the advance of the current bull market. When this occurs, you look for a more aggressive trend line. I initially used the 1990 low through the 1994 low as that 'more aggressive' line, but it also failed to confine the advance. The most aggressive line remaining is the 1994 low through the orthodox low, the July low, of 2002. This line is paralleled off the 2000 high and comes in on the chart currently at roughly the 2290 level for this month. The red line is roughly at the 2310 level for the current month.

COMMENTS

Various trend lines have emerged over the past few years for the purpose of confining the current bull market. My choice is the line defined in this communication. If it is violated, then we will have to re-evaluate. The concern at this point is that we are in the second longest bull market in US stock market history. The long term historic expectation is that we are due for the end of a long wave cycle (80+ years) which should result in the largest correction within that 80+ year period. As they say, KNOW YOUR RISK. On an economic basis, the expectation is for a depression, not a recession. This is the result of two back-to-back 40 year periods (cycles) of debt buildup. The first 40 year cycle slowly builds up debt emerging from The Great Depression. This is a slow process because people are not motivated to take on debt coming out of a depression. At the end of the first 40 year cycle, the depression is forgotten and new and younger people are in the work force who have no memory of the depression – they are easily motivated to employ debt. The second 40 year period of debt buildup is strong and ends in a parabolic explosion of debt. This debt explosion is motivated in the beginning of the second 40 year period by the runaway inflation of the late 1970s. Investors were motivated to take on debt as a way of bolstering profits in their stock and real estate investments. The financial news media promoted this action by pointing out that the government was actually your “partner” in these investments as you could write off the interest on the debt ... and interest rates were high at that time.

This initially incentivized debt and that incentive and mentality has remained, to one degree or another, throughout this cycle. The analysts who have a difficult time finding a true growth industry during the current bull market have simply looked in the wrong place. The preeminent growth industry is debt. Don't waste your time looking at real estate, technology or manufacturing ... again, the real growth industry is debt. To comprehend this growth, all you have to do is go back to 1980



when there was comparatively little debt i.e. about \$4.3 trillion – which was about 1.5 times the size of gross GDP. Currently, the total debt figure is \$66.7 trillion, up 15.5 times from 1980. US GDP is currently \$18.7 trillion which is up about 1.5 times from 1980. This shows that over the same period of time, production (GDP) was up only 1/10th of the rate that debt grew – or debt grew 10 times the rate of GDP's growth since 1980. While the chart to the left shows the growth of debt vs. GDP through May 2015, the current numbers show that debt is 3.56 times GDP. Again, the alarming part is that debt has grown 10 times faster than GDP over the period since 1980. This, obviously, confirms the “parabolic” growth rate of debt in the second 40 year cycle ... and should clearly explain why the expectation (and risk) is for a depression and not a recession. Any questions? GJ

