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A QUICK MARKET VALUATION

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1.0 SUMMARY

The economy is likely in the later stages of the market cycle. The longer the current bull run goes on for the further we advance towards a recession. Despite the long history of economic cycles of expansion and contraction some still like to claim that “this time it’s different. Today there are multiple recession indicators with impressive track records that are starting to flash red. It’s important to note that “History doesn’t repeat itself but it often rhymes”. There is no way of accurately predicting what will trigger the next recession, although there is one thing that seems to be behind almost every recession in history.

2.0 THE MARKET CYCLE

All financial markets go through economic cycles of expansion and contraction most commonly simplified into bear and bull markets. The current bull run which started on March 9, 2009 following the housing crash of 2007/8 is now 11 years and 2 months old, the longest period of economic expansion in history. With the last economic cycle ending in the worst recession since the Great Depression, where will the current market go from here?



Figure 1: S&P 500 index historical chart with bear markets highlighted in grey.

2.1 A Short History

Throughout the history of financial markets there have been recurrent episodes of speculation followed by a burst of the bubble. The first of these major financial bubbles took place in the 17th century and has come to be known as the Tulipomania. In the late 1500's tulip bulbs of the lily family *Liliaceae* were first brought to western Europe from the Mediterranean. The bulbs came to be known as a status symbol and were not easily cultivated, pushing their prices to enormous heights. By the mid-1630's ownership of these rare and beautiful tulips had become a craze, and the increase in prices seemed to have no limit. People converted their property and possessions into cash to be able to purchase even a single bulb and many individuals became suddenly rich. Bulbs would change hands several times at steadily increasing and wonderfully rewarding prices while still unseen in the ground. During the peak of the speculative bubble high end bulbs were worth as much as 4000 florins, an unimaginable \$50,000 to \$100,000 today [1]. However, in 1637 the bubble burst. Tulip bulb prices tumbled downward and a panic to sell soon engulfed the entire market. In a matter of months, the bulbs were practically worthless. Those who had used leverage to purchase bulbs were suddenly bankrupt and in poverty and those who had contracted to buy at the enormously inflated prices defaulted en masse. The collapse of the tulip prices and the resulting impoverishment had a chilling effect on economic life in the years that followed, in modern terminology, an appreciable depression.

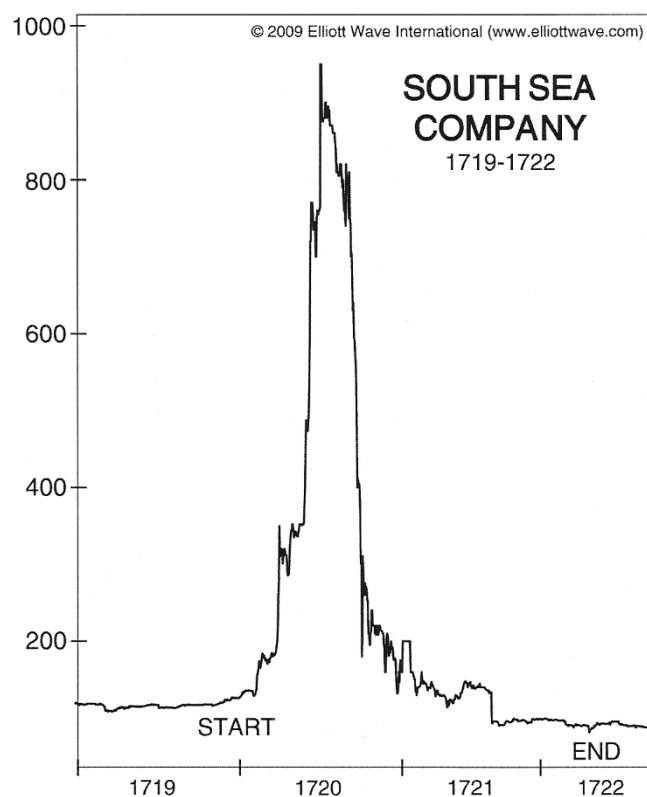


Figure 2: The South Sea Company stock price from 1719 to 1722.

Other notable episodes of speculation throughout financial history include: The **South Sea Company**; who's stock rose from €128.5 in January, 1720 to over €1000 in August on speculation of immense metallic wealth in South America. Investors were quick to overlook the fact that South America was then controlled by the Spanish, this being a minor problem as the South Sea Company was backed by the English government. By December of the same year the stock had collapsed to €124 [2]. The **British Railway Mania**; which took place during the 1840's in the height of the industrial revolution. Fueled by low interest rates and an increasing demand for transportation of passengers and cargo by train, railway stocks began rise. Speculation and the lure of an easy profit quickly drove railway valuations sky high, companies even offered stock for only a 10% down payment [3]. In 1846 the bubble was popped by interest rate hikes and the realization



Figure 4: Railway share prices in Britain from 1830 to 1850.

after the Federal Reserve hiked interest rates by a percentage point, the market opened down 11% followed by another 13% and 12% on the following Monday and Tuesday [5]. What followed was a four in a half year long economic downturn known as the Great Depression.

that railway companies had overbuilt thousands of kilometers of track. The **Wall Street Crash of 1929**; during the “Roaring Twenties” after world war one the US economy enjoyed rapid expansion, with the Dow Jones increasing six-fold in just eight years. This wild speculation; egged on by easy credit, a booming automobile industry, and low unemployment led the Dow Jones to a peak of \$381 on September, 3 1929. Investors purchased stock with reckless overconfidence and with up to 10 times leverage, they acted "as if the price of securities would infinitely advance." as quoted by U.S. Treasury Secretary Andrew Mellon [4]. On October 24, 1929 two weeks



Figure 3: Bankrupt investor Walter Thornton trying to sell his luxury roadster for \$100 cash on the streets of New York City following the 1929 stock market crash. (Credit: Bettmann Archive/Getty Images).



Figure 5: The Down Jones Industrial Average from 1928 to 1935. From peak to trough the Dow Jones lost an astounding 89%.

2.2 This Time It's Different

Often times the phrase "This time it's different" is used by investors to justify irrationally overvalued market prices. Potential for things like continuous quantitative easing, interest rates staying lower for longer, and companies thriving even in the absence of profits are used to argue that historical valuations are no longer relevant, and that there doesn't have to be another recession. Every bull market to date has been followed by a period of economic contraction, and during the peaks of every market cycle investors have chosen to ignore historical valuations and past market cycles claiming that "This time it's different".

2.3 Where Are We in the Market Cycle Today?

The question now turns to not whether there will be a recession, but to when it will take place. The answer to this is that no one knows, the next market crash could come tomorrow or in 10 years from now. Most of the time it is not discovered that the economy has gone into recession until months afterword. Attempting to time the market is a delicate task and predicting exactly when the economy will turn is near impossible. Perhaps a more logical way of looking at the market is to assess the probability of a market downturn. If you were to try and guess a random number by counting up from 1, you'd have no idea as to how many guesses it would take. You would on the other hand, know that after every incorrect guess the odds of your next guess being correct would increase. We know that a recession is inevitable, so with every passing day of a bull market and increase in market valuation above historical norms, the probability of a market downturn is increased. However, what those odds are and by how much they increase by remains unknown.

3.0 RECESSION INDICATORS

There are a number of economic indicators commonly used to predict a recession such as the Treasury yield, Buffet indicator, and unemployment rates. All of whom can offer valuable insight into current market conditions, but as was outlined above will never be able to perfectly time an incoming recession.

3.1 U.S. Treasury Yield Curve

The U.S. Treasury yield curve is a chart that plots U.S treasury maturities against there respective interest rates, and hence captures the perceived risks of bonds with various maturities to bond investors.

Typically, “the yield curve is upward-sloping, meaning lenders demand higher interest rates when they

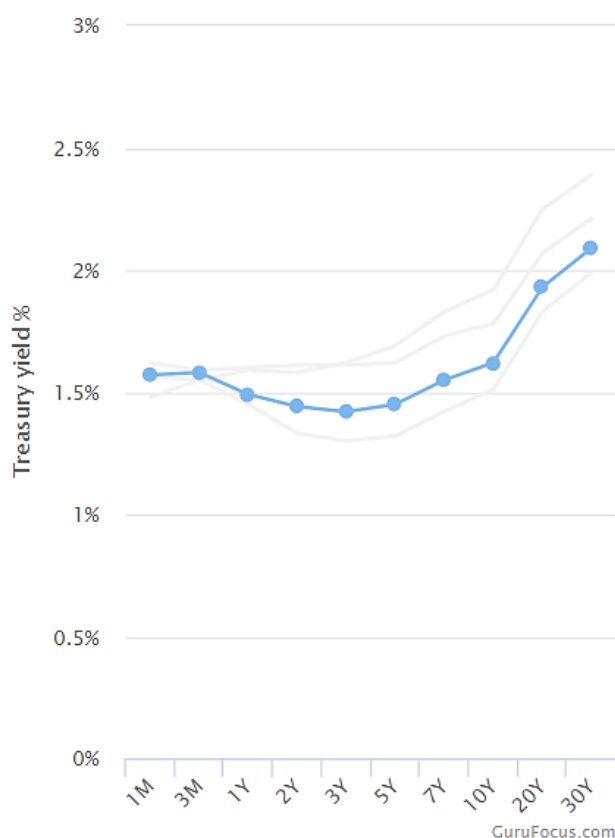


Figure 6: The current US Treasury yield curve.

lend for longer periods as compensation for the increased uncertainty (especially with regard to possible declines in the purchasing power of the currency between the time the loan is made and when it's repaid). But sometimes, long-term rates fall below short-term rates, and the curve is said to be inverted" [6]. Although the explanation for inversions isn't always clear, the simplest explanation is that investors are more uncertain about the health of the economy in the short-term than they are in the long-term. As investors grow increasingly uncertain, they move more money from short-term securities to supposedly safer long-term ones, driving the demand for long-term securities up and the demand for short-term securities down. This increases the yields of short-term securities while decreasing the yields of long-terms ones, leading to an inversion of the yield curve.

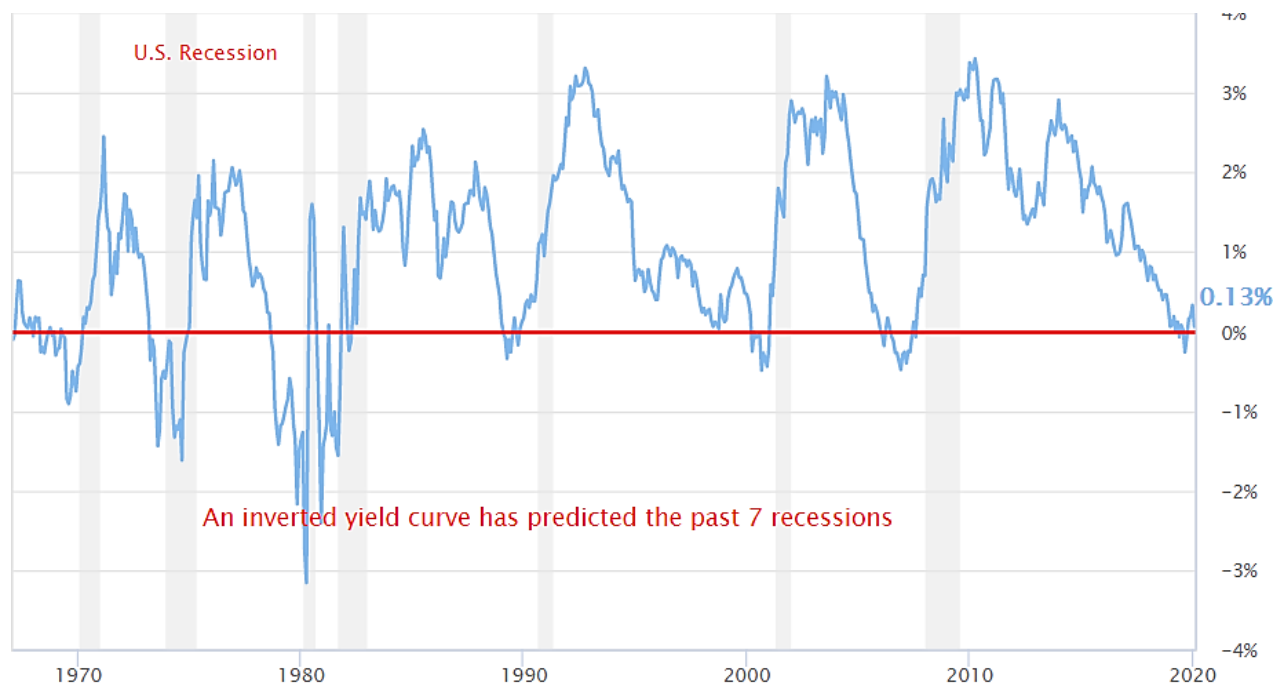


Figure 7: Historical 10 to 1 year spread on US Treasury yields. An inversion of the yield curve has preceded every recession since 1950.

3.2 The Buffet Indicator

The ratio of total market capitalization to US GDP was made popular by Warren Buffet as “probably the best single measure of where valuations stand at any given moment.” Based on historical valuations a ratio between 75% and 90% is said to be fairly valued, today the ratio sits at 158.4% [7].



Figure 8: Total US market cap as a percentage of GDP.

3.3 Employment Data

The unemployment rate is another measure often used to evaluate where the economy stands. When an economy is facing recession, business sales and revenues decrease, which cause businesses to stop expanding. This decreases the need for additional jobs and leads to a rise in unemployment. Currently, unemployment is at its lowest level since 1969, sitting at 3.6% [8]. This is typically viewed as a good thing; however, the unemployment rate is flawed when it comes to representing the health of the job market. The unemployment rate is calculated by dividing the number of unemployed people by the labour force. It is important to note that people who are not actively searching for a job do not count as unemployed and are not counted as being part of the labour force. This means that individuals on welfare and workers who have simply given up on finding a job are not accounted for in the unemployment rate [9]. With the unemployment rate inaccurately depicting the job market, perhaps it's better to look at the number of jobs added to the economy every month. This would eliminate the dependence on people who are actively looking for a job or not; however, once we look into what counts as a new job this figure becomes as skewed as the unemployment rate. When calculating the number of new jobs each month there is no difference between part-time and full-time employment [8]. As companies look to decrease labor costs, they often prefer to hire multiple part-time employees instead of full-time ones to avoid paying overtime and benefits. This forces people to take on two or three part-time positions instead of a full-time one, and on the monthly jobs report this simply shows up as added jobs.

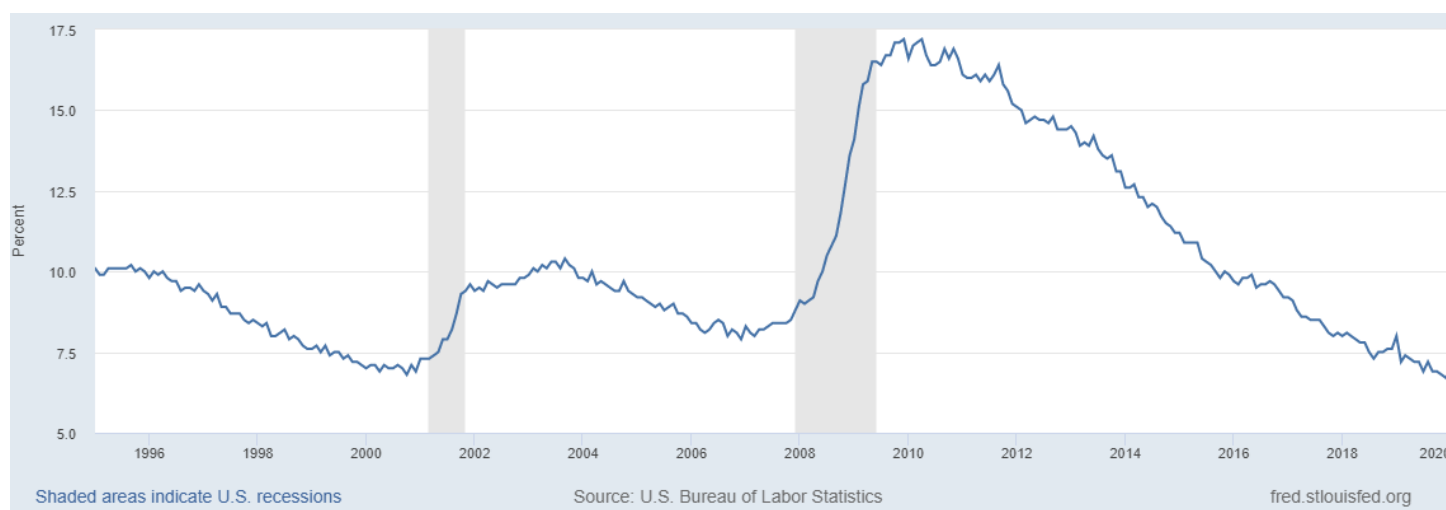
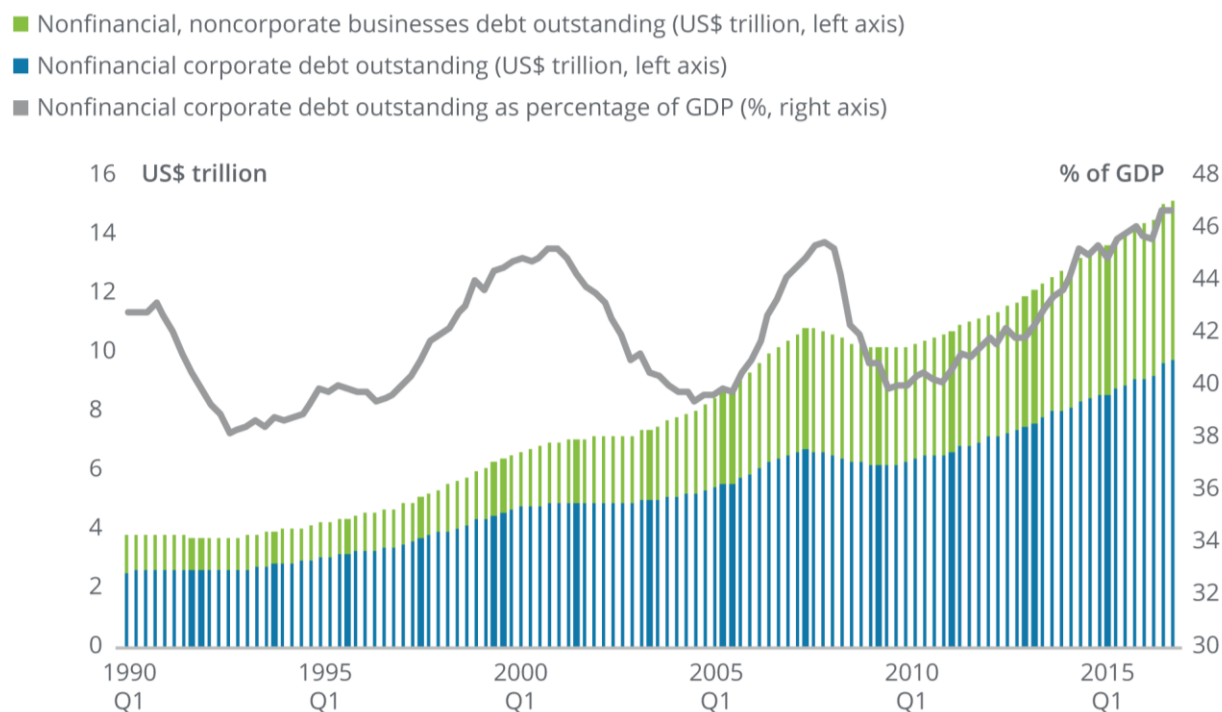


Figure 9: The U-6 (real unemployment) rate above differs from the more commonly reported U-3 (unemployment) rate in that it also includes workers that are discouraged and underemployed. This might give a better idea on how the US economy is functioning, since it captures a larger labor force.

4.0 RECESSION TRIGGERS

During the peak of every bull run there is always something that seems to prick the bubble. In 1981 and 1990 it was a result of developments in the Middle East leading to a spike in oil prices, in 2000 it was rising interest rates and a broader realization that current market valuations were in no way sustainable, and in 2007 it was the high rate of subprime mortgage defaults and ensuing collapse of mortgage backed securities. With multiple recession indicators flashing red and valuations at all time highs, what will be the cause of the next recession? The cause of a recession differs every time and is unseen by the majority of the financial world. As put by Mark Twain “History doesn't repeat itself but it often rhymes”. With this in mind, there is one thing that seems to wedge itself within the causes of every financial bubble and following crash. Leverage. Leverage allows for increased buying power and an elevated upside in potential gains, but when things turn sour leverage results in a rapid depletion of capital. An increase in corporate debt levels amplifies the effects of a recession and plays a key roll in creating unsustainable market valuations.



Source: Haver Analytics; Deloitte Services LP economic analysis.

Figure 10: Corporate debt to GDP currently stands at a record 48%.

5.0 CONCLUSION

In concluding this report, it is beneficial to bring to light Bob Farrell's 10 rules for investing.

1. Markets tend to return to the mean over time
2. Excesses in one direction will lead to an opposite excess in the other direction
3. There are no new eras — excesses are never permanent
4. Exponential rapidly rising or falling markets usually go further than you think, but they do not correct by going sideways
5. The public buys the most at the top and the least at the bottom
6. Fear and greed are stronger than long-term resolve
7. Markets are strongest when they are broad and weakest when they narrow to a handful of blue-chip names
8. Bear markets have three stages — sharp down, reflexive rebound and a drawn-out fundamental downtrend
9. When all the experts and forecasts agree — something else is going to happen
10. Bull markets are more fun than bear markets

We are more likely than not near the end of the longest bull run in history. Interest rates have been at near record lows since the financial crisis leading to an explosion in corporate debt. The market for non-investment grade bonds has quadrupled over the past decade and a record amount of it is maturing over the next five years [10]. Corporate defaults are already above the long-term average and with profits and global growth starting to slow, how will the economy respond? The Buffet indicator states that the market is severely overvalued and the US treasury yield curve is on the verge on inverting for the second time in under a year. But don't worry, unemployment is at all time lows, analysts have a positive outlook for the market, the economy is "probably the best our country has ever done" and there has been "tremendous value created since the election", and after all "this time it's different".

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