

**July 11, 2017**

## **Quarterly Outlook Q3 2017**

### **Overview**

Equity markets posted a solid performance in both the first and second quarters of 2017. Including dividends, the S&P 500 index recorded a gain of 6.1% in the first quarter and another 3.1% in the second. Earnings grew at a 9% rate in the first quarter, year over year. In the second quarter the earnings growth declined and is now on a path to produce earnings growth of 6% for 2017. The energy sector, as expected led the earnings recovery, sporting an earnings increase of about 400% in the quarter. The improvement was, of course, widely anticipated and did not wind up boosting the price of energy company stocks. Almost 90% of the S&P 500 companies beat the earnings that were expected by analysts, an unusually high number.

Overall, growth in the US economy continues apace and we do not foresee any derailment of the present growth pattern in the next 12 months. The job market is generating a few more jobs than the number of new entrants to the workforce so unemployment continues its downward trend. Both inflation in wages and overall inflation continue to be lower than the 2% goal set by the Federal Reserve.

The yield curve retains its upward slope, although a bit less steep than it was at the beginning of the year. The 10-year Treasury yield at the beginning of the year stood at 2.45% and was 1.93% higher than the 0.52% interest paid on the 30-day Treasury. Those same interest rates at the end of Q2 were 2.31% for the 10-year Treasury and 0.84% for the 30-day Treasury bill for a spread of 1.47%.

There is, of course, considerable speculation about where the stock market values will wind up next quarter and at year-end, which begs the question as to whether the equity markets are “too high”. The Price/Earnings (P/E) ratios are higher than the historical mean so there have been all manner of mean reversion arguments that have been floated declaring an imminent collapse of the market indices. We do not think so, which is the focus of this quarter’s outlook.

### **What is “Too High?”**

No one knows, of course, what constitutes an assessment of “too high”, except after the fact when we have experienced a substantial decline. So, we should dismiss the notion that just because the S&P 500 index is near, or even at an all-time high, that fact, by itself, heralds an oncoming doom simply because the overall market is priced higher than it used to be.

The most factual assessment of the stock market return can be determined by looking at the “Earnings Yield” and comparing that yield to the risk free yield. The Earnings Yield is simply the inverse of the Price Earnings Ratio, so a P/E of 15 implies an earnings yield of 1/15 or 6.67%. A stock priced at \$15 per share with a P/E of 15 will have earnings per share of \$1.00, which is equal to 6.67% of that price. As an

investor, you will be earning your share of 6.67% by taking the risk in buying the stock or you could take the return on a 10-year Treasury and, if held to maturity, earn notably less without taking any investment risk. Of course with the stock investment, the 6.7% return noted above is far from certain and would most likely not be the actual return experienced due to changes in earnings, market conditions, and investor's willingness to take risk, just to name a few factors.

Since 1970, changes in the earnings yield have tracked changes in 10-year Treasury yield pretty closely. During the big inflation years in the late 1970's and early 1980's, the P/E ratio declined markedly as the risk free return (represented by the 10-year Treasury) climbed from roughly 6% for an average in 1972 to about 14% for an average in 1981. Since 1981, the bond yield has been on a steady down trend and the earnings yield has similarly declined resulting in an increasing P/E ratio.<sup>1</sup>

For almost all of the years between 1982 and 2009, the earnings yield was lower than the 10-year bond yield. This might suggest that the stock market was actually overpriced during most of that time. Of course, investors were looking at future earnings, which were generally expected to be a bit higher and sufficient to compensate for the risk of owning equities<sup>2</sup>.

The point of looking at the comparison of the earnings yields to the 10-year Treasury yield is not to pinpoint which one is too cheap or too expensive. The point is to say that the relationship has held since the Dollar went off the gold standard, that investors can choose to own stocks or bonds and that it makes sense to think that the returns on the two investments will track each other with some degree of precision going forward. The arguments of stock prices based on historic averages really have no particular merit unless you can conclude that the 10-year Treasury will also revert to its historic average of somewhat over 7% (from 1972 to today).

It is also clear that the return on the 10-year Treasury tracks inflation, so if we can get a handle on inflation, we can evaluate the probability that the 10-year Treasury rate will remain fairly low or whether that yield will increase substantially getting back to its long term average of 7%, in which case, you would expect the earnings yield to follow, reducing the price of equities substantially.

### **Inflation Estimates**

The estimate of inflation is the key determinant of the estimate of the 10-year Treasury yield. The long-term history of inflation says that it is generally very low. In the US, from 1800 to the onset of World

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<sup>1</sup> Prior to 1970, the US Dollar was on a gold standard. The fixed Dollar gold price ended in 1971. At roughly the same time, the world experienced a dramatic increase in the price of oil. The free floating dollar coupled with the huge increase in oil prices to create a very volatile time. The financial markets have taken many years to adjust to the shock. However, financial market conditions in the period when the US Dollar was on the gold standard are sufficiently different from the financial market conditions prevalent since. So it is in keeping to begin the earnings yield analysis in 1972 after the free floating US Dollar period began.

<sup>2</sup> It is also interesting to note that in 2011, the earnings yield shifted to be greater than the 10-year Treasury bond yield, rather than less. Taken by itself, an earnings yield higher than the treasury yield coupled with an expected increase in corporate earnings, would indicate that either the 10-year Treasury bond yield is too low, or the earnings yield is too high. You would need lower bond prices or higher equity prices to bring the two back to their historical relationships, which would argue that since 2011, equity prices are too cheap – a trend that continues to this day.

War II inflation was exactly zero. That is correct. For over 140 years; there was no inflation in this country whatsoever.

The general public and most of the financial community hold a view of inflation that is anchored to the two decades of high inflation years following the free-floating of the dollar. In the two decades, from 1973 to 1993, inflation averaged 6% per year – a vast departure from the zero inflation for the 150-year period ending in 1942 and also a vast departure from the 2.2% annual inflation that the country has experienced from 1993 to the present.

If you look at the period of time before and after the 1972 to 1993 period (when the inflation shock of the free floating dollar coupled with an enormous increase in the price of oil), you would conclude that the “normal” rate of inflation is low – 2% or below.

Listening to the rhetoric from the Federal Reserve as well as from the financial media, you would conclude that keeping inflation below 2% requires a superhuman effort – something that can only be achieved by a set of extraordinary management skills in regulating the economy – and in particular by managing the rate of unemployment and relying on the Phillips Curve which establishes a relationship between unemployment and inflation.

### **The Phillips Curve**

From Wikipedia – “The Phillips Curve is a single – equation empirical model, named after William Phillips describing a historical inverse relationship between rates of unemployment and corresponding rates of inflation”. It is instructive to google “Phillips Curve Wikipedia” and look at the real data underpinning the Phillips Curve. In standard economics textbooks, the Phillips Curve is presented as if it is some sort of economic law, pretty much on par with some of Isaac Newton’s equations describing what has become known as the subject of Physics. In reality, even a casual examination of the actual data underlying the paper written by William Phillips, would lead one to conclude that while there might be something behind the relationship described, the nexus is very tenuous at best.

- 1) The paper describes a relationship between the rate of change of money wage rates and the rate of unemployment. Modern use of the Phillips Curve extends the relationship to be one of overall inflation to overall unemployment – far beyond anything ever indicated in the original paper. Overall inflation would have to accommodate a considerable number of other variables beyond simply inflation in wages. Some of these other variables would be labor productivity, the ability to convert paper money into gold, the prevailing interest rates and a host of prices of other inputs to the economy beyond labor, such as raw materials.
- 2) The paper examines a period of time between 1861 and 1957 with the most dominating data from the years between 1916 and 1921. The period of time between 1916 and 1921 was an extraordinary period in the history of the world. First, there was the impact of a massive war on the scale that the world had never seen. Second, there was the impact of technology, also on a scale that the world had never seen<sup>3</sup>.

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<sup>3</sup> George Washington University evaluated the “Impact of Technology on Economic Growth”. See Andrew Reamer, 2014. In the study, 25 significant innovations are identified spanning the entire human experience beginning with the domestication of plants in about 9000BC to the present day significant innovations of biotechnology and

### **Is the Phillips Curve Really Valid?**

It is hard to imagine a study could be really valid when that study examination period includes the most technology change mankind has ever seen and the most encompassing world wars ever experienced; especially when that study ignores the effects of the technology change and the effects of the war upheaval. The study was done during a period of a fixed gold price and focused only on wages. With the backdrop of technology upheaval, world wars and fixed gold price, expanding the study conclusions to include overall inflation in a period of free floating currencies is equally circumspect. In fact, all recent data show the Phillips Curve conclusions to be tenuous at best<sup>4</sup>.

I like to compare the Phillips curve to “comfort food”. You would think that there should be some relationship between unemployment and wages – after all, when there are a lot of people looking for a few jobs, employers do not need to offer high wages to attract people. If you think about it a bit, however you will see that adding a 10% bonus to the salary of a data scientist is not going to convert a coal miner to a data scientist. It is not likely that a 10% bonus would even attract a data scientist in one company to leave to go to another one. It takes years for technology and skill sets to equilibrate and those years do not fit in well to attempts to manage the economy on a shorter term basis.

Eating chicken soup and toast when you don’t feel good usually does make you feel better. Economists like their comfort food and people do like chicken soup. Economists have invented all manner of “adjustments” in an attempt to make the Phillips Curve theory fit the real inflation and unemployment data, but it really does not fit well. (Fortunately, mankind as a whole has learned to look beyond chicken soup for ways to manage their own personal happiness.) Since the Phillips Curve analysis largely breaks down in reality, the Federal Reserve cannot make inflation respond to changes in the unemployment rate, much as they would like.

### **Long Term Inflation and Interest Rates in the Long Term**

Our above arguments lead to the conclusion that without some sort of major external shock to the world’s economic system that in the long term, inflation is generally low and that the Fed really cannot manage inflation well. In particular, since the Phillips Curve model does not really work, the Fed will not successfully raise inflation by trying to lower unemployment. In today’s economic climate, there is

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nanotechnology. Five of mankind’s most significant innovations identified in the study are the internal combustion engine, electricity, the motor vehicle, the airplane and mass production. These five innovations comprise fully one fifth of all mankind’s most significant innovations. These five innovations also were all implemented in a 20 year period from 1895 to 1915 – heralding a massive improvement in human wealth and productivity. It makes sense that some of this wealth would accumulate to the workers that helped create it. That wealth transfer did indeed happen, but it required considerable political pressure and resulted in a delay of several years. However from 1916 to 1920, the wages of a machinist in New York grew fourfold in actual dollar wages and doubled in inflation adjusted wages. At the same time, the productivity and the output of that machinist also grew several-fold.

<sup>4</sup> See University of Toronto study of the Phillips Curve, John Floyd, Topic 5. Mr. Floyd presents data for the US between 1954 and 1969, showing an R-Square of only 0.28, a correlation of zero between 1954 and 1969 for Canada and an inverted relationship for the period in the US from 1970 to 2008. Also see Econbrowser’s analysis of Unemployment and Inflation from 1948 through 2007. This analysis shows the correlation between unemployment and inflation to be exactly the opposite of that predicted by the Phillips Curve.

not very much that would be driving inflation higher. Raw material costs are low. The price of gold is stable. The price of food is stable on the world markets. The price of oil is declining slowly. Productivity and technology are continuing to improve mankind's lot in life and some of that improvement flows back to the workers in terms of increased wages although prices do not necessarily increase because of better technology. Amazon continues to drive prices lower. EBay helps recycle old stuff into new uses. Uber adds value by utilizing a previously unused asset of a car and driver that were totally unproductive and just sitting around. The only part of the US economy where prices continue to increase is in healthcare and education. No politician is going to suggest that we use higher healthcare or education costs to help the Fed achieve a 2% inflation goal. Inflation historically is generally fairly low and there is just nothing on the horizon that would drive inflation higher.

In this quarter's "Economic Outlook" we do not see any factors that are going to lead to inflation that even gets the Fed to its 2% goal. With inflation low, the 10-year Treasury rate is also going to continue to be relatively low and way below the 7% averaged between 1972 and today. With low interest rates on 10-year Treasuries, the earnings yield will continue to be favorable. One could even argue that today's earnings yield (4.2% based on a P/E of 23.77) indicates that stocks are somewhat cheap. We are not arguing that stock prices will move markedly higher. With the 10-year Treasury yield currently well below 3%, it is not likely that P/E ratios can expand markedly, and should the 10-year Treasury yield get down even to a 2% level, the earnings yield on equities will not match the 2% level. To do so, would drive the average P/E ratio above 50x. But we will save the details of that argument for a future discussion.

### **Conclusion**

Warren Buffett has been quoted saying "If I could only pick one statistic to ask you about the future...I would ask you what the interest rate is going to average over the next 20 years".

You could use the 10-year Treasury rate for that interest rate. Twenty years is a long time horizon and we cannot look that far out. However, we just don't see any factors that argue for any kind of substantial increase in the 10-year Treasury rate in the next year or two. Given a low rate in the 10-year Treasury, it is pretty easy to conclude that the stock market today is not overvalued, in spite of what might seem high when comparing it to most any historical average metric that you might choose to use.

We do have a wealth of numerical information and further detail on the above comments that we would be happy to share with readers who are interested in more information. We also thank you for continuing to be clients of Traub Capital Management and we look forward to continuing to manage your investments.