



*“But here you are in the ninth, two men out and three men on. Nowhere to look but inside. Where we all respond to Pressure.” – Billy Joel*

The title of this quarter’s Market Insights, “*Can Fiscal Policy or Financial Engineering Save US Equities?*” is unlikely to win many awards for creativity in literature. It is, however, very direct with several implications. First, it implies there is a problem to be solved. We’ve discussed this at length over the years. The problem, is that overvaluation in US Equities typically leads to below average returns for any ensuing long-term period (i.e., a decade or more). Reduced returns for this length of time would be a serious obstacle for investors, greatly inhibiting their ability to achieve financial objectives. The more obvious part of the title is can fiscal policy or financial engineering save us? Said differently, can we legislate and create policy, either through government or central banks, that will cure what ails us? My intention is to explore these topics in detail. As such, I intend to 1) demonstrate how equity returns are created, by empirically proving past investment returns from their component pieces and tying them into actual results. This will clearly show the impact changing valuations have on returns. 2) We will state today’s problem clearly, demonstrating the magnitude of the task at hand. 3) We will examine if our newly elected President’s pro-growth plans can be the elixir that is needed.

*Disclosure: This article is not a political statement. We will discuss pro-growth policies of the current administration as a matter of relevance. This article will demonstrate the daunting task ahead for any party or administration.*

### The Problem

The problem facing US Equities, and those who rely on US Equities to reach their investment goals, is expensive valuations. As of December 31, 2016, the trailing 12-month P/E multiple on the S&P 500 was 23.68x<sup>1</sup> earnings vs. a historical average of around 16.5x<sup>2</sup>. Small Cap stocks are no picnic either. In fact, they are worse, trading at 36x<sup>3</sup> earnings versus a historical average of 23x<sup>4</sup> earnings. Does any of this matter in creating long-term returns for investors? I mean, who cares as long as prices keep going up? Well, it certainly matters.

Stock market performance can be a bit nebulous to the everyday investor, but is created by more than the greater fool (someone else being willing to pay more than you did). Price movement is important, but it is only a part of the return equation. Returns come from the price movement plus the dividend yield. Still simple, right? Well, what causes the price to move? The answer to this is a bit more complex. Long-term stock returns come from four components or building blocks: inflation, growth of real earnings per share (EPS), the dividend, and the change in valuation. You don’t need to take my word for it, I will prove it mathematically.

Let’s go back 100 years and stack up our building blocks. Beginning in 1917, the dividend yield on the S&P 500 was 5.71% and real EPS, in today’s dollars, was \$31.90, which has grown to \$99.30. Over 100 years this equates to an annualized growth rate of real earnings per share of 1.14%. Surprised? Don’t be. Most academic studies suggest that earnings growth above inflation can account for less than 2% per year of total return, as opposed to the very lofty double-digit projections by Wall Street. Our third building block, inflation, was 3.08% per year

<sup>1</sup> S&P 500 stated TTM PE, as reported EPS bottom up as of December 31,2016

<sup>2</sup> S&P 500 average TTM PE 1871- February 28, 2017

<sup>3</sup> Russell 2000 stated TTM PE as of December 31, 2016

<sup>4</sup> Russell 2000 average TTM PE 1979 – December 2016

over this period. Lastly, valuations began at 11.41x<sup>5</sup> earnings and ended at 28.02x earnings. This is called multiple expansion and added 0.90% per year to performance. Put this all together and you get 11.61% annualized (note: this number is compounded not the simple addition of the 4 component returns) over the last 100 years vs. 11.33% calculated from the change in price combined with the dividend, well within a statistically acceptable margin of error. The bottom line, returns come from inflation, growth of real earnings per share, the dividend, and the change in valuation.

Now, how do valuations impact returns over periods of time that are shorter than 100 years, but long enough to do damage to a portfolio? Let's look at another example. This time, let's examine the 10-year period from 1999-2008. As opposed to the prior example, where the change in valuation was a positive contributor, in this case the valuation beginning in the internet bubble was 38.82x<sup>5</sup> earnings and ended at 15.19x earnings a decade later. This would have subtracted a whopping -8.99% per year from returns. Over the same period, the dividend yield was 1.36%, inflation was 2.63%, and real EPS growth was above average, contributing 3.77% per year. The result from our building blocks exercise was an annualized return for the decade of -1.75%. The actual stated return...-1.38% per year. Let the magnitude of what I just wrote not be lost. By far, the single most important factor in determining returns for this decade (1999-2008) was not the earnings growth, or for that matter the dividend. Both were positive. The change in valuation subtracted nearly 9% per year from returns as the bubble deflated.

Lastly, on a more positive note, let's look at the most recent 10 years. On January 31, 2007, the CAPE (cyclically adjusted price to earnings ratio) stood at 27x<sup>5</sup> earnings, vs. a historical fair value of 17.15x earnings, very expensive by historical standards. Over the next 10 years, valuations increased, ending at 28.02x earnings and creating a 0.30% annual boost to performance in the process. Over the same 10-year period, real earnings grew by 2.57% annually, while inflation was 1.83%, and the dividend contributed 1.76% to total returns. Performing the bottom-up calculation you arrive at a return of 6.60% versus the actual stated return of the past 10 years of 6.95%. This is just another example proving the drivers of stocks returns.

However, there is one additional message in this last calculation. Notice that valuations barely budged over this last decade, contributing a positive 30 bps per year to performance. The market began as expensive and ended as expensive. This serves as a good example of what happens if valuations remain the same, but begin at an overpriced level, much like today. That is, there is no spectacular crash that wipes out performance. Most would expect returns in-line with the historical average of 10%. The reality is, returns will be reduced even without the crash because you paid a higher price. This is lost by many who debate if stocks are expensive. They are by historical standards, but what if fair value is higher than the historical 16.5x earnings? If fair value is higher, the level of overvaluation and risk of a wipe out is lower. Problem solved? Not at all. While fair value can be debated, what cannot be debated is that even if valuations don't fall and there is no spectacular crash, there is still a cost. That cost is a reduced return, compared to the historical average, in perpetuity, or until the cost of declining valuations is experienced in one period, to boost returns in the next.

### Big Problems Require Big Solutions

As discussed in the preceding section, the long-term link between valuations and returns is exceptionally strong. Additionally, we discussed the current overvalued nature of US stocks, with US Large Cap stocks trading at levels that are 40% above fair value and Small Caps at approximately 50% above fair value. This leaves us with two possible scenarios. First, nothing changes over the next decade and we end up with one that looked like the last...US stocks provide 5-6% per year. The other possibility is that valuations correct. This can occur either by a wipe out, a 40-50% decline in price, or by earnings increasing by the same percentage. From the point you reach fair value forward, attaining a return approximating the historical average of 10% becomes a reasonable expectation, but not before. So, where does that leave us? We

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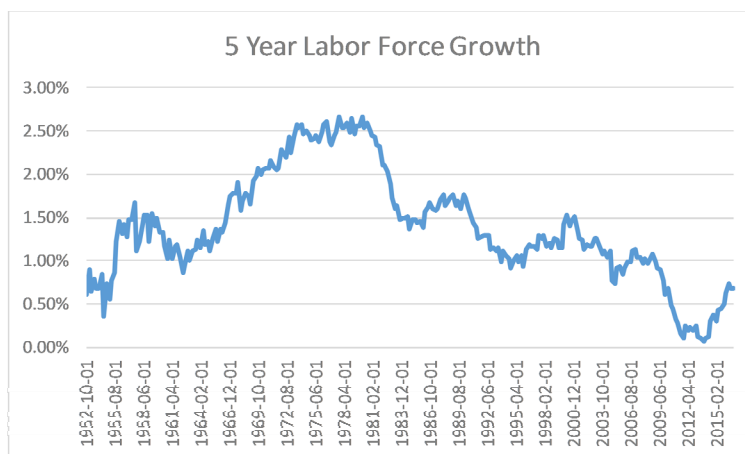
<sup>5</sup> S&P 500 PE/10

need to create 40% growth in earnings above and beyond price gains, stocks need to decline by 40% over a relatively short time period, some combination of the two, or investors simply need to accept that fact that they will be faced with permanently reduced returns.

Amidst our current equity market reality, newly elected President Trump has proposed some aggressive plans that are undoubtedly pro-business. In the end, his stated goal is to restore the glory days of 4-5% real GDP growth to the US. Bold? Absolutely. However, big problems require big solutions. Is it possible for a mature economy like our own to grow at this level for any sustained length of time? Remember, a rising tide raises all boats. If our economy grows faster, there is more to go around for both wage earners and businesses.

To determine if this is possible we must first understand where real GDP growth comes from. I'm not referring to the  $C+I+G+(x-m)$  formula for GDP (or consumer + investment + government spending + net exports). What causes GDP to grow in inflation adjusted terms? Surprisingly, considering the hundreds, if not thousands, of economic variables with which we are bombarded, real GDP growth is essentially a function of two variables. That's right. This incredibly complex engine that is our economy and its growth in inflation adjusted terms, comes down to just two variables. To comprehend this, we need to look no further than an age-old tradition on Wall Street of making the simple complicated! I digress. Those two variables are the growth rate of the labor force and ultimately how productive they are. For those that have economics backgrounds, our findings are hardly revolutionary, as this is a commonly accepted economic principle. It is, however surprising, how little we hear of this simple relationship, especially considering that 99%<sup>6</sup> of the change in our real economy over the prior 70 years can be explained by those two simple variables!

## Drivers of Real GDP Growth



Despite the hundreds of variables quoted by financial media, Real GDP growth can be explained by two variables, growth of the labor force and productivity. These two variables explain 99% of the change in inflation adjusted economic growth in our country.

Source: Federal Reserve Board, iCM Capital Markets Research

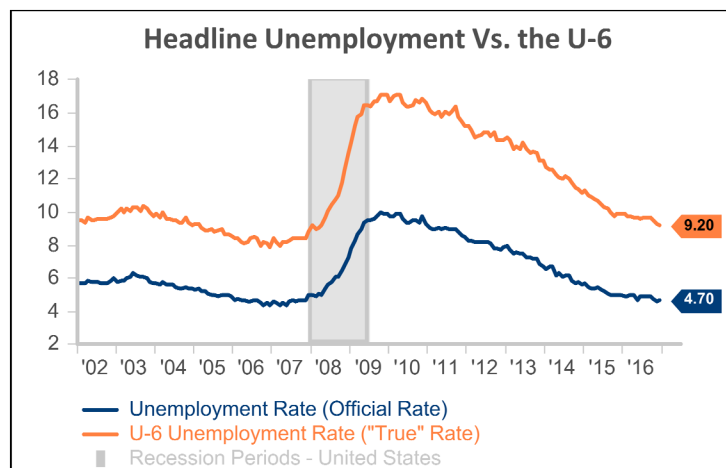
<sup>6</sup> This is the adjusted r-squared of the regression series attributing real GDP growth to productivity and labor force growth. – Source: Federal Reserve Board, iCM Capital Markets Research

Let's explore this in greater detail. If real GDP growth is caused by growth in the labor force or by productivity growth, can economic policy be derived that will take us from a barely 2% real GDP reality to double that number for a sustainable period? Growing the labor force is a function of population growth and demographic shifts. As a society, we can have more babies, which will contribute to the labor force in 18-25 years when they mature, or we can change our current paradigms; when we start working or when we retire. A third possibility is a structural shift in demographics. You can see in the chart on the prior page that the average 5-year growth rate of the labor force is a little more than 1% annualized. The period of high growth represents the era where our society shifted from the paradigm of a one earner household to the two-earner household that is more prevalent today. Given that most are already two income families, and as the baby boomers age it is more likely that they begin to exit the workforce, it seems unlikely that demographics will contribute much to labor force growth.

Another possibility is the marginally attached worker. These are people of working age that have stopped seeking employment for one reason or another. The chart on this page details the current state of our labor markets. As you can see, headline unemployment sits at 4.7%, very close to the level most would define as 'full employment' for our economy. The higher line is what many refer to as the "true" rate of unemployment. When someone stops actively seeking employment they drop out of the headline calculation. The U-6 ("true") unemployment calculation adds those individuals back. This number currently sits at 9.2%. The difference between these lines is the marginally attached worker, or 4.5%. Even if the president is successful in enticing some of these workers to re-enter labor force, the opportunity is small in terms of providing a sustainable boost.

The final variable is productivity. Can we produce more with the same number of workers? This is a bit of a catch 22, in that greater productivity leads to greater profit margins and the opportunity for wages to rise as profits increase. That said, productivity cannot come at the expense of the labor force. Think massive automation increasing productivity, but coming at the expense of jobs. Average annualized productivity gains amount to about 2% in total, but with definite peaks and valleys. In the chart on the prior page, we can see two distinct peaks. The first, in the 60's, was the era where we transformed ourselves from an industrial society to a service based society driven by technology. Boost to productivity? Absolutely. The other noticeable period was in the late 90's, during the internet craze. Think about the magnitude that the internet has had on our lives. A decade ago, it was rare for people to shop online. Today, not only is it commonplace, but it is literally threatening the existence of brick and mortar malls across the country. Is a retailer more or less productive as a result of not maintaining a physical presence and the costs associated with it? Much more productive. Yet notice the magnitude of the change. Productivity growth jumped from just 1.5% to 2.5% per year. The moral being,

## Employment Landscape



The difference between headline unemployment and U-6 or "true unemployment" is the marginally attached worker. These are people of working age who are not actively seeking employment and have dropped out of the headline calculation.

Source: Federal Reserve Board

seismic changes on our society that have a meaningful impact on our day-to-day lives move the productivity dial on our \$17 trillion-dollar economy by very little, relatively speaking.

## Conclusion

Where does this leave us? If we can squeeze 1.5%-2.0% annually in productivity gains and manage a 1% growth rate from our labor force, while our largest demographic group, the baby boomers, age and retire, you may be able to get to 3% real GDP growth. More likely, however, we are left as a mature economy where sustainable economic growth rates are limited to closer to 2% per year. Therefore, our stated problem, 40% overvaluation, is unlikely to be solved by making the entire pie bigger. What then are we left with? Can businesses consume a bigger piece of the existing pie? That is, can corporate profits expand faster than the economy, allowing earnings growth to outpace economic growth and eliminate the overvaluation? Unfortunately, history would say no, as long-term growth of real earnings per share has generally fallen short of Real GDP growth (less than 2% per year). That said, over short periods it is possible for this to happen. Still, we need to allow for enough time to grow earnings by 40%. How about 5 years, arbitrarily? Short enough to see some statistical anomalies from the norm, but long enough to make a dent. Over 5 years, earnings would need to grow by 6.96% per year, while the economy muddles along at 3% (and equities advance by 0% for 5 years). Profits as a percentage of GDP have averaged 6.33% for the last 70 years. For this to occur, profits would need to swell to 10.08% of GDP or a 2.79 standard deviation event (a probability of 0.26% or 1 in 379 outcome). This is required because business profits are a portion of the whole, GDP. For earnings and profits to grow at a faster pace than the whole (GDP), they will consume a larger share of the economic pie in the process. In this case, consuming more than 10% of GDP has proven to be historically unsustainable.

The title of this article is “Can Fiscal Policy or Financial Engineering Save US Equities?” While not mathematically impossible, the likelihood of resolving this issue without pain seems very remote. The problems that we face are imbedded into our fabric. The wealth effect that saved us from the financial crisis, created our current bubble. Thankfully, we as investors who live within US borders can deploy capital elsewhere. Assets like emerging markets equities have several potential tailwinds, including low valuations and exceptionally inexpensive currencies. Thoughtfully, we remain exceptionally confident in our strategy and current positioning. We are confident in our ability to process information from an unemotional perspective and are equipped to respond as needed if a shift in strategy is justifiable. Until then, we encourage investors to remain focused on the long-term and avoid being emotional if adversity should arise. Thank you for your trust and confidence.

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