

A UNC fan experienced a vast range of emotions in five seconds on April 4 in the NCAA Basketball National Championship game. With 4.7 seconds remaining in the game, UNC made a three-pointer to tie the game with the Villanova Wildcats. UNC fans were euphoric. In the following 4.7 seconds, UNC fans saw their euphoria crater to despair as Villanova answered with a three-pointer of their own to win the game at the buzzer. Many investors and market participants we talk to felt the same range of emotion in the first quarter. In roughly six weeks (Jan 3–Feb 11), the consensus turned incredibly bearish with recessionary headlines everywhere as markets lost 11+%. In the following seven weeks (Feb 12–Current), consensus seems to have swung the other way, with headlines and news anchors declaring ‘buy risk assets’ as markets rallied back. The quarter was in fact the largest intra-quarter swing for the DJIA¹ since 1933¹ – fueling that UNC fan-like emotion over just 13 weeks. Even many disciplined investors who had maintained their positioning were convinced to go along with consensus when patience was tested, often near the tops and bottoms. How can these substantial swings in investor emotion exist in one quarter? Did market fundamentals drastically change over seven weeks?

This era of ‘policy normalization’² has proved to fuel volatility over the past twelve months. We expect the markets to go up and down in high-single digit increments in short but volatile spurts. We also believe that the risk/reward profile has changed for the worse since the beginning of the year, leading us to believe this choppy market will exist in a downward slope. Although ‘trading’ this trend would seem reasonably simple, the existence of time and emotion make it incredibly challenging. There was no ‘time-specific’ reason markets fell in late August or early January, nor was there a catalyst for a rebound. These random, rapid shifts in market sentiment make it prudent for investors to adjust for the longer term and focus on underlying market fundamentals.

As mentioned, we view the overall risk/reward profile more unfavorably than we did at the end of December, despite the recent rally. This viewpoint is derived from four main groupings: monetary policy, domestic investment (capital expenditures, productivity, etc.)³, corporate earnings, and global implications (rest of world, or ROW). As a whole, recent developments (or lack thereof) among these groupings have influenced our year-end price target slightly lower. We note that our earnings estimates have declined because of a lower than expected 4th quarter, leaving the S&P 500

Scenario	Probability	2016e EPS	2017e EPS	FPE Multiple	2016 Target
Bull	15%	\$125	\$136	18x	2450
Growth		6%	8.5%		
Base	50%	\$123	\$129.5	16.5x	2140
Growth		4%	5.5%		
Bear	35%	\$120	\$115	15x	1725
Growth		2%	-4%		

¹ Dow Jones Industrial Index.

² Speaking to a phase of the economic cycle.

³ Domestic Investment defined as a component of GDP, where $Y = C + G + I + NX$.

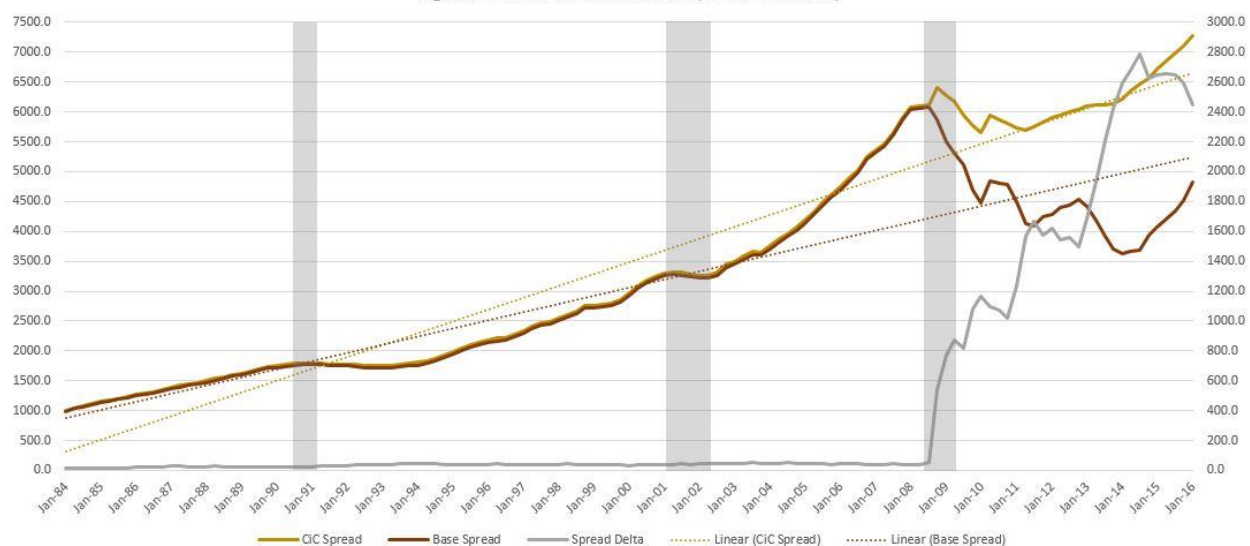
2015 adjusted earnings per share (EPS) at \$118. We have also adjusted the scenario probabilities to more accurately reflect the risk/reward skew we see in the marketplace. We would not be surprised to see S&P 500 close 2016 between our bear and base cases, but we also reiterate a very strong 'long' conviction behind equities in the 1700's based on a variety of fundamental factors, assuming no material changes occur.

Monetary Policy and the Federal Reserve

We do not envy the Governors of the Federal Reserve. In our view, there is no doubt that the Ben Bernanke-led Fed⁴ did what they had to do to soften the blow of the financial crisis. The Fed also decided to engage in unconventional policy because of the zero lower bound on interest ratesⁱⁱ – and ended up being there for much longer than initially planned. This 7-year experiment of monetary policy has yet to be concluded, thus no one can determine whether the right or wrong policy actions were taken⁵. However, it should come as no surprise that concluding this monetary experiment will be just as unpredictable as when it was started [i.e. Figure 1 – Fed policy has changed the makeup of the entire monetary base].

Source: Doxa Research, US Bureau of Economic Analysis/FRED

Figure 1: Loans & Leases Deficit (Trillions of USD)



Before we 'blame the Fed' for creating an increasingly volatile environment, it is important to recognize that 1) fiscal policy actions (Dodd-Frank, Basel III, etc.) have been a direct headwind to desired monetary policy outcomesⁱⁱⁱ, and 2) nearly all developed economies in the world have engaged in conventional and unconventional easing, also a direct headwind to desired policy outcomes^{iv}. Nevertheless, recent Fed actions have raised concerns among many market participants and their concern has nothing to do with *current policy*, but with the *expectation of future policy*^v. One of any central bank's largest tools is 'forward guidance' or 'expectations'. The committee⁶ deployed this tool in 2008 to calm markets and give participants assurance of what monetary policy would be and how it would adjust.

As normalization loomed, Chair Yellen made it abundantly clear that the process would be gradual and data dependent, with a focus on wages, labor, labor force participation, and inflation^{vi}. Many believed that economic data merited the first rate increase last September, but the committee

⁴ Bernanke was the Chair of the Board of the Federal Reserve from Feb. 2006 to Jan. 2015.

⁵ Current policy can be viewed as an experiment because of the unprecedented size and scope of asset purchases.

⁶ Referring to the FOMC.

waited, citing global deterioration and further labor market improvement was needed^{vii}. In our view, this was somewhat warranted seeing as an increase in wages (which is needed for inflation) was absent and the committee made it clear that policy changes were coming in December. The same forward guidance was given at the December meeting, along with the first rate increase they had foreshadowed.

The March FOMC meeting was rather different, however. Since December, the labor market has added an average of 230k jobs per month. Average hourly earnings climbed along with decent inflation readings. Consumer spending was moderate and the housing market continued a gradual recovery.^{viii} By most accounts, economic data supported another rate increase as determined by previous guidance. Yet the committee did not change policy, citing global weakness, weak manufacturing, and lower corporate earnings because of weak international demand.^{ix} Of course, monetary policy is very complex and should not be bound to 'forward guidance' – which is the box the committee finds themselves trapped in. By altering the 'target criteria', the committee has created a large amount of uncertainty, regardless of whether the *current* policy decision was right or wrong.

A large and *known* effect of uncertainty is volatility, which we have seen and will continue to see. A large and *unknown* effect of this particular uncertainty is how it will influence investors to act. Currently, it appears that investors should feel somewhat capped on the upside: if global factors improve and corporate earnings recover, then interest rates should be on a path higher. Higher rates = compressed margins, reduced multiples, and restricted access to capital (i.e. lower asset prices all else equal). At the same time, investors may feel like there is a floor to asset prices. Quick deterioration of global factors could adversely influence the U.S., causing the committee to reverse course and start easing again. Additional easing could equal easier access to capital, more liquidity, and/or a lower USD⁷. In our view, these two situations define the extreme tops and bottoms of the market, with the uncertainty influencing movements in between. The closer we are to scenario one, the more bearish we become and vice versa.

The (fixed) Investment Case

A high level of uncertainty (or fear) can create additional consequences in an economy, outside of increased volatility for investors as we mentioned above. One consequence however, must be thought of in the perspective of years and decades, not quarters.

Excessive uncertainty (especially in the bond market) can greatly alter the actions of corporations and small businesses. Executives and owners will direct their entities to be more conservative during times of distress or when future seems very cloudy. This conservatism amounts to cash flow being retained, paid out in dividends, and/or used to purchase their own shares. Although these actions make for solid, healthy businesses, they also prevent cash flow from being invested to increase demand. These investments (capital expenditures, or capex) are crucial to having a better business in the future⁸. Investing in new technology, new people, higher wages, and/or new assets can increase the efficiency of operations and/or increase demand⁹ (think new products, new innovations, larger footprint). Without capex growth, a business may get left behind on the innovation curve compared to competitors (think Kodak, Hewlett Packard, Dell).

⁷ Demonstrating support for US asset prices.

⁸ Capex would be classified as a 'fixed investment', whereas buybacks and dividends would be classified as a 'capital return'.

⁹ Otherwise known as sales or revenues.

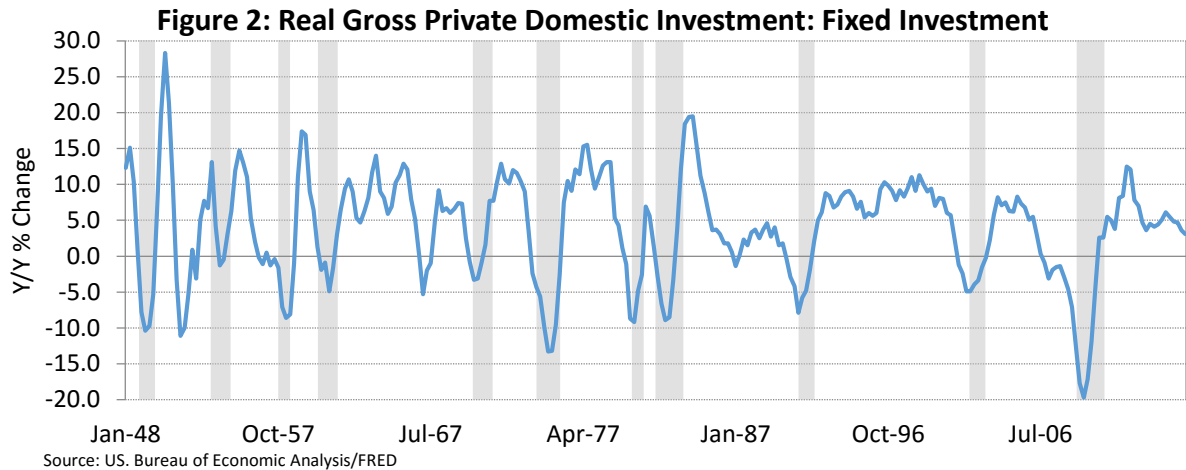
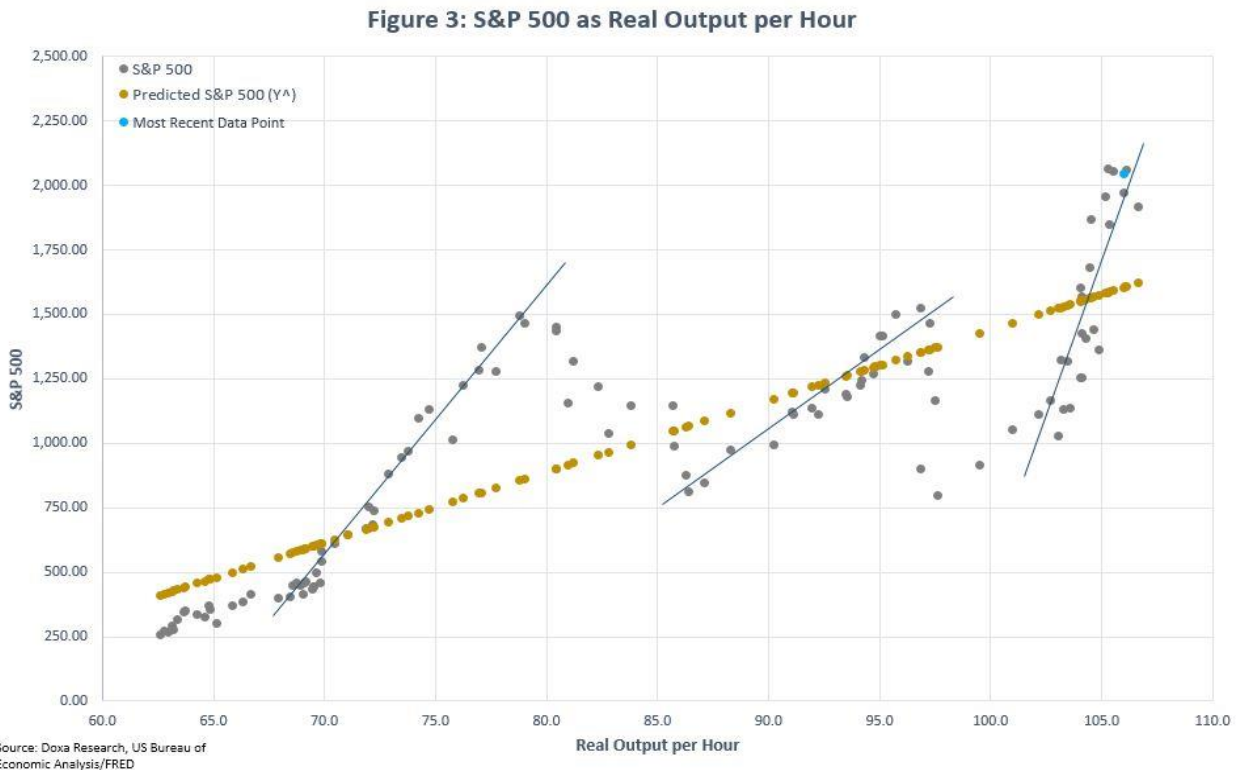


Figure 2 shows the % change, year over year, of real domestic fixed investment¹⁰. Note the large decline in 2008 was followed by a corresponding pop, but sub-5% growth has persisted ever since – lower than other expansionary periods outside of the late 1980's.^x The thought here is simple, "...it's not clear either the public or private sector has made investments this decade that will lead to growth in the 2020's. The 1980's were powered to some extent by the heavy capex of the 1970's. The 1990's consumption/tech boom was powered by investments made in the 1980's. The broadband internet/tech boom of the 2000's doesn't happen without the telecom investments of the 1990's. And FANG¹¹/Uber/\$30-40 oil doesn't happen without investments made in the 2000's."^{xi} Each one of these investments created

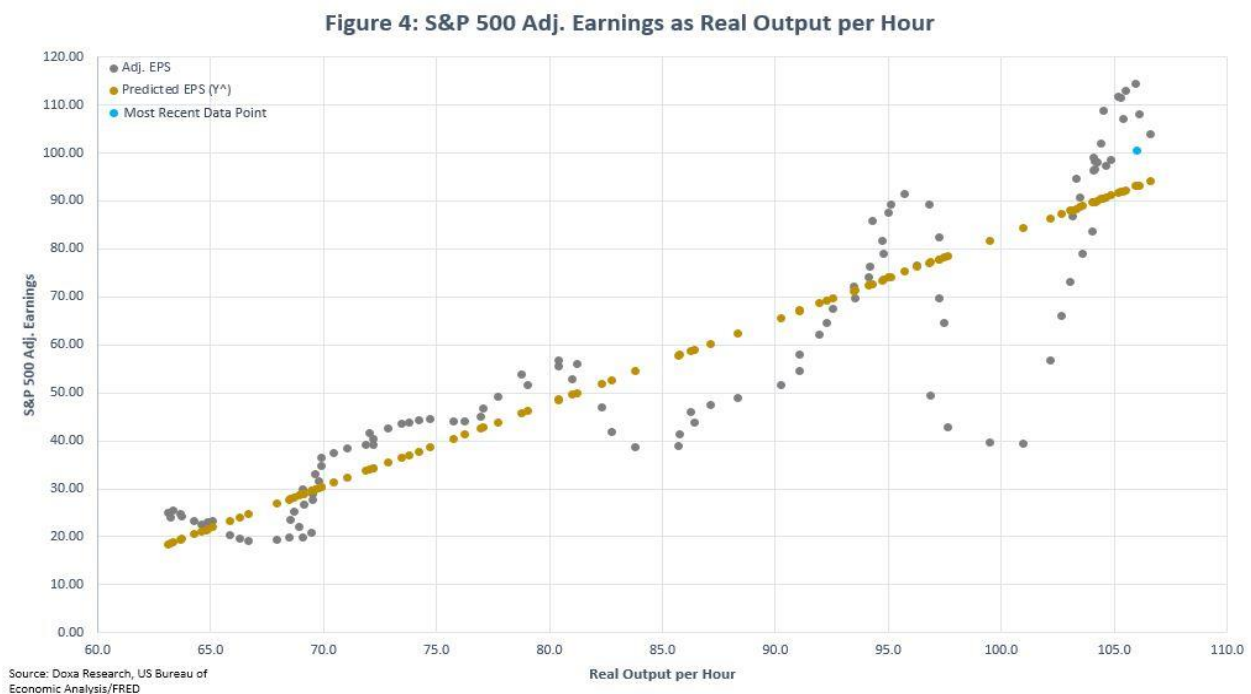


¹⁰ As defined by the BEA.

¹¹ Acronym for Facebook, Amazon, Netflix, & Google meaning – 'the internet of things'.

innovation/efficiency, which increased productivity. Productivity increased earnings, and higher earnings increased asset prices.

Figure 3 is a regression analysis¹² expressing the S&P 500 since 1988 as real output per hour (productivity). Two things stand out to us: 1) Market prices fluctuate, but generally increase as productivity increases (72% R^2) and, 2) in recent years, market prices have increased much faster than productivity – actually the fastest rate in 20 years. This can be explained by either much higher demand (revenues) or by financial engineering (buybacks, increased credit/leverage) – hint: its not revenues (we will look into this in the next section). Are current asset prices solely built on buybacks and low interest rates? Will this decade's investments show up to fuel productivity higher over the next ten years? Can innovation continues the current growth trajectory? Although these questions cannot be answered currently, our work does not inspire much confidence in asset prices at current levels. The steep slope in prices compared to productivity seems unsustainable, especially knowing that weak capital expenditures may not power much efficiency in the future. Both figures 3 & 4 suggest that S&P 500 would be more appropriately priced in between 1700 – 1800, based on the current rate of productivity [Figure 4 (82% R^2) suggests adj. EPS around \$95, using the current 18.5 multiple would equal 1757].



Another consequence of uncertainty effecting investment can be rapid changing, and can influence the capital expenditures mentioned above. This consequence is rooted in liquidity.

Most often, smaller companies need capital to invest in their business for growth or efficiency (capex). This funding usually comes from two places: the credit markets (issue debt) or the equity market (issue stock). As we stated earlier, uncertainty can create excess volatility in

¹² Regressions show the relation between two variables and predicts the value of Y based on the value of X. Time has no effect in a regression analysis. The R^2 quantifies how strong a correlation exists between X & Y.

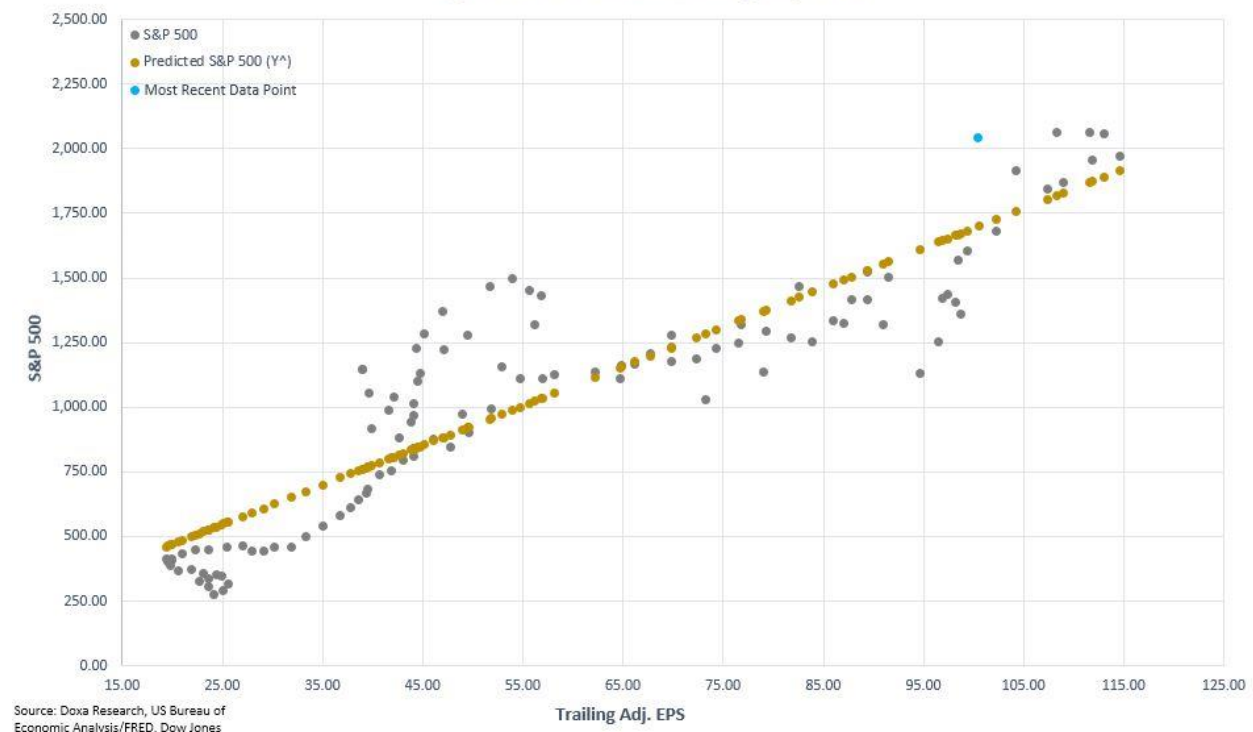
the market place. Increased volatility usually means widening credit spreads¹³ – i.e. more expensive for less credit-worthy borrowers to access capital – and rapid fluctuations in share prices – i.e. ‘cheap’ or ‘expensive’ company valuations. Borrowing money at higher than normal rates or receiving capital at an undervalued valuation is not what good managers and executives strive for. This has been very apparent in 2016. On average, roughly \$15 billion in funding through IPO’s come to market in January. This year – zero.^{xii} M&A transactions (by USD) are lower by 19% globally and 38% in the U.S. In the debt markets, investment grade offerings (by USD) are roughly flat, while high yield, sovereigns, MBS’s, and ABS’s are all lower compared to 2015.^{xiii} It seems the companies that need capital cannot get capital and the companies that do not need capital are getting it to fund capital return programs (buybacks, dividends, etc.)¹⁴.

To us, it seems fairly clear how the uncertainty generated by the Federal Reserve (section one) can greatly influence fixed investment (section two), adversely affecting the value of financial markets and the economy. However, it is too simple to say that current and expected policy actions have foreshadowed a decline in the economy. There is a way forward: earnings.

Corporate Earnings

Earnings, or profits, are the lifeblood of stock prices. The better the outlook for future earnings, the higher the stock price will trade – in most cases and over a longer time frame. *Note: We recognize that short term market movements can fluctuate for a variety of reasons with or without a regard for immediate or future earnings. For the purpose of this section, assume we are referring to a time horizon greater than one year.* Figure 5 shows this strong correlation (82%) in a regression

Figure 5: S&P 500 as Trailing Adj. EPS



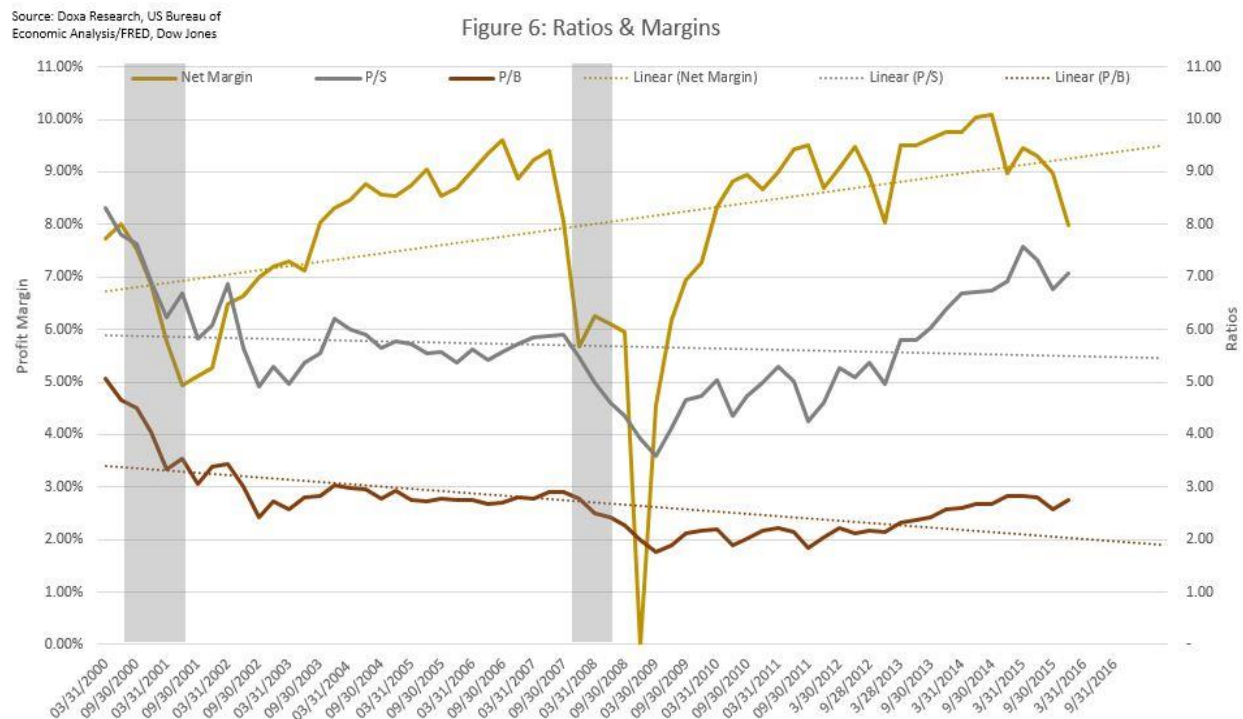
¹³ Referring to the spread between investment grade and non-investment grade borrowing costs.

¹⁴ The buyback yield of the S&P 500 is currently close to highs at 3.3%.

analysis using data from 1988 to current. So if stock prices go higher when earnings go higher, what are the ways companies increase earnings?

- 1) Increase revenue (sales), without increasing costs at the same rate.
- 2) Decrease costs (expenses) more than the decrease in revenues.
- 3) Financial maneuvering, i.e. buybacks, M&A, tax & interest rates, deferred comp, etc.¹⁵

The high-level thought here is relatively simple: if earnings grow enough to offset the headwinds from section 1 (Monetary policy) and section 2 (lack of investments), then asset prices as a whole could move higher, or at least remain stable. However, an increase in earnings must be the effect of higher revenues (#1 above) because the other two options are just about exhausted. We can see this in figure 6. In 2009, companies engaged in aggressive cost cutting. These deep cost cuts



increased profitability (gold line) as demand marginally improved – raising earnings. Higher earnings = higher stock prices. As margins rebounded near 10% in 2012^{xiv}, many companies ran out of expenses to cut and embarked on financial maneuvering, such as inversions, buybacks, & capital arbitrage¹⁶ to increase earnings¹⁷ (this can be seen in figure 7). Higher earnings = higher stock prices. Most importantly, we note that revenue growth has been mostly muted since late 2012. The grey line above (figure 6) represents the price-to-sales ratio, simply being the price of the S&P 500 Index divided by its total revenues. This ratio has steadily grown since 2012, meaning that the price of the index has increased more than its revenues – in other words, the past 3 years of growth in the S&P 500 has not been because of strong demand.

¹⁵ This refers to financial actions outside of core operating functions, or operating income.

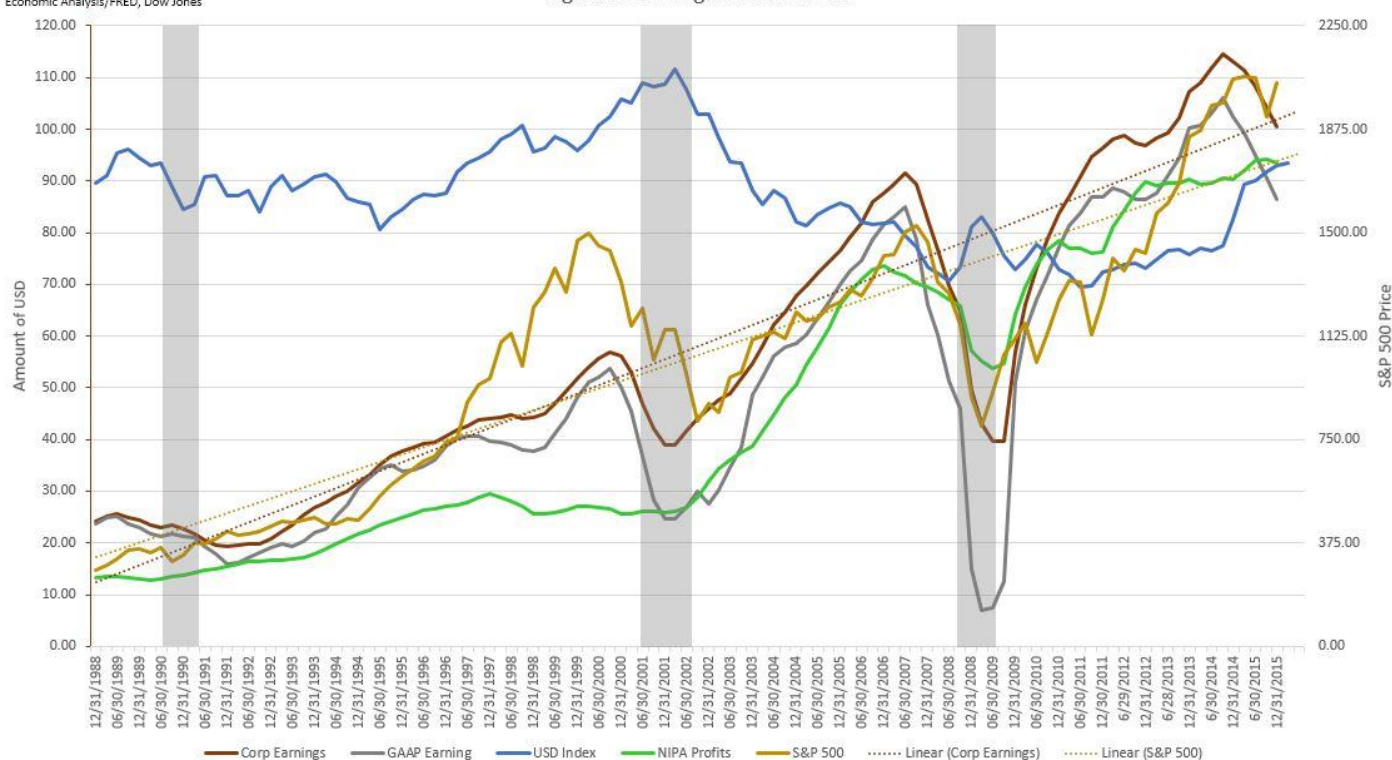
¹⁶ This describes situations where a company takes a loan to repurchase its own stock, capturing the difference between the interest rate and the company's dividend.

¹⁷ Inversion = lower tax rate = higher earnings. Buybacks = smaller divisor = higher earnings. Arbitrage = less financial liabilities = higher earnings.

With companies already running lean and without additional dry powder for engineering, revenue growth appears to be the only way to power earnings higher – and the rate of growth over the past couple of years does everything but increase our confidence. Nevertheless, demand is what we identify as our biggest X factor and solely drives our bull case laid out on page one. If demand suddenly escalates, stock prices and earnings will surely follow. Demand is the hardest of any variable to forecast because of the qualitative and fickle nature of the consumer, but data we analyze closely does not currently point to any material acceleration.

Source: Doxa Research, US Bureau of Economic Analysis/FRED, Dow Jones

Figure 7: Earnings & the S&P 500



Investors frequently approach us with many questions about earnings and their effect on prices, so we will try to answer the most common ones here:

Q: Does an earnings decline foreshadow a recession?

A: Using data since 1988, including the past 3 recessions, earnings (grey & brown lines) have never declined materially without the index (gold line) following it. [Figure 7]

Q: Doesn't the US dollar have a big influence over earnings?

A: Actually, the USD (blue line)¹⁸ has very little effect on earnings as a whole. Over the past 20 years, the value of the USD has moved rather independent of prices and earnings over the long term. [Figure 7]

Q: Businesses are beginning to pay more for labor. Wouldn't this drive up expenses; therefore, decrease profits?

A: Yes. At a company level, costs have been rising since late 2014.^{xv} Healthcare regulation, higher wages, and an increasing cost of capital have decreased profit margins (gold line).

¹⁸ The blue line shown is the trade-weighted USD Index.

Lower margins should incentivize business to raise prices, creating inflation. Higher inflation should influence the policy from the FOMC, bringing us back to section one. **NOTE:** *innovation and technology are deflationary¹⁹; therefore can increase competition. Increased competition can prevent businesses from raising prices, which may lower margins further. Lower margins = lower multiples = lower stock prices.* [Figure 6]

Q: Could the recent decline in earnings be attributed to the decline in commodity prices?

A: Partially, yes. The energy sector contributed the largest amount of earnings to the index in 2014 and the smallest in 2015. Excluding energy, earnings in 2015 were roughly flat. Although, excluding energy from the S&P 500 would make the 2015 return modestly higher, meaning the multiple increased throughout the year on flat earnings. We note the benefactor of this multiple expansion was consumer staples, which owns the largest multiple in the index at 21x.^{xvi}

Q: We are a service economy and a net importer of energy. Wouldn't lower energy prices help the economy and earnings?

A: If our economy was primarily focused on energy, we would already be in a recession like many other energy exporters. Luckily, we have the US consumer holding up GDP for the time being. Nevertheless, economies are complex and very connected – it is rare that one industry suffers and the others flourish. Low commodity prices can cause many job losses (which we have not seen) and influence lower input prices. Ironically, margins have actually fallen since the oil price decline, leading us to believe that businesses are passing the savings on to their customers. Yet, we haven't seen any material pickup in consumer spending^{xvii}. This is one of the many variables of our X factor, demand. This question is still 'to be determined'.

Global Influences

If global trade patterns with the US remained unchanged, 2008 monetary policy actions alone would have most likely caused a quicker rebound and economic expansion than we felt in reality. Low interest rates devalued the US dollars against all other currencies and made investments in the US cheaper, spurring large exports and economic growth. Unfortunately, trade patterns (and global politics) are never unchanged – they are complex. Applying systems theory here works best –

[Paraphrased] “Global markets are complex, but certainly not complicated. Think of a watch. A watch is complicated, but not complex. When we open it up there is a whole heap of complicated gears and springs, but its outcome is simplicity itself – it just tells the time. Now when we look at markets, the ‘gears’ are pretty simple (buy/sell, borrow/lend) but the outcomes are complex because they are certainly not stable and many different outcomes, predictable and unpredictable, can occur simultaneously.”^{xviii}

This complexity has defined the past 7 years. The outcome of low interest rates and ‘easy money’ is fairly straightforward in one economy, but untested and complex when multiple developed economies (EU, Japan, Nordics, Australia, US, UK) try it all at once.²⁰ To understand where we are now, a simple chain of events:

1. US housing bubble popped, lowering US consumer demand
 - a. The Federal Reserve responded with low interest and asset purchases, which
 - i. Spurred investment and domestic demand.
 - ii. Devalued the USD.

¹⁹ Technology is naturally deflationary because the overall point is to increase efficiency.

²⁰ From 2008 on, many economies have engaged in some sort of monetary easing.

2. The low value of the USD made US goods cheaper abroad, which
 - a. Increased exports from the US.
 - b. Decreased exports from everywhere else.
3. Other developed nations caught contagion because
 - a. US consumers were buying domestically (cheaper).
 - b. Foreign consumers were buying from the US (cheaper).
4. These countries embarked on 'easy money' policies to devalue their currencies so they could compete in global trade again. These policies
 - a. Repeated over several years and slowed the recovery of all economies.
5. These policies stole exports from emerging economies, also slowing their rapid growth. This is a big problem because
 - a. Many emerging economies are built on credit that expects a certain rate of growth. Slower growth will put financial stress on many emerging institutions.
 - b. These economies want their growth back, and may devalue to regain their 'lost' exports.

Clearly, many variables are being left out for simplicity, but we are now at an inflection point between developed countries wanting more growth, and emerging economies wanting faster growth. The chase for growth is embodied by the recent commodity decline – producers oversupplied the market in search of buyers when buyers of that magnitude just weren't there.

Luckily over time, markets can correct this (detailed in [The Variables](#)). Oversupply means cheaper prices, which equates to lower future supply and more demand. This is happening and will continue to happen, all else equal – but we know all else is never equal. The largest potential foreseeable threat to this market mechanism is detailed below.

China: Being the world's second largest economy and the most populous country on earth, China is everyone's problem. First, we specifically want to call out folks who insist that China doesn't materially affect the U.S. because only 7.7% of all exports from the States go to China.

1) 7.7% of \$1.5 trillion matters.

2) 21.8% of all US imports come from China. If China devalues the yuan or events disrupt the import flow – a large range of 'cause & effect' events can influence the U.S. economy. China matters.^{xix}

Again, for simplicities sake, the short version of China's past 20 years amounts to this: China wanted to slowly open their economy for monetary benefits, which required a mass of investment in infrastructure. Foreign companies and banks piled in to take advantage of a huge market. Per usual, infrastructure projects were built on credit assuming future growth. Cheap input prices made Chinese exports soar, meeting big growth expectations and spurring more projects and more credit growth. When global demand halted in the late 2000's, China shifted the growth focus to their own people, known as domestic consumption. Since much wealth had been created, this worked – GDP targets were still met and credit growth kept going. China seemed like a good bet in a struggling world, causing the yuan to appreciate (note: there is also a USD component here)²¹.

China is now at a transition point. Growth from domestic consumption cannot meet the growth demands from creditors. Exports are actually a drag on growth at this point because of a strong yuan. 33% of firms reported growth in capital spending in the 1st quarter, the

²¹ The value of the Yuan is determined by the PBoC on a daily basis, known as an adjustable peg. Many variables can influence these daily adjustments.

lowest in 5 years. Hiring is at a four year low, making it increasingly difficult for domestic spending to increase when people are being laid off.^{xx}

As these economic headwinds slow growth, a credit crisis may be born. \$1.3 trillion of Chinese corporate debt, or one seventh of the total, is owned by companies whose profits don't cover their interest payments. A default of this magnitude would trigger bank losses equivalent to 7% of China's GDP.^{xxi}

Among many policy actions the PBoC can take^{xxii}, it seems the most effective and most likely could be a currency devaluation. This would make Chinese goods cheaper to the world, increasing exports, and boost growth so firms can satisfy creditors. Assumedly, this devaluation would hurt the rest of the world as China would steal export growth from other nations. Many Chinese firms share this same view of the yuan, as the aggregate amount of



USD M&A transactions YTD sums \$28.8 billion – more than the last 3 years combined.^{xxiii} For these Chinese buyers, this shows a strong desire to move assets from the yuan to the US dollar. Whether a devaluation would fix China's problems or not remains to be seen, but we feel relatively confident that the move would not be met with positive feelings across global markets.

Other quick global notes:

- 1) A 'Brexit'²² would negatively affect the UK economy in the short term. The BoE's large current account deficit may be the culprit here, stoking big outflows.
- 2) The world's 7th largest economy, Brazil, is set to impeach another President. We note that since 1985 (end of military rule), only one out of five elected presidents have completed a full term in office without a corruption scandal attached.^{xxiv}
- 3) Japan's massive economic experiment isn't turning any corners, leaving us very concerned about the nation's prospects. The administration is slated to add a

²² Referring to the referendum in June allowing Britain to separate themselves from the European Union.

large sales tax in 2017 to lessen the burden of prior years' stimulus, but that seems unlikely seeing as the country cannot even spur spending without it.^{xxv}

The financial markets are extremely complex because the variables discussed lead to many different outcomes. At the current time, our highest conviction leads us to be more cautious moving forward, looking for opportunities that involve strong brands, good management teams, pricing power, and strong economic tails winds. Chasing after high valuations with little earnings growth is not likely to be advantageous over time. We prefer to avoid areas like China and Japan and are intrigued by valuations in Argentina and Mexico. Our overall outlook is not necessarily dire, nor does another 2008 seem probable, i.e. widespread economic weakness. Instead, we view the environment as one where asset prices need a reset to bring the next stage of growth. In closing, the best way to win a game is to stay disciplined to your fundamentals and not hope for a last second buzzer beater.²³

Chase Lee

Director of Research

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- ^{xxv} Poll finds over 60% favor delay, <http://www.japantimes.co.jp/news/2016/04/15/business/poll-finds-60-favor-delay-japans-consumption-tax-hike/>, April 2016

IMPORTANT INFORMATION

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Bond investors should carefully consider risks such as interest rate, credit, default and duration risks. Greater risk, such as increased volatility, limited liquidity, prepayment, non-payment and increased default risk, is inherent in portfolios that invest in high yield ("junk") bonds or mortgage-backed securities, especially mortgage-backed securities with exposure to subprime mortgages. Generally, when interest rates rise, prices of fixed income securities fall. Interest rates in the United States are at, or near, historic lows, which may increase a Fund's exposure to risks associated with rising rates. Investment in non-U.S. and emerging market securities, directly or indirectly, is subject to the risk of currency fluctuations and to economic and political risks associated with such foreign countries.

ECONOMIC INDICATORS AND FINANCIAL DEFINITIONS

Inflation – The Consumer Price Index (CPI) NSA (non-seasonally adjusted) measures changes in the price level of a market basket of consumer goods and services purchased by households. This indicator value represents the trailing year over year % change in the CPI index as of last month-end.

GDP / Economic Expansion – GDP (Gross Domestic Product) measures the total market value of a nation's output of goods and services during a specific time period. It is usually measured on a quarterly basis. Current GDP is based on the current prices of the period being measured. Nominal GDP growth refers to GDP growth in nominal prices (unadjusted for price

changes). Real GDP growth refers to GDP growth adjusted for price changes. Calculating Real GDP growth allows economists to determine if production increased or decreased, regardless of changes in the purchasing power of the currency.

Recession - A period of temporary economic decline during which trade and industrial activity are reduced, generally identified by a fall in GDP in two successive quarters.

Market Volatility (VIX) -CBOE VIX (Chicago Board Options Exchange Volatility Index) measures annualized implied volatility as conveyed by S&P 500 stock index option prices and is quoted in percentage points per annum. For instance, a VIX value of 15 represents an annualized implied volatility of 15% over the next 30 day period. The VIX measures implied volatility, which is a barometer of investor sentiment and market risk.

Aggregate Demand - In macroeconomics, aggregate demand (AD) or domestic final demand (DFD) is the total demand for final goods and services in an economy at a given time. It specifies the amounts of goods and services that will be purchased at all possible price levels.

Monetary Stimulus - an attempt to use monetary or fiscal policy to stimulate the economy by lowering interest rates and/or quantitative easing.

Policy Normalization - Specifically, monetary *policy normalization* refers to steps to raise the federal funds rate and other short-term interest rates to more normal levels and to reduce the size of the Federal Reserve's securities holdings and to return them mostly to Treasury securities, so as to promote the Federal Reserve's statutory mandate set by Congress.

Productivity - the effectiveness of productive effort, especially in industry, as measured in terms of the rate of output per unit of input.

Monetary Policy - the process by which the monetary authority of a country controls the supply of money, often targeting an inflation rate or interest rate to ensure price stability and general trust in the currency.

Yield - The yield of a bond is inverse to its price: as bond prices increase, bond yields fall. For example, assume that an investor purchases a bond with a 10% annual coupon and a par value of \$1,000. The yield on this bond would be its par value divided by the interest it pays.

Unemployment - The Bureau of Labor Statistics measures employment and unemployment of all persons over the age of 15 using two different labor force surveys conducted by the United States Census Bureau (within the United States Department of Commerce) and the Bureau of Labor Statistics (within the United States Department of Labor) that gather employment statistics monthly. The data reported here is seasonally adjusted (SA) to account for seasonal gains in employment leading up to Christmas.

The S&P 500® Index - is a free-float capitalization-weighted index published since 1957 of the prices of 500 large-cap common stocks actively traded in the United States. The stocks included in the S&P 500® are those of large publicly held companies that trade on either of the two largest American stock market exchanges: the New York Stock Exchange and the NASDAQ.

Capital Expenditures (Capex) - A capital expenditure is incurred when a business spends money either to buy fixed assets or to add to the value of an existing fixed asset with a useful life extending beyond the taxable year.

Multiple / Price to Earnings Ratio (P/E) - a ratio for valuing a company that measures its current share price relative to its per-share earnings.

Quantitative Easing - is a type of monetary policy used by central banks to stimulate the economy when standard monetary policy has become ineffective.

High-Yield Bond - A high paying bond with a lower credit rating than investment-grade corporate bonds, Treasury bonds and municipal bonds.

The Dow Jones Industrial Average - a price-weighted average of 30 significant stocks traded on the New York Stock Exchange and the NASDAQ.

Corporate profit - also called net income, the amount remaining after all costs, depreciation, interest, taxes, and other expenses have been deducted from total sales.

Liquidity - the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.

Wages - monetary compensation (or remuneration, personnel expenses, labor) paid by an employer to an employee in exchange for work done.

R-squared (R²) - a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determination for multiple regression.

Adjusted EPS / Pro-forma EPS - otherwise known as non-GAAP earnings, this EPS number factors in currency effect, D&A, & non-recurring expenses.

PBoC - People's Bank of China, the central bank of the People's Republic of China

Profit Margin / Net Margin - the percentage of revenue left after all expenses have been deducted from sales. The measurement reveals the amount of profit that a business can extract from its total sales. The net sales part of the equation is gross sales minus all sales deductions, such as sales allowances.

Structural - of or relating to the arrangement of and relations between the parts or elements of a complex whole.

Developed Economy - countries with high gross domestic product (GDP) per capita and industrialization; countries in which the tertiary and quaternary sectors of industry dominate would thus be described as developed.

Emerging Economy - progressing toward becoming more advanced, usually by means of rapid growth and industrialization. These countries experience an expanding role both in the world economy and on the political frontier.