Q4 2016 Market Review & Outlook

Morgan Creek Capital Management

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Letter to Fellow Investors

Babson's Brilliance and #WelcomeToHooverville

Source(s): NPR, Silverbearcafe.com, Babson College, Seattle Post-Intelligencer

The first time I heard the name Babson was in 1980 when I was a senior in high school in Weston, Connecticut (serendipitous given some of the themes of this letter and coinciding with Reagan's election). I was on a bus with my soccer team headed to Massachusetts to play weekend scrimmages against Babson College and Brandeis University. Our coach had convinced our parents that this was a college tour and showcase event where the college coaches would be evaluating us as potential recruits. We learned (the hard way) the real reason for the trip was to help break the complacent attitude the team developed after going undefeated the previous season. Coach felt we were overconfident as we entered the new season, and he intended to show us that we didn't even know what we didn't know about the game of soccer. The bus trip was awesome, the first night in the dorm at Babson was amazing and we were pretty ebullient as we sauntered onto the field on Saturday morning. Most of us had never even heard of Babson College. How good could they be? We were the WCC Champions. This was going to be a great day for the Trojans. It turns out that overconfidence kills (in sports, investing, and pretty much everything else). Since we will be talking about 1929 a lot in this letter, it is appropriate to compare that scrimmage to the Saint Valentine's Day Massacre (a gangland ambush perpetrated by Al Capone's gang in Chicago on February 14, 1929). It wasn't pretty. We never had a chance. Any swagger we had when we walked on the turf, got beaten out of us over the next 90 minutes in Wellesley, yet despite the short-term pain (both physical and emotional) we all learned some very valuable life lessons that day. We learned that humility and resilience are two of the most important character traits (in life, sports, and especially investing). They say that all growth requires pain and by that metric, we all grew a lot over that weekend. Despite getting our butts kicked twice (we lost at Brandeis too) we walked away better for the experience, and with a more humble and committed attitude, we went on to have a very successful season.

Unbeknownst to us at the time, Babson College was a lot more than just a soccer powerhouse. Roger Babson founded the Babson Institute on September 3, 1919 (ironically, ten years to the day before the stock market peak that would bring him fame as a market forecaster and make him the subject of this letter) as he saw a need for a private college specializing in business education to provide practical and ethical training for the sons of businessmen who wished to become business executives. The Institute enrolled its first class of twenty-seven students in a one year program focused on the fundamentals of business. Babson believed, ***"it is not knowledge which young people need for success, so much as those basic qualities of integrity, industry, imagination, common sense, self-control and a willingness to struggle and sacrifice. Most individuals already have far more knowledge than they use. They need inheritance and development of a character, which will cause them properly to apply this knowledge. Real business success comes through the qualities above mentioned, not through money, degrees, or social standing."*** Classwork was paired with opportunities to gain

practical experience, and group work, and first exposure to business were emphasized. Over time, the Institute expanded beyond the original instruction model to a three-year program and eventually awarded undergraduate degrees (1947) and master's degrees (1953). In 1969, the Institute converted to a four-year college and began admitting women. Over the next four decades, Babson has become the predominant school for entrepreneurship in America and has been consistently ranked #1 for nearly three decades. In addition to the main campus in Wellesley, Babson has opened campuses in Boston and San Francisco to extend its reach into the entrepreneurial centers of the U.S. and created a blended learning program for the Babson F. W. Olin Graduate School of Business MBA program. From humble beginnings, Babson has grown into an internationally recognized leader in business education and has maintained the entrepreneurial spirit of its founder and namesake.

Roger Ward Babson was born on July 6, 1875 in Gloucester, Massachusetts.[1] Babson's father Nathaniel owned a dry goods store and instilled a keen sense of business and commerce into his son that would become the guiding principles for his career, philanthropy and extensive writings later in life. Babson also had a deep interest in his family heritage and rigorously studied his ancestors' personalities, professions, and lifestyles, as he believed personality traits were hereditary and that individuals should focus on their inherent core strengths. This process led to his belief in and deep understanding of human psychology and personal interactions and served him very well during his career. One of the most interesting things about Roger Babson was his independent thinking and his willingness to break from conventional wisdom. As an example, he did not believe in the traditional university experience as he felt the instruction, ***"was given to what had already been accomplished, rather than to anticipating future possibilities."*** But as a dutiful son, he attended the Massachusetts Institute of Technology to gain the rigorous, technical education that his father felt was necessary for success in the business world. Babson had a disappointing experience at M.I.T., as he believed his professors failed to foresee the great industries of the 20th century including automobiles, air travel, motion pictures and radio. The area of study he did value was learning about the eminent scientist, mathematician, and philosopher, Sir Isaac Newton. Babson was enamored by Newton's original discoveries, in particular his Third Law of Motion: For every action there is an equal and opposite reaction. This construct loomed large in his life (and in this letter) as he integrated Newton's theory into his personal and business activities.

Upon graduation from college in 1898, Babson's father encouraged him to seek employment in a line of work that would ensure repeat business indefinitely. Babson chose finance and began a search for a position as an investment banker. He found a position with a Boston investment firm, where his intelligence and inquisitiveness got the better of him. He was a quick study and soon had learned enough about some of the sketchy ways that investments were being sold that he actually got himself fired. After only a short time in the business, Babson concluded that the financial services industry at the time was broken (think bucket shops) and was quoted as saying ***"if things are not going well with you, begin your effort at correcting the situation by carefully examining the service you are rendering, and especially the spirit in which you are rendering it."*** So young Roger took matters into his own hands, and while trying to keep the best interests of his clients ahead of the firm, learned the hard way that the firm was seeking to maximize their profit and they informed him that his services were no longer required (unfortunately, character is not always welcome). Undeterred, and in keeping with one of his core beliefs, "***It is wise to keep in mind that neither success nor failure is ever final,"*** Babson decided to set up his own bond brokerage firm in NYC. Later, he moved back home and brought Wall St. to Worcester, Massachusetts. In the fall of 1901, Babson contracted tuberculosis and was given the traditional gloomy prognosis

1) "Biography of Roger Babson." Babson College. http://www.babson.edu/about-babson/at-a-glance/babsons-history/Pages/biography-of-roger-babson.aspx

for that era. For Babson, a man of deep faith and great resolve, giving up was not an option, and with his characteristic determination, he fought the disease and was intent on living a healthy and productive life. Babson also believed that, ***"if things go wrong, don't go with them,"*** so he went his own way. This turn of fate provided another opportunity for Babson to show his resilience and tenacity. Concerned about how he could continue an investment career away from a major city, he decided to become an entrepreneur (the later focus of Babson College) and started an enterprise based on his unique view of the investment business. Babson had an insight that all financial institutions employed statisticians who simply duplicated each other's efforts in their active research. Babson (with the help of his wife) created a central clearinghouse for economic, business and investment information (an early form of Bloomberg; information is power, and generates lots of wealth too) straightforwardly named Babson's Statistical Organization. Babson published analysis of the stock and bond markets in a newsletter format and sold subscriptions to institutions and individual investors. The Babsons were true pioneers and revolutionized the financial services industry, turning an original investment of $1,200 in seed capital into an organization generating millions of dollars of annual revenue. Babson was known to say, ***"Experience has taught me that there is one chief reason why some people succeed and others fail. The difference is not one of knowing, but of doing. The successful man is not so superior in ability as in action. So far as success can be reduced to a formula, it consists of this: doing what you know you should do. The successful man is the one who had the chance and took it. It takes a person who is wide-awake to make his dream come true,"*** and he was living proof.

Babson's success as an investor and in running his investment research firm was, to some large degree, based on his unique (some might say unorthodox) beliefs in how markets functioned. Babson was quoted as saying, "***Don't look for society to give you permission to be yourself,"*** and his willingness to start an investment business based on a theory that many dismissed as something akin to astrology was notable (particularly because it ended up working). As mentioned above, during his time at M.I.T., Babson became interested in Newton's third law and posited a theory that the business cycle was driven in part by the interplay between human participants and gravity. Over the course of his career Babson researched and developed Newton's theory and came to the conclusion that economic variables (and even the stock market itself) could be explained by the gravitational forces of the earth. Working with M.I.T. Professor of Engineering George F. Swain, Babson applied the concept of actions and reactions to classical economics, which led to the development of the Babsonchart of Economic Indicators (pictured above). The Babsonchart was designed to not only assess current economic, business and investment conditions, but to predict future conditions as well. Having amassed a meaningful fortune himself, Babson expanded his business information business into wealth management after the Financial Panic of 1907 and utilized the Babsonchart to counsel on when it was wise to be in the markets or out of the markets (one of the first tactical allocation services). Babson had concluded that there was a better way to manage wealth, saying, ***"More people should learn to tell their dollars where to go instead of asking them where they went."*** Babson thought it was important to just begin his wealth management effort with his own capital because he believed that, ***"people would rather be shown how valuable you are, not told."*** Actions always speak louder than words, and Roger Babson was always a man of action. As a disciple of Newton, Babson drew strength from the construct of "actions and reactions," so whenever an endeavor in Babson's life ended, a new one immediately began to take its place. Babson had an amazing ability to never be discouraged by setbacks. One of his mantras was, "***When we are flat on our backs there is no way to look but up."*** Perhaps his greatest strength, however, was his willingness to take chances and to rebound when the risks at the time perceived by others seemed to overwhelm the likelihood of a successful outcome.

Babson developed his own list of ***"Ten Commandments of Investing"*** that he encouraged his readers and clients to follow:

1) ***Keep speculation and investments separate.*** This is a very important concept that is often lost on market participants. We describe it as the Three Bucket Rule. Everyone should have three buckets in their portfolio, the Liquidity Bucket (10% to 15% to cover lifestyle costs), the Stay Rich Bucket (70% to 80% that is diversified, long-term investments,) and the Get Rich Bucket (10% to 15% for speculation, we joke this is for the stock tips and friends & family deals, unfortunately, you will likely lose it all, so keep it small).
2) ***Don't be fooled by a name.*** Make sure you know what you are buying as names can be deceiving. For example, the Blue Chip Growth Fund in my 401(k) that turned out to be "the Blue Chips of the future" and was actually small-cap growth instead of large-cap core.
3) ***Be wary of new promotions.*** If a financial services firm is selling you something new, it is likely that they have figured out how to package up an old idea with higher fees for themselves.
4) ***Give due consideration to market ability.*** Be honest with yourself about how much time you are willing to commit to investing and whether you have the knowledge, temperament and discipline to be an effective investor.
5) ***Don't buy without proper facts.*** Do your homework and never (ever) buy a stock tip. Always remember there is someone on the other side of every transaction who has done at least as much diligence and research as you have.
6) ***Safeguard purchases through diversification.*** Concentrated portfolios make you rich (or poor) and diversified portfolios keep you rich. How do you create a small fortune? Start with a large fortune and stay concentrated.
7) ***Don't try to diversify by buying different securities of the same company.*** Single company risk is a very dangerous game (that said, over the past 80 years there have been some developments in capital structure arbitrage which make this rule a little less absolute).
8) ***Small companies should be carefully scrutinized.*** Back in Babson's time this was a really big deal as the small companies that went public were dicey at best, and fraudulent at worst. With the increased regulatory burden placed on public companies today, there is somewhat less risk, but small-caps are still very volatile and should be handled with extra care.
9) ***Buy adequate security, not super abundance.*** Investing is about taking intelligent risks. You must take risk in order to make an adequate return, but you only want to take the risks where you are adequately compensated.
10) ***Choose your dealer and buy outright (i.e., don't buy on margin.)*** Leverage is a tool. It can be used to amplify the returns of any assets, but the danger of margin is you are leveraging leveraged assets, which can lead to problems. The real danger is leverage can't make a bad investment good, but it can make a good investment bad through forced selling at inopportune times.

Roger Babson was a great thinker, avid reader and prolific writer. He believed it was his obligation to share his insights, experience and wisdom with others, particularly those who were not already subscribers to Babson's Reports. From 1910 to 1923, he wrote a weekly commentary for the *Saturday Evening Post* and wrote weekly columns for the *New York Times* and other newspapers. As was usually the case, after being engaged in an industry for some time, Babson thought of ways to improve it and so he formed his own media syndicate, Publishers Financial Bureau, to disseminate his work to newspapers across the country. Babson wrote an astonishing 47 books, including his autobiography, appropriately titled *Actions and Reactions,* given his

admiration of Sir Isaac and his predilection for being a man of action himself. Babson wrote about a myriad of topics from business, investing, education, health, commerce, politics, religion, societal challenges, all with one consistent, primary message - that individuals, and society as whole, could, and should always seek to get better. He believed no achievement or contribution was too small, saying, "***Do not let yourselves be discouraged or embittered by the smallness of the success you are likely to achieve in trying to make life better. You certainly would not be able, in a single generation, to create an earthly paradise. Who could expect that? But, if you make life ever so little better, you will have done splendidly, and your lives will have been worthwhile."*** Babson was a man of many talents and many interests, so in addition to his accomplishments in education, business and philanthropy, he actively engaged in religion, politics (running for president as the Prohibition Party candidate in 1940), and was always seeking ways to be involved in the scientific advances of the time.

So this brings us to the central theme of our letter. Roger Babson accomplished many things in his life and we can all benefit from his philosophy of life, by adopting his "can do" attitude, emulating his tremendous work ethic and modeling his lifelong commitment to giving back to his community and society. We can learn some amazing investment lessons from him and hopefully benefit from his brilliance in a time that appears similar to the time when he made one his most noteworthy contributions to society. Babson ran an annual Business Executives Conference at the Institute and began to warn investors that the stock markets were reaching dangerous levels in the fall of 1927. At the time, the DJIA had just breached 200 after having doubled over the previous three years. Money was pouring into the equity markets following a huge real estate bust in Florida in 1925. Prices were beginning to move materially above fair value and the Babsonchart was indicating that the markets were frothy (little did he or anyone else know that the ebullience was just getting started). A year later, the Dow had rallied another 30% to 260 as Herbert Hoover was elected president. Despite endorsing the Republican candidate and saying, ***"the election of Hoover should result in continued prosperity for 1929,"*** Babson issued another warning that stock prices were overvalued and that a, ***"terrific correction could occur."*** But as equity bubbles go, the euphoria stage was just about to begin. To get a sense of the mania at the time, economist H.W. Morehouse said on December 28th, "Millionaires have been made many times over with the unprecedented rise of certain individual stocks. Of a list of twenty well-known stocks, which have increased from 600 to 6,000 percent during the last ten years, twelve famous names appear above the 1,000 percent mark, with one outstanding motor stock heading the list with a 6,493 percent increase. No wonder our nation has gone stock market mad."

But the average investor had also bought into Hoover's promises of prosperity in a big way and the 1929 stock market started out "hot" with the DJIA rising 5.6% in January (investors were slightly less ebullient in Trump's first month, but the S&P 500 was still up nicely, rising 1.9%, while NASDAQ was more Hooverish, up 4.3%). The Hoover Bubble took a pause in February and March, flat and down (2.5%), to finish Q1 up a solid 3%. The climb resumed in April with markets rallying 3.2%, but then there was the first tremor of what was to come later as equities dropped (6%) in May to where they began the year, only to have the original "Buy the Dippers" come out in force in June and the markets rocketed up 12.4% to finish Q2 up a robust 8.1%. But the crescendo was still to come as the Dow jumped another 4.2% in July and the final thrust upwards of 9.2% in August to arrive at Labor Day up 27%. Again, to get a sense of the euphoria, we quote Samuel Crowther's (a journalist best known for his collaborations with Henry Ford) interview in *The Ladies Home Journal* on August 29, 1929 entitled *Everybody Ought to be Rich*, where he said, "The common stocks of this country have in the past ten years increased enormously in value because the business of the country has increased. Ten thousand dollars invested ten years ago in the common stock of General Motors would now be worth more than a million and a half dollars. And

General Motors is only one of many first-class industrial corporations. It may be said that this is a phenomenal increase and that conditions are going to be different in the next ten years. That prophecy may be true, but it is not founded on experience. In my opinion, the wealth of the country is bound to increase at a very rapid rate." The DJIA peaked at 381.17 a couple days later on September 3rd and newspaper headlines read, *"Public Demand for Stock Appears Insatiable."* The rest, as they say, is history. The index did not regain that level for 25 years. It took two and a half decades to get back to even. Over the next couple of days, stocks began to decline and had fallen (2.9%) by September 5th (not that big a deal given the March and May volatility and the huge run up in the previous few months) and this is where our hero enters the story. Babson delivered his now famous speech to his National Business Conference where he said, ***"I repeat what I said at this time last year and the year before, that sooner or later a crash is coming which will take down the leading stocks and cause a decline of 60 to 80 points in the Dow Jones Barometer. Fair weather cannot always continue. The Economic Cycle is in progress today as it was in the past. The Federal Reserve System has put the banks in a strong position, but it has not changed human nature. More people are borrowing and speculating today than ever in our history. Sooner or later a crash is coming and it may be terrific. Wise are those investors who now get out of debt and reef their sails. This does not mean selling all you have, but it does mean paying up your loans and avoiding margin speculation. Sooner or later the stock market boom will collapse like the Florida boom. Some day the time is coming when the market will begin to slide off, sellers will exceed buyers, and paper profits will begin to disappear. Then there will immediately be a stampede to save what paper profits then exist."*** As news of his prediction reached Wall Street, the markets fell another (3%) and that decline was later labeled the "Babson Break."

Irving Fisher, an accomplished Yale economist for whom there was no love lost with Babson, came out two days later in the *New York Times* and said in a direct, contradiction of Babson, "There may be a recession in stock prices, but not anything in the nature of a crash." Stocks fell (9.7%) in September and that little recession in stock prices had begun. On October 13th, Dr. Charles Amos Dice, a professor of business at Ohio State University, came to the support of Fisher saying that the market rally was just getting started, "The stock market will see bigger gains in the immediate future than at any other period of its history, and except for minor fluctuations the present high level of prices will be constant for years to come." Given the massive increase in equity prices over the past few years, this seemed like an inopportune time to make such a bold prediction, but these are often the types of things you hear near market tops. Who can forget the book Dow 36,000, published months before the 2000 peak with DJIA at 16,000, a level it would not regain for fourteen years? Not to be outdone in the audacious statement category, Fisher came back at Babson a few days later with a statement that will forever live in infamy, saying, "Stock prices have reached what looks like a permanently high plateau. I do not feel there will be soon, if ever, a 50 or 60 point break from present levels such as [the bears] have predicted. I expect to see the stock market a good deal higher within a few months." In what can only be labeled as the worst stock market tip of all time, Fisher could be forgiven (a little) because he was simply responding to someone who he had decided was wrong. Babson had claimed that stocks could crash in 1927 and they had nearly doubled over the past two years, so he was clearly wrong. Babson had claimed that stocks could crash in 1928 and they had rallied nearly 35% in the past year, so he was clearly wrong. Now Babson was claiming that stocks could crash and they were only down (10.5%), which is nothing but a speed bump on the permanently higher plateau, so he was definitely wrong (well, maybe wrong; well, hopefully wrong; well, what if he's right this time?). Does the fact that when all was said and done the DJIA fell to 41 by July 1932, a total loss of (89%) from the peak, and even (80%) lower than the level at Babson's first warning, mean that he was right? This is the toughest question in investing. When is early the euphemism for wrong? Is it okay to miss out on the last 150% of gains over the final two years of the Bubble in cash to have a $1.00 at the end

of five years rather than $0.11? If you were managing other people's money, could you keep your clients while you sat on the sidelines in cash while everyone else was getting rich? Likely easier said than done. The real issue here is that the events are not directly related, Babson being wrong in 1927 and 1928 doesn't change the facts at the time in 1929. Just because the markets went to more extreme levels than he thought was possible given fundamentals in the prior two years doesn't change the fact that the call for caution in 1929 was excellent advice and that the risk/reward was skewed very much to the downside. We will go out on a limb here and say Roger Babson wasn't wrong or even early, but was actually right all along.

When "Black Thursday" came on October 24th and the stock market bubble finally burst for good, it was a horror show. Trading volumes surged to 12.9 million shares (about 90 seconds of volume on average today) and the Ticker Tape was delayed four hours. Newspapers would report the market's paper loss at $5 billion that day and that a "pool of bankers" had acted to stem the drop by putting more money into the market. President Hoover's advisors urged him to issue a statement of confidence to help calm the markets. The DJIA was down (12.5%) from the Irving Fisher "higher plateau" and fell another (9%) over the next week to finish October at 273. The *New York Evening Post* ran a story with the Headline "Brokers Believe Worst is Over and Recommend Buying of Real Bargains" that included another endorsement of the Fisher perspective: "How can any cool head fail to agree with Professor Irving Fisher's declaration that standard American stocks have gone so much too low as to be crying to be bought?" Indeed there was more crying to come, but it would be investors shedding the tears. After another (6%) loss over a few days, President Hoover decided to weigh in on November 5th saying:

> "We have had a period of over speculation that has been extremely widespread, one of those waves of speculation that are more or less uncontrollable, as evidenced by the efforts of the Federal Reserve Board, and that ultimately resulted in a Crash due to its own weight. The ultimate result of it is a complete isolation of the stock market phenomenon from the general business phenomenon. In other words, the financial world is functioning entirely normal and rather more easily today than it was two weeks ago, because interest rates are less and there is more Capital available. The effect on production is purely psychological. So far there might be said to be from such a shock some tendency on the part of people through alarm to decrease their activities, but there has been no cancellation of any orders whatsoever. There has been some lessening of buying in some of the luxury contracts, but that is not a phenomenon itself. The sum of it is, therefore, that we have gone through a crisis in the stock market, but for the first time in history the crisis has been isolated to the stock market itself. It has not extended into either the production activities of the country or the financial fabric of the country, and for that I think we may give the major credit to the constitution of the Federal Reserve System."

We are reminded here of Shakespeare's words from Hamlet, "the lady doth protest too much, methinks." Hoover is trying to talk himself (and everyone else) into believing that all is well and everything is contained. It brings to mind the scene at the end of *Animal House* where Chip Diller (as played by Kevin Bacon) is trying to convince the rioting crowd by shouting, "All is Well! Remain Calm!" just before being flattened into the sidewalk by a crush of people. We know from history that all was not well and all was not contained (in fact, we wrote last summer how Seth Klarman said in one of his letters the best indicator of when something is not contained is when a government official tells you it is) and that things would get worse (much worse) over the ensuing months and years (which we detail in Surprise # 10 below).

Will Rogers, in his weekly column a month later wrote, "Oh it was a great game while it lasted. All you had to do

was to buy and wait till the next morning and just pick up the paper and see how much you made, in print. But all that has changed, and I think it will be good for everything else. For after all everybody just can't live on gambling. Somebody has to do some work." Indeed, lots of work is required to create actual earnings so investors want to buy a company's stock. The real problem was that the Fed, the banks the brokerage houses and the investment trusts (equivalent of mutual funds) had rigged the game to the upside by lending people money with ridiculously low collateral requirements in order to perpetuate the buying mania and generate fees for themselves . So long as the music keeps playing and the fools keep getting more foolish in the belief that the price will always be higher tomorrow, the bubble keeps growing. But when it bursts, things can get really bad quickly. A month later, in the January 1930 issue of *The North American Review,* author Virgil Jordan wrote a piece entitled "The Era of Mad Illusions" where he succinctly summed up the problem writing, "Probably no nation in modern times has suffered so frequently or so greatly as the United States from recurrent periods of exaggerated optimism and unrealistic interpretation of its economic situation. This tendency to ignore the natural law of steady growth has its deep roots in American history and the American temperament. The country was discovered, settled, and developed by speculators and adventurers, and not so long ago but that the strain is still in the blood of American business and the general public." Will Rogers made a great comment a year later in January 1931 in reflecting back on the Crash, when he said, "We was just getting the idea that nothing could go down in price, we thought the only way it could go was up. Just buy it and hold it a day or so that's all we thought there was to finance." The key points here are that this excessive optimism is in our DNA as Americans and it was in the context of this ignorance of the natural laws of growth where Roger Babson had an advantage. As a student of Newton, he knew that it was only a matter of time before the crash would come and that it had to be ***"terrific"*** because the euphoria was so terrific on the other side during the bubble formation.

Babson was right. The crash came and it was beyond terrific, it was horrific. Fortunes were lost, businesses were destroyed, thousands of banks collapsed and disappeared (taking depositors' savings with them) and, after a series of policy errors by Hoover, the Republican Congress and the Fed, the 1929 Recession morphed into the Great Depression. This letter is already too long to go into much detail on the Depression, but suffice it to say that the stock market and the economy were not independent as Hoover had suggested, but rather they spiraled downwards together for many years, wringing out the excesses that had been built up during the Roaring Twenties. Newton was right. For every action, there is an equal and opposite reaction, and the symmetry of the rise and fall is a chart pattern that every student of financial history knows all too well. So what is the primary message to take away from all of this history and discussion of Roger Babson? It is all in the first two words of the title of this letter. Babson's brilliance was his ability to consistently stick to his discipline and remain cautious and defensive, even in the face of ridicule from the media and loss of clients who were tiring of the proverbial boy who cried wolf about the dangers of the stock markets (while all their friends were getting rich…temporarily it turned out). Now it is time to step way out onto a limb and remind you that we have been warning that a correction could come since the summer of 2015 (I tweeted on 7/1/15 that going to cash then was a good idea to avoid the coming correction) and to paraphrase Mr. Babson, we repeat what we said last summer, and the summer before, that a correction is coming and it might be terrific. We have written letters over that period entitled *Defense Wins Championships* and *Danger Zone* and we have made the case over the past year that the S&P 500 could run toward the Jeremy Grantham 2,300 and that would trigger a #2000.2.0 correction (down (40%) over three years), but we are now modifying that view. We see a run to the 1929-esque peak of 2,800 as a possibility and a bubble of that magnitude would likely be followed by a Newtonian reaction and we could see a crash that would lead to the scenario we outline below in #WelcomeToHooverville. Yogi Berra famously quipped, "forecasting is hard, especially about the future" and, contrary to the cover of our 10 Surprises slide deck, we don't have a crystal ball, but we are students of

history and we do agree with Churchill that, "the farther back you can look, the farther forward you are likely to see," and by looking back nearly a century, we believe we have a fairly clear picture of what could happen if things do begin to spiral out of hand.

As a tenth generation Gloucesterite, Babson had a keen interest in the history of an old settlement in Gloucester known as Dogtown. During the Depression, as a way to provide assistance to unemployed stonecutters in his hometown, he commissioned carvings of inspirational inscriptions on two dozen large boulders surrounding Dogtown Common. Nicknamed the Babson Boulder Trail, the town has developed the site into a hiking and mountain-biking trail that is very popular to this day. Finding the boulders is a sort of scavenger hunt and the inscriptions represent many of the primary tenets of Babson's philosophy of life, business and investing (kind of like the lessons we walked away with from the Babson soccer field). The carvings include: INDUSTRY, BE ON TIME, COURAGE, IDEAS, HELP MOTHER, SPIRITUAL POWER, GET A JOB, LOYALTY, STUDY, TRUTH, BE TRUE, INTELLIGENCE, PROSPERITY FOLLOWS SERVICE, INITIATIVE, USE YOUR HEAD, and KINDNESS. A few are particularly relevant to the themes of this letter, including, KEEP OUT OF DEBT, NEVER TRY NEVER WIN and IF WORK STOPS VALUES DECAY. The root causes of the crash (and subsequent Depression) were excess debt and the belief that Will Rogers spoke about that speculating in the stock market could replace good old-fashioned hard work. The problem is that when things get easy and you don't have to work for something, you don't value it properly. Babson said, "***Property may be destroyed and money may lose its purchasing power; but, character, health, knowledge and good judgment will always be in demand under all conditions.***" Few truer words have ever been spoken, the markets will rise and fall, but character is what defines us, health is the truest wealth, knowledge is power and good judgment will, indeed, always be in demand.

Fourth Quarter Review

We have spent the whole year opening this section of the letter with a comparison of the volatile movement of global equity markets during the quarter to a roller coaster ride, so we will complete the metaphor here in Q4. We wrote when we started that *"the nice thing about roller coasters is that after every down (no matter how steep and scary) there is an up and you always end up in the same place in the end,"* and in October of 2016 the S&Peedcoaster was just about where is started at year-end 2014 (almost no return for nearly two years). We also wrote that after a big rally during Q3 when the global Central Bankers went "Full Jawbone" to try and talk the market up after the Brexit drop it appeared that *"as we come to Thanksgiving it does appear that we are looking over the edge of a rather large drop and the heightened uncertainty surrounding the recent election makes that plunge seem even scarier, but we will have to wait until next quarter to see if the S&Peedcoaster turns into the Screamcoaster."* Investors were indeed screaming as the SPX began to accelerate downward. After dropping (1.9%) in Rocktober from 2,168 where it started the quarter, the index fell another (1.9%) to 2,085 in the first four days of November as election fears began to crescendo as new rumors swirled about the FBI email "investigation" (there actually never was a new investigation, merely some random emails found on a former aid's laptop). Then on Sunday, Director Comey suddenly declared that the issue was closed and everyone was convinced Hillary Clinton was going to win (for conspiracy theorists, a master stroke of Republican strategy as it likely convinced many Democratic voters to stay home as the election was in the bag now…) so the S&Peedcoaster caught the chain lift and headed back up 2.8% to 2,140 two days later on Election Day. A funny thing happened on the way to that sure victory for Clinton as at 10:42 EST Fox News called Florida for Trump (and within the hour, odds moved to 95% that Trump would win) and SPX turned back into the Screamcoaster. By 11:42 EST S&P Futures were limit down (5%) and had been halted by the CME and global equity markets were careening downward when suddenly in very roller coaster-like fashion the plunge abated, the Narrative changed from "DJT winning will be the end of the world" to "DJT winning will be great for business and stocks" and the SPX locked into the chain lift and headed straight up. By the end of the next day, SPX had jumped from 2,038 at the early morning trough to 2,163, up 1%, and continued steadily up another 1.7% to 2,199 to finish the month, and up another 1.8% in December to finish the year at 2,239. As we write the letter today, the S&Peedcoaster is still locked in the chain lift and has jumped another 1.9% to 2,279 through 1/31/17. While the 12.5% lift from the nadir during the wee hours of election night is not quite as big as the 14.5% jump off the 2/11 bottom when Oil prices troughed and the Fed dovishly put rate hikes on hold, this move has pushed the S&Peedcoaster out of the pattern of ascents and descents to arrive at the same place over the past two years, so we will have to write using a different analogy in 2017.

Across the Pond, the Eurocoaster ride has been much more nausea-inducing over the past two years than the American version – the drops have been similar, but the recoveries have been weaker (violating the essential rule of roller coasters that ascents and descents should be roughly equal magnitude). The Euro Stoxx 50 Index had been making a series of lower highs since peaking in April 2015, a pattern that continued for the first two-thirds of Q4. Interestingly, despite the recent fade in prices, the Eurocoaster had been returning to the same place for even longer than the S&Peedcoaster and, as we wrote a couple quarters ago, *"not only is the Euro Stoxx 50 at the same level it was to begin 2014 but the ups and downs have actually delivered the cars back to the same spot as in September of 2008 (while there has been some return from dividends, the price has been the same for the better part of a decade)."* Caught in a lull between the Brexit Referendum and the Italian Constitutional Referendum (that many were saying could trigger a massive global equity sell-off if it failed and Renzi stepped down), all eyes in Europe were on the U.S.

elections to see if the populism wave that was sweeping the EU & UK would lap upon the shores of America. The Eurocoaster began the quarter at 3,002 and bucked the global trend in October, rising 1.7% to 3,055 before joining the pre-election slump when it fell (3.3%) to 2,954 on 11/4/16 only to bounce 3.3% along with global equities to settle back at 3,056 on 11/9/16. Unlike the U.S. markets, the rest of November was rocky for Europe as fears of the impending Italian Referendum countered the Trump-induced surge in other developed markets, sending the index through three weeks of whoop-de-doos to finish November at 3,052. The December 4th vote came as expected, but the reaction to the outcome was the exact opposite of what everyone said was going to happen. The Resolution failed (expected) and Renzi resigned (expected) but, instead of the Eurocoaster plunging down another hill, the cars locked into the chain lift and went nearly straight up during December, jumping 7.8% to 3,291. The lift carried the cars up another 1% to 3,321 the first week of the New Year and then released, falling (1.5%) back to 3,273, before gliding back up to finish about where they started the year at 3,231 by 1/31/17. Unlike its American counterpart, the Eurocoaster remains well below the peak of a couple years ago and has oscillated around where it was in June of 2014 (so much for the benefits of QE, more on that later). We concluded this section last time saying, *"there are a lot of very cheap companies in Europe (particularly the Financials and Cyclicals), but uncertainty about the U.S. election and consistent rumors of the ECB getting ready to taper bond purchases have put the brakes on any meaningful advance in the Euro Stoxx 50 this year."* We now have the answer and the brakes won in 2016 as the index managed only a scant 0.7% rise from 3,267 to 3,291, and a negative (0.4%) return after dividends and currency adjustments, so the roller coaster ride down and up did indeed leave the Eurocoaster right back where it started. Like most indices, the average return masks what is going on within geographies and sectors. There have been some meaningful moves in Financials (and more to come based on Surprise #5 for 2017 below) and Cyclicals that we will discuss later, leading us to believe that Europe could be one of the big winners in 2017.

After Kuroda-san seemingly lost his mind by surprising the world with NIRP (Negative Interest Rate Policy) in January, we described the Samuraicoaster in Japan as a *"truly motion sickening ride"* as the BOJ Governor *"put the thrill in thrill ride"* during the first half of 2016. The Nikkei had taken a rapid-fire series of steep plunges and ascents during the first six months to settle almost (22%) lower than where it started the year to the trough on 6/24/16 (the day after Brexit). We discussed last time how following that bottom, the Nikkei had locked in to the chain lift and had moved in the exact opposite fashion as the other global equity markets, where *"each successive peak was higher than the previous and (surprisingly) Japanese equities have been one of the best performing markets over the past four months, rising 11.3%."* So the Samuraicoaster began Q4 at 16,450, locking into the chain lift during October as the yen kept weakening, and Japan was once again the Land of the Rising Stocks as the Nikkei jumped 5.9% to begin November at 17,425. The next ten days were significantly less fun for investors as the surprising Trump victory triggered a massive (albeit temporary) flight to safety and the yen surged and stocks careened down (6.7%) to 16,251 the day after the U.S. election. Then, as quickly as you can say *Dōmo arigatō gozaimashita* (thank you very much), the Samuraicoaster locked into the chain lift and went nearly vertical surging 12.6% to 18,308 by 11/30/16 to tack on another 4.4% to 19,114 before closing out the year. The Nikkei jumped another 2% on the first trading day of the New Year, peaking at 19,594, spent the next three weeks in a steep decline, falling (4.1%) to 18,787, and then jumped back up 1.4% to 19,041 on 1/31/17. From the Brexit bottom in June, the Nikkei has surged an astonishing 30%, but in true roller coaster style, remains (6.7%) below the peak reached (coincidently) exactly one year before the Brexit low on 6/24/15. In the near term, we continue to believe the path of the Samuraicoaster will be determined by the course of the yen. We even went so far as to write

last time about how a weakening yen through the end of the year would ramp up returns but a surprise in the U.S. election could again make the yen a safe haven for global investors (pushing it up to 100 and sending the Samuraicoaster over the hill for *"a real screamer"*). Given how the events played out, these were fairly prophetic words indeed as the yen did surge to 101 during the "Trump Dump" and the Nikkei screamed downwards. However, when the yen reversed course and ran to 116, the cars locked back into the track and investors enjoyed the ride up the hill for the final two months of the year. We will talk more about the prospects for the yen and the Nikkei in Surprise #3 below, but suffice it to say here that we think Kuroda-san has found what he lost a year ago and we see him channeling David Beckham in 2017 (Kurve it Like Kuroda).

We have commented over the past year that of all the global roller coaster rides, the Emerging Markets ScrEEMcoaster had been the most harrowing during the 2011-2015 Commodity Bear Market. The EEM ETF had made six laps around the track over the four years (April to April) punctuated by gut-wrenching drops and euphoric rises only to end up exactly in the same place. The final leg of the Bear Market was a massive (35%) plunge from April 2015 to January 2016, and we wrote previously that *"after a quick bounce and subsequent drop over the next three weeks, 'something changed' on 2/10 as oil prices bottomed, the dollar began to weaken and EM began a steep ascent that would last for the next seven months."* The most positive element of the change was how EEM had made a series of higher lows and higher highs, but as we noted, *"the string was broken in October as fears of a Fed rate hike in December pushed the dollar higher and EEM could only muster a bounce to 38.10"* (a lower high). The ScrEEMcoaster began Q4 at 37.45 and was basically did a whole lot of nothing in October, slipping (0.8%) to 37.14, before joining the rest of the rides in the Global Theme Park downward during the first week on November, falling (3.3%) to 35.93. EEM surged a bit on when Comey dropped the Clinton email case, rising 4.4% back to 37.47, but unlike other global equity markets, released from the chain lift immediately on election night as the negative Trump rhetoric toward emerging markets like China and Mexico struck fear into the hearts of EM investors. The ScrEEMcoaster plunged (8.5%) to 34.03 over the next week before riding back up on a relief rally based on better than expected economic data coming out of China. EEM ran 3.5% in the back half of November to 35.50 and ran another 2.0% to 36.20 the first week of December before more Trump-Talk sent the cars careening back down (6.3%) to 34.10 right before the Holidays. Part of the problem had been a 3% surge in the Dollar Index (DXY) in the weeks following the election as investors assumed that all of the regulatory, tax, and fiscal spending changes would magically materialize immediately (in fact, maybe even before Trump took office) and Chairman Yellen lost her royal title as QEeen, raising interest rates 25 bps in mid-December. Many investors thought that the Grinch really was going to steal the EM Christmas. Alas, as readers might now expect from our letters, when everyone in the markets begins to expect something, the odds of the opposite occurring, in a round-about way, become unexpectedly likely. Indeed, instead of the dollar surging more, it began to fall (giving back the entire 3% post-election gain) and EEM climbed 2.6% from the 12/22 nadir to finish the year at 35. With this momentum heading into 2017, EEM tacked on another 6.7% to 37.34 by 1/3117 (nearly back to the September highs). We had written last time that given the big moves in EM equities since the 2/10/16 bottom, *"there is a lot of 'air' under the track and a lot of market prognosticators are predicting a big drop in EM equities should the Fed pull the trigger and the Dollar continues to strengthen."* Not that (6.3%) isn't a big drop (and it did happen fast), but going down for a week probably is not what those prognosticators were thinking and clearly no one was predicting that EM markets would bounce so hard so quickly and be up so much in the New Year (well, almost no one…). As we said last quarter, *"We on are the other side of this view and think that there are lots of fundamental reasons to be bullish on EM going forward."* Despite

this positive outlook, we reserved caution for the possibility of an election surprise in November that could push all cars down the hill, and we felt a strong cash stockpile was a smart maneuver. This reservation turned out to be right as the MSCI EM Index declined (4.1%) in Q4, and it provided dry powder for investors to go shopping in some of our favorite markets like Argentina, Russia and China to ring in the New Year. We discuss our positive views on EM in a number of the Surprises later on, but suffice it to say here that we think the ScrEEMcoaster will have to be renamed the DrEEMcoaster over the next few years as Emerging Markets trump (couldn't resist) Developed Markets over the next market cycle.

Since the cathartic bottom in late January/early February 2016 (depending on the particular market), most of the individual markets in EM already resemble DrEEMcoasters and have been essentially locked in the chain lift for the past year. After a horrible plunge in the first few weeks of 2016, the Dragoncoaster in China settled into a strong upward track, and while there were a few mini drops along the way, the Shanghai Stock Exchange Composite Index (SHCOMP) made a steady series of higher lows throughout the summer and fall. Starting at 3,005 on 9/30/16, the Dragoncoaster rose 3.2% in October to 3,100, and was unfazed by the U.S. election, powering up another 4.8% to 3,250 in November before falling (4.5%) in December to finish 2016 at 3,103. In January, it was up 2.1% in the first week to 3,171, down (2.2%) back to 3,101 in the next two weeks, and up 1.9% to 3,159 for the final week. Over the trailing twelve months, the SHCOMP has ratcheted up a very dreamy 18.9%. We wrote last time that, *"the Canarinhocoaster has been locked in the chain lift track all summer and fall and has risen all the way to 64,925 by the end of October. That 13.2% surge over the past three months brings CYTD gains for the Brazilian equity market to an astonishing 49.7% in local currency and 62% in USD as the BRL continued to strengthen."* Although Brazil canceled Carnival for budgetary reasons, the party kept going in the Ibovespa after a reasonably-sized freak out after the Trump surprise (it appears the Trump-Mexico tension had investors worried about offshoot effects in other Latin American markets) as the index fell (8.8%) through 11/11 to 59,184, jumped back up 4% to 61,609 to finish November, fell (7.3%) in the first half of December after a series of negative Trump tweets about Mexico, only to rally 5.5% back to 60,227 to close out 2016 up a very robust 66.2% (in USD). At some point investors were able to see Brazil for its own worth, and the Canarinhocoaster locked into the chain lift, surging 6.8% back to 64,302 through 1/31/17. Speaking of Mexico, one of Trump's least favorite countries had a textbook roller coaster ride over the past four months, with the Bolsacoaster starting Q4 at 47,246 and actually rising 2.6% to 48,476 when it appeared Clinton would win the election, only to plunge downhill after the Trump surprise, falling (8.5%) to 44,364. But a very interesting thing happened over the course of the next three months, as the currency got clobbered, the local equity markets began to recover as companies that benefit from a lower currency began to surge (unintended consequences). The Bolsacoaster came to rest on 1/31/17 at 47,001, almost exactly where it began Q4, and while the USD return was (7.8%) in Q4 the Peso has actually strengthened a bit in January. Two final markets that are good examples of ScrEEMcoasters turning into DrEEMcoasters are Russia and Saudi Arabia. Both countries have basically been locked into the chain lift over the past four months, barely flinched during the election, and have surged post-election as oil prices have firmed and investors anticipate the reduction of sanctions against Russia and the potential for Saudi to be included in the MSCI EM Index. Russia jumped 24% and Saudi jumped 32% over the period – dreamy outcomes indeed.

The past couple of quarters we have discussed our #2000.2.0 thesis, which posited that the period from 2016 to 2018 would look very similar to the period of 2000 to 2002 in the U.S. equity markets. When we compared the path of 2000 to the path of 2016 for the first ten months of the year last quarter there were

some striking similarities. In 2000, the S&P 500 was down hard in the first six weeks of the year, falling (9%) by mid-February, while in 2016, the drop was (11%). In 2000, the market rallied halfway back in March and was mostly flat during the summer leaving the index down (3%) coming into election season, while in 2016 the markets rallied all the way back by April, suffered a setback during Brexit, but rallied back to up 2% on the eve of the election. Knowing the rest of the story in 2000 was a decline for the balance of the year to post a (9%) loss, we wrote, *"Given the uncertainty even now that the election has been decided, the high valuations, declining profit growth and uncertainty about global growth and interest rates, we continue to err on the side of caution right now in portfolio positioning."* Another point of concern was that 2000 was one of the seven times since 1900 that the new President was following a President who had been in office for eight years and in five of those occurrences there had been negative returns for equities (averaging a loss (14%) across all occurrences). With all that said, there was one piece of data that was causing us some concern indicating there was a risk that 2016 might not play out like the other years. We wrote last time that *"As we sit here eleven months into the year, 2016 actually looks closer to a normal election year where the markets are mostly flat during the year and surge 8% on average during the final few months. With the election results now decided, we will see over the last eight weeks of the year whether we get a normal up 8%, an eight-year normal (14%) or somewhere in between."* Actually, 2016 turned out to be a little better than a normal year in that the SPX jumped 4.9% post-election (versus the normal 4%) and finished up 12%. A legitimate question to ask at this point is whether the positive market reaction post-election negates the #2000.2.0 thesis. For now, we will say not yet, as there are still signs that economic growth is slowing (Q4 GDP just disappointed), and should there be a 2017 Recession (like 2001), equities could catch down in a hurry. All of that notwithstanding, there is an alternative scenario that actually could be developing in real time that we will discuss in the 10 Surprises section below – perhaps Mr. Trump turns out to be the second coming of Herbert Hoover and 2017 will look more like 1929 than 2001 and #2000.2.0 gets replaced with #WelcomeToHooverville.

It was full steam ahead for U.S. equity markets during Q4 as concerns about declining global growth, moribund trade volumes, falling margins in the U.S., the threat of rising rates, declining liquidity, and extremely lofty valuations gave way to enthusiasm for a more pro-business agenda in Washington and the delivery of the Trifecta of tax reform, regulatory relief and fiscal stimulus. Yes, investors were suddenly sure that President Trump could channel Rodney Dangerfield in the "classic" (ok, a bit of a stretch, but so is believing in the Trifecta…) 1980s movie *Back to School* and nail the Triple Lindy dive with nary a ripple on the entry into the pool. After the three-hour freak out during election night when all equity markets were "limit down," stocks surged in Q4 with the S&P 500 up 3.8%. Small-caps were up a stunning 8.8%, and micro-caps were up an even more stunning 10%. The narrative goes like this, smaller companies will be helped more by tax and regulatory changes than large companies. An alternative explanation is that they came into the election more overvalued, more shorted, and less liquid than large-caps, and the ensuing short squeeze (after the surprise Trump win caught investors off-sides) was more acute. A little bit of both probably apply. When we tack on Q4 to the first nine months of the year, the S&P 500 was up 12%, the DJIA was up 16.5% (Value surged), the Russell 2000 was up 21.3%, and the Russell Microcap was up 20.4% (it had more ground to make up after a really rough Q1). Given how cautious we have been on the prospects for the U.S. equity markets over the past two years due to the levels of valuation, why was 2016 such a great year for equities? In fact, it wasn't a great year, but more of an amazing two months following the election. Here are a few interesting stats to chew on. S&P 500 earnings for 2016 are the same as they were in 2014 (and basically the same as 2012, but more on that in a minute), yet over the past 25 months SPX is up 11% (excluding dividends). How

did prices rise if earnings were flat? The answer is that the P/E multiple expanded from 22 to 25 over that period. If we look back even a little further (5 years), we see that EPS for SPX was the nearly the same in 2012 as 2016, but the Index rose 75% thanks again to the multiple expanding from 15 to 25. Why would investors pay more for companies that aren't growing earnings? The narrative is that interest rates are falling so investors can pay a higher multiple for future earnings. The problem is that interest rates were dead flat over the five years leading up to Election Day. The narrative really breaks down post-election, as rates have backed up 30% (higher discount rate should mean lower prices in absence of EPS growth) while P/E ratios expanded yet again. Unfortunately, we don't have a logical answer to the questions other than a collective belief that economic growth is going to magically reaccelerate and earnings are going to surge dramatically (both of which run counter to the current data). One last point here is that as scary as the surge in the S&P 500 P/E ratio has been, it barely registers on the "crazy scale" compared to what is happening in small-cap land. The R2000 Index P/E was 108 one year ago, and now is listed as "nil" because there are so many companies with negative earnings they have decided not to calculate the ratio. The Index creators are willing to show Forward P/E ratios excluding companies with negative earnings, and that measure has risen from 20 to 25 in the past year, the highest ever other than the peak in 2000 (which was truly "off the charts" as it is a line to infinity). Investors don't seem to care much as the R2000 has surged 18% in the three months since the election. Clearly our caution seems to have been unwarranted, particularly over the past three months (in keeping with the theme of this letter), but harkening back to our Shakespeare letter, in matters of great importance (like protecting capital) *"better three hours too soon than a minute too late."*

Looking more closely at style, Value absolutely dominated Growth across the capitalization spectrum. We discussed this phenomenon in our last few letters saying, *"It is possible that there is a meaningful shift underway in global equity allocations to favor more value and cyclical names. While this shift doesn't fit exactly with a slowing global economy and stress in the financial sector, this trend will be worth monitoring very closely in the months and quarters ahead."* Looking back, it was much better to pile in rather than monitor as the Russell Top 200 Value (RTop200V) surged 7.2% versus the Russell Top 200 Growth (RTop200G) at only 1.2%, the Russell Midcap Value (RMidV) was up 5.5% versus the Russell Midcap Growth (RMidG) up 0.5% and the Russell 2000 Value (R2000V) soared an amazing 14.1% versus the Russell 2000 Growth (R2000G) up "only" 3.6%. For the full year, Value completely and totally smashed Growth as the RTop200V surged 16.2% versus the RTop200G up 7.0%, the RMidV jumped 20% versus the RMidG up a pedestrian 7.3%, and the R2000V surged an astonishing 31.7% (read that number again, wow!) while the R2000G was up 11.3% (yawn). We explained one of the reasons for the incredible performance on the small-cap Value area in the last letter, saying *"it turns out that when companies get very close to bankruptcy (as many small/mid companies were) and they don't go bankrupt they surge dramatically (and crush any hedge funds who happen to be short those names as well). In the Golden Age of free money, really bad companies have been allowed to survive (unlike a normal business cycle) and these stocks that act like options have distorted the equity markets in 2016."* Distort the market they did as it turned out to be a great year for speculators willing to take the bet of Zero or a Multi-bagger (arguably not the most prudent strategy for those charged with protecting & preserving capital) as banks, SWFs, and anyone else who wanted to be in the Shadow Banking business threw money at companies in the form of Rescue Financings, and the equities that had turned into options came into the money in a huge way. History is written by the winners, so we will hear a lot about how obvious the small Value trade was in many year-end letters, but in February, when High Yield spreads were blowing out and many of these companies were stumbling in the valley of the shadow of bankruptcy, it

was not obvious that there would be a lot of great outcomes.

When we look at the performance of sectors in the S&P 500 during 2016, it was a year dominated by political reactions as the various sectors surged or plunged based on which candidate had the upper hand at each juncture along the campaign trail. For example, we wrote last time how *"a belief that HRC would win the election and therefore the Fed could raise rates in December without risk of political fallout,"* but [defensive] sectors were hammered in Q3 with healthcare up only 0.9%, Staples down (2.6%), Telecomm down (5.6%) and Utilities down (5.9%). In Q4 it was these same sectors that were rallying and falling, but for a completely different set of reasons (new narrative). Investors shifted from fear of a Trump victory to enthusiasm for the Trump victory (at an astonishingly rapid pace) as all things physical soared on the prospects for Fiscal Stimulus (disregarding the reality that it will likely be 2018 before any money is actually spent…) and Financials launched into the stratosphere on expectations that President Trump and his Cabinet full of ex-Goldman guys will repeal Dodd-Frankenstein and rig the system (even more than it already is) in favor of the Banksters. Multiple sectors had a great year in Q4 (half the sectors were flat going into the election) as Financials rose 21.1% for the quarter (yes, the decimal point is in the right place), Energy was up 7.3%, Industrials jumped 7.2%, Utilities were surprisingly up 4.8% (usually punished along with other Defensive sectors) and Materials were up 4.7%. On the flip-side, Health Care was slammed to the mat as Trump picked up the mantle of beating on drug pricing from Clinton (wild turn of events to see "Republican" bashing Pharma), falling (4%), Consumer Staples dropped (2%) and Telecom was basically flat, up 0.1%. For the full year, real assets dominated, with Energy leading the way, up 27.4%, Utilities up 23.5% (again surprisingly given the rout in Bonds in the second half), Financials up 22.8%, Industrials up 18.9% and Materials up 16.7%. Safety was punished for the full year and Healthcare brought up the rear, down (2.7%) and the only sector with a negative return (beautifully setting up a worst to first trade for 2017, more on that in Surprise #8 below). Staples were up 5.4% and Consumer Discretionary was up 6%. Interestingly, seven of the ten sectors outperformed the Index with Tech and Telecom being examples where they ranked 7th and 6th, respectively, but were up a very solid 13.8% and 16.3%, respectively, as well. Given our outlook on Commodities, we weren't surprised to see Energy, Materials and Industrials at the top of the charts, but we will confess to being slightly surprised by the magnitude of the increases given the tepid recovery in earnings (Energy benefitted from the low base issue). In a world of flat overall earnings growth and the prospect of higher interest rates, it does seem aggressive to only have one sector with a negative return in 2016 and the vast majority of sectors up double digits. Again, it comes back to P/E multiples expanding. The 22% increase in the P/E of the SPX over the past twelve months does justify the moves, but the math says expanding multiples simply pull return forward and future return expectations fall (indicated by Wall Street estimates for year end 2017 SPX targets being around 2,350, almost where we are now).

Perhaps one of the most interesting things that impacted U.S. equity markets in 2016 (that no one seemed to talk about) was the continuation of bond purchases by the Fed, despite the publically announced end of Quantitative Easing (QE). The Fed claims that reinvesting in the maturing securities in their portfolio is somehow different than buying bonds in the open market, but we don't see the difference. No matter what you call it, the Fed removed around $220 billion of bonds from circulation during 2016, and that liquidity continued to find its way into financial assets (read stocks). We have discussed for a number of years, the great work by Larry Jeddeloh of TIS Group regarding the impact of QE in the equity markets as his model shows that "*every $100 billion of QE has translated into 40 S&P 500 points.*" By Larry's math, the Fed (don't call it QE) activities during the year translated into 88 S&P

500 points and accounted for nearly half of the gain for the market. We made the case last quarter that *"we still can't find a catalyst for higher equity prices (no EPS growth, no room for multiple expansion) and we can find a lot of risks that could trigger lower prices (U.S. election, EU problems)."* So the post-election rally caught us (and a lot of others) off guard (or rather, on guard) as we were more hedged than we would have liked to have been during a big risk-on move. Further to the point of expecting a less robust outcome we said, *"it will be interesting to see if Janet really does channel her inner Lucy Van Pelt and is willing to pull the ball away in mid-December,"* as history would argue that an increase in the discount rate (absent a large increase in profit growth) should put pressure on equity multiples and put equities at risk of a correction. In the Year of the Monkey where surprises were rampant and the world seemed to turn upside down at every big juncture, Janet did raise rates and equities actually interpreted that as a signal that growth was robust (despite overwhelming evidence to the contrary) and stocks rallied more. We've spoken to this point previously when we wrote, *"the biggest challenge for the Fed is that despite many claiming that they are behind the curve and they must raise rates, it is really tough to see how a tightening bias makes sense in a world where the world's largest economy continues to languish below stall speed (2% GDP growth)* and now with the Q4 GDP number just released we see that growth actually slowed even more, to an incredibly anemic 1.6% for the full year, which flies in the face of the arguments that the economy is accelerating. The narrative has already begun to shift toward blaming the previous Administration for strangling business with excess regulation (although I have yet to get anyone to give me a decent answer about which regulations are actually the problem) and that the grand vision of Trumponomics will deliver "yuge" growth, "yuge" profits and, according to a member of the Trump team on CNBC, Dow up to 25,000 in 2017. We will take the under.

When we talk about International Equity markets we have to think beyond just the dimension of returns from the underlying businesses and include the return from currency translation over the course of the time we own the security. For any global investor that means having a view on the relative attractiveness of your home currency versus the other currencies in which you may invest your capital. To keep this letter simple (since we are based in the U.S.) we will focus here on the dollar and for readers outside the U.S. the construct is the same, but obviously the names and directions will change. We have written in the pages of these letters on multiple occasions over the past three years (since the DXY broke out of its multi-year consolidation in 2014) that getting the dollar right might be the most important investment decision we could make during the year. The reason for the hyperbole on the Greenback (beyond my normal hyperbolic style) was that so many of the other market opportunities had become so tightly correlated to the dollar and if you got the dollar call right you could make better returns in equities, bonds, commodities and (obviously) currencies. Clearly, the dollar's impact on International Equities can be very profound and in many years the translation can swamp the base return, and investors who do not hedge currency appropriately may find losses in their accounts even when it appears that the stocks in the underlying markets made significant gains. There are many examples of such moves, but an easy one to touch on quickly was the huge impact that the dollar surge in the second half of 2014 had on Russian investments. The rapid surge in the dollar from June to December of 2014 triggered a correction in oil prices (exacerbated by the Saudi decision not to cut production in November) and the Russian Ruble was pounded relative to the dollar. If you owned Russian equities in Russia, you actually made 3.2% over the June 2014 to June 2015 year, but if you bought Russian equities as a U.S. investor, your return in USD was (30.6%). What has been interesting about the dollar since the beginning of 2015 is that after the 25% surge in 2H14, the DXY peaked at 100 and was locked in a channel between 95 and 100 right up until Election Day last year.

One note of caution here on DXY (or any index for that matter) is while the Index has been fairly stable, the sub-components have been rather volatile (DXY is mostly yen and euro). If you invested just in Japanese equities over the past few years hedging may have been critical since it began and ended the period around the same level of 115 but the gyrations between 100 and 120 have been brutal. I say "may have" because the second important point is that the holding period dictates demand for hedging. Take the yen example, if you bought Japanese equities in June of 2014 and held them to today you would have no currency impact, but if you have traded them over shorter periods of time in between the FX impact could have been monstrous. Bottom line, we need to think about currencies and the dollar when we are evaluating investment opportunities, making sure we implement our ideas to capture opportunities and defend against ravages of currency fluctuations. Q4 was a particularly volatile quarter for currencies as the King Dollar narrative was reinvigorated by the surprise Trump victory in the U.S. election and there was a significant short-covering rally in the second half of the period. The DXY surged 7.1% for the quarter, erasing the losses from the first nine months of the year, and finished up 3.6% for 2016. Looking inside the DXY, the euro was down (6.4%), but the yen was down a stunning (13.4%) as Kuroda-san located his mind (that he lost in January) and Yield Curve Control seems to be having the desired effect in Tokyo. Other Asian currencies got pounded as well on fears of a trade war with the new President, as the RMB fell (4.1%), the won fell (8.8%) and the ringitt fell (8%). Outside of Asia, Mr. Trump's favorite country to pick on, Mexico, saw more damage to the peso as it fell (6.5%), bringing full year losses to (17%). The worst pain was experienced in Turkey and Egypt as Erdogen's struggles led to the Lira plunging (14.8%) and Egypt was forced to devalue the Pound, which shed half its value, down (51%). Not all currencies are bullied by King Dollar though as the Brazilian real stood firm, up 0.2%, capping a remarkable year, up 21.7% and Mr. Trump's new BFF's currency (Russian ruble) was up 2.2% for the quarter and 18.6% for the year (firming along with oil prices). Currencies matter, and in a world of political uncertainty and volatility in which we seemingly have plunged into, they will continue to matter even more. Sound hedging will be critical to investment success.

In the last letter we talked about a trio of countries in the EAFE Index that were often overlooked (and underinvested) by market participants, Canada, Australia & New Zealand. We discussed how one of the common characteristics of these markets is they have been highly correlated to commodities and, therefore by association, have been inversely correlated to the dollar. The group is even referred to as the Commodity Countries and Currencies. CAN (for short) do not have very large equity market capitalizations (probably why many investors don't bother with them). However, small can be mighty, and 2016 was the year for the CAN-do markets to shine. There was one risk that we wrote about last time which was that if a counter-trend rally in the dollar were to occur there could be a pause in their bull runs, saying, *"the one caveat is that if the Dollar reverses course and climbs again (as it did in the second half of October) these markets could struggle."* Q4 saw mixed results for the trio as rising energy prices kept the loonie stable in Canada and the TSX rose another 3.3%, Australia also was able to counter FX losses with some strong economic and corporate news and eked out a 0.7% gain, while New Zealand got pounded, falling (10.9%), (which we are fairly sure was not related to Peter Thiel being granted citizenship). Even with the uneven results in Q4, the Commodity Currency markets were great places to invest in 2016 rising 24.6%, 11.5% and 18.4%, respectively. One might ask, why pay attention to these small markets? We discussed the primary reason a couple quarters ago saying *"one of our favorite research groups, 13d Research, thinks that these markets will have a built in currency tailwind for the foreseeable future and that equity returns could continue to surprise to upside as the commodity bull market develops."* If a new Commodity Super Cycle has begun (which we agree with 13d that is has) then

these small markets could be big money makers. Alas, as we have noted previously, the risk here is if the dollar were to gain momentum inspired by tighter monetary policy. *"There are an increasing number of people jumping back on the King Dollar bandwagon in anticipation of a Fed hike in December, but we remain on the other side and believe the Dollar has hit a secular peak and will decline for many years to come which should provide a tailwind for these countries over the long-term."* The dollar did have a great Q4, but (as we discuss in Surprise #7 below) we think that was King Dollar's Last Stand and structural changes in the global currency markets will continue to provide a tailwind for these markets.

2016 was a year where Europe was constantly in the news and was front of mind for global investors as every few months it seemed there was another Crisis (Greece), another Referendum (Brexit) or another Referendum that was going to lead to another Crisis (Italy). Populism was on the rise, economies were stagnating, leadership was disappearing (voluntarily and involuntarily), the ECB was waffling (hinting about Tapering), the currency was struggling and many observers and prognosticators were predicting that the entire EU experiment was crumbling (which is not a new idea – receiving critique since 2011). As might be expected during a period of such tremendous uncertainty, volatility and surprises, the European equity markets produced a whole bunch of nothing in Q4 (and in the full year as well). The MSCI Europe Index was down (0.4%) during the quarter (coincidently, the return for 2016 as well) with one caveat, markets across the region participated in the post-election rally (up 5.1% in Euro). So the super strong dollar erased all the gains for those who were invested without hedging the Euro. As you might expect in any group that averages zero, seven of the major markets were up and eight markets were down. At the top of the group in Q4 were Italy, Austria and France with returns of 10.8%, 6.5% and 2.9%, respectively. The Italian return was the most surprising as many had predicted a massive collapse if the Referendum failed (it did) and Renzi resigned (he did), but investors sold the rumor and bought the news as the uncertainty turned to certainty. Like many of the major events in 2016, even when the outcome was not what investors desired the relief that the event had passed overwhelmed the potential negatives. At the end of the day, even a great Q4 couldn't save Italy from being near the bottom of the heap for the full year, finishing down (10.5%). Which begs the question that maybe the market had already discounted the doomsday outcome in advance of the Referendum. Though we feel the real worst case scenario would have come from the side had Germany had not agreed to let the government bail out the Italian banks, a decision which had nothing to do with the Referendum. The laggards for Q4 included Belgium, Denmark and Finland which fell (11.8%), (8.7%) and (4.4%), respectively, driven by different idiosyncratic events in each country. For the full year the winners in Europe were Norway (oil recovery), up 13.3%, Austria (interest rate moves), up 11.3%, and France (politics and bank recovery), up 4.9%. On the flip side, the losers were Denmark (rate moves), down (15.8%), Italy (banking crisis), down (10.5%), and Belgium (politics), down (7.6%). Super Mario was notably absent from the stage in Q4, and didn't fight back when Yellen raised rates in the U.S. causing the dollar to smack down the euro (6.4%) during the quarter. Maybe he was recovering from his wolf crying days that we addressed las quarter, *"Draghi (aka the boy who cried wolf) was at in again in October as he hinted that the ECB could begin tapering their bond purchases (translation: there are not any bond left from them to buy…"* and he knows that he is between a rock and a hard place trying to keep the ECB propping machine fully engaged. There is a growing chorus of people making the case that Europe is recovering rapidly and that inflation is surging to the point that not only will Draghi have to Taper, but he may have to raise rates soon.

We will talk more about this below, but one of the issues that Europe is dealing with is that since the ECB started their Bond Purchase Program, the European equity markets have actually fallen (unlike the U.S.

where QE liquidity found its way in to financial assets and stocks rose). We discussed last time how *"we (along with many other investors) have been frustrated by the ineffectiveness of the ECB QE program to generate any meaningful benefit for equities since inception of the program in Q2 2015."* The fact remains that the Euro Stoxx 50 Index has basically not moved up since the beginning of the ECB program (it is actually down (13.7%) the April 2015 peak right after purchases began), and could not manage any return again in 2016 despite large volume bond purchases by the ECB. We have tried (unsuccessfully) to quantify the impact that ECB bond purchases might have on European equities using the methodology developed by TIS Group for the S&P 500 (that we discussed above). With some trial and error (mostly error) over the past year we arrived at a formula that seemed to sync with the U.S. model "*that for every 100B Euro of purchases you get 20 Euro Stoxx 50 points."* The results in 2016 say we need to keep working on the model. Despite the ECB's relentless Bond buying to the tune of $80B a month (recently trimmed to $60B for 2017), expansion of the Program to include Corporate Bonds last year and the increase of their balance sheet by $1.5T (yes, that is Trillion) over the last couple of years, stocks have gone nowhere (but they have been volatile). Based on the model and the expected ECB purchases, the Euro Stoxx 50 Index should have risen around 200 points to close to 3,500 from the starting point of 3,268 at the end of 2015. Instead, the Index barely moved during 2016, finishing the year at 3,291. Again, that small move masks two nearly 600-point drops in February and June and a similarly sized recovery in the second half of the year (predominantly in July and December). We wrote last quarter that *"clearly our model (and maybe the ECB model) is broken and there does not seem to be any meaningful linkage between ECB bond purchases and European equity prices,"* and it appears we were right as all that Bond buying has not led to any movement in equities. We have tried to reconcile why QE worked so well in the U.S. and not in Europe, but have not been able to come up with any satisfactory answer. We posited last time that *"perhaps the confidence in the magical powers of the global Central Banks is waning and investors are reverting to the tried and true conclusion that without economic growth and rising corporate profits it is difficult for equities to rise no matter how low interest rates are pushed (the proverbial pushing on a string hypothesis)."* Maybe Ben & Janet had some sort of first mover advantage. We also said that, *"we might even go one step further and say that Negative Interest Rates destroy the fundamental bedrock of Capitalism,"* and that does appear to have some merit as both Europe and Japan have now gone to extraordinary lengths to try and shift back to positive rates and bury NIRP in the bad ideas graveyard. If the ECB can't buy prosperity for Europe and generate excess returns for European equity owners, what will it take to get European equities back on track? As we said above, it is likely to take a good old-fashioned economic recovery and better profits for European businesses. The challenge is that these will be lofty ambitions in the face of the Killer D's of poor Demographics (10,000 people turn 65 every day in Europe), overwhelming Debt and the ever present specter of Deflation. Focusing in, we do see some signs of life in parts of the region, and we do think there are pockets of opportunity to make money in Europe (see Surprise #5 below). It will be interesting to write about the EU in the coming quarters.

Japan became one of our favorite equity markets in late 2012 when newly elected Prime Minister Abe laid out his economic reform plan dubbed "Abenomics," (I guess all heads of state now get their own personalized –nomics appellation) and BOJ Governor Kuroda committed to weaken the yen. Being overweight Japan had been very good to us during 2013, 2014 and 2015, and we were convinced that Abe-san and Kuroda-san would continue with the plan in 2016. We made *Save Us Kuroda-san, You're Our Only Hope* Surprise #3 in our 2016 list, and we thought that the USDJPY would weaken to 135 and the Nikkei could rally to 21,000. Unfortunately, a few days after we released the 10 Surprises, Kuroda-san seemingly lost his mind and

implemented a NIRP policy (after vehemently denying that he would do so only a week earlier). By mid-year things in Japan had come completely unglued as the yen surged and stocks plunged. We had to write in the Q2 letter *"'the good thing about Surprises is that they are only supposed to be right (by definition) a little over 50% of the time, so there will be some that are simply wrong.' Simply wrong might be an understatement on this one, we were dead wrong."* We spent a fair amount of time over the summer talking to experts about Japan, and we came away from the discussions with some new conviction that perhaps Kuroda-san was moving back toward the right track. We even went so far as to write *"it takes serious conviction to be supportive of Japanese equities when the Yen is crashing toward 100 and foreigners are selling in waves, but earnings growth is positive (best of the major Developed Markets) and valuations are back to levels described as "stupid cheap" by one of our favorite Japan specialist managers."* The good news is that these meetings helped us not sell at the bottom, but the bad news is we didn't follow our own advice echoing the advice of our manager to back up the truck and get super long again in Japan. Worse still was the fact that Japan was truly on sale with the yen up 17% and stocks down (21%) at the Brexit lows. What makes the lack of action even tougher to take is that we discussed how the Nikkei appeared to be making a Double Bottom (technical formation), "*the distinguishing characteristic is the second bottom has to have lower volume than the first (a sign that sellers were exhausted on the first leg down). June 24th was a very unique day in that it was a quite volatile due to the surprise Brexit vote the night before and volumes were high as well, pushing the Nikkei down (7.9%) for the session. Yet, surprisingly, the volume was lower than the February 12th low, so technically we had a textbook Double Bottom."* Of course, all of this is easier to see in hindsight, but sometimes they really do ring a bell and you have to act on the signal given.

Q4 was spectacular in Japan as the moves in stocks and the currency were quite large with the USDJPY down (13.4%) and the Nikkei up 14.9% in local currency (actually down (0.2%) in USD for investors who did not hedge back to yen). Importantly, the momentum that was initiated by the BOJ Comprehensive Review last fall became reflexive and began what appears to be a virtuous cycle again. We wrote last time that *"there could be significant gains ahead if the BOJ can actually steepen the yield curve as they committed to doing during their last meeting. "Curve it like Kuroda" is the new rallying cry and we will see how his effort plays out over the course of the next year."* We are back in the Kuroda-san fan club, so much so that Surprise #3 for this year is *Kurve It Like Kuroda* and we are back in the yen to 130, and the Nikkei to 22,000, camp. The power of the current rally should not go unnoticed. From 16,450 in September to begin Q4, the Nikkei jumped to 17,442 by November, only to be bludgeoned by the U.S. election volatility where it hit a one day low of 16,251 before launching on a nearly vertical ascent to finish the year at 19,114 (a 17.6% surge from the Trump Dump). The Megabanks finally began to move in the last couple months of the year, and to reiterate what has become a common theme in our letters, *"the Japan Megabanks are selling at single digit P/E ratios with rising EPS and extremely strong balance sheets, so while we understand that NIRP is bad for financials, there does come a point where all the bad news is already priced in and you have to plug your nose and buy."* The basket of SMFG, MTU and MFG were up nicely in Q4 (despite not being hedged), rising 13%, 15% and 7%. Importantly, if we look at the Japan listed securities, the gains are much bigger (and available also if you hedged ADRs) as JP:8316, JP:8306 and JP:8411 are up 33%, 42% and 25%, respectively. These moves are interesting as well given the USDJPY moved (13.4%) over that period so there is continuing "slippage" between the local listed shares and the U.S. listed ADRs, likely caused by foreigners continuing to flee Japan equities while the local investors continue to buy.

Emerging and Frontier markets were not at the top of anyone's buy list as 2016 began, but we had at least

begun to recognize that the depth of the Bear Markets in these areas might be reaching an exhaustion point. We had actually written in the Q4 2015 that it *"might be nearing the time to buy 'what is on sale' in Developing Markets"* and we followed that up with Surprise #7 that China and India might begin to recover. We often refer back to our letter on Sir John Templeton, trying to follow his wisdom to buy at the point of "Maximum Pessimism," and we wrote last quarter that *"at what seemed to be that darkest hour in late January (where the EM Index was down another (13.3%) and the FM Index was down (10.5%) in three weeks) we referenced George Soros' wisdom that 'the worse a situation becomes, the less it takes to turn it around, the bigger the upside.'"* In hindsight, we should have taken Soros not just figuratively, but literally, as it was the B and the R of BRIC where the most misery was and Brazil and Russia trounced India and China in 2016. After an extremely strong Q3 where the MSCI EM Index was up 9% (CYTD up a very strong 16%), we wrote that *"despite all the headline fears to begin 2016 including a hard landing in China, a hawkish Fed, Middle East conflicts, a rising Dollar and weak commodity prices, Emerging Markets lead nearly all Developed Markets in 2016 (Canada and New Zealand are better) and are up more than triple the MSCI World Index increase of 5.5% and more than double the 7.8% return of the S&P 500."* As is usually the case when you talk about how great things are going, the fall turned out to be the peak for EM & FM and the markets went flat in October as Ms. Yellen threatened to take the punch bowl away from the party in December. However, the real party crasher showed up on November 8th and the surprise Trump victory had the same effect as the next door neighbor calling the cops when your party gets too out of hand. The markets got sucker punched and went to the mat hard, falling almost (10%) in a couple of days. They tried to get up off the canvas in the second half of November, but were hit again in December when Janet really did raise rates and the dollar surged. The old saying goes "you can't keep a good man down," and EM got back up in the last week of the year, clawing back more than half the loss (the rally kept going in January). So in Q4 the MSCI EM Index was down (4.2%), which is not a terrible outcome considering the opposition, and the MSCI FM Index actually managed to eke out a fractional gain of 0.5% on the backs of a few strong currencies.

Not unexpectedly, there was quite a bit of dispersion in the EM Index during Q4, with returns ranging from surprisingly strong (two normal years of returns in three months) to surprisingly weak (loss of a normal year of returns in three months). Starting with the laggards, the worst performer was Egypt, which was forced to devalue their currency, plunging markets (23.3%). Next up, the Philippines continue to lead the way in what not to do in the global markets as their leader continued to make horrible decisions and stocks fell (12.8%). It was more of the same in Turkey as their leader also made nearly every mistake one can make, presuming the goal was to stabilize the markets, and stocks fell (13.7%). Finally, Malaysia edged out Mexico for the last spot in the "Terrible Trio" (Egypt was a one off event while the others have been serial offenders) as the strong dollar whacked most Asian currencies and markets and stocks fell (8.4%). For the year, the worst three markets were proof positive of how bad leadership can destroy wealth as Egypt, Greece and Turkey fell (11.5%), (12.1%), and (8.5%), respectively (Americans should take note). We actually wrote about this trend last time saying *"the common thread with these three is the poor leadership and we could see continued weakness from these regions (and others with poor quality leadership) in the coming quarters. The rising nationalism, populism and protectionism trends are hurting global trade and if those trends accelerate some of the Developing Markets countries could suffer disproportionately."* We should all be forewarned, if Developed Markets continue down a similar path, our markets are likely to suffer like the Terrible Trio. Turning to the top of the list, the leaders for Q4 were Russia (strong leader getting stronger), Greece (weak leader getting better) and Hungary (strong leader with his own –nomics, Orbanomics), which surged 18.6%, 15.3%, and 9.3%,

respectively. Russia benefitted from the grand slam of rising oil prices, the Trump victory, expectations of reduced sanctions, and good economic decisions during the downturn that have enabled a faster recovery. Greece has been an on again, off again basket case over the past few years, but there has been real improvement in the economy. Once the theater with the EU regarding debt restructuring is complete, we believe this market could really soar. Hungary is a very interesting case of how a good President/Prime Minister can make a tremendous impact if they are completely committed to working for the interests of the people. We shared our favorite saying from Arjun Divecha (Chairman of GMO and head of the EM team) about EM last quarter, *"you make the most money in Emerging Markets when they go from truly awful to merely bad."* The winners for 2016 are shining examples of this strategy. If you had asked anyone in 2015 which markets to avoid, Brazil, Russia and Peru (maybe a few others would have made the list besides Peru) would have topped the list. These markets were incredible for investors as they rocketed higher all year, surging 66.2%, 54.8% and 55.6%, respectively. Given how out of favor the idea of investing in EM was one short year ago, these numbers were unfortunately not enjoyed by many investors. What is also amazing about 2016 in EM is that returns like Hungary's 35.4%, Thailand's 26.6%, Columbia's 26.5% and Taiwan's 18.5% don't make the top three, yet are 3X to 5X the MSCI World Index return.

Given how bad the situation in Turkey has become, I want to repeat something from the last letter (normally I put repeat info in italics, but given the length of the paragraph I will just leave it normal) that I think is important when thinking about investing in the Developing Markets. We had noted in the Q2 letter that *"some EM observers have been saying that Turkey is beginning to look a lot like Russia during the early phase of the sanctions and that stocks are looking cheap."* Given how poorly Turkey performed in Q3 and Q4 (and down another (2%) in January with the EM Index up 6%), I want to reiterate some findings shared by Arjun Divecha at the November GMO meeting where he presented a study on the correlation between EM returns and the Quality of Institutions (QOI) score (a measure of Regulatory quality and Government effectiveness). Their findings showed that the better a country is at improving the quality and effectiveness of their institutions, the better the returns to shareholders (makes sense – when there are good institutions there is less "leakage" to the family majority owners). Arjun said that while the quantitative models love Turkey (really cheap) they are hesitant to buy since the QOI score is collapsing (removing judges, jailing political rivals). Some pundits are now comparing Erdogan to Putin and saying that Turkey (like Russia) is no longer a safe place to invest. We beg to differ with the view on Russia. We noted last quarter that Russia was one of the best performing markets in 1H16 and the positive returns continued in the 2H as Russian equities surged on the surprise election results in the U.S. and soared 54.8% for the year (sounds pretty investable). We noted that *"there are emerging signs of a broadening in the Russian equity Bull Market and some managers we admire have been talking about the retailers (Magnit, X5, Lenta, Dixie) as a buy for the next phase of the recovery."* Over the past three months, RSX surged an amazing 19% while the S&P 500 rose a robust 8%, the Russian retailers were mixed, (5%), 14%, 15% and (14%), respectively, and our favorite play on Russian growth, Sberbank, rose just another 27% (up an astonishing 100% for the year). Finally, looking at another place that many think has become uninvestable, we noted that, *"Greece has continued to be a dark spot amidst the breaking dawn in EM, but we believe that they have finally resolved the issues with the EU and the time is now to begin wading back into Greek equities."* We said to start with the Banks *"Alpha, National Bank of Greece, Eurobank & Piraeus, in that order of riskiness, as they will be a leveraged play on the recovery."* Greece did indeed finally stop going down and rallied quite strongly in Q4. The bank stocks were particularly strong and surged 28%, 27%, 35% and 55%, respectively, for the period. We would like to

point out how the riskier names increased the most due to their greater amount of embedded leverage. We expect this story to play out in much the same way that Sberbank did in Russia during the recovery from the oil collapse.

As a huge portion of the world's population recently celebrated the Chinese New Year and the transition from the Year of the Monkey to the Year of the Red Fire Rooster, the balance of the world's population (particularly those in investments) continue to struggle with the cognitive dissonance between the popular narrative that China is due for a hard landing any moment and the continued improvement in the economic data. This dissonance has been going on for a while. We wrote in Q3 that "*China continues to grab daily headlines and the constant barrage of pundit predictions of the impending deflation of bubbles in the housing markets, the stock markets and the debt markets is actually getting a little tiresome, particularly when the economic data continues to surprise to the upside"* (Pesky facts getting in the way of another good narrative). All global citizens seem to suffer from one common affliction, Home Market Myopia, which drives people to think that all the smart people live where they live and all the great investment opportunities are in their home market (investors around the world are always overweight their domestic market). Clearly neither of those beliefs is true, but that doesn't stop us from believing them. On top of our home bias, there is a huge East/West culture divide and the Western media does an amazing job of consistently bombarding us with tales of economic and political woe in the East (particularly China) and in the past couple of years the cacophony has been turned up a couple notches to a level bordering on "Endgame Watch." We wrote last time that *"we will continue to take the under on the total Doomsday scenario, but we are willing to concede the point that there are some stress points in the China economy that must continue to be managed. Where we differ from the Chicken Littles is that we actually think the Chinese Leadership is doing a good job doing just that."* So let's go to the scoreboard (actual data) and see where things stand. The numbers say (yes, we know the vast majority say the numbers are wrong, with no evidence of why they are wrong or what the "right" numbers are by the way…) that the Chinese economy is humming along just fine and, in point of fact, is now showing signs of improvement. To that point, I visited with one of our favorite PE managers in Hong Kong in early January, and he said the trough is behind us (based on the cash flow data from his 80 investments, source data). Q4 GDP came in a little higher than expectations at 6.8% (unsurprisingly, right in the target zone of 6.5% to 7%), the December retail sales growth came in at a 10.9% YoY increase, the Manufacturing PMI is now nicely above 50 at 51.9 (expansion), the Non-Manufacturing PMI is even stronger, at 54.5 (which remains a key number as China transitions toward a consumer economy) and Industrial Production continues to expand nicely (contrary to the U.S. where IP has been contracting for over a year). In order to maintain growth, China must continue to expand Credit and the Money Supply. The Government continues to step up in a big way as credit growth expanded at an annual 13.5% clip (down slightly from the 16% average over the past decade) and M2 money supply growth has been 11.3% in the past year. Both Imports and Exports are growing robustly and the one missing piece of the puzzle has been the persistent deflation in the PPI, but the most recent stimulus package seems to have hit the mark and PPI went from a negative (5.3%) a year ago to a positive 5.5% today (after being below zero for nearly five years). Historically, Chinese equity markets have struggled when PPI is negative (played out from 2013 and 2016) and have done quite well when PPI is positive (turned in September – a possible tailwind for 2017).

Leaving the Macro view to look more closely at the Micro view, Q4 unfortunately did not see a continuation of the significant strength in the Chinese equity markets during Q3 as the MSCI China Index fell (7.1%), Hong Kong slumped (9%) and even the MSCI China A-Shares 50 Index could not hold onto the early gains in October and November, slipping

(0.8%). For the full year of 2016, the MSCI China Index exhibited a lot of volatility and not much to show for it from a return perspective, finishing up a scant 0.9%. The Hang Seng Index exhibited the same pattern, rising only 2.2%. After rallying hard to get back close to even in November, the MSCI A-Shares 50 dropped again in December to finish down (8.1%). The steep correction in Q1 pushed P/E ratios in China to silly levels, and even with a 20% recovery from the February bottom, valuations in China continue to be extremely attractive. History has shown that investors with patient capital have been amply rewarded when buying Chinese equities at these levels (MSCI China P/E is 13X trailing and 11.4X forward). To this point, we wrote last time that, *"we do believe that valuations merit a considerable overweight to China relative to the Developed Markets going forward."* For many investors there has been a hesitancy to invest in China due to persistent fears of an impending RMB devaluation. The absolute certainty of a huge currency crisis in China has been the rallying cry for the China Bears over the past two years, and their persistent growling has kept many investors on the sidelines. The good news is that waiting for 2016 to pass has not had a large opportunity cost (a window that may not be open for the rest of 2017). We discussed the RMB fear issue in our Q2 letter, saying *"we have laid out our case for why there wouldn't be an RMB devaluation in 2016 (too much at stake with getting RMB included in the SDR) and that the hedge funds who were betting on that event would have been better off deploying capital elsewhere."* The Yuan was indeed included in the SDR during 2016 and was relatively stable during the year. There was some willingness on the PBoC's part to let the RMB gradually depreciate (6.6%), but it was a very controlled move, so any one who tried to "Fight the PBoC" by putting on a big RMB collapse hedge lost money. The RMB Bears are out in force again this year, but we are still compelled by the GMO presentation last fall that explained why there would not be a significant RMB devaluation in 2016 or 2017. We wrote about the two pillars of the thesis last time: "*1) fears of the NPLs in the banking system were unfounded because SOEs (manufacturers and banks) are on both sides of many of the loans (one as liability and one as asset) so they cancel out (require no bailout that would drain FX reserves) and 2) President Xi would not allow such a significant event in advance of the 19th National Party Congress in 2017, as he has too much at stake in his plans to consolidate power."* During our Hong Kong visit in January, one of the takeaways from the Bank of America Merrill Lynch CIO Conference was the broad consensus amongst investors on the ground in China that significant weakening of the RMB was not necessary. When choosing between the Western Press and I-Banks or boots on the ground in the region, we will go with the local knowledge every time.

Last year at this time we discussed how we had come across an interesting Chinese New Year forecast with very specific market expectations for 2016, which we summarized, *"while the early 2016 returns in China have been poor, on the eve of the lunar New Year, the forecasts for the Year of the Monkey indicate that there will be a meaningful rally in the Chinese equity markets in the second half of the year."* After some consolidation to digest the strong move off the bottom in February and a small drop after the Brexit vote in late June, China equities looked poised to resume their upward ascent. We wrote last quarter that, *"almost like a light switch, Chinese equity markets began to rally in July and have been very strong over the past four months."* The prognostication looked to be uncannily correct from the Brexit lows through early October, as FXI (a proxy for large caps) was up 20%, EWH (the Hong Kong ETF) was up 17% and even ASHR (the A-share ETF) was able to muster an 8% gain. Looking closer at the few sectors we really like (and have been overweight in our portfolios) like e-Commerce, Healthcare and Consumer, the returns are more in line with the Year of the Monkey predictions. While we were writing last quarter's letter it was like someone turned the light switch right back off. That someone was named Janet Yellen (and her merry band of Hawks) and when she convinced the world she would hike in December the multiples

for growth stocks (all around the world) began to decline precipitously. Q4 was not pretty in China as FXI was down (9%), EWH fell (12%), ASHR dropped (5%), Phoenix tumbled (28%), Tencent dropped (12%), JD was down (2%), VIPS skidded (25%) and BABA dropped (17%). Just to keep these moves in perspective, the U.S. growth stocks, the FANGs (FB, AMZN, NFLX and GOOGL) also saw their multiples compress in Q4 (aside from NFLX which beat on subscriber growth) and these stocks fell (10%), (10%), 26% and (2%), respectively.

Interestingly, when looking at Frontier Markets as a whole, performance was a non-event again in Q4 (like the previous three quarters) as the MSCI FM Index rose a scant 0.5% bringing YTD returns to only 2.7%. That said, the lack of movement overall masks some very wide dispersion across the different regions and countries within the group. There were some absolutely extraordinary moves around the world in Q4 as explosive rallies were triggered by a number of catalysts in disparate places like Zimbabwe, Saudi Arabia, Jamaica and Bulgaria. Within the FM Index there were eight countries that jumped more than 10% during the quarter with the Q4 Fab Four leading the way up 51.3%, 27%, 19.7% and 17.2%, respectively. Three of the four are very small, very volatile markets, but Saudi has been developing into a very interesting story, which we discuss in more detail below. For the full year, despite the Index producing not much to write home about, there were again a number of places where huge returns could be found as Pakistan was up 40.4%, Zimbabwe finished up 36.5%, Morocco jumped 34.3% and Croatia slipped into the fourth slot, up 22%. There were a surprising 13 countries up more than 10%, so making money out on the Frontier in 2016 was all about country selection (and sector selection within those countries). We noted last time that Sir John Templeton, *"was right in saying don't look for where things are going well, but look for where things are the most miserable (it would have been tough to find a more miserable place last year than Ukraine maybe Brazil)."* We already detailed how great the Brazil recovery and rally was in the EM section above, and while Ukraine took a pause that refreshes in Q4, falling (2.6%), the market was still up a very robust 18.4% for the year. and Sir John's admonition to search for misery continues to be a great way to make significant returns for patient investors, who by nature have a time horizon longer than a few months. We also wrote last time that *"the real story for [Pakistan and Vietnam] may develop in 2017 as they are both candidates for inclusion in the MSCI EM Index. History shows that markets included in the Index rise between 60% and 120% in the year leading up to the actual inclusion (see UAE, Qatar and Dubai as recent examples)."* MSCI reaffirmed their decision to move Pakistan into the EM Index and that market surged 16.2% for Q4 and was up 40.4% for the year (right on track and likely more to come), but they decided not to move forward with Vietnam, which proceeded to drop (10.4%) in Q4, reversing the earlier gains in 2016 and finished down (7.8%) for the year (oh the power of Index creators). There could be great news for Argentina and China A-Shares as they are both up for inclusion in May, but bad news (the hits just keep coming) for Nigeria, as they will be removed from the FM Index this year.

The other country that has been rumored to be included in the EM Index in 2017 has been Saudi Arabia, and we believed this was one of a number of tailwinds that was creating tremendous opportunity for investors in the Saudi market in the 2016. After struggling a great deal in the first three quarters of 2016, as we noted above, Saudi stocks found solid footing in Q4 and surged 27%, to turn a healthy (13%) year-to-date loss into a 10.3% gain for the year. We wrote last time that *"there is a lot of angst within the global investment community about Saudi and the oil prices (neither of which appear to be very stable), but what we believe many are missing is the significant change that has occurred in the Leadership of the country with the ascension of Deputy Crown Prince Mohammed bin Salman."* At 31 years old bin Salman is the youngest leader in the history of the Saudi Kingdom and is the personification of the

"modernization in thinking about the future of the Kingdom in the post-hydrocarbon era." There is still plenty of skepticism about whether Saudi Arabia can emerge from their role as an oil dependent Kingdom to become a modern global economy, but there are positive signs emerging. The most significant of such signs is their plan to take parts of ARAMCO (the Saudi oil company) public and use the proceeds to create a vehicle for funding the projects that will be necessary to create a new future for Saudi Arabia. The building enthusiasm is palpable in the markets. From the textbook double bottom pattern that occurred on 10/18 at 5,461, the Tadawul Index has surged 30% to close at 7,102 at the end of January as investors have poured money into the Kingdom's stocks in anticipation that the Inclusion Committee will look favorably on Saudi Arabia. We noted last time that *"there is more to the story than just MSCI inclusion as corporate profits are recovering as oil prices have stabilized, the government budget problem was solved with a recent debt issuance and the prospect of an IPO of some portion of ARAMCO has animal spirits flowing again."* After a couple of years of being overrun by the bears, the bulls have taken over in Saudi, and the positions we built in our portfolios last summer have been beneficiaries of the surge in positive momentum. Given how little foreign capital is invested in Saudi, the bulls could be loose for a while, and should MSCI give the green light for inclusion in the EM Index, there will be a mad dash into Riyadh.

Perhaps our favorite frontier market over the past few years has been Argentina. In mid-2013 it became evident that real change was coming to this country that had been left for dead after the 2001 bond default. A corrupt President and political system, rampant inflation, a terrible currency, little regard for foreign investor rights (bond defaults and YPF asset expropriations) and myriad other maladies made Argentina appear unfit for investment. Yet, almost as quickly as you read this line, readers should be hearing the alarms of both Soros and Templeton loud and clear. Having reached "maximum pessimism" it couldn't get any worse (it didn't), it didn't take much to turn it around (a new President and settling the bond case with the U.S. hedge funds) and the upside has been very large indeed. Over the past four years the Merval Index has risen nearly fourfold, and while there have been two currency devaluations that have cut those returns significantly for dollar based investors, there were domestic businesses that you could buy which actually captured more than the Index returns (the Index has been held back by a large weighting in oil giant YPF which is hurt the most by currency losses). Another reason that Argentina has been such a great place to invest is it has not been crowded. We wrote last time how *"fears about past defaults, currency devaluations and corruption have made global investors skittish about re-engaging with Argentina. [However], there was a silver lining in the reluctance of global investors to come back quickly to Argentina as it has extended the investment opportunity (so far, so good) and we expect to see meaningful opportunities to make excess returns in this market for many years to come."* Another benefit has been the restriction of global capital markets to Argentinian companies for so long that there were few options for global investors, so when the money did start coming back into the country there were few places for it to go. Excess demand and limited supply is a great recipe for rising stock prices. Despite all the good news, Q4 was a rough quarter for Argentina stocks as the Merval Index fell (12.2%) for the period on no real news (again unfair fallout of the Trump-Mexico worries), bringing 2016 returns down from 19.5% in September to 4.9% for the year. Prices exploded upwards again in the new year, and the Merval surged 18.4% in January, bringing the TTM return to 19.9% and the trailing 3-year return to a spectacular 24.6% (nearly doubles your money). If we dig in a little deeper to the largest ADRs that investors can buy to gain exposure to Argentina, YPF (oil company), GGAL & BMA (banks) and PAM (utility) have done even better, rising 25%, 10%, 7% and 29% in January. We have written previously about PAM and I tweeted at the beginning of 2015 that if I was forced to own one stock for the next decade this

would be it. Over the past two years PAM has soared 360% while the SPX is up 10% and the ARGT (Argentina ETF) is up 40%. Viva Argentina!

With all the attention focused on the "Trump Bump" in equity markets there was very little attention paid to the "Trump Thump" in bond markets as global interest rates surged and investors who owned bonds incurred some "yuge" losses (bond market losses exceeded $2T, outweighing equity market gains, but who's counting because the narrative is Trumponomics is great). What is interesting is how quickly the narrative changed from deflation to inflation and the threat of negative interest rates to the end of the bond bull market. Also of note is how market observers seem to have forgotten that the bulk of the move up in interest rates from the summer lows occurred before the election (Trump was not favored to win so it seems unlikely that the market would be discounting his economic policies). Yes, 10-year rates in the U.S. did jump 32% post-election through year-end (from 1.86% to 2.45%), but the summer lows were 1.37% and the peak was at 2.6% in early December (a 90% jump). For all the hype about how this time is definitely the bottom and rates are going much higher from here it is odd that the move in yields after the election is a fraction of the move during the Taper Tantrum (1.66% to 3.01%). Further, until such time as the 10-year breaks above that 3.01% level, the current trend is still down. We continue to side with Van Hoisington and Lacy Hunt who believe that the secular low in rates is ahead of us, rather than behind us (we discuss that position more thoroughly in Surprise #1 below). Q4 was tough on bondholders (the irony here is the voters who elected Trump likely have more exposure to bonds than stocks and therefore are worse off today…Sad) as the Barclay's Aggregate Index dropped (3%) for the period and the Barclay's Long Treasury Index was completely thrashed, plunging (11.7%). The sharp drops erased half of the Aggregate Index returns for the year, up 2.7% for 2016, and nearly all of the return on the Long-Bond Index for the year, up only 1.3% for 2016 (after being up 14.7% CYTD only three months earlier). At the end of Q3, Long Bonds were up twice as much as equities and by the end of Q4 Long Bonds were up 1/10th of the S&P 500 return for the year. Again, much of this reversal occurred prior to the election. We discussed last quarter that *"it appears that the Fed has finally convinced people that they are truly serious (as opposed to Sutherland serious in Animal House from the last letter) and bonds responded by shedding one-third of their gains as we come to Halloween."* Perhaps we should have known that the Trump Thump was looming on the horizon when it was reported that the hottest selling Halloween mask was Trump.

To add fuel to the "Bond House on Fire" narrative, the Fed did raise rates at their December meeting by another 25 basis points but curiously, the 10-year yield actually peaked two days later and has fallen over the past two months. We said last January in MCCM Surprises #2 *Two Wrongs Won't Make It Right* that QEeen Janet wouldn't be able to pull the trigger on raising rates in 2016. Given that the Fed said they were going to raise four times and they only managed one hike in the final two weeks of the year we said "close enough" on the Surprise, but the fact remains that the Fed is stuck between a rock and a hard place when it comes to trying to tighten liquidity in the face of falling economic growth (Q4 GDP was below consensus estimates and full year 2016 was a paltry 1.6%). Our Q3 letter discussed the perils of the Fed moving forward with raising rates in December, saying *"it is perhaps possible (emphasis on perhaps) that the Fed really does go through with what appears to be an ill-advised rate hike to end the year (and maybe the crushing will continue). We say ill-advised because all the economic data that we see is pointing to a fairly serious slowdown in economic activity and it appears to us that a tightening of liquidity would be a policy error at this point."* The bond market appears to agree with this perspective in that the steepening of the yield curve that was supposed to happen post rate hike (necessary to justify the massive ramp in U.S. financial stocks over last two months of the year) has not materialized and 30-year rates have actually fallen since the Fed hike. We wrote last time that *"after*

spending some time with one of our favorite managers in London who owns a lot (and we mean a lot) of long bonds (Treasuries and Bunds) he convinced us that nothing has changed that warrants shifting the view that the Fed missed their opportunity to raise rates in 2013 and there is not enough going right for them to propagate any meaningful increase." In the spirit of full disclosure, this positioning turned out to be exactly wrong in Q4 and this manager got crushed on these long bond positions, but he remains steadfast that the economic data will continue to disappoint and the Fed will be forced to reverse course in 2017. In thinking last October about the December hike, he was right when he said it was possible and now we will see if the second part of his forecast holds true, *"but [the December hike] would be it and it would then be even more likely that they would be forced to ease again (QE IV or something better) in 2017 as the economy tips toward Recession."* The Fed Dot Plot (and broad consensus on Wall Street) says they will raise rates four times in 2017 and that it will be a bad year for bond investors. We will take the under on the number of rate hikes and will take the contrarian position that bonds will outperform stocks as volatility rises and bonds again serve as a safe haven trade at some point during the year.

The President Xi quote of Dickens in Davos where he described the global economic environment, saying "it was the best of times, it was the worst of times" could have just as easily been a description of 2016 in the global bond markets as the first half was heavenly, but the second half has hellish. We wrote last time that *"Global Fixed Income markets had been non-stop a party during the first half of 2016, as the relentless front running of Global Central Banks (particularly the ECB), who had basically told the world "if you issue a bond, we will buy it…" created a massive race to the bottom, leading ultimately to over $13T of bonds trading with negative rates."* The rest of the Dickens quote says, "…it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity." We see this as a perfect parallel to the actions of the bond markets as investors had left the "age of wisdom" (in which one must be paid to lend money to a government) and plunged headlong into the "age of foolishness" (actually paying governments to hold their money via negative interest rates). Investors' belief in the omnipotence of Central Bankers since the depths of the Global Financial Crisis suddenly turned to an age of incredulity as some bond investors began to awaken from their stupor. Charles Mackay in his classic book (a serious must-read), *Extraordinary Popular Delusions and the Madness of Crowds*, says, "Men, it has been well said, think in herds; it will be seen that they go mad in herds, while they only recover their senses slowly, and one by one," and the 2H16 saw some investors shaking off the Central Bank zombie curse. The Barclay's Global Bond Index got hammered in Q4 on the double whammy of rapidly rising interest rates and a rapidly appreciating dollar and slumped (7%), which nearly wiped out the entire gain of 9% in 1H16, so the Index finished up just 2.1% for the year. It seems we were right when we wrote last quarter that the flat performance in Q3 following the torrid run in Q1 and Q2 might be setting up a phase shift. We said, *"Once again the sedate outcome masks a very volatile period where the oscillations around zero became very rapid (usually the sign of a trend change, like water atoms vibrating rapidly before they turn into steam or ice) and global bond yields looked like just as much of a roller coaster as global equity markets,"* and it was indeed a wild ride for bond investors akin to cresting the top of the hill and careening down the steepest drop on the coaster leading into the 360 degree loop at the bottom (as rates rise, bond prices fall).

We chronicled the nausea-inducing ride of the German Bundercoaster (10-year Bund) last quarter saying *"that's where the "fun" (less fun if you actually owned Bunds, or any other bond for that matter) started as fears of the Fed actually raising rates in December (and a bunch of highly acclaimed Bond Gurus talking their short books on TV) triggered a near panic selling spree and the normal party month of Oktoberfest turned into Rocktober for bondholders and the Global Bond Index shed a third of the gains*

for the year in the month." The funny thing about global bond markets is how amazingly interconnected they have become (driven by the speed with which money moves around the world, particularly in the bond and FX markets) and Q4 was a great example. The Bundercoaster, which crested the second highest hill in the entire amusement park (the JGBeastcoaster being the highest, read most negative rates) on 9/28 at (0.15%). From that point, rates rose and prices were rocketing downward as yields surged to 0.4% by the day before the Fed meeting in December. In a classic sell the rumor, buy the news event, the Bundercoaster suddenly stopped falling and started back up the hill as rates inexplicably fell back to 0.18% in the last three weeks of the year (short squeeze most likely), only to have prices head right back down again in January as yields bounced back to 0.45%. The global amusement park rides have been scary on both sides of the English Channel, as the GILTcoaster ran from 0.68% to 1.49% and the Italian BTPcoaster ran from 1.18% to 1.80% from the end of Q3 to the Fed meeting on 12/15, then both rates fell slightly, before careening back up (yields up, prices down) to 1.44% and 2.26% in January. We continue to hear about how this recent move in rates is the "End of the 35 year Bond Bull Market" and we even wrote last time that, *"There is a rising cacophony that "this time is the big one" and that foreign government bonds are the short of a lifetime, but before we get too carried away let's recall that Bund yields (as a proxy for all) have had multiple surges in the past five years (many much larger than the current one) and the yield has always peaked at a lower level (lower highs) and headed right back down to new lows (lower lows)."* The 10-year Bond hitting (0.15%) on 9/28 was a new lower low, but until we surpass the 2015 high of 0.92% the downward trend remains intact. So let's go back through the checklist of criteria to see if we can answer the essential question we have to ask. What has changed so much in a positive direction that rates must now increase? Is European and German GDP growth better? We have moved from No to A Little. Has European inflation emerged? We have moved from No to Yes (EU CPI has jumped from 0.2% in June to 1.8% in January). Are European politics stable and supportive of better growth? This one is still a No. Have European demographics gotten better? This one is still an emphatic No. Are European banks extremely healthy and rapidly growing new loans? This one has changed from a No to Getting Better (the German decision to let Italy bail out the banks is a big deal). So we may not have an abundance of Yeses, but there are some positive signs in the EU that support the idea that global bond yields will have an upward bias in the near term. We still lean toward the Hoisington thesis that the final trough in global bond yields is ahead of us, but we won't fight the data in the short run.

We are running out of superlatives to describe the credit markets. Last time we referenced Ludicrous Speed (from the movie *Space Balls*), but now we have to find something even faster as the high yield bond markets keep running faster and faster. Elon Musk at Tesla is also a fan of *Space Balls* as he has two modes for his Model S cars, Insane Mode (0-60 mph in 3.2 seconds) and Ludicrous Mode (0-60 mph in 2.8 seconds) and has hinted that in the new roadster there would be a Maximum Plaid Mode, which refers to what happens to the star grid you see from the windshield as you accelerate past Ludicrous speed in the starship. The scene in the movie actually fits perfectly when thinking about "high" yield bonds (the yield is not high any more at 5.9%). Dark Helmet (Rick Moranis parodying Darth Vader) is holding on to the bridge railing and looks like a flag flapping in the wind and he orders Colonel Sandurz not to be chicken and go faster and then says, *"What have I done? My brains are going into my feet,"* which in our opinion, is exactly what would be required to buy high yield bonds here. Calamos Advisors does a great quarterly review of the high yield markets and they always show a forecast for the next year with a number of default scenarios. From 12/31, they forecast that if there is only a nominal increase in incremental defaults (highly unlikely given that defaults rose from 2.9% in 2015 to 4% in 2016), the total return for HY bonds will be 3.6%, and if Treasury rates were to increase even a little that

number quickly slips to 0%. They also have an upside case (decline in defaults) that gets to 6.8% and a downside case (rise in defaults to normal for this phase of cycle) that gets to (10.1%). Just to put some numbers around the Ludicrousness, in Q4 the Barclay's High Yield Index rose another 2% to finish the year up 17.5% (keep in mind this occurred while other bonds were getting whacked by rising rates). HY has been oblivious to deterioration in other markets as spreads keep tightening due to the global grab for yield and the Option Adjusted Spreads (OAS) has narrowed from 5% at the end of Q3 to 4.1% on 12/31 and has moved closer to Maximum Plaid in January, falling to 3.84%.

The most ludicrous thing that has happened is that the junkiest company bonds are the most prized and CCC rated bonds (remember a CCC rating indicates a 50% risk of default within four years) are well into Maximum Plaid speed and surged more than twice as much as the HY Index, soaring a truly astonishing 36.5% in 2016. We warned (clearly unnecessarily) in Q3 that, *"despite the fact that corporate debt levels are at all-time highs and there are many companies with suspect balance sheets issuing bonds, sure enough, since the bottom in February, there have been record inflows into HY bonds. Normally this kind of rush into an asset class has been a contrarian indicator for future returns, but not so far in 2016 as HY Bond prices keep getting larger and the yield in "high yield" keeps getting smaller."* With 2016 securing the spot as the third best year in the HY market in the past two decades, we find it very odd that both 2003 (2nd) and 2009 (1st) were years where the economy was coming out of a Recession and HY bonds were rising from the ashes of a wave of massive defaults. We can't help but feel that the end of the movie scene might apply within HY markets soon. In that scene, when Dark Helmet says *"stop this thing"* (he can't take the g-forces any longer). Colonel Sandurz reminds him he is not buckled in and it is too dangerous, to which Helmet replies, *"Bulls###, just stop this thing, I order you."* Sandurz pulls the emergency brake, Dark Helmet flies into the dash of the bridge and has to be pulled out by two Storm Troopers, his helmet crushed, glasses shattered, and he mumbles barely coherently, *"Why don't we take a five minute break?"* and falls over. We were early in thinking at the end of 2015 that Carl Icahn was right to be cautious about the High Yield markets and our Surprise #10 from the 2016 list on the party bus crashing into the big black rock was too cautious. We wrote last time that, *"'Overly cautious' is generous, we look silly at this point for doubting the power of the global stretch for yield, but when valuations reach extreme levels we think it pays to remember the words from our tribute to Shakespeare earlier in the year where he writes in the Merry Wives of Windsor that 'you can be three hours early, but not one minute late.'"* In #TheValueOfValue letter we discussed a number of examples of what can happen when investors pile into an asset class or investment with no margin of safety; years of paper gains can vanish quite quickly. Sticking with the *Space Balls* theme, we advised investors to don their own Dark Helmets, as it is better to be safe than sorry (missing the last couple percent seems like a small opportunity cost). Sometimes when markets get truly and extremely overvalued, they hit the wall with no skid marks.

On multiple occasions over the past few years, we have discussed the significant change that has occurred in Emerging Markets Debt as the number and quality of issuers has increased over time and the breadth and depth of the overall market has dramatically improved. We commented last quarter about just how far this trend had progressed, saying, *"What has been a bit surprising is how EMD has become the "go to" Safe Haven trade when things get rocky as investors perceive there to be better credit quality in EM than in the more highly leveraged Developed Markets. Clearly that doesn't mean that all EMD is good and all DM HY is bad, it is just that on average investors can find superior issuer quality and more diversity of product in EMD today than ever before."* Through the end of Q3 the EMD markets were surging in line with HY markets and were well ahead of global equity markets, having jumped 12.8%

for the first three quarters. Then came the U.S. election surprise. Following his victory, Trump unleashed a tweetstorm of threats against global trade, singling out emerging markets like Mexico and China and resurrecting the America First mantra, which touched off a rapid sell-off across the Emerging Markets, and both equity and debt markets were clobbered in Q4. The JPMorgan EM Bond Index fell (2.6%) during the quarter, pushing the full year return down to a (still respectable) 10.2%. Most of that loss came from the rapid appreciation of the dollar following the election and the Fed decision to hike rates in mid-December. Given our view that the Trump Bump in the dollar will be short-lived (it has already almost fully reversed in January), we remain more bullish on EMD than other forms of debt as there is higher growth, better cash flows, lower leverage and higher average quality across these markets versus the Developed Markets. One issue that we discussed last time is that, *"now that EM Bonds have gone "mainstream", the bond holder's dilemma now applies to EM Debt as well as all the other forms of fixed income we have discussed above. In so many global bond markets yields have been compressed so far that there is simply no margin of safety (there is no Value) and the expected return from this point forward is likely to be very unappealing."* The problem with any investment decision is when you shift from buying an asset that you feel is undervalued or has substantial investment income to generate return to a decision to buy an overvalued asset because you expect some "greater fool" will pay an even higher price in the future, you move from the realm of investment to speculation. In choosing between the various segments of liquid debt, we would still favor EMD over HY and traditional fixed income, but we would favor other forms of income-oriented assets over all these and would rather look at BDCs and MLPs for more consistent cash flow and lower risk of capital loss in the event of meaningful interest rates rises.

When looking at the other yield related assets, we discussed last quarter how great things had been in the first half of 2016 for REITs and MLPs as they had risen 13.3% and 14.7%, respectively, for the first six months of the year. Most investors would probably assume that these types of similar returns would be normal as "yield is yield" and there is some logic in assuming that both asset types would rise and fall in a similar fashion with interest rate moves. What we know from the past few years is that assumption breaks down (it was completely obliterated in 2015 as REITs rose 2.5% and MLPs were crushed, falling (32.6%) when oil prices collapsed). We explained why this might occur last quarter saying, *"not all yield assets are created equal; different structures, different leverage levels, and different underlying asset quality "should" produce different return streams. The problem lies in those times when investors ignore all the differences and simply buy the yield of what they consider to be comparable assets (REITs and MLPs)."* The divergence among yield assets reemerged in Q3 as REITs fell with rising rates and MLPs rose with rising oil prices. The trend accelerated in Q4 as the S&P U.S. REIT Index slumped (3%), while the Alerian MLP Index rose 2% on excitement about a reported agreement for an OPEC production "freeze" (more on this in the Surprises section). The continued drop in REITs cut 2016 returns to a modest (but still better than bonds) 8.5% and they ended up losing to the S&P 500 for the year after leading for the first three quarters. We wrote a few quarters ago that, *"the most impressive thing about REITs is that, interestingly, they have outperformed equities over nearly all trailing periods during the past twenty years, so perhaps there is something to this yield construct after all."* How quickly things can change. The S&P 500 has regained the lead over REITs over most of the trailing periods in the past ten years and while REITs dominate for much of the ten to twenty year trailing periods, the gap is closing. We mentioned last quarter that *"we can't help but feel that this is not a particularly good time to put new capital to work in REITs as it is beginning to feel a little like 2007 (when we made a lot of money for clients going short REITs along with short Sub-Prime) where investors seem to be willing to pay any price for real estate related assets.*

When the margin of safety disappears, usually forward returns disappear." We could spend a lot of time here discussing the headwinds for many property types like office (shrinking working age population) and malls (AMZN road kill) and we could point to the crazy valuations in multi-family as supporting evidence for why to avoid this particular yield asset, but we will keep it short and sweet and say that the risk/reward is unattractive and there are plenty of better places to deploy capital (although we can't help but think shorting mall REITs is a really good idea).

Back to MLPs, with the Alerian MLP Index rising 2% in Q4, the full year number was a very robust 18.3% and MLPs were one of the strongest performing asset classes in 2016 (as we said might happen in Surprise #9 on Commodities). Coming into the year we were beginning to get excited about the commodity space because it appeared that there were signs that the five year bear market had pushed prices down far enough to cause capacity reductions. That said, prices were still falling (some, like MLPs, were still falling very sharply) so we wrote *"we talked in January about how trying to catch falling knives in investing was a very dangerous sport (and resulted in lost fingers) and said that the best strategy is to let the knife hit the ground, bounce around a bit and then go over and pick it up by the handle."* That turned out to be the best strategy in MLPs as there were some precipitous falls over the first six weeks of 2016, but then the knives hit the ground, bounced around a bit and came to rest allowing smart value investors to make "generational" purchases. There was one more complication in trying to sift through the wreckage in MLPs, and we wrote last time that *"we have been making the case that there were indeed a bunch of oil & gas related companies that never should have been allowed to utilize the MLP structure, but the mid-stream transportation companies had long-duration assets and relatively stable cash flows that were ideal for MLPs so when the markets sorted themselves out, these pipeline companies would surge."* Prices got so low in February that investors were discounting zero growth in hydrocarbon production forever in the U.S. and we made the case that buying core assets like ETE, PAGP and WMB would provide investors with outstanding prospective returns. We had it on pretty good authority (we own a bunch of private production assets in the Permian basin and management was telling us they were getting ready to "drill, baby, drill") that production volumes would actually rise, and maybe even rise a lot if oil prices continued to recover. Reiterating what we wrote last time, *"it appears that investors have come around to the idea that hydrocarbons will continue to need to be transported in the U.S.,"* and ETE, PAGP and WMB were up an impressive 250%, 135% and 130% from their babies thrown out with the bath water phase in February. Even the AMLP Index ETF was up 60% for the same period despite being bogged down by some of the MLPs that should never have been allowed to become MLPs. Just for a little additional perspective (and an indication that there could still be additional upside), if we back up to the 6/22/15 date of the announcement of the hostile takeover attempt of WMB by ETE (always see big deal announcements at the top, including many recent tech deals), our tremendous trio are still down (40%), (51%) and (49%), respectively. Similarly, the MLP Index AMLP fell less during the crash, but is still down (22%) from the peak of eighteen months ago. Going forward, we see a confluence of events that could further stimulate MLP gains, including: 1) a less environmentally sensitive Trump Administration likely to accelerate drilling and pipeline projects (would be huge win for ETE) 2) technological advances continue to defy pundits who conclude depletion of existing wells must reduce volumes, and 3) a rapid recovery in rig counts in the Permian as $50 oil makes E&P companies extremely profitable in the basin (much to OPEC's chagrin).

On the verge of Super Bowl weekend a year ago (after a punishing five-year Commodity Bear Market from 2011 to 2016) no one wanted to even talk about commodities, let alone consider owning them. In fact, many investors/managers were heavily short. As we reflected on those dark days in our last letter, we

wrote, *"Trade show attendance was down, commodity company management breakout sessions at investment banking conferences were sparsely attended and long-time commodity bulls like Jim Rogers had been relegated to "has been" status. What better time could there be to buy?"* A week earlier we had released our Ten Potential Surprises for 2016 at the ETF.com Conference in Florida and the Surprise that got the most attention (and the most vitriol on Twitter, which is often a good contrary indicator of the strength of an idea) was #9 on Commodities, *The Cure for Low Prices in Low Prices.* Our primary point was that *"it turns out capitalism works and high prices bring on new capacity that eventually collapses prices and then low prices lead to shuttering of capacity they eventually allows prices to move back up."* Looking back over the course of the year (and abusing the roller coaster analogy one more time) the GSCreamcoaster (GSC is the GSCI ETF) plunged (15.8%) during the first three weeks of 2016 (in a final cathartic sell off), but then locked into the chain lift and rose 41% over the next five months to crest in mid-June (right before the Brexit vote). Following the summer excitement and reacting to the sudden strength of the dollar global interest rates began to rise (seemed counterintuitive given global Central Bankers pledging massive additional QE) and commodity prices plunged (16.5%) swiftly to the end of July right as we were writing the Q2 letter. We noted, *"It will be very interesting to see over the next quarter if this recent move was a normal correction in a new commodity Bull Market or whether the strength in the first half of 2016 was a steroid (read liquidity) induced pause in the ongoing commodity crash that began in 2011."* The GSCreamcoaster gave us the answer quickly and careened back up 9.2% by the first week of October, but then got crunched by the surprise up-move in the dollar post-election and fell back (7.5%) to be almost back to where it began the year and the commodity haters came out in force declaring the resumption of the Bear market. As Kiril Sokoloff has written many times, primary trend moves will have a series of "tests" early on which will throw off many investors resulting in the largest (and best money making) portion of the recovery being captured by the smallest number of participants (there is a reason that the average investor underperforms the markets over the long term). As many investors were bailing on commodities, the GSCreamcoaster locked back into the chain lift and quietly rose 13% over the last weeks of the year to finish up 16%. If we look at the GSCI chart from a technical perspective, the recovery trend look firmly ensconced with a series of five higher lows in 2016 and now a series of three higher highs since the July low. Refreshing the numbers on the GSCI Index since the beginning of the Commodity Bear Market in 2011, GSCI is down (54%) from August 2011 and still down the same (54%) from the peak in oil prices in June 2014, so there is plenty of room for this recovery to run. An interesting fact is that since the fall of 2011, the S&P 500 and the GSCI make a giant alligator jaws pattern with SPX up 100% and GSC down (50%) and one thing we know is that eventually all alligator jaws will close.

We promise to find a new analogy for 2017 as we agree that the roller coaster theme is getting a little tired, but it is hard not to use it when markets have been locked in a high volatility trip over the past year. After fitting the analogy perfectly in Q3 (lots of volatility and a (0.2%) return) and bobbing up and down, making ever-quicker round trips between the $40 and the $50 level since June (as we predicted in Surprise #4), the roller coaster analogy (mercifully) careened off the rails and oil prices broke out a bit in Q4, steadily rising over the last few weeks of December to close the year at $53.72, up a very solid 11.4%. We talked last time about how the funny thing about roller coasters is that despite all the wild drops and rises, in the end, you end up in the same place. We even asked last quarter, *"Will we take another lap over the coming months? We will write about that next time, but we do know that November, and the first half of December, are seasonally weak periods for oil (with an average decline of 7%) followed by a little rally into year-end and another seasonally weak period in January and February so it could be a wild ride over the Holidays."* It should come as no surprise

that during the Year of the Monkey, conventional wisdom was once again foiled and November and early December were actually quite strong for oil prices. There was volatility in Q4 as the Crudecoaster rose 5.4% from $48.24 on 9/30 to $50.85 on 10/21, then plunged (14.8%) through the election to trough at $43.32 on 11/14, but then locked into the chain lift and powered up 24% to close the year at $53.72. The most intriguing thing about the late November and December rally is that it occurred while the dollar was surging 3% (normally a contrarian indicator for oil) as the narrative shifted toward how strong the U.S. economy would be in 2017 as the trifecta of lower taxes, reduced regulation and huge fiscal spending will all boost growth (and therefore demand for oil). Not only will be take the under on all three of these (after watching the debacle that was the first two weeks of "Policy by Executive Order" during the Trump Administration), but there is the pesky fact that oil supplies have been stubbornly high (contrary to promises from OPEC to cut production). Oil prices have been basically flat in January and we continue to see short-term risk to the downside. That said, we reiterated last quarter that, *"we discussed in Q1 how a notable oil trader in London had upped his forecast for 2016 to $60,"* and that while, "*We reiterated last quarter that 'we are clear-eyed about the dangers of disagreeing with a legendary oil trader on oil prices, … to be clear, we completely agree with his directional call, but just think the market rebalancing will take modestly longer based on our conversations with our private energy fund managers who are running U.S. shale companies.'*" Technically, $53.72 is closer to $50 than $60, so we can claim a small victory, but now what matters is updating our oil forecast for 2017 (which we do in our 10 Surprises below). It bears repeating here that, as we noted in Q3, *"we have been spending a disproportionate amount of time with our private energy managers this year (an indication of how attractive we think the opportunities are) and every time we talk to one of the teams in the oil patch we come away even more excited about the potential to make outsized returns in the private oil & gas markets."* As a quick update, the first two deals we participated in with the two NGP spin-outs that we backed have already generated multi-bagger returns and they see more great deals coming down the pipe as overleveraged companies are forced to sell assets by the banks.

The most discussed commodities in the media continue to be oil and gold, but there are plenty of other commodities that are worthy of both media and investor attention. For example, Natural Gas has been an investor's dream during the 2016 Commodity recovery, with spot prices rising from a low of $1.64 on 3/2 to a peak of $3.93 on 12/27. We also noted last time that, *"there are some very interesting developments with the transition from El Niño to La Niña that could make this winter particularly interesting in the Nat Gas world."* Copper and Iron Ore have also been very interesting stories as Copper suddenly found a bid in late October and surged from $2.08 to a peak of $2.68 on 12/4 while Iron Ore basically rose all year, doubling from $40 in January to a peak of $80.44 on 12/12. We wrote last time how these commodities are, *"normally associated with global GDP growth (more specifically of late, China GDP growth) and the price trends in these industrial metals are very closely watched for clues as to the state of the global recovery (or lack thereof)."* Given the recent flurry of strong numbers coming out of China on GDP growth, both manufacturing and non-manufacturing PMI, retail sales and M2 growth, we would say the predictive power of the industrial metals has been spot on once again. In Q4, Nat Gas continued to bounce on the trampoline as we discussed last time. Prices jumped an amazing 29.7% for the period and a truly astounding 59.2% for the full year. We had written in the Q1 letter after Nat Gas had troughed at $1.64 that, *"there seems to be some balance around the $2 level and the futures curve puts Natural Gas above $3 sometime later in the year."* We had also discussed how we had met with one of our favorite resources managers who posited that there was a high likelihood that prices would start to move toward $4.00 sometime in 2017. We wrote last quarter that *"'Sometime this year' finally*

occurred on September 20th when Nat Gas hit $3.05" and then the trampoline fun really started as Nat Gas bounced up to $3.34 on 10/13, bounced down to $2.73 on 10/26, bounced back up to $3.10 on 10/28, bounced back down to $2.62 on 11/11, bounced back over $3.00 on 11/23 and then super bounced all the way to $3.93 on 12/27 before settling at $3.72 to end the year. We noted last time that with all the bouncing around, *"we need to see a move back above $3.34 in order for the upward trend to stay in place,"* which we clearly got and then went on to say that *"prices in the next few months will likely shift to being influenced by just how bad a mood La Niña is in this winter and how quickly she sends her blast of artic air down into North America."* With an unusually warm winter so far it appears that we got the baby sister version of La *Niña* and Nat Gas prices have weakened dramatically in January, falling a brutal (21%) from the $3.93 peak to $3.11 at 1/31. If the temperature remains unseasonably mild, Nat Gas prices could stay under pressure and the level to watch is the $2.62 low on 11/11 because if that level is breached the bullish trend reverts to a bearish trend and the that could be bad news for prices ($2.00 could happen in a hurry) given the continued high production levels in the Marcellus and Utica basins. Something to keep an eye on is many of the Nat Gas equities that had been star performers in 2016 (SWN, RRC, COG, RICE, where prices were up between 40% and 160% through September) have turned down hard (telling us something?) and are down between (15%) and (30%) over the past four months.

We wrote last time that the best analogy for Copper during the Commodity Bear Market from summer 2011 to the January 2016 low of $194 *"was not a roller coaster, but a rubber ball bouncing down a set of stairs as there were some meaningful bounces (kinetic energy), but the end of the trip is a bad place (much lower)."* The rubber ball rolled around the floor for six months in Q2 and Q3 doing nothing pricewise, flat in Q2 and up only 0.4% in Q3, but in Q4 suddenly started rising and surged 13.8%. Actually all of the gain occurred in November and December as Copper spent October falling from $221 at 9/30 to $209 on 10/24 and right back to $221 on 10/31. When we wrote the Q3 letter we said, *"There is something important about that $221 close. Since the January low, Copper prices have made a series of four higher lows and a series of four lower highs (picture a wedge shape like a pennant flag) and $221.05 was the last lower high, so any breakout above that level could indicate that a new primary trend (up) has been established."* Literally the next day Copper burst through the resistance and never looked back the rest of the quarter, surging to a peak of $265 on 12/5 before finishing the year at $250. We discussed the likelihood of Copper making a breakout as we had observed, *"The narrowing of the volatility range is another sign of a potential "phase shift" as in Q1 price swung from $194 to $229, in Q2 the price range tightened to $203 to $228, in Q3 the range tightened again to $207 to $226 and now in October that range has shrunk again to $209 and $221. We will definitely have something to write about on Copper next quarter, as the coiled spring will break one way or the other."* Soros has said this phase shift phenomenon was one of the tools he used to find inflection points when it made sense to break from the herd and take a contrarian position (in fact, he said you should never fight the primary trend until this phase shift occurs). The coiled spring did indeed unleash and the momentum has continued in January as Dr. Copper seems to be feeling much better and has surged all the way to $272 at 1/31. Last summer, we talked about how a highly regarded hedge fund manager (and a former CIO for Soros) was so confident in the near-term prospects for Commodities (and Copper in particular) that he raised a long-only fund to take advantage of what he thought would be the best place to invest over the next two to three years. He was so confident in his thesis that he set up the fund with an "old school" fee structure, no management fee and only an incentive fee (like the original A.W. Jones Hedged Fund).

One of the Surprises that we got completely wrong in 2016 was the second part of #5 where we believed that

European Financials would have a crisis, at least not for the reason we thought. We thought they would struggle because they had so much exposure to the Commodity trading companies like Glencore, and their imminent bankruptcy would trigger dramatic losses in the banks (this part didn't play out so well). We have written over the past year that the consistent decline in Copper prices was triggering losses in the trading companies and Glencore in particular looked to be headed for bankruptcy. The old saw in banking that, "if you borrow $100,000 you have a banker, if you borrow $1,000,000 you have a partner," was 100X more relevant in this case (Glencore owed Credit Suisse $100 million) and surprise, surprise, somehow CS allowed Glencore to restructure their debt and it was off to the races. When companies on the verge of bankruptcy get a lifeline, their equities soar and we wrote in the Q2 letter that, *"'the trading company stocks have soared off the bottom, with some up more than 100%,' and those most tied to Copper, like Glencore and First Quantum are up 160% and 360% respectively since January."* We wrote originally about this type of reflexive movement in our Soros letter a couple years ago, and it turns out that many great lessons in investing can be traced back to Soros's discipline and wisdom. Updating the Copper related stocks in Q4, FCX (Freeport-McMoRan) surged 22%, SCCO (Southern Copper) rose 22% as well, FM.TO (First Quantum) was up another 24%, GLEN.L (Glencore) jumped another 30% and AAL.L (Anglo American) was up 20%. The rally continued with the surge in Copper prices in January as the group rose 21%, 18%, 22%, 14% and 17%, respectively, which brings the four-month returns to a stunningly good collection of numbers at 53%, 46%, 51%, 53% and 40%, respectively. Perhaps there is a reason that we chose copper for the official MCCM color as the Fab Five put up some staggering numbers over since the trough last January, soaring 320%, 75%, 475%, 315% and 475%, respectively. The recovery in Iron Ore over the past year makes the move in Copper seem downright pedestrian as China actually did something that no one thought was possible, shuttered excess capacity. Add a sharp increase in demand from the One Belt, One Road (OBOR) project to diminished supply and you have the ingredients for Iron Ore to double during 2016. Keep in mind that given the brutality of the (78%) price decline from a peak of $185 to $40, prices at $80 today are still down (57%) from the peak. We wrote back in the summer that it was Chinese commodities futures buying in late Q1 that drove Iron Ore, *"up 39% CYTD dragging pure play names like Vale, Fortescue and Cliffs along for the ride, up 164%, 204% and 555% from the January nadir (more examples of optionality."* The Iron Ore related equities had a spectacular Q4 with VALE up 39%, AU:FMG up 20%, BHP up 4%, RIO up 15% and CLF up a stunning 44%. The party kept rolling in January with the group jumping 26%, 12%, 12%, 15% and 2%, respectively. Looking back a year to the trough last January, these stocks are up a sensational 335%, 335%, 110%, 90% and 540%. Surprise #9 said the cure for low prices was low prices and said that there would be generational buying opportunities and the returns in Copper and Iron Ore would certainly fit that description.

We discussed last time how Precious Metals had become the big investment story of early 2016 as bets like Stan Druckenmiller's gold play paid off big as gold surged from $1,100 to start the year to $1,350 at the end of Q2. We wrote that, *"Part of the allure of the metals in 2016 was their currency character as faith in fiat currencies was waning and threats of an RMB devaluation seemed imminent, investors sought out the protective benefits of hard currencies."* The mood shifted dramatically after the Brexit vote in late June when global Central Bankers all sang in unison, "we got your back," and promised as much QE as was necessary to reflate the world (problem is that QE doesn't actually lead to inflation, but more on that later) and as quickly as the precious metals rally had begun it ended and prices stopped rising in Q3. We wrote last time that *"the question on everyone's mind today is whether this break in the action is the pause that refreshes or the rounding top setting up for a resumption of the Bear Market from 2011."* If Q3 provided the rounding top, then Q4 may have

provided some fodder for the Bears, as Precious Metal prices collapsed with Gold down (12.8%), Silver down (16.9%), Platinum down (12.1%) and even Palladium fell (5.5%). We wrote last quarter that, *"A series of five lower highs in Gold make for an ominous chart pattern and the (3.2%) decline in Rocktober isn't helping confidence in the metals. Whether it is election uncertainty or fears of a dollar rise should the Fed actually raise rates in December is not critical to discern, but both are likely to result in heightened volatility as we head into the end of the year."* Heightened volatility indeed, but interestingly not for the reasons that everyone anticipated. The polls and the pundits were all convinced that Clinton would win the election and the metals had slowed their descent coming into Election Day. We even posited in the last letter the week before the election that *"one wildcard worth considering is what would happen to Gold prices in the event of a surprise upset in the election as many of the elements of the Trump platform would seemingly be good for Gold."* Plenty of experts predicted a Trump victory would cause chaos in the markets and huge safe haven demand for Gold and that is exactly what happened in the wee hours of the morning on 11/9, but the shock to everyone was that it only lasted a few hours. It was amazing how quickly the Narrative changed and how quickly Gold began to drop, plunging (11.3%) from Election Day to the trough on 12/22. Something changed again in the precious metals markets in late December and Gold has rallied 7% and Silver has rallied 11% over the past five weeks (more on that next quarter). With the Trump Presidency off to a bit of a rocky first two weeks (to put it mildly) it appears that the safe haven demand story might have only been delayed rather than derailed.

When looking to invest in Precious Metals, you get to choose between investing directly in the metals themselves or the companies that unearth, process and distribute the metals. History shows that the long-term return for trading commodity futures is close to zero while the return for trading commodity equities has been consistently positive, but very cyclical. At the end of July last year we described the returns of the mining ETFs (GDX, GDXJ, SIL, SILJ) in 2016 as "gaudy" (125%, 165%, 187% and 280%, respectively) and learned a valuable lesson that we memorialized in the letter last time, saying, *"Note to self for future letters, when you use words like gaudy to describe returns it is time to think about the other side of the trade as we were two weeks away from a major turn for the Miners and they have fallen (22%), (21%), (22%) and (24%) over the past three months to bring their CYTD returns to a somewhat less gaudy (perhaps still rock solid) 75%, 105%, 115% and 170%, respectively."* We have always liked the old saw, "If a trend is unsustainable it will not be sustained," and the rapid correction proved yet again that equities (no matter how good they are) can't rise 10% a month for very long before investors get nervous and take profits (reflexively takes over and causes the trend to reverse). We will update the rule even further this time saying that if one uses a word like gaudy to describe returns the right answer is not just to sell, but go short. In Q4, as Gold and Silver dropped like stones, falling (13%) and (17%), the miners fell like boulders with GDX down (21%), GDXJ down (29%), SIL down (28%) and SILJ down (22%). To be completely fair it was still a nice investment to hold the miners all year as the group finished up 55%, 65%, 75% and 135%, respectively (not gaudy, but awfully good). We did warn last time that while, *"We remain constructive on the metals and the miners (with the caveat that there will be heightened volatility related to elected administration and Fed,)"* and we said we would be back in three months with an answer. The answer is that volatility was heightened around the election and the six weeks following the Trump victory was a challenging time for investors to hold conviction. But a funny thing happened on 12/22 and both the metals and the miners are surging again and staying constructive has been rewarded, with GLD up 7%, SLV up 11%, GDX up 25%, GDXJ up 34%, SIL up 24% and SILJ up 33%, through the end of January. We noted previously that, *"historically when gold miners and silver are outperforming the gold metal that has been confirmation of a bullish trend and*

based on that criteria clearly the Bull is loose in the Precious Metals shop."

Thankfully we chose "*to be agnostic about Agricultural commodities"* last year based on our observations in Q2 that *"extreme volatility due to weather, uncertainty about the dollar and global growth concerns meant it has been best to simply ignore the sector altogether from an investment perspective and we will remain consumers of Ags in restaurants, but not in our investment portfolios."* Q4 was another ho-hum quarter for the Ags as Wheat fell (3.9%), Soybeans rose 4% and Corn rose 1.9%. La *Niña* did deliver on her promise to heat things up in the U.S. last summer, but she has not delivered on the promise to make it a colder than average winter. With no real direction in the trend and the volatility in the weather, we continue to view these markets as un-investable, and until we see what we wrote about a few quarters ago where, *"perhaps these markets will revert back to a more consistent trend-following pattern, but until then, we will leave them to those with higher levels of short-term trading acumen."* There are plenty of markets around the world where we can invest and we prefer to focus on the markets where we can gain an edge from fundamental analysis and our global network of relationships (weather forecasting has never been on our edge list). We did write last time that, *"there is a case to be made that La Niña is going to really mess with harvests this year and that the Ags will be a good investment at some point in 2017, so we will keep talking to the handful of managers we think have some expertise in these areas and we will try to remain open to the idea that at some point the price will be low enough where incremental supplies will be impacted and the headwinds in these markets could turn into tailwinds."* Nothing has really changed in the past three months to alter our view, so we will continue to leave the Ags to the trading pros. One caveat is that we have seen signs of life in the Fertilizer companies (CF, POT, AGU, MOS), which have surged since mid-October (up 56%, 17%, 37% and 17%, respectively), so perhaps there is some activity in the heartland going on that we should watch. Pulling this thread though might argue for even lower prices in the Ags as more fertilizer usually means higher yield and lower prices.

According to the media headlines, hedge funds as a group (although we rail all the time against calling them a group since the term is as meaningless as mutual fund) finished their seventh consecutive year of underperformance relative to equities in 2016. We can argue all day over whether the S&P 500 is an appropriate benchmark for measuring the performance of hedged strategies whose primary role in a portfolio is to reduce volatility and improve the long-term (not short-term) compounding of portfolios (it isn't), but the average investor is bombarded with this comparison, so we have to address the issue after what many perceive to be a substantial period of relative underperformance. We contend that the more appropriate way to think about hedge fund returns would be according to the net exposure of the underlying strategy plus an alpha component, since the whole point of investing in hedge funds is to shift portfolios away from being dependent on the more volatile component of beta (market) toward the historically less volatile component of alpha (manager skill). When we think about Relative Value strategies that have equal dollars long and short (like Market Neutral, Merger Arbitrage, Fixed Income Arbitrage, CTAs, etc.), we should think about returns from a T-Bills (cash) + alpha return expectation (perhaps T-Bills + 3%). When we think about more directional strategies (like Equity Hedge, Macro, Event Driven, etc.), we should think about a higher alpha expectation like T-Bills + 5%. Finally, when we think about purely directional strategies (like Activist, Credit, Distressed, etc.), we could use traditional equity or credit benchmarks. When you consider what a hedged fund strategy does, buys a security and sells short another security and deposits the proceeds in cash, the return of hedge fund strategies is driven by the return on cash plus (or minus) the alpha from the long and the short. Herein lies one of the problems over the past seven years (and even longer) for hedge funds. During the go-go years

of hedge fund returns in the 1980s, cash rates averaged around 10%, so you began from a pretty good place before you started adding alpha from your stock/bond picking. The cash rate has steadily declined: 1990s averaged 5%; 2000s averaged 2.5% and it has basically been pinned at zero since 2009. Even if a manager had a heroic amount of alpha (5% to 10%), it would be nearly impossible to keep up with the S&P 500 compounding at double digits since QE began after the Global Financial Crisis. Again, we contend this is the wrong comparison as it doesn't look over the entire cycle (good times and bad) and when we look at longer periods like twenty and thirty years the picture changed dramatically in favor of hedge funds. So the real question is what the future holds for traditional asset classes and hedge fund strategies. From here, it is basically assured that Bonds make T-Bills + 2% (that is what they always do), U.S. Equities are likely to make T-Bills + 3% (based on multiple forecasts) and we have relatively high confidence that hedge funds (particularly long/short equity) will deliver T-Bills + 5%. Everything in investing is cyclical and we have seen these lean periods in the past (like 1994 to 2000) and they have always been followed by prosperous periods and we would expect the next seven years to look more like 2000-2007 when traditional equities struggled and hedged equities excelled.

So, looking at the performance of the various hedge fund strategies in Q4, we see a great deal of dispersion in a year that was full of surprises and punctuated by abrupt reversals and a treacherous environment for short sellers who were continually fighting the Central Banks' liquidity injections. The HFRX Equity Hedge Index was up only 0.8% during the quarter, a disappointing result, but not unexpected as most managers were caught "off-sides" when Trump surprisingly won the election and short alpha turned very negative again (as it did in Q1). We commented last quarter that, *"The headwinds we have discussed this year on the short side have shifted from gale force to trade breeze and 'our expectations that these winds will change soon (like the shift from El Niño to La Niña earlier this spring),'"* and things were looking much better right up until Election Day. For the full year, the Equity Hedge Index produced a very disappointing 0.1% as solid alpha on the long side was completely erased by the losses on the short side. Global managers were able to outperform their domestic counterparts as the HFRX Global Hedge Index managed a slightly better (but still not good) 1.2% gain and eked out a slightly positive 2.5% return for the year. We said last time that, *"We believe that alpha generation across long/short equity managers has troughed at levels we have witnessed only a few other times in history (most recently in 2000 and 2008),"* but we were a quarter early as Q4 continued to be challenging (before some real signs of recovery in January). After the very frustrating performance in Q1, we asked ourselves (and wrote in the Q1 letter), *"Have … managers lost their edge?"* We wrote last time that, *"We spend a lot of time thinking about, identifying, analyzing and monitoring manager edge and we would NOT conclude that the fundamental approach utilized by active long/short managers is no longer effective."* The most basic problem in 2016 was that companies with poor fundamentals went up more than companies with good fundamentals, and whether it was the result of excess Central Bank liquidity, the increased speed of global capital movements or the change in perspective that the new U.S. president can actually reverse growth-restricting demographic trends is a little bit irrelevant insofar as regardless of the reason, errors in risk management (not withdrawing from losing positions to live to fight another day) were very costly in the long/short equity space in 2016. As we wrote in Q2, *"There have been plenty of incidences over the decades where active management has underperformed passive management, where traders beat fundamental analysts and where long only has trumped long/short strategies. In every one of those instances mean reversion has occurred and to paraphrase Sir John Templeton again, it won't be different this time."* As the theme of this letter expounds, our error in predicting when the mean reversion in the past would begin does not impact whether we are correct or not

when making a similar forecast today (they are independent events). We said last time that, *"As the effectiveness of QE programs globally has waned, we see increasing opportunities for managers to generate returns on both the long and the short side and we would expect the alpha of these strategies to compound at a much higher rate in the coming quarters."* Clearly we were early by at least one quarter as Q4 was another relative underperformer for hedged strategies, but we have seen equity correlations crater to decade lows (a tailwind for stock selectors) and witnessed a number of long/short managers put up very strong numbers in January, so perhaps 2017 will turn out like 2001 after all and the we will be writing from a different perspective (long/short > long -only) in the coming quarters and years.

Activist strategies continued on their comeback trail as more targets worked out favorably and there were fewer high profile mistakes. The HFRX Activist Index had its third consecutive solid quarter, rising 3.7% to finish the year at a respectable 9.1%. One of our favorite managers has a strategy where they short the longs of high profile Activist managers because he contends they get "stuck" given their "public" positions. So despite a couple good quarters, we are not likely to allocate much capital to the Activist space. The broader HFRX Event Driven Index was also solid during Q4, jumping another 3.7% (after 3.8% in Q3), which brought returns for the year to a very solid 11.1% (nearly in line with long-only equities). As we discussed last time, *"Event Driven strategies also benefitted from the continued tightening of credit spreads and the ability of many highly leveraged companies to get debt relief as the banks continue to "extend and pretend" (we know that this music will stop one day)."* As we discussed above, credit spreads have moved above Ludicrous Speed and are moving rapidly toward Maximum Plaid, so 2016 was time to make hay while the sun was shining. We follow one upstart manager that focuses on buying only highly leveraged companies (where he believes cash flows can support debt reduction). His portfolio was up a stunning 40% for the year, benefitting from the surge in small-caps and the decline in credit spreads. While we continue to be nervous about the current credit cycle and the potential for rising defaults, this manager makes a very compelling case for why the default cycle has been modified due to the oil shock, and he has boldly predicted that their portfolio could enjoy similar gains to 2016 should defaults ease from current levels. Like the scene from Top Gun when Viper asks if Maverick thinks his name will be on the Top Gun trophy and he replies *"Yes, sir!"* Viper says *"That's pretty arrogant considering the company you're in,"* Maverick replies *"Yessir,"* and Viper says *"I like that in a pilot".* Confidence = #Edge.

Despite our lingering concerns about the weakness of the economy and the potential for rising defaults, credit was the one area within the hedge fund space where managers did not struggle at all in 2016. The HFRX Distressed Index surged another 5.5% in Q4 as credit spreads continued their relentless march downwards. Bankruptcies and defaults actually subsided somewhat (for now), but we believe they will accelerate again in 2017 as economic growth continues to disappoint. For the year, the Distressed Index rose a very impressive 19.7% (about 1.5X the equity market return), but as we wrote last quarter, *"We can't help but be reminded that this ferocious rally feels like the 'last gasp rally in 2001 within the Telecom sector before companies like WorldCom and Qwest defaulted (and disappeared, taking huge piles of investors' money with them). There were some tremendous opportunities to make big returns buying the good assets from the bad balance sheets in 2002 and we would expect those opportunities to come again, but not until 2017 or 2018.'"* Clearly some of those opportunities came in 2016, although most of the big winners were in the energy space, so there are likely to be plenty of opportunities across other sectors in the New Year. There was a lot of money raised by all the big Distressed players in the past few years to buy the huge supply of bad debt that was supposed to have been created during the crazy surge in HY issuance five years ago. Unfortunately (or

fortunately, depending on which side you are on), the Central Bank largesse (read free money) has kept many marginal companies on life support and the debt that should have gone bad is still sitting on corporate balance sheets instead of inside the managers' portfolios. Gravity always wins – there will come a day in the not so distant future where the opportunity set for Distressed will get even better, and the returns could be quite substantial.

For Absolute Return oriented strategies, 2016 was very challenging. The ZIRP hurt market neutral players who rely on cash returns, and the choppiness of the market made it tough on trend followers which kept a lid on sector returns. In Q4, the broad based HFRX Absolute Return Index fell slightly, down (0.4%), bringing full-year returns to a very unsatisfying 0.3%. Within the broad category, the HFRX Market Neutral Index fell (1.2%), the HFRX Merger Arbitrage Index eked out a positive 0.2% return, the HFRX Macro/CTA Index was down (1.8%) and the HFRX Systematic CTA Index was down (3.5%). The challenges facing Arbitrage related strategies are not new to this section of the letters. As we have written in the past, *"Absolute Return strategies (Merger Arbitrage, Market Neutral) continue to fight the brisk headwind of Zero Interest Rate Policy (and now negative rates, or NIRP) and the generation of alpha (or simply avoiding negative returns) in such an inhospitable environment is a positive outcome."* The challenges continued in 2016, and the full-year returns for the various sub-strategies have been poor. Market Neutral fell (5.1%) on really poor short alpha, Merger Arbitrage was better, rising 4.3%, the Macro/CTA Index dropped (2.9%) and the Systematic CTA Index fell (1.4%). Despite lackluster recent returns, there continue to be good reasons to include these Absolute Return strategies in a portfolio. Most importantly, we expect these strategies to meaningfully outperform bonds (and even perhaps stocks) over the market cycle (seven years), and they will dramatically outperform in the event that interest rates begin to rise back toward a more normal level (Fed Funds should equal the Nominal GDP growth rate). If rates were to rise, bonds would suffer significant negative returns from capital losses (as we have said before, the reason why buying bonds for capital gains is a fool's errand) while Absolute Return strategies should provide acceptable returns from the combination of the alpha of the strategy and the better return provided by higher rates on the core cash. As we have written in the past *"in essence, A/R has a positive correlation to interest rates while traditional fixed income has a negative correlation, and after a thirty-five year bull market in bonds, it is somewhat logical that hedging some portion of that portfolio with A/R makes sense."* In the past we have made a case that Macro/CTAs could be an attractive addition to portfolios given their protective nature during market dislocations (like 2000, 2008), effectively making them a low-cost form of insurance against dislocations. Further, given that we believed we were nearing another period similar to the 2000-2002 environment, we thought the timing was good to add them to the portfolio. The key to the idea was that by generating modestly positive returns (while the S&P 500 was up low single digits) the Macro/CTAs were actually paying their own insurance premiums. Unfortunately, that argument has broken down over the past year as the premiums just went up as the strategy generated negative returns for 2016. There are lots of explanations for why the effectiveness of CTAs is waning, ranging from the impact of high frequency trading to excess liquidity from the Central Banks precluding normal price discovery. Whatever the reason, the cost/benefit equation has changed, and we need to rethink how we utilize these strategies. We also discussed another potential headwind last time when we wrote, *"After spending time at the GMO meeting recently, we came away convinced of Jeremy Grantham's perspective that this bout of market overvaluation is more likely to be remedied over a longer time period (read, not a quick crash, but a long, slow decline) and in that environment the value of disaster insurance is diminished."* In the absence of a meaningful market correction, the likelihood that these strategies deliver the same profile of returns as they did in 2000 and 2008 is suspect at best, and

unlikely at worst. We also mentioned another issue last time saying that *"the risks of an unwinding of the risk parity model (leveraged long bonds) could exacerbate the moves on the long end of the curve and cause the historical relationship between stocks and bonds to diminish."* In that type of environment, the models that created the CTA trading programs would no longer be valid, and there would actually be a potential scenario where these strategies dramatically underperform just when you need them to outperform the most.

Given the recent volatility in the bond markets, it is critical to reiterate (one more time) an important point that we have written about on numerous occasions over the past couple of years, *"historically, the primary purpose of fixed income in a diversified portfolio has been to counter balance the volatility of equities, which are necessary as the core of the portfolio in order to generate returns in excess of inflation. Given current conditions, traditional bonds are unlikely to deliver adequate returns to warrant their inclusion in portfolios, despite their risk reduction benefits (the opportunity cost is too high)."* Now, more than ever, we would argue that substituting a diversified portfolio of hedge fund strategies for traditional fixed income exposure will prove to be very beneficial to portfolios over the coming years. The primary benefit of this strategic change is that you get the benefit of lower overall portfolio volatility with higher expected returns (particularly at current valuations) by substituting alternative investments for traditional bond exposure. We summarized the most important point last time when we wrote, *"When valuations, uncertainty and volatility are above average, alpha will likely outperform beta and we find ourselves in just such an environment at present and, unfortunately, we expect that environment to persist for many years. 'Alpha is a precious and scarce commodity and it turns out that it is not found in quiet, safe and stable environments, but rather in chaotic and unstable environments where it takes courage 'to be greedy when others are fearful and fearful when others are greedy' (to quote Ben Graham)."* Given the challenging performance of these types of strategies in the recent past, we appreciate how difficult it is to consider rotating away from the best performing strategies this year (passive) toward strategies that have performed the worst (active). Ben Graham would admonish us here to be brave, and we have said before that *"Courage comes from process and having the discipline to follow your process, even when it is difficult (especially when it is difficult), will yield the best results over time."*

The fourth quarter of 2016 was full of surprises (a fitting end to the Year of the Monkey) as Donald Trump pulled off the upset victory in the U.S. Presidential election, the Italians defeated the Constitutional Referendum forcing Prime Minister Renzi resignation, and the Fed raised interest rates for a second time. Perhaps the most surprising thing about Q4 was that throughout 2016 the pundits all said that if any one of these three events were to happen, there would be trouble in the capital markets (Heaven forbid that all three should happen because or else there would be total chaos). The reality turned out quite differently than the pundits' worst fears. The theme of our last letter was *Save FairUS,* a play on the catch phrase "Save Ferris" from the iconic movie *Ferris Bueller's Day Off.* We used this theme to make the point that given the populist and nationalist trends that emerged during the campaign trail in the U.S., it would take the efforts of the entire American village to come together and save our fair country. The wave of populism began across the Pond in Europe and grew quickly as a number of national elections were scheduled for 2017. Interestingly, the markets shook off every piece of "bad" news and surged higher on hopes that political movement away from long standing control by the "elite" would yield more pro-growth policies. The one wrinkle to this movement is that history has shown that "better together" actually works and that globalization has created enormous economic prosperity. In writing about how Trump's U.S. Presidential campaign eerily resembled Ferris Bueller's romp through Chicago on his ninth sick day we were struck by a couple scenes that we wanted to

repeat here.

Ferris: ***"Not that I condone Fascism, or any -ism for that matter. -Isms in my opinion are not good. A person should not believe in an -ism, he should believe in himself. I quote John Lennon, 'I don't believe in Beatles, I just believe in me.' Good point there. After all, he was the walrus. I could be the walrus. I'd still have to bum rides off people."***

Ferris reminds us that -Isms are not a good thing and we completely agree with his sentiment, as –isms tend to increase the risks in the global capital markets as movements toward populism, nationalism, isolationism and protectionism have historically led to less robust growth, destruction of wealth and lower standards of living for all. Over the course of history, these ideas have unfortunately led to conflict, and what begins as trade disputes devolves into trade wars and sometimes into to armed conflict. Perhaps in a more connected world when information and goods and services can move more freely around the globe, we can avoid the worst outcomes if indeed these trends toward –isms continue. The principal at Ferris' school sums up the problem that we are all facing today when he says:

Ed Rooney: ***"What is so dangerous about a character like Ferris Bueller is he gives good kids bad ideas. Last thing I need at this point in my career are fifteen hundred Ferris Bueller disciples running around these halls. He jeopardizes my ability to effectively govern this student body."***
Grace: ***"Well, makes you look like an !$% is what he does, Ed."***
Ed Rooney: ***"Thank you, Grace. I think you're wrong."***
Grace: ***"Oh, well he's very popular, Ed. The sportos, motorheads, geeks … they all adore him. They think he's a righteous dude."***
Ed Rooney: ***"That is why I have got to catch him this time. To show these kids that the example he sets is a first class ticket to nowhere."***

There is indeed an entire swath of people in America that believe Donald Trump is indeed a "righteous dude," and his followers come from all walks of life. In the investment markets, we are at a very delicate point today (perhaps even at a tipping point), and with very high asset valuations in many markets around the world it would not take much of a catalyst to create a very unpleasant situation for global investors. Ed Rooney was determined to show the kids that following Ferris was a ticket to nowhere, and we discuss in the opening of this letter (and in the 10 Surprises below) that there is a series of events that could unfold that would create a first class ticket to Hooverville, or what might affectionately become known as Trumptown. We hope we don't have to write about that journey in the quarters ahead, but that said, we remain cautious and defensive as we prepare to navigate what promises to be a very challenging road ahead.

Market Outlook

We bring all this back up again at the beginning because it feels like investors have decided that "it is different this time" (again) and that buying assets simply with the notion that someone else will buy them from you at a higher price is a sound strategy. History would beg to differ and Sir John Templeton reminds us that those are the four most dangerous words in investing. The biggest problem with not having a margin of safety in your investments is that in an uncertain and volatile world, to paraphrase Ferris, #RiskHappensFast. So let's get to the Outlook.

Our January #ATWWY Webinar each year is entitled "*Channeling Byron: 10 Potential Surprises for 2017*" (a nod to Byron Wien, the former Morgan Stanley Strategist who originated the annual 10 Surprises idea). When we talk about Surprises it is important to clarify that Surprises are intended to be non-consensus ideas, and therefore have some reasonable probability of not occurring (they are not necessarily predictions). The unlikely nature of a true Surprise fits in perfectly with the famous Soros quote

about how meaningful returns are made by *"discounting the expected and betting on the unexpected."* Michael Steinhardt was famous for saying that, *"We made all our big returns from variant perceptions that turned out to be right."* To his point, the actual definition of a Surprise is a variant perception (an idea that is materially different from the consensus) that we believe has a better than 50% chance of occurring in the current year. The key point here is that a variant perception must be *materially* different than consensus to be truly valuable. One other important point to be mindful of is a year is a long time, things can change (sometimes dramatically) and we need to remember the wisdom of John Maynard Keynes who famously quipped, *"When the facts change, I change my mind. What do you do, sir?"* We will remain vigilant during the year to track the progress of each of these Surprises and look for opportunities to capitalize on them in the portfolios, but we will also be ready to change our minds (and our positioning), should the facts change.

The nice thing about doing the Surprises in January is that they coincide with writing the Q4 letter and the process of looking back over the past year's surprises, gathering information on precisely what the consensus is across each asset class and geography and then forming variant perceptions (the actual Surprises themselves) provides a huge amount of data from which to create the New Year's Market Outlook. The Surprises framework is sufficiently broad that we can cover the vast majority of global markets and can even drill down further to look at investment sectors and individual company ideas that allow for the optimal expression of the themes. So, let's begin our tour around the world of what investors might (or better, might not) expect for 2017.

Surprise #1: Demographics Is Destiny

Massive Central Bank Monetary stimulus programs around the world have been unable to spur higher global economic growth as the rising costs of aging populations weigh on the Developed Markets, so governments follow Japan's lead and shift toward fiscal stimulus measures. Given the negative multiplier effect of Government spending (crowding out), these programs fail to spur growth & inflation and global interest rates resume their downward trend.

As the cartoon on the opening slide in our webinar presentation of this Surprise shows, Big Government may be good at things like infrastructure (building bridges, etc.), but there is one not so small problem in that as the big guy kneels down to install the bridge, he crushes an entire swath of homes. The problem of "crowding out" that has always been an inherent issue with fiscal stimulus seems to be underappreciated despite all the data that supports this "negative multiplier" effect (government money crowds out private money and slows growth). What is interesting is that the Fed Chair herself presented papers supporting this phenomenon at the Jackson Hole meeting last year and has warned the new President directly about the hazards of fiscal stimulus. The data is overwhelmingly supportive of this fact and the Dynamic Duo (Van Hoisington & Lacy Hunt) have utilized a number of the papers presented in Wyoming as basis for their outstanding research on why increased debt and deficits will actually slow (not accelerate) future GDP growth. There are a huge number of people who are pinning their hopes for the new President on his ability to get fiscal spending ramped up. While this is not a bad bet given the Republican control of Congress, not only will it take much longer than most people think just to get the legislation drafted, vetted, voted on and implemented, the real rate limiting factor is that there are not enough "shovel ready" projects to be started even if we had the money today. Roger Babson also had some sage advice about the role of Government and how private enterprise was the key to prosperity when he said, ***"Does anyone believe for one moment that the progress we have made would have been possible under bureaucratic control of any Government. This country was founded upon the principle of the regulation of private effort, of***

making rules for the game, and under that system alone can we look for the same success in the future, which has been ours in the past. Our position today is the direct result of the free play among our people of private competitive effort."

One of the most serious problems with the big promises of higher GDP growth in the U.S. (and all the Developed Markets) is the horrible trend in population growth, and working age population (WAP) growth in particular. Global population growth has slumped from 2% in the 1950-1980 timeframe to just over 1% today and is projected to fall continuously toward 0.5% over the next three decades. The WAP growth problem is even more acute for the developed world as the total WAP peaked sometime in the 1980-2000 period (depending on the country) around 66% to 70% of total population and has begun to decline rapidly. The leader of the pack is Japan, which peaked in 1991 at 70% and has collapsed to 59% today, while the U.S. and Germany remain at 66% (remember that Japan leads Europe and the U.S. demographically by around 10 years), but are heading for steep declines in the next few years. The real issue is that GDP growth is a math exercise and the components of growth are WAP growth and productivity, both of which are in inexorable decline thanks to Demographics. It turns out that 65-85 year olds don't work as much, are not as productive as 45-65 year olds and, given that every day in the U.S. and Europe 10,000 more people turn 65, we have a math problem. Economies need greater than 0.8% growth in WAP to maintain adequate (defined as greater than 2%) GDP growth. Unfortunately, according to the U.S. Census Bureau and the Bureau of Economic Analysis the U.S. is now at less than half that rate and will remain in a tight range around 0.4% for the next three decades When looking at the Developed Markets as a whole the picture turns really dark as the WAP growth rate is plunging toward zero and will be negative for most of the next three decades. Only in Emerging Markets do we find WAP growth above the magic 0.8% line (and even there by the 2030s it will be a struggle to stay above the line). The punch line is that Nominal GDP is highly correlated with WAP growth rates and the forecast is for growth to fall to 1% through 2030, rebound back toward 3% by 2040 and then fade back toward 2% (a knockout blow for the "Growth Hopers"). A more refined model from UBS forecasts Nominal GDP in the U.S. to trend downwards toward 0.5% (repeat, this is a nominal number) by 2023 before recovering back toward 2% over the next decade. Coincidently, 2023 is the same year that Harry Dent predicted in 1993 (in book *The Great Boom Ahead*) would be the bottom of the fifteen year "Depression" (defined as falling economic growth and bonds beat stocks as investment, so far so good on both counts) that he said would begin in 2008 (not bad to get date right on Global Financial Crisis 15 years in advance).

So if growth is going to stay extremely low and Demographics are going to remain a headwind for many decades into the future, why have global interest rates surged so much since last summer and why are all the Bond Bears declaring the end of the Great Bond Bull Market again? We say again because they have made this declaration just about every year for the past ten years and rates just keep going lower… There is no doubt that global interest rates turned on a dime last July after ECB President Mario Draghi made his annual summertime "whatever it takes" speech and, despite all the talk about the "Trump Bump" in interest rates, half of the move occurred in the four months before the Election. Another thing to keep in mind is that this move in rates has been smaller than the move during the Taper Tantrum in 2013, and despite rising to just over 3% on the 10-year, rates made new lows below 1.5% within a couple of years. That 3% number is very important as it defines the last lower high (bonds have made a very long series of lower highs and lower lows that define the downward trend), and when we look at the "Chart of Truth" (the downward channel in rates over the past few decades) we can see that until rates break out past 3%, the primary trend down remains intact. What is a little different this time is the very broad consensus that

this time really is "The End" and that Trumponomics will deliver better growth, higher interest rates, more inflation and nirvana to the stock markets (largely ignoring the massive losses for bond holders in this scenario). All of the pundits, forecasters and talking heads on TV are projecting higher rates to end the year (not just in the U.S., but globally), so why would we take the other side? Remember what a Surprise is supposed to be, a variant perception that is materially different from consensus and that, if it were to occur, would provide a meaningful opportunity to make excess returns. Being Bullish on bonds (bearish on rates) is definitely a variant perception, and given the record numbers of shorts against bonds (particularly long bonds) the return potential would be greatly enhanced by a massive short squeeze should things not play out the way the masses are positioned. Another point we know is that when the Commitment of Traders data gets skewed so far in one direction that has been a very good contrarian indicator of future returns (people buy/sell what they wish they would have bought/sold). Interestingly, the pessimism in the bond markets reached a fevered pitch in December around the Fed rate hike, but then a funny thing happened, rates actually peaked on December 16th and have been falling (ever so slowly) for the past six weeks. We will see how this plays out over the course of the coming months and quarters, but the data thus far in the New Year seems to support the idea that growth is faltering, inflation is peaking and rates are headed lower.

One of the biggest surprises in the aftermath of the Election in the U.S. was the speed at which the Bull Market in Financials erupted once the rumors of more Goldman Sachs appointments to the Cabinet were likely and criticism of Dodd-Frank regulations entered the rhetoric of new Administration. Curiously, the U.S. banks had languished during the fall despite the continual rise on interest rates from July to October, but then they exploded higher in November after the Trump victory. This move shouldn't have come as a surprise to anyone as Financials always rally hard when rates rise suddenly (as they did during the Taper Tantrum), but the media frenzy about this move was much more frenetic than normal and the moves were much sharper. For perspective, the Fab Four (or not so Fab Four if you look at the fact that they have made no money for fifteen years), C, JPM, BAC and WFC were up a dazzling 20%, 23%, 36% and 21%, respectively, in the five weeks following the election. We asked the question during the #ATWWY webinar whether the banks had run too far, too fast, and questioned whether there was actually any change in their operating environment or whether there was just hope that the new Administration would help reduce regulation and keep pressure on rates to expand Net Interest Margins (NIMs). Curiously, there is some great data that shows that NIMs have been stuck at below average levels over the past few years despite meaningful moves in interest rates during that time, so perhaps there is more to the banking game that just hoping for higher rates. Since the mid-December peaks, the U.S. bank stocks have been locked in a tight range and have actually given back a little of the post-election gains. We are concerned that there is a great deal of air between what has been promised and what is likely to be delivered in coming months, so we would not be adding to U.S. Financials here. Furthermore, there is actually a reasonable case to be made for shorting them as their correlation to the 10-year Treasury rates have been very high and if our Surprise comes true on rates, the banks could wind up as collateral damage.

Surprise #2: Gravity Rules, The Economic Cycle Lives

QEeen Janet Yellen has maintained interest rates at crisis-level lows throughout the current economic cycle, yet U.S. GDP growth has continued to disappoint (and confound Fed forecasters). With the current shift toward a tighter Fed Monetary Policy stance, growth in commercial bank credit & the monetary base has slowed to zero (from an average of 7% over past 60 years) which portends a rapid

deceleration in growth in 2017 resulting in a Recession (right on schedule for our #2000.2.0 theme).

There is a strong consensus that courtesy of the Fed's largesse (constant monetary stimulus, aka the Greenspan/Bernanke/Yellen Put) that the Business Cycle has been eradicated and that Recessions are a relic of a less sophisticated time in financial history. This consensus flies directly in the face of the data over the past couple of hundred years that shows a continual ebb and flow of business and economic activity punctuated by highs triggered by monetary easing and lows triggered by monetary tightening. Interestingly, there is another trigger that has been in place over the past century that has a perfect track record of forecasting Recessions. When a "fresh faced" President (defined as the opposite party following an eight year term) enters the White House (which has happened seven times since 1900) the U.S. economy falls into Recession during the new President's first year. There are plenty of reasons why this phenomenon is likely to occur; for instance, eight years is simply pretty close to a normal Business Cycle, the outgoing President has tried hard (albeit unsuccessfully) to keep their party in power by passing legislation that pulls demand forward into their second term to juice growth and it fades in the new term, that about 2,000 positions in the Administration have to be rotated during a Party change creating a lull in work and the economy stalls, or the Fed (in an attempt to keep their job) waits too long to raise rates (tap the brakes) and falls behind the curve and has to tighten in the new term. All of these reasons probably play some role, but suffice it to say that economic activity is cyclical and after a long expansion, gravity eventually takes over and brings growth down to earth.

Contrary to what you might be reading in the headlines every day about how great the economic data has been (like all the crowing about the recent jobs number which actually was pretty average and the trend has actually turned negative), there are lots of signs of an impending slowdown in the economy. Cross Border Capital has a system of tracking liquidity flows in global economies (best indicator of health) and they publish a Recession Risk indicator that has been flashing bright red for the past few months and is currently at the highest reading since 2007. Total Federal tax receipts (which is a great proxy for economic activity) cycles between year-over-year growth of positive 15% to negative 15% over time, and when the growth rate inflects from positive to negative there has consistently been a contraction. As if on cue, Government revenues just turned negative, just like in 2001 and 2008 (the last two Recessions). The Leading Economic Indicators (LEI) have turned down and are signaling slower growth ahead (although they are not in negative territory quite yet). Citi Economic Surprises Index (CESI) has hit a cyclical inflection point and indicates economic growth will slow in 2017. Remember that 2016 GDP growth was 1.6%, so how much slower can we go (without hitting stall speed)? Industrial Production has been contracting for over a year, which has never occurred without having a Recession. A very interesting indicator comes from breaking apart the components of Nominal GDP and looking at the percentage of growth that comes from the Personal Consumption Expenditures Index (PCE) (the Fed's favorite measure of inflation) "adjustment." To make growth comparable over time, it must be "deflated" (remove the impact of inflation) using the PCE and that calculation can have a variable amount of influence on the final GDP over time. Interestingly, whenever that ratio spikes above 50% it has signaled Recession and that ratio just spiked last quarter to 70%. There are a number of employment and labor statistics that have historically been good Recession indicators and many of them are rolling over (right on schedule). The most precise of these indicators is the year-over-year growth in jobs in the Goods-Producing Industries. When it turns negative (as it just did) there has been 100% accuracy in forecasting a Recession in the next year.

There is a spoiler scenario for this Surprise, however,

in that it is entirely possible that we had a "Stealth Recession" in 2015/16 similar to 1985/86 that was isolated to the Energy and Commodities areas because of the Supply shock in late 2014. The Manufacturing ISM dipped below 50 for a number of months in late 2014 and early 2015 (very similar pattern to 1985 after Saudi Supply Shock) and has now rebounded back firmly above 50 since September. There is a good deal of data that supports the thesis that a Recession can be averted if oil prices fall enough (like a tax cut for consumers) and in the 1980s the economy bumped along (avoiding the 3rd Recession during the Reagan Presidency) through an extended expansion until the S&L Crisis (precipitated by the deregulation of the Financial Services industry under Reagan, sounds familiar…) caused a nasty Recession in 1991. The other spoiler that people often refer to is that the Yield Curve is not inverted so you can't have a Recession. While it has been true that in the post-WWII period, we have not had a Recession without an inverted Yield Curve, one could make the argument that the current excessively easy monetary policy makes that comparison less valid. If the short end of the curve were not being artificially held down by the Fed, short rates would be roughly equivalent to the Nominal GDP rate (around 3%) and the Yield Curve would have been inverted on numerous occasions over the past couple of years. During the last time that we had QE (in the 1930s), there was a nasty Recession without an inverted Yield Curve, and we went from the Great Recession in the early 1930s to the Great Depression when the Fed tried to raise rates in 1937 over the protestations of many who said it could tank the economy (sounds eerily familiar to today…).

The other positive spin we hear against the idea of a Recession is commentary talking about how strong many economic indicators are today like Consumer Confidence, Auto Sales and Unemployment rates. Think about this one for a minute, at which part of an economic expansion would you expect to have high levels of confidence, high levels of auto sales (and all consumption) and low unemployment rates, at the beginning of the cycle or the end of the cycle? History provides the answer, confidence is low at the beginning of an economic cycle and high at the end, car sales trough at the beginning of the cycle and peak at the end, and unemployment is high at the beginning of the cycle and low at the end. If we dig into the data a bit it gets a little scarier. Auto sales have been juiced (demand pulled forward) by the largest boom in sub-prime auto loans in history, in fact, 40% of new car loans have a trade in with negative equity (let that sink in for a minute) that ends up with the LTV ratio being 115% on day one. It is bad enough to drive a car off the lot at 100% LTV, 115% will make this problem even bigger a few years out. As you might expect given these figures, delinquent car loans are surging to levels we haven't seen since (you guessed it) the last Recession (actually the GFC). Now let's look at other forms of consumption like restaurants and retail and see how they are holding up. We would expect to see them accelerating upwards if we were at the beginning of the expansion, but they have (unfortunately) already fallen to levels we saw in the 2001 and 2008 Recessions. On top of that, taking a look at retail sales and consumer credit, these indicators are flashing bright red as sales are falling while use of credit cards is expanding (bad combination). The last dagger on growth is the rapid surge in interest rates since the election has had a deleterious impact on home sales, which collapsed back to 2014 levels over the past couple of months. Putting all of this together paints a picture where there could easily be a greater than 50% chance of a Recession in 2017, which would put our #2000.2.0 framework back in play. Clearly the Trump Bump in November made S&P 500 performance in 2016 much better than the (9%) loss in 2000, but we could "catch down" in a hurry if growth continues to surprise to the down side and if the promises made during the campaign fail to materialize quickly enough to reverse the economic deterioration. Remember, we don't need another GFC to have a bad outcome in the markets as the very shallow Recession in 2001 (which is what we expect in 2017) triggered the "normal" market correction of (38%). Given that the median stock today is actually more overvalued

than back then (overvaluations in 2000 were extremely narrow), it is not unreasonable to expect that the correction this time could be of equal (or larger) magnitude.

Surprise #3: Kurve It Like Kuroda

After shocking the world last January by adopting NIRP, BOJ Governor Kuroda sees the error of his ways and fully commits to his Yield Curve Control Program, resulting in a steeper yield curve and greater stability in Japanese capital markets. The Yen continues to weaken (with USDJPY approaching 130) corporate profits surge to new record highs and Japanese equities rally hard (particularly the Mega-Banks). The Nikkei finishes the year at 22,000.

When Prime Minister Abe was elected in 2012 he set out a very simple, very ambitious, plan to stimulate the Japanese economy and equity markets that has become known as Abenomics. The plan was quite elegant in its simplicity; weaken the Yen to stimulate competitiveness for Japan Inc., continue with fiscal spending to drive economic growth and create regulatory reform to spur innovation and business formation. With the help of his trusty side-kick, BOJ Governor Kuroda, Abe-san set to work and things went swimmingly for the first couple of years, the Yen fell, profits rose, markets surged and investors were happy (so long as you remembered to hedge your Yen exposure). Then a funny thing happened in 2016, Kuroda-san adopted a Negative Interest Rate Policy (NIRP) that triggered a swift appreciation in the Yen (from 120 back to 100) and a swift depreciation in Japanese equity prices in the first half of the year. Thankfully, Kuroda-san got things back on track in the second half of the year (got rid of NIRP and got JGBs back to positive yields), and got back to work on job number one, weakening the Yen. Japan investment strategy is fairly straightforward today, buy Japanese stocks (hedged) that benefit from a declining currency (banks and exporters) as they truly have no way out but to appreciably devalue the Yen over time given their massive government debt burden and unfavorable demographics. One thing people forget is that it wasn't that long ago (30 years) when the Yen traded at 350 to the Dollar, so the idea of the USDJPY moving to 135, 150 or 175 would only be half way back.

To be sure, there are some other interesting domestic stories in technology and services that are worth considering as well, but the primary play in Japan today is more Macro than Micro at this point. Actually, this is one market where a good ETF (like DXJ or DXJF) can be an appropriate option to capture the upside. We also continue to like the Mega-Banks, SMFG, MTU and MFG (these are the ADRs) but you then need to hedge the currency, which can be achieved by buying YCS (double short Yen) in a 2:1 ratio with the ADR holdings or selling short FXY in a 1:1 ratio (you can hedge FX directly in other ways too). Another interesting point for investors is that Japan remains very much out of favor for foreign investors (usually a good contrarian indicator). In fact, foreigners have been net sellers of Japanese stocks over the past year, while local Japanese investors have become large net buyers. Usually the local buyers have superior knowledge of the value that exists in their home market, and we have always preferred to follow the local money than the “hot money” that runs from market to market around the world always buying what they wish they would have bought (chasing the hot dot). This Surprise is pretty straightforward – Kuroda-san must be successful in keeping the upward march of the USDJPY going in order for us to hit our target for the Nikkei in 2017. While we do have confidence that he will eventually succeed, we are wary that the move from 100 back to 118 in the back half of last year was very abrupt and that there will likely be some consolidation before we go higher (in fact, have seen that in recent weeks as Yen has strengthened modestly back to 112). What this means is that we can pick our spots to enter the market and don't have to be in a rush to put all the money to work at once. Another wildcard is that if we do get a really bad #2000.2.0 or #WelcomeToHooverville correction, the Yen is still

considered a safe haven, and it will strengthen in the heat of the downturn. This would lead equity correlations to rise (even though based on relative valuation and EPS growth they should fall), and there will be a lower entry point if, and when, that occurs. We have talked about how Cash has a very high option value today and this is one of the reasons why.

Surprise #4: When OPEC Freezes Over…

After the ceremonial show of OPEC unity in November, where members agreed to production cuts to attempt to firm up oil prices, it turns out that members of cartels cheat, and excess supply continues to dog the oil market. In hindsight it becomes clear that the agreed upon "cuts" were merely normal seasonal production declines and 2017 brings a chorus of "you cut first, no you cut first…" Global crude inventories remain stubbornly high, and prices fall back toward the bottom of the New Normal, $40 to $60 range, before bouncing back to end the year at $60.

In theory, OPEC members agreed to a 1.2mm barrel/day production cut at their meeting in November, which would take them back to February 2016 production levels, in an attempt to accelerate the balancing of the oil market and prop up prices of the commodity. We say this is in theory because the devil will be in the details of seeing how the members actually comply (track record is not good on this…) and seeing if there is any gamesmanship on the part of individual members to pawn off their share of the obligation on other members (the you cut first phenomenon). Two of the biggest problems to the plan seem to be the lack of strong verification procedures for member quotas and (more importantly) the lack of meaningful penalties for non-compliance. Another issue that seems likely to rear its ugly head is that Saudi Arabia has to take the lion's share of the cuts. There is some evidence from past seasonal declines during maintenance season that they can talk a good game about restricting production but have continually ended up with a higher level of production in each of the past five years despite the protestations that excess supplies were harming prices. Another interesting development is that by OPEC unexpectedly agreeing to the supply restrictions at the last minute, they had the impact of raising the front month oil contract much more than the out months (flattened the futures curve), which is an important strategic move. A flatter curve could cause some of the most highly leveraged U.S. E&P companies to not be able to hedge forward adequate production and raise new capital to expand overall production, thereby taking some of the U.S. supply competition off line. Immediately after the announcement, the forward oil curve moved to a degree of flatness that we had not seen since the GFC. The plan was elegant in its execution, but once again the resilience of the U.S. shale oil producers (particularly in the Permian basin) has been much greater than the Saudi's anticipated. In fact, one thing that OPEC clearly did not anticipate was that U.S. shale producers would actually be able to ramp production as the current price levels (remember T. Boone Pickens saying in 2014 that oil couldn't go below the marginal cost of $70).

U.S. total oil production troughed in June of 2016, and has been slowly recovering over the past seven months from 8.3mm barrels to 8.9mm barrels in early January. Given the expansion of the oil futures markets over the past decade, producers have become more adept at hedging future production, and we have a great chart (also in our webinar presentation) that says at $40 WTI, U.S. production will be 7mm barrels in 2017, at $50 WTI, U.S. production will be 8.3mm barrels and at $60 WTI, U.S. production will surge to 9.6 million barrels (which would offset more than half of the OPEC cuts, or more if they don't get all the way to 1.2 mm). Saudi made a huge miscalculation in their analysis of the price it would take to shutter production in the U.S. and they seriously miscalculated the innovation that has been going on in the oil patch to extract more hydrocarbons from the same amount of surface area acreage. Multiple pay zones, longer laterals on wells and highly

improved fracking technology have been game changers for operators in the Permian basin (and the SCOOP/STACK in Oklahoma as well), and the redeployment of drilling rigs in the Permian has skyrocketed in recent months. The oil Bulls will argue (and have been arguing for a while) that the total collapse of the U.S. rig count from 2014 to 2016 will have a monster impact on U.S. production (negative), but they claim that there is an 18-month lag before depletion rates swamp the impact of the larger number of active wells. There was some merit to the claim in prior years as the rig count and production curves were highly correlated when lagged, but that correlation has broken down in the past year due to the significant advances in drilling and completion technology. One example is that producers found that if they crammed four times more sand down a well they could double production. This is great news for sand companies (which have been on a tear) like SLCA, FSMA, EMES and HCLP, but not such great news for rig owners as producers can get more output with fewer active wells. It is really, really bad news for offshore-related companies as it is much cheaper to produce onshore than offshore and being short the ultra-deep-water drillers and service companies that support the offshore industry has been a great trade (and is likely to continue to be a great trade). Companies like RIG, SDRL, RDC, ATC are just a few examples of companies that are being dramatically impacted by the stunning technological advances in U.S. shale production.

There are a lot of very smart oil traders, oil industry analysts and oil company executives who are jumping on the bullish oil bandwagon, calling for $65 to $70 oil in 2017 and $85 or more in 2018. We even saw someone make the dreaded $100 call for 2018. We say dreaded because the Saudi oil minister said a couple years ago that oil would never hit $100again (we know what usually happens when people say things can never happen). We are by no means oil experts and many of the people we talk to, and invest with, have forgotten more about oil than we will ever know, but when we look at the data, we just can't see how the oil markets move back into supply/demand balance as quickly as predicted. Given the huge oil surpluses in the U.S. (highest ever), as well as stubbornly high global crude stocks, it seems that without a dramatic increase in oil demand it doesn't appear the oil markets can come into balance before late 2017. Another troubling factor for the uber-bullish camp is that traders are already at their highest net long exposure to oil futures since the 2014 peak, and we know from history that the COT futures data is a tremendous contrarian indicator for oil prices. Finally, there is the troubling alligator jaws pattern that developed between the dollar and oil prices in the days following the OPEC agreement. For many years the dollar and oil prices were highly inversely correlated, and you could get a good sense of where oil prices were headed by the primary trend of the dollar. For example, when the dollar surged in mid-2014, oil prices collapsed and when the dollar weakened in the first part of 2016, oil prices recovered. These two price series moved in near perfect inverted harmony throughout the past year right up until 11/29 when OPEC made the decision to cut production and oil spiked 13% in the following days opening a big gap with the dollar (which has been in a flat to slightly downward trend since then). Looking at the long-term correlation charts, with the DXY around 100, oil should be in the $30s (rather than $50s). The other indicator that has tracked oil prices very well has been the USDEUR with a six week lag. With this view and the Euro at 1.07, oil should be somewhere around $40. So in summary, we think that oil prices have entered into a "New Normal" range of $40 to $60 as the Permian Basin assumes the role of global swing producer. We would expect to see oil prices near the $40 bound at least once this year, and would expect prices to drift back toward the $60 bound by the end of the year. From a Macro investment perspective, be a buyer of oil at the lower end of the range and be a seller at the upper end.

Surprise #5: Saldi, Saldi, Saldi

After a bruising environment for European Financial

stocks in 2016, culminating in the failure of the Italian Referendum in December, summer clearance prices come early and the Risk/Reward becomes compellingly attractive. Contrary to the negative headlines, Euro Banks have recapitalized their balance sheets, NPLs have peaked and the Euro Macro backdrop is improving. We often say that investing is the only business we know where when things go on sale, everyone runs out of the store. So resist the urge to run, and buy what's on sale.

We know that in investing the point of maximum financial opportunity lies in times of despair, despondency and depression, that point of maximum pessimism and you have the urge to sell. The ability to not only resist the urge to sell, but to want to buy what is on sale when it makes you a little sick to your stomach, is exactly the place you want to be to maximize long-term investment returns. We wrote extensively about this phenomenon in a previous letter, *The Value of Value*. The discipline to be a value investor is one of the most difficult things to do in the business because we are hard-wired to run out of the store (the flight response) when things go on sale (because we feel wrong). All the great investors from Buffett to Klarman to Robertson talk about the ability to welcome price declines below fair value because it gives you the opportunity lock in the profits when you buy the bargain. So, as we look around the world today, it has gotten more and more difficult to find assets that are fairly priced, let alone on sale, but Europe is an exception. There are lots of cheap securities on the continent because the economic recovery has been more elusive than expected and the ECB QE Program is not having the same liquidity impact as the U.S. program had on equity markets. Europe had been mired in a Bear Market for a number of years. As the U.S. markets were making new highs seemingly every other day, European markets were still well off their highs (in some cases still by double digits). The EU equity markets only began to come out of their funk last summer, running into some resistance coming into the U.S. elections, then surging over the next few weeks into year end. One of the things that helped push European market momentum back to positive was the end of Negative Interest Rates across most countries and the emergence of some inflation (after a very long hiatus) in response to the massive balance sheet expansion stimulus by the ECB. There were fears that the transmission mechanism had completely broken down because Draghi kept buying bonds, but deflation was pernicious and persistent.

With the summer backup in interest rates around the world, financial stocks became more attractive, and nowhere were there better bargains in financials than in Europe. Not only were Euro Banks cheap, the attitude toward them was classic Soros' Law material, as investors considered them completely untouchable. As evidence, I happened to be on CNBC on the last day of September last year, which just so happened to be the day that pundits were predicting that Deutsche Bank would have to pay a $14 Billion fine to the DOJ (the actual fine was a fraction of that estimate), and the anchor asked me what I thought of the stock as it was plumbing new lows at $11. I replied that at this price it was probably a good long-term buy, and while it would certainly be volatile, the margin of safety was adequate to make the investment. Later that day on Twitter, the vitriol was so amazing you would have thought I suggested you should short Berkshire Hathaway. With the stock hanging around $20, it clearly has been a solid investment over the past few months. Furthermore, as the stock is still down (60%) from where it was in 2013, there is probably more upside to come. What people seem to forget is that not all banks are created equal. There is a list of 30 global banks that are considered systemically important (the G-SIB list). 13 are located in the EU and eight are in the Euro Area. Unsurprisingly, DB is on that list.

Very importantly, European Banks have been working for the past few years to comply with new Basel III regulations, raising capital, working out NPLs and generally cleaning up their balance sheets to levels that are quite robust (particularly compared to where they

were post-crisis). As a result, European Banks are doing much better as a group than the media would have people believe. Core Earnings are rising quite sharply, and are approaching 2007 levels again (after being negative for two years in 2011 and 2012). NIMs have recovered back to 2007 levels (nicely ahead of their U.S. counterparts). Real GDP growth in the EU is positive again, the rate of expansion is accelerating (after two years of contraction in 2012 and 2013), and total loans from Eurozone banks just set a new all-time high (surpassing the peak from 2011). On top of the improvement in fundamentals, Super Mario delivered his usual summer boost by hinting at tapering and the hope of higher rates, which was quite bullish for Euro financials. On the flip side, there was serious concern that the Italian banking system was on the verge of implosion, that the Italian Constitutional Referendum (if unsuccessful) would trigger a major correction, and that Germany would not agree to allow the Italian Government to backstop the banks and/or provide bailout funds. In fact, things were so negative and dark that some were referring to the Italian banking crisis as the mother of all economic threats in 2016. Because of the fear in the markets, Italian stocks, and banks in particular, were falling like stones during most of the year. Cratering after the Brexit vote, most of the banks were down (50%) to (60%) and some of them down (80%) to (90%). Looking at the flat line along the bottom over the last six months of 2016 we concluded that these stocks looked like they were trading not like a crisis was imminent, but that a crisis had already passed. The key to looking at markets that are down a lot is that you don't have to buy them all (some will fail, maybe Monte Paschi for example), but if you can identify the ones that won't fail, the returns can be enormous as the equities act more like options. This concept played out in 2016 across the commodity complex. We feel this is an apt comparison, as we believe that European Financials could actually be the "Commodities of 2017," and some of the returns available to intrepid investors could be generational just like last year in iron ore, copper, steel, MLPs and E&P companies. Beyond Italy, a couple places where the damage has been so severe that should things begin to improve there could be very significant profit potential are Greece and Portugal. We have talked about the Greek banks in the past, and we were early a couple years ago. However, we believe now they will reach an agreement with the Troika and the upside potential in Alpha Bank, Pireaus Bank, Euro Bank and National Bank of Greece is truly outstanding.

Surprise #6: One Belt, One Road, Multiple Bear Markets

China has embarked on a historic infrastructure program, the One Belt, One Road (OBOR) project that will recreate much of the ancient Silk Road trade routes all across Europe, Africa & Southeast Asia. This massive undertaking will trigger Bull Markets in stock markets all across the region, as well as in industrial commodities needed to complete these enormous construction projects. As Chinese cyclical companies trade at substantial discounts to consumer companies, there are particularly attractive investment opportunities in these sectors.

The One Belt, One Road Project (OBOR) is an undertaking of epic proportions, an ambitious project that has all the makings of being Great Wall-esque. The massive combination of highway systems, railway systems and shipping channels will connect and serve 60 countries across Eurasia and Africa, and is expected to cost between $4 Trillion and $8 Trillion to complete. Let those numbers sink in for a moment and the boost that OBOR will give to the Chinese ambitions to be a truly global leader. Another clear benefit of OBOR is the boost it will give to Chinese economic growth, job creation, global trade, RMB acceptance and myriad other social and political benefits around the globe. China clearly has global ambitions and President Xi's speech at Davos is an example of how his country wants to become a

2) The original estimate of the Bubble Top of 2650 was based on the DJIA level on Black Tuesday, but after reviewing the actual daily data we found that the 1929 peak was actually the last day of August, not in October when the Crash was officially labeled.

dominant super power and leader on the world stage. One of the most interesting things to us about China today is how much negativity there is in the Western media. The narrative is always that China is on the verge of economic, financial and societal collapse, yet China just keeps plugging along focused on their long term goals and plans (they think in decades while the rest of the world thinks in months and years). It is almost like they are playing a different game than the rest of the world as they continue to focus on building infrastructure to facilitate globalization and to increase their status and stature within that global community, while the rest of the world today retreats inward toward populist and isolationist movements.

Another consistent theme over recent years is the continual frustration experienced by the China Bears who are confused by the resilience of the Chinese economy as GDP growth, retail sales, industrial production, PMIs and many other indicators continue to defy the prognosticators' predictions of collapse. China's growth continues to be very robust and the quality of growth continues to improve as they transition a manufacturing dominated economy toward a consumer and services dominated economy. As the China Bears around the world continuously warn that all the numbers coming out of China are fake, curiously the leading economic indicators (like electricity use and money supply growth) continue to not only hold firm, but are actually accelerating upwards (indicating that GDP growth in China might be understated, not overstated). Eighteen months ago was a different story as there were signs that manufacturing was struggling, profits were falling and IP and PMIs were fading, but those trend have all reversed course in the past year. There appears to be a meaningful tailwind to economic activity triggered by stimulus actions taken by the PBoC and Central Government early last year (and that is before any OBOR stimulus). Two very critical developments that point to better growth ahead are the switch in PPI from negative to positive that happened last quarter and the dramatic upturn in Industrial companies' profits at the end of 2016. These industrial companies actually sell at very attractive multiples relative to growth. Defensive stocks have investors worried about the cyclical nature of these businesses, but we believe they will be the most attractive segment of the Chinese equity markets in the near term as the OBOR program begins to ramp up. This increased activity will also likely trigger bull markets in the cyclical companies in the other countries involved like Indonesia, India, Russia, Vietnam and Saudi Arabia (to name a few).

Clearly one asset class that will benefit greatly from a massive infrastructure project is commodities. China has set new records for imports of Iron Ore, Copper and Oil in recent months. Also, in what might be one of the most important changes in Chinese policy in many years, they have shut down capacity in China where production of certain commodities (iron ore, coal, etc.) was not competitive and/or losing money. This change is so big, that one of our favorite managers did an entire "re-do" of their commodity supply models when they heard this was going on, and the results were so compelling that they switched their entire book from short iron ore producers to long. This topic also came up during my trip to Hong Kong in January when talking to China managers who said that there was a new discipline creeping into the manufacturing sector in China – a stronger focus on ROIC is leading companies to shutter divisions and close unproductive units. There is still a big problem of excess capacity in China, but these steps are very positive signs at both the Government, and the corporate level, which bodes well for these markets. The broad commodity indices have broken out of the consolidation range where they had been "stuck" during the surprise dollar rally in 2H16, and materials stocks have broken above their 2007 highs after a very choppy recovery. In equity markets, many trend following systems and technical analysis systems will see these moves as buy signals, and that increased demand will reflexively feed on itself creating a virtuous cycle of rising demand as the rising prices attract new buyers. In other words, we may be on the verge of another Commodity Super Cycle beginning.

One commodity that deserves some quick mention here is Copper. Copper is important to China within the commodity based industrial demand story as a store of value (and source of re-hypothecation). We all understand the fundamental demand story for copper in China as the country urbanizes there are myriad uses for copper from plumbing to electrical to automobiles etc., and the fact that China will need to build five cities the size of Philadelphia every year puts that demand into perspective. What is less understood is how copper is used as a financing tool to provide leverage into the economic system. The basic idea is that someone buys a giant shipment of copper and has it deposited into a large pile in one of the port cities as a means of storage until such time as they can sell it to producers. However, the story does not end there as the owner can then pledge that pile of copper to a bank as collateral for a loan to make other investments or buy other assets. There are even cases where this re-hypothecation goes on multiple times and allows for some creative means of skirting capital controls, speculating on the RMB or speculating on markets and commodities. We won't dig in too deeply, but suffice it to say that this mechanism has the effect of inflating actual copper demand, and could inflate copper prices in the short-term (that would not be sustainable). This scheme reached a crescendo in 2011 and there was supposedly a crackdown on its use (and abuse) and copper prices have been locked in a downward spiral ever since then until the recent upturn. A couple things we know for sure: 1) copper prices have been tightly inversely correlated with RMB prices over the past year, which is not that surprising given the "soft-peg" to the dollar and the high inverse correlation of copper and the dollar, 2) there has never been a higher level of speculation in copper futures, and the current levels are three standard deviations higher than the average. This relationship bears watching as there are some good fundamental reasons to like copper (and other industrial commodities), but high levels of futures activity can vanish quickly as we saw in the oil markets in Q2 of last year. Given the goal of the Chinese leadership to maintain stability in the RMB, it would not be surprising to see any and all schemes utilized to hedge and/or smooth fluctuations in the FX markets.

The final point here is that Chinese equities are compellingly cheap and the H-Shares (Hong Kong) are the cheapest of all of the exchanges. What is missing is a catalyst to trigger the re-rating. One thing to remember is that the Chinese A-Share market (locally listed in RMB) is the second largest equity markets in the world ($8.2 Trillion market cap) and has a zero weighting in the MSCI Indexes. That will change. It could change as early as this year, but will most likely hold off until 2018 for political reasons. The time is now to make plans for how to integrate this market into portfolios.

Surprise #7: King Dollar's Last Stand

There is broad consensus that the U.S. dollar must appreciate as the Fed takes a different monetary policy course than the ECB & BOJ and begins to normalize interest rates (despite DXY being up only a couple percent since the Dec 2015 hike). [Interestingly, if not for a strong dollar rally after the surprise Trump election victory, the DXY would have finished down for the year.] That final surge, perfectly commemorated by the Economist cover last month, turns out to be King Dollar's Last Stand and USD actually begins to weaken against other global currencies in 2017.

We have been in the minority on the dollar for a while (and more right than the consensus as dollar has been essentially flat since Q1 2015), so coming up with this Surprise was really easy. The other indicator that makes us more confident that this Surprise could actually work out is the extreme dismissiveness the Dollar Bulls have for anyone who would dare to disagree with them. But the pièce de résistance in making the case for why the Bull thesis might break down is the Economist Cover Curse that shows a shirtless George Washington (in a beautiful dollar green shade) with a massive upper body standing with

arms crossed next to the headline *The Mighty Dollar* and the sub-title *America's currency, the world's problem.* As is usually the case with these covers, the timing could not have been more perfect (as a contrarian indicator) as the magazine printed almost exactly on the day of the DXY peak in mid-December on the heels of the big post-election rally. Another strike against the dollar is the "buy the rumor, sell the news" phenomenon that has historically occurred around Fed interest rate hike cycles. Given that these changes in interest rate policy are widely telegraphed, investors pile into the greenback in advance of the actual rate hike pushing the dollar up dramatically leading right up to the first increase. After the hike occurs the dollar has tended to fall relative to other currencies over the coming quarters and years. The DXY followed the sell the news playbook very well in early 2016 after the first hike in December 2015, falling from 100 down to 92 by May, then bounced around during the summer turmoil around Brexit. Then the dollar broke rank and surged in Q4 from 94 back to 100, right before the election as fears of the U.S. elections and the December Italian Referendum triggered some safe haven demand. The most interesting move was after the election as the DXY jumped up to 103 leading up to the Fed meeting (where they did raise rates another 25 bps) on speculation that somehow all the hyperbole from the Trump team after the election on tax reform, regulatory reform and fiscal stimulus would somehow happen overnight and trigger a massive growth recovery and suddenly the Fed was behind the curve and interest rates were going to skyrocket and inflation was going to explode and puppies would rain from the heavens and everyone would wake up ridiculously good looking… (Sorry, don't know what came over me). Then a funny thing happened the next day, the dollar started falling again and has slumped from 103 to 100 over the past six weeks.

What is most interesting about the dollar is the long-term secular decline since the mid-1980s that has been interrupted by a couple of meaningful spikes and declines, one leading up to 2000 equity peak (big), one leading up to 2008 equity peak (smaller) and a third one today (medium). There are those that want to compare Trump to Reagan and think the dollar is headed for a monster upward move. We have written extensively before about how there is no comparison between these two, either in terms of the men themselves (other than age when taking Presidency and being former Democrats) or in the economic and market environment that exists during the two time periods. There are others that want to compare the current move in the dollar to the 1990s bull market run and we see some similarities in that both periods were influenced by Central Bank liquidity measures and the valuations of assets is fairly close (hence our #2000.2.0 moniker). Under this scenario, the dollar would continue to appreciate about another 20% before heading back down to make lower lows over the following six years (only to be re-inflated by the Housing Bubble). The symmetry of the past three dollar Bull Markets being around the Tech Bubble, the Housing Bubble and today's "Everything Bubble" is very interesting (and frightening at the same time). There is likely some predictive power in that the dollar peaks around the time that the Bubble pops. In December, one of our favorite analysts, Larry Jeddeloh, of TIS Group wrote an interesting piece that showed that the dollar had one last run in it to 125 on the DXY (based on a number of factors including the Coppock Curve). However, when I was with him in Hong Kong in January, he said the facts had changed and that he thought the dollar had peaked after the Fed meeting. Just to give you a sense of how strong the consensus on the dollar continuing to rise is today, Strategas did a survey of their clients in December and a startling 86% said that the dollar would move higher in 2017.

There is a body of work, from people who I respect around the world that points to a massive (think $10 Trillion) global carry trade that could unwind and cause a dollar shortage (essentially a run on the dollar bank) and trigger a massive upsurge in the dollar. I am compelled by the logic of their arguments and even by the construct that there is a global currency

imbalance. The world reserve currency will always be the most favored nation, so to speak, in a crisis, but I am not as convinced as they are that there is an imminent catalyst to trigger the unwind. If we take their argument to the extreme, we get to The End Game and a complete collapse of the global monetary and fiat currency system. There has been plenty of ink spilled talking about what "could" happen, but we won't add to that total here because extremely low probability, high impact events are very difficult to predict, plan for and manage should they occur. It reminds me of thinking about how close we live to the edge in a just in time inventory world where a small disruption of the supply chain could be devastating. Assuming for now that the global powers that be don't trigger The End Game, what is the most likely scenario for the dollar today? We continue to believe that slowing demand for dollars around the world due to an increase in trade in local currencies (pushed by the Chinese who have their eye on world reserve currency status for the RMB someday), reduced demand for Petrodollars in a lower oil price world, and the desire for U.S. businesses to have a more "competitive" currency will continue to put downward pressure on the dollar that counters the increased demand for U.S. bonds, given the global yield differentials. Just for good measure (and because we think great investors like Tudor Jones and Druckenmiller are right for thinking about technical analysis), the DXY did stand out in a DeMark (famous technician who is widely followed by huge investors) weekly 9 count (read sell signal) in December almost to the day of the peak. The Energizer Bunny may have run out of power.

Surprise #8: Healthcare Gets Discharged

The relentless negative news beginning with the infamous "Hillary Tweet" and culminating in (now) President Trump's comments on drug pricing have pounded Healthcare & Biotech stocks over the past year (only sector that was negative in 2016). Given that the House and Senate are both controlled by Republicans (who receive significant backing from the Pharma Lobby), we believe it is highly unlikely that any of the Campaign proposals targeting drug pricing see the light of day in Congress. Healthcare & Biotech stocks emerge from sickbay and are peak performers in 2017.

Ever since the infamous Hillary tweet in late 2015, healthcare stocks have declined while the rest of the global equity markets ground higher over the past sixteen months. The declines were the most acute whenever Clinton would take the lead in the Presidential Polls since investors took her at her word that she was going to attack drug pricing and healthcare costs. Despite her strong rhetoric, eight of the ten proposals she put forth (the same ones she offered in 1994) require an act of Congress and, again, Congress is controlled by Republicans who are funded to a large degree by the Pharma lobby so the likelihood that any of the proposals would see the light of day in the Capitol seems like a stretch. That said, in the weeks leading up to the election global healthcare stocks were taking a beating (biotech and specialty pharma worst of all) and were falling very much in line with the 1994 drop in the AMEX Pharma Index (dropped (40%) in the eighteen months leading up to the Election). If history is sound guide, not much will actually get done in Congress and this dip will prove to have been a very good buying opportunity to pick up some great companies at bargain prices. We would have been even more confident on the timing of the rebound given Trump's surprise win, but with him picking up Clinton's microphone on this topic, we will have to endure some additional volatility.

In what turned out to be a modestly positive year for the Index in the U.S. (and a wildly positive year for a couple sectors like energy and financials), healthcare was the only sector that had a negative return in 2016, falling (5%). If we break down healthcare into its component parts, there were some really big losers like biotech, which fell (15%) and healthcare service, down (10%), and one winner, managed care, which surged nearly 20% following the election (in reaction

to the fears of fallout from the potential repeal of the ACA). If we dive even deeper into a couple of segments specifically targeted by Clinton, specialty pharma was pounded as good companies (read, companies with real products that are not bilking the system) like HZNP, HRTX, RTRX and AVDL fell (30%) to (50%) and the bad companies (read, companies with fraud and/or are bilking the system) like ENDP and VRX fell (75%) and (85%), respectively. Mylan was another poster child of the theater for votes movement during the past year as Congress convened a special panel to grill the Mylan CEO about massive price increased in EpiPens and MYL stock was down (30%) for the year. But not all specialty pharma companies are bad. Many companies in the space serve real patient needs, don't have massively leveraged balance sheets resulting from sketchy M&A deals, and aren't run by shady CEOs. Alas, all the babies were thrown out with the bathwater in 2016. As is usually the case in January the worst to first (and first to worst) phenomenon occurred as investors rebalanced their portfolios for the New Year by selling what worked (energy) and buying what didn't (healthcare). In the first ten days of January, XLV (healthcare) was up 2.5% while XLE (energy) was down (2.5%) and the SPX was up 0.5%. The specialty pharma companies were up smartly as well, around 8%, right up until Trump held his first press conference. On a throw away comment that he didn't like what was going on in drug pricing, pharma stocks gave back all their gains. While ENDP and VRX continue to get punished (deservedly) by investors, the specialty pharma group has continued to firm, we expect to see significant gains in this segment over the balance of 2017.

Biotech is another sector that was under attack in 2016 as the index return masks some of the real damage that was inflicted on specific companies that missed numbers, were in the cross-hairs of regulators, or were just too big a portion of the ETFs when money fled the sector. Some of the highest quality names like AMGN, CELG and BIIB managed to limit losses to single digits, but some of the more speculative names like GERN, TRVN, ACAD were down between (25%) and (55%) for the year. The once high-flying GILD (Gilead has a drug that actually cures Hepatitis-C, but it is very expensive), a company with a real drug that cures a real disease and saves real money for insurers and patients over the long-term, was grounded, falling (30%) and is now trading at a seemingly crazy 6.9X TTM earnings (remember most people are crowing that the S&P is somehow cheap at 17X forward EPS). We say seemingly because the market must know something that we don't here because after peaking at $120 last June (up from $20 to start 2012), the stock has made a series of eight lower highs and lower lows, falling all the way to $65. Following the broader healthcare trend and their specialty pharma cousins, biotech stocks surged (worst to first) in the first two weeks of the New Year, up anywhere from 3% to 13% before succumbing to the Trump press conference comments. While it is true that many of these companies are not cheap (in fact, P/E can't be calculated because there are no earnings, or in some cases, no sales) the innovation in Biotech is nothing short of miraculous, and we expect to see some very large fortunes created from areas like immune-oncology, gene therapy with CRISPR, CAR-T therapies and Biosimilars in the coming years.

There is no question that the healthcare industry group has been in the sick bay over the past eighteen months but we see a clear path to discharge in 2017 and believe that the sector could have completed a worst to first transition for the year when we look back in early 2018.

Surprise #9: Willie Sutton Was Right

Despite all the concerns about rising U.S. interest rates and a stronger dollar triggering a crisis in Emerging Markets, the developing world proves yet again how prophetic Willie Sutton was when asked why he robbed banks. His reply was simply, "Because that's where the money is," and the same holds for why EM will continue to outperform in the coming years (because that's where the growth is). The

positive momentum spreads beyond just the commodity producing countries that surged in 2016 and the rising tide lifts all boats across Emerging & Frontier Markets.

One of my favorite investing stories comes from my visit with the very first potential client we called on after we formed Morgan Creek. We met with the patriarch of a family in North Carolina who had amassed a sizable fortune in real estate land development over many decades (he was 82 and showed up to the meeting in a bow tie that he wore every day). During the course of our meeting we asked him how he had been so successful as a real estate investor and he said it was very simple. He pointed to a large map on the wall that had a number of concentric circles drawn on it (like a bullseye) and he said, "I just figure out which direction is the path of progress and I buy land one circle outside the current activity and I wait." Half-joking, we replied, "That's it?" He smiled brightly and said, "Yep, pretty much." It was a fun exchange, but it is a profound lesson in investing. If you can get in front of major trends and you have patient capital, you will outperform dramatically versus most other strategies. We can point to lots of other examples across many industries, like buying AMZN stock when it went public and the doubters thought it was just an online book store and couldn't see the path of progress to become the dominant retail channel for the future of e-commerce. Just to put some numbers around this, $100,000 worth of AMZN purchased at the closing price on the day of its IPO in 1997 held to today would have increased by 41,993% (37.4% compounded for almost two decades) to nearly $42 million. The problem is that the volatility was so extreme in a number of instances, most investors would have lost their nerve and sold. The real key to making large, long-term, returns is having patience and fortitude to weather the inevitable ups and downs in the price of an asset over time as the view of Mr. Market (volatile) moves away from fair value (relatively stable). Even those investors fortunate enough to buy AMZN early likely ended up selling along the way because it has had so many horrific drawdowns. There were plenty of (50%) drops, but the worst was pretty early on when from the IPO to the peak of the Tech Bubble in 2000, $100k would have grown to about $5.4 million, but then fell a stunning (94%) to be worth only $300k by mid-2001 (still not a bad outcome at 3X in four years, but the "loss" of paper wealth would have felt horrible). About the only way to have captured the complete upside of the path of progress of AMZN was to be an employee with locked up shares (or so many shares that you could sell a few and still be okay) or to have literally forgotten you owned it (so you would never overreact at the troughs). Amusingly, Fidelity reports many of its best performing brokerage accounts are listed as "inactive" or "deceased." Emerging Markets fits in this category. It is an asset class with fantastic long-term potential, but also high degrees of volatility, so the average investor never realizes the benefits of progress and growth because they overtrade and sell after big drawdowns (and potentially compound their mistake by buying back in after the big run up). Clearly it would be better to buy when things go on sale, but maybe the best answer is buy great companies that focus on capturing EM growth early and just lock them in a drawer (or better yet, buy them in the private markets and hold onto them after they go public).

We know a couple of things about the Emerging Markets that we think make them a great place for investors to focus time, attention and capital over the coming decades. Basically, they don't suffer from the Killer Ds (in fact, they benefit) that will hamper growth and returns in the developed world for many years to come. Demographics, Debt and Deflation are three primary trends that can significantly harm (or benefit) returns and the position of EM and DM could not be more different. The Developed Markets have very poor Demographic trends (rapidly aging populations) that will slow GDP growth, limit productivity and make it more challenging for their economies to multiply capital. They will be saddled with excessive Debt burdens that will hamper growth

and drain resources from more productive pursuits. And they will struggle with persistent Deflation as technological innovation and global excess capacity continually put downward pressure on wages and prices. Emerging Markets on the other hand have excellent Demographics in aggregate, and growing working age populations that will be a tailwind for GDP growth. They have limited Debt burdens that will allow continued leveraging of the economies and populations (similar to the boom witnessed in Developed Markets during the past 50 years). Lastly, Emerging Markets still have inflation insofar as they have expanding populations driving increasing aggregate demand and with it, rising prices. Inflation, contrary to popular western economic belief is a Demographic phenomenon not a monetary phenomenon. We also know that EM has reached an inflection point where their economies are transitioning from a manufacturing-led model to a consumption based model and the explosion in the EM middle class consumer over the coming decade will be like nothing the world has ever seen. For perspective, just in China alone, the number of middle class consumers is projected to hit 472 million people by 2020 (roughly the combined adult population of the U.S. and Europe).

Returning to the difficulty that most investors have with buying and holding great companies for long periods of time, the trend in investing in Emerging Markets has been punctuated by periods of time where investors favor EM over DM and vice versa. There are myriad reasons related to the perception of growth in the various regions, the direction of the dollar, the overall health of the global markets, and the basic home market bias that inflicts all global investors. We have seen this cycle play out over the past fourteen years with the nearly perfect symmetry of a classic Kindleberger Seven Year Cycle. From 2003 to 2010 EM dramatically outperformed DM as investors couldn't get enough of the commodity producing countries during the commodity super cycle and China was pumping huge amounts of stimulus into the economy to help the recovery from the Global Financial Crisis. In early 2011, that cycle peaked and as Commodities turned down, EM followed and DM went on a seven year surge as the Fed, BOJ and ECB poured trillions of dollars on the bonfire in an attempt to spur growth and DM stocks lapped up the liquidity and went on an epic seven year run (second only to the run in the late 1990s leading up to the Tech Bubble). We believe it is time for another turn and EM is likely to outperform DM for the next seven years.

Buying things is always more fun when they are on sale. We have always been Value investors at heart, which means we like to buy things below their fair value and we really like to buy things when they are really cheap. EM as a group are the cheapest major markets in the world with a forward P/E of 11.7X relative to Europe at 14.3X, Japan at 14.7X and the U.S. at a kind of silly 17.4X (don't listen to the talking heads who say 17X forward P/E is cheap). On top of being cheap, the earnings growth rate is much higher, so you get the double benefit today of buying faster growth at cheap prices. One of the great things about valuation is that it can actually be predictive of future returns over long periods of time. The Cyclically Adjusted P/E (CAPE) ratio is a great example. The CAPE looks at trailing ten-year earnings to remove the volatility of the current year earnings and can be used to effectively forecast long-term returns for markets and countries (it's less effective short term and for individual companies). Looking at current CAPE ratios around the world today paints a troubling picture for DM investors. The U.S. is the most overvalued of the major markets with a 12/31/16 CAPE of 26.4. This implies a forward return over the next decade of 4% (with a 50% confidence interval of 2% and 6%, meaning there is a 25% chance the return could be above or below that range). Japan is not much better with a CAPE of 24.9 and an expected return of 4.3%, while Europe looks modestly better at 16.6, implying a 6.6% expected return for the decade. Some of the PIIGS have a better expected return (they are cheaper today) with Spain at 11.7 and an expected return of 11.7% and Italy at 12.7 and an expected

return of 9.1%. Hong Kong is on the fringe between the DM and the EM as the gateway to China and the CAPE of 14.3 implies a forward return of 8.3%. The fun begins when we get to EM, as the BRICs look pretty attractive with CAPE ratios for Brazil at 9.8, Russia at 5.9 (the lowest in the world), India at 17.6 (India always looks high due to the heavy tech weight in its index) and China at 12.8. These below average CAPEs imply above average returns for EM investors as India is expected to compound at the lowest rate of 7%, but China expected returns are closer to 9%, Brazil comes in at 13% and Russia is expected to beat everyone with a 14% annualized return for the next ten years (14% compounded for a decade turns $1 in to $3.71). As we have said, these forecasts are not useful for short periods of time, but they have been accurate over decades and they are supported by an inherent logic that entering at a low valuation will yield a better return than entering at a high valuation unless there is a dramatic difference in growth. Unfortunately for DM, the growth is unlikely to surprise to the upside, so EM has a comparative advantage in that department as well.

There are other indicators which have proven to be reliable indicators of relative strength over time pointing to a robust coming decade for EM equities. These include the commodity cycle, the CESI economic surprise index, liquidity provided by financial institutions and inflation. EM equity has been inversely correlated to the dollar and positively correlated to commodity prices over the long term, and there has been a strong cyclicality to these assets over time. With an apparent breakout of commodity prices over the past year, the beginning of another seven year up cycle would provide a nice tailwind for EM. The CESI just broke out to a new multi-year high as economic data has continued to surprise to the upside, boding well for EM corporate profits and, in turn, stock prices. The CrossBorder Capital Liquidity Index has dramatically shifted from negative to positive in the past few months and has gone nearly vertical to levels we have not seen since 2004, right at the beginning of the last up cycle for EM. One of the biggest issues for EM equities over the past few years has been the stubborn presence of Deflation in China that was being exported to the rest of the world. In a bold move, Chinese leadership recently committed to curb excess capacity in many industries and the PPI has done an about face and surged from negative 5% to positive 5% over the past year. Historically, when Chinese PPI is negative, Emerging Markets struggle and when PPI is positive they perform well. When we look at the MSCI EM Index over the past year, despite the strong recovery in 2016, there has been volatility around the uptrend which has created a falling wedge pattern (technical pattern) that normally precedes a dramatic move. The only problem is that the move can be up, or down, and breaking the trend line in either direction can trigger that strong move. Right after the election, the Index headed for the bottom of the wedge and (fortunately, in our view) bounced right off the bottom and has now burst through the top of the wedge here in January, which should be a good confirmation of the uptrend.

As we look around the EM countries there are lots of compelling stories (Russia, Saudi Arabia, Argentina) and lots of horror stories (Philippines, Nigeria, Turkey) from which to pick our spots to invest in the new year. In Russia, recovering oil prices, a resurgent economy and incredibly cheap stocks (even after a 44% increase in 2016) bode well for investors. In Saudi Arabia, there is the momentum that will be generated by the ARAMCO IPO, the hope that Saudi Arabia will be included in the MSCI EM Index and a young population that wants to become more active consumers. In Argentina, there is great leadership, a massively under-equitized market and a stabilizing economy. The places to avoid in EM have a common theme: bad leadership. Other potential challenges facing EM include currency woes (current account problems), potential trade issues with an aggressive Trump Administration revisiting old trade deals, or economic malaise, but many of the problems can still ultimately be traced back to bad leadership. One caveat to always remember (especially in EM) is that when things go bad and prices really get hammered,

there eventually comes a time when the discount to fair value is so great, and the Margin of Safety becomes so large, that even though it seems dangerous, it is time to buy. Lord Rothschild said the time to buy is "when blood is running in the streets" and Sir John Templeton frequently reminded those who asked him "where is the best place to invest?" that they were asking the wrong question, that they should ask "where is it the most miserable?" Recall that at the right price, it can make sense to sell fire insurance on a burning building. There is one spoiler alert in EM that we have to pay attention to and that is should there be a meaningful dislocation in the Developed World (a surprise in European elections, a spat between Trump and Mexico, or worse Iran, recession in the U.S., etc.) EM equities will struggle in the short term and it might be better to ease into positions and save some cash to buy at cheaper prices. Many of the best investors in the world have lots of cash today as it has the highest option value (rises in times of uncertainty and volatility) that it has had in years.

Surprise #10: #WelcomeToHooverville

Donald Trump, like Herbert Hoover, made a lot of promises in order to win the Presidency. Also like Hoover, Trump comes to office with no political experience and finds it difficult to deliver on those promises. But just like in 1929, equity markets believe those promises and surge to a Bubble top (S&P 2800)[2] within months of his taking office. With a U.S. Recession triggering an unwinding of massive debt burdens and the stock market swooning, Trump repeats the policy mistakes of Hoover on trade, immigration & taxes and Hooverville is back with a new name, Trumptown.

To begin this section, we want to repeat some of what we wrote in *Save FairUS* on the history of Herbert Hoover and why we see some similarities between him and Mr. Trump. Rather than do the entire section in italics (which gets funky to read), just know that if the following four paragraphs sound familiar, they are familiar (if you read the last letter), as they are the same as last time *[with a couple new parentheticals in square brackets].*

Donald Trump is only the third man to be elected U.S. president that has never held a national elected office, been a Governor or a General. The first was William Howard Taft and the second was Herbert Hoover in 1928. Hoover (like Trump) was of Anglo-German descent. He was born in Iowa, and after a series of unfortunate circumstances with deaths in the family, moved around a great deal as a young man. In a very interesting story, he applied to a new university in Palo Alto, CA in 1891 and, after failing the entrance exam, essentially talked his way in and claims to have been Stanford's "first student" as he was the first to sleep in the dormitory (Trump went to a different elite university, Penn/Wharton). Hoover graduated with a degree in geology (Trump majored in economics, so maybe Trumponomics fits) and set off on a global mining career where he ended up in Australia. Known as a bit combative (similar), Hoover became estranged with his superior in the organization and was shipped off to manage mining projects in China. Hoover married his Stanford sweetheart, Lou Henry (known for her riding skills and her uncanny aim with her .38 caliber pistol; ok, no similarities here to Trump's wives), and she accompanied him to China, became fluent in Mandarin, and while working on projects, the couple began fighting for the rights of Chinese workers in an attempt to end indentured servitude (perhaps some similarities and differences with Mr. Trump here). Hoover was very successful in his mining career and he became an independent consultant traveling the globe to teach mining companies how to improve operations. By 1914 (age 40) he had amassed a personal fortune estimated at $4 million (roughly $100 million today) and was quoted as saying "if a man has not made a million dollars by the time he is forty, he is not worth much" (certainly not a stretch to think that might have come out of Trump's mouth in the past). After returning to California, Hoover was recruited by the Democrats after WWI, but was resistant to the confines of such partisan affiliation. In 1920 he tried to run for

president (another similarity as Trump ran unsuccessfully in 2000 under the Reform Party) but was narrowly defeated in the primary in California. Like Trump, he was never considered a serious candidate. After throwing his support to Harding, he was rewarded with the position of Secretary of Commerce making him somewhat less of an outsider than Trump.

That said, there are some real similarities with how Hoover approached the Commerce Department and Trump's claims that only he himself can fix Washington *[he literally said recently that he doesn't need briefings because he makes "great" decisions with no data…wow, just wow]*. Commerce had only existed as a department for eight years and was a very minor entity with limited power. Hoover wanted to change that and make the Commerce Department the center of the nation's growth. He seized power across many industries and created huge sub-committees and sub-departments to regulate everything from manufacturing, communications, transportation and the census. Hoover took over other Cabinet officials' offices when he deemed they were not performing well (sounds familiar, "you're fired") and rose to a level of prominence that actually overshadowed two presidents. The media referred to them as the Secretary of Commerce and the "Under-Secretary of Everything Else" and in an interesting twist, under Hoover, the 1920 Census became the only one to not be used for Congressional reapportionment, which ultimately impacted the 1928 Electoral College (which he won). When Coolidge decided not to run for a second term as President, the GOP turned to Hoover. Interestingly, Coolidge did not endorse Hoover (Trump was not endorsed by former GOP presidents) who referred to him in a not so nice manner as "Wonder Boy" and remarked that "For six years, Hoover has given me unsolicited advice, all of it bad." The Republican Party ran a very harsh campaign (although Hoover, unlike Trump, largely remained above the fray) that was designed to be anti-Catholicism (again "–isms" are not good) against the Democratic challenger, four time New York Governor Alfred E. Smith. The campaign was described by the media as a "lily-white campaign" to crack the "Solid South" (the original Southern Strategy), and they actually purged black leaders from the southern portion of the GOP in order to appeal to southern white voters. The efforts were successful in turning Virginia, Tennessee, Florida, North Carolina (the last two being big wins for Trump as well), and Hoover was the first Republican to win Texas. By campaigning against Prohibition, against Catholics and by winning the southern white vote, Hoover won in a landslide with 58% of the popular vote (even better than Trump).

Hoover came into office with a very strong agenda of wanting to fight against government inefficiency, a plan to reform and reduce the nation's regulatory system (ironic since he created much of it as Secretary of Commerce, but sounds a lot like Trump), a plan to create less dependence of individuals on government by encouraging public-private partnerships (sounds familiar), a mandate to build greater global trade, particularly in Latin America, (clearly the antithesis of Trump rhetoric) and a focus on the areas of justice (he started Federal Bureau of Prisons), education (he proposed the Department of Education) *[Hoover is probably rolling over in his grave with Ms. DeVos being appointed here]* and civil service. Hoover also made a public claim that he would live to regret during the Great Depression when he said that the U.S. was close to defeating poverty. As Hoover took office in January the economy was already beginning to slow into a recession (another fresh face in the White House, another recession in year one) and things accelerated to the downside into the Great Stock Market Crash of 1929. As the markets sank and the economy tanked, Hoover abandoned his lofty goals and began desperately trying to prop up both the market and the economy by attempting to legislate wages for workers (failed badly) and in what is nothing short of a complete déjà vu started the Mexican Repatriation program in 1929 (heard something like this recently) *[in addition to The Wall, now we have the Muslim ban, that isn't a ban, except*

when he calls it a ban when he tweets about it… confused yet?]. Then, in June of 1930, over the objection of leading economists, Hoover reluctantly (at least it was reluctantly) signed the Smoot-Hawley Tariff Act that Congress believed would help ease the growing recession by limiting imported items in favor of "made in the U.S.A." *[Now we have America First]* Having seen this movie, we know the true result was accelerating the recession and eventually plunging the economy into the Great Depression (along with the Fed trying to raise rates from zero; wait, that sounds familiar too). In the depths of the depression, unemployment had skyrocketed, thousands of banks failed as businesses defaulted and shanty towns derided as "Hoovervilles" by the Democrats sprang up across the country. Rather than cut taxes to spur growth, Congress passed tax increases which not only didn't spur growth but were (unsurprisingly) wildly unpopular. That combination of punches was game over for Hoover and he was soundly defeated in the 1932 election by FDR who promised a "New Deal" (because the American people were done with the old deal).

Herbert Hoover ascended to the presidency from relative obscurity by riding a huge wave of populist sentiment (sounds very familiar) to a landslide victory (electoral college for Trump was pretty solid) *[but he did lose the popular vote no matter how many times he claims he won by making unsubstantiated, outrageous claims about voter fraud].* Yet despite that strong start, why has the Hoover presidency been described as "tragic" by historians? Was it Hoover's lack of government experience that didn't allow him to truly execute his pro-business agenda over the very powerful Republican Congress? Was it Hoover's hubris that he was better and smarter than everyone else that led to his inability to form coalitions within the party? Was it that Hoover was blinded by retaining his own power and when he was faced with the deterioration in the markets and economy, a "self-made man" with a "superman" complex (hmm, are we talking about Hoover or Trump?) wasn't able to change his mind and change the plan? *[You actually have to have a plan in order to change it…]* Perhaps there are kernels of truth in all of these, but many economic historians will claim that it was his extreme fiscal conservatism that did not allow him to waver from a balanced budget or accept any inflation (no similarity to Trump here). While it is certainly likely that the 1932 tax hike into the recession was an error, recessions themselves are necessary and normal and we would posit that the errors of protectionism and interfering in the normal business cycles through regulation was more to blame. As we think about a Trump presidency in 2017, the similarities to 1929 are clearly robust (with some differences), but we see many more similarities than to 1981, and if we have to settle on something in between, we see lots and lots of similarities to 2001 (#2000.2.0 year two).

With this information as background, let's explore why the theme of this letter evolved from the events of 1929 and why we think there is a real possibility (maybe even a probability) that we get a repeat of the events leading up to Black Tuesday that would turn this Surprise into a reality.

The first step in getting a #1929.2.0 would be to have equity market valuations run from their current level of "silly" to "stupid" between the Inauguration and Labor Day (in 1929, P/E ratios surged from 17X to 21X over this period to a level not seen since 1860). When Hoover was inaugurated in 1929 the DJIA had been oscillating around 300 after having rallied nicely after the election, and then had one last, cathartic, 24% rally through the end of August to complete the bubble top. When Trump was inaugurated the S&P 500 was fluctuating around 2,260 and if the markets were to replicate that last, cathartic, euphoria-induced rally, the SPX would spike to around 2,800 by the last official day of summer (day before Labor Day). When Jeremy Grantham wrote his Q1 letter in 2014 talking about the potential for a U.S. equity bubble to form, he said that somewhere around 2,250 by the 2016 election would qualify as a bubble. He later modified the target to 2,300 (after fair value increased), and has since come out with a new letter at the end of 2016

that said there was not enough "euphoria" in the markets for there to be a true bubble (defined as prices more than two standard deviations above fair value plus a sudden parabolic price movement based on euphoric market sentiment). A parabolic move of 22% from here (already moved up 2% since Inauguration) would tick that box and put the S&P 500 in classic equity bubble territory. What would drive this last gasp move and take us from the silly valuation level of 25.8X (higher than all periods except the 2000 tech bubble) toward the stupid levels of 31X which we have seen only once in history? The standard response today is that "Animal Spirits" have been revived by Trumponomics and there will be a sharp acceleration in GDP growth (which is fairly close to impossible mathematically as we have explained in other parts of the letter), a surge in corporate profits as tax rates and regulation are slashed and a giant windfall gain from repatriation of foreign cash hordes and fiscal spending. Seth Klarman would argue it is something else entirely. Whenever market participants are paying more than the fair value for securities (which they clearly are today) then we move from the realm of investment to the realm of speculation. At this threshold prices will be driven up to bubble extremes simply by rampant speculation (the belief that some greater fool will always pay a higher price). To keep the rarity of the current levels of valuation in perspective, remember that the CAPE ratio has only been higher than today 4% of the time over the last century (all of those other periods were in 2000 and 1929). Bubbles are formed when market participants move from optimism (things are getting better) to excitement (things are really getting better) to thrill (things are great) to euphoria (things couldn't get any better), and it is at that precise moment where you have the point of maximum financial risk (and, perversely, the point of maximum risk seeking behavior). Jeremy said we can't have a classic bubble until we see euphoria, and we have laid out the path that would take us up to Babson's Crossing once again.

For that euphoria to occur, market participants (using this term intentionally because you lose your status as an "investor" when you knowingly buy assets with no margin of safety) must believe that President Trump will deliver on all the promises that were made on the campaign trail, and (more importantly) they must believe that the fulfillment of these promises will in some way lead to higher growth, higher profits and ultimately higher equity prices. Trump promised a lot of things during the campaign (Someone wrote an article saying there were 76 promises. Others say more. We lost count), but the ones that really matter for the equity markets are the Trifecta of 1) cutting corporate taxes, 2) reducing corporate regulation and 3) instituting a large fiscal stimulus program. The "Trifecta Trade" that began within hours of Trump's election win ran hard for four weeks, taking materials stocks up as much as 80%, financial stocks up as much as 35%, energy stocks up 15% and the S&P 500 up about 8%. However, those stocks have gone nowhere since the first week of December, as market participants try to decide if the Trifecta policies really have a chance of coming true in 2017. One of the problems is that Trump (like Hoover) made so many promises it is unclear which ones he can/will actually address (there was a great political cartoon that made this point in 1930s with Hoover sitting at desk with long scroll of promises that looked like Santa's list). The other problem is that his approach of sitting in the safe space of the Oval Office issuing Executive Orders rather than engaging with Congress to actually pass some real Legislation begs the question of how much impact he will actually be able to make. Some of the promises that have diverted attention from the Trifecta so far are his promises 1) to build a wall paid for by Mexico to keep out illegal immigrants and protect American jobs, 2) to get rid of Obamacare and replace it with something *"terrific"* (a bit vague), 3) to save Medicare, Medicaid and Social Security (without cutting benefits, again with no details of a plan), 4) to rid the world of Radical Islamic Terrorism (noble goal to try and reduce terrorism of all kinds including the white nationalist kind), 5) to ban all Muslims from entering the country (recently softened to a travel ban from seven identified high risk countries), 6) to deport

all illegal immigrants (low ROIC here), 7) to "Drain the Swamp" in Washington, 8) to create at least 25 million jobs (actually the quote was, "I will be the greatest jobs President that God ever created," which, given where Unemployment rate is today, is likely mathematically impossible), 9) to revive the steel, auto, coal and basic manufacturing industries (comparative advantage works as developed countries develop, we should keep focusing on knowledge industries), 10) to pick Supreme Court Justices who are "great legal scholars" (sounds great, having strong character would be good too), 11) to stop spending money on space exploration (tough call, a few good things have come out of NASA over the years), 12) to strengthen the military, *"so no one will mess with us"* (again, a noble goal, but at last check, we already have the strongest military in the world) and 13) to get rid of Dodd-Frank (excellent, can't come soon enough, and bring back Glass-Steagall while you're at it). At the first turn of the first hundred days, there has been very little mention of actual policy decisions that would complete the Trifecta, but the markets grind higher as people still want to believe in the narrative.

What drives people to spend more, save less, borrow more and buy more stocks is the belief that tomorrow will be better than today. In 1929, America was coming off one of the biggest economic booms in history as a number of technological innovations such as mass electrification (families could now have appliances and consumer electronics), radio and television, mass production of automobiles, consumer installment credit and margin lending for stocks were created. During the Roaring Twenties the mantra of the day was "Live today, Pay tomorrow," and there was a palpable excitement that the future would be amazingly better than the past. Thus, buying as much of that future growth as possible was the only logical thing to do because prices only went up (no matter what the asset, real estate, businesses, stocks). Hollywood boomed and stars were born, glamour was in, modesty was out, and with radio fueling an explosion in advertising, the Age of Consumerism was born. With the Republicans in charge of Congress taxes on corporations and the rich were cut, and corporate profits surged, but the problem was that the share that went to workers plunged, raising income disparity to the highest level ever (a level we are close to exceeding today). In 1929, the top 1% of Americans took home 23.9% of all income, and the top 10% owned 84% of all wealth. Today, the top 1% takes home around 23% of all income, and the top 10% own approximately 79% of all wealth (the current numbers are a little fuzzier because they haven't been seasoned). The problem with income inequality is that it encourages speculation, speculation leads to bubbles, and bubbles lead to crashes. If you are in the bottom classes, the bulk of your income is spent on housing, clothing, education, transportation and food and there is no money for saving or investing. If you are in the upper classes, you have more than enough to cover essentials, plenty for luxury items, some for saving and investing, and during these periods of excess, even some for wild speculation. Worse yet, if you don't have enough for speculation, the banks will lend it to you. In 1929 the creation of installment loans for consumer goods increased all incomes but it really leveraged the top earners' ability to pour money into real estate and the markets. There was a massive RE boom and bust in the mid-1920s (a story for another time), and when that market dried up, money began turning toward equities. The banks were eager to get in on the game, and margin lending (at 10:1 leverage ratios) was rampant during the final mania phase of the bubble. The real problem comes when market participants are buying stocks with borrowed money only on the expectation that the price will rise and they will be able to sell it to someone else at a higher price. In other words, all notion of a fundamental improvement in the prospects of the underlying company is thrown out the window since the holding periods are too short for fundamentals to matter. Markets become locked in a reflexive virtuous cycle of new money pushing prices higher, which in turn attracts new money and pushes prices higher… lather, rinse, repeat. The speculative fever turns to a fear of missing out (FOMO) and a fear that *"everyone*

else is getting rich so I better get in there" (). In the end, the exuberance, which was at one time (long ago) rational, becomes irrational, dangerous and ultimately lethal to people's wealth. In his book, *Wall Street: A History: From Its Beginnings to the Fall of Enron,* historian Charles Geisst described it this way, "Excessive speculation was creating an inflated wealth and a sense of prosperity built upon borrowed money." In the decade leading up to the peak in 1929, speculators accumulated $8.5 billion of margin debt with which they were buying stocks (Sounds like nothing, but was 10% of total market cap, equivalent to $2.5 Trillion today. Inflation is a thief). One piece of data to ponder here is that corporate America has issued nearly that precise amount of debt (approximately $2.4 trillion over the past five years) to buy back stock, which in a sense is not very different than individuals buying on margin (and yes, individuals have the second highest margin debt balances ever today too at just over $500 billion).

The last phases of an asset bubble are an amazing thing to watch as all rationality of market participants has been lost and prices begin to spiral ever higher at an accelerating rate (the final parabolic thrust). As the market moves from excitement to thrill and finally to euphoria, new metrics are created to justify prices that make no sense when measured with traditional, fundamental, measures. For example, in 2000 we saw the creation of "Eyeballs" as a metric for the number of people that would see a particular web application (with no regard for whether they would pay anything to see it), and "old fashioned" metrics like Price/Sales and Price/Earnings that were harder to calculate for many new companies with no sales or earnings were rendered obsolete. If a company actually had sales and revenues (and a real business) like CSCO, people were willing to pay ridiculous prices ($286 for every $1 of earnings, which means you expect the company to grow EPS at 15% for 50 years, which has never happened, ever) because they were playing with "house money" (paper gains) or "other people's money" (mutual fund managers) or "the bank's money" (margin leverage). You know how this story ended, CSCO fell (87%) over the next two years. In 1929, the promise of the radio, railways and the automobile companies to shrink distances, expand commerce and facilitate travel and leisure as their network footprints expanded (sounds similar to the internet) was so great that these stocks soared to levels that could never be justified by fundamentals (and eventually gravity takes over). As one example from 1929, RCA (Radio Corp of America) saw its stock rise tenfold from 1927 to 1929, and then it crashed from $114 to $3 (down (97%) to where it started in 1923) over the next three years. To see some of the craziness in stocks right now, AMZN has risen tenfold since 2009 and currently sells at 168X earnings (although earnings is a recent phenomenon AMZN has only made $4.2 billion in earnings over 20 years), and trades at a nearly $400 billion market cap (right in line with craziness of 2000 and 1929). For perspective, AAPL has also risen tenfold since 2009, but only trades at 15X earnings and made $18 billion in profit last quarter. AAPL does have a $700 billion market cap, but has over $100 billion in retained earnings, paying out $3.2 billion in dividends last quarter (almost as much as AMZN has ever made)!

With all of this as backdrop, if the S&P 500 were to continue to track the Hoover bubble track from 1929, the index would run from the current level of 2,300 to 2,800 by the end of the summer, a 22% increase (keep in mind, that is starting from all-time highs already). If that does occur, get ready for #FANG (FB, AMZN, NFLX, GOOGL) at P/E ratios of 50X, 205X, 420X and 37X, respectively, and the SPX at 31X which would be meaningfully higher than 1929 (and not much below that absolute insanity that was 2000). What is very interesting is how complacent investors are despite the relatively lofty valuations and here are a few examples. The Forward P/E of the S&P 500 is already at 17.5X, which is higher than the 2007 peak right before the Global Financial Crisis (second only to 2000 again). There is 20X (read that again, 20X) more money invested in levered long ETFs than levered short ETFs (for perspective, that ratio usually fluctuates between 2X and 4X), only surpassed at the

end of 2015 (right before the 12% drop in early 2016) and (you guessed it) 2000. The ratio of Bulls/Bears is 3.75 and in the 95th percentile which has a very high correlation to equity corrections (highest ever is five in 1987, so could get more ebullient). The CBOE Put/Call recently rebounded from 0.75 (extreme bullishness) to 0.98 (neutral), so there is plenty of room for more euphoria here. The Sentiment Trader Risk Appetite Index is at levels we have not seen for years and is signaling extreme optimism. The Hulbert NASDAQ Newsletter Sentiment Index is at 80%, versus an average of 20% (only exceeded 80% once in past three years). The percentage of stocks in the S&P 500 above their 200-day moving average is 76%. The RSI is 65%, just below the 70% overbought threshold. Equity Mutual Fund cash holdings have fallen to 3% (well below normal), and are about as euphoric as we have ever seen. Finally, U.S. household exposure to financial assets is the highest it has ever been (ratio of financial assets to income), exceeding both the peak during the DotCom Bubble and the Housing Bubble. My Twitter amigo, Jesse Felder (@jessefelder), has coined the term for this all-in moment, "The Everything Bubble."

We are well on our way to euphoric stock market valuations just like in 1929, so we can check that box for the Surprise. Second, we need a Recession to begin 2017 to be the triggering event for the Administration so they are forced to make policy decisions (that turn out to be errors). We covered the chances for Recession well in Surprise #1 above (no need to beat that drum again), but we do have a few more facts that we didn't discuss above that we would like to expound upon here. Contrary to popular belief (that Obama wrecked the economy), Trump enters the White House with the third best GDP growth since the 1970s (only Carter and George H.W. Bush had better) and the second lowest unemployment rate (only George W. Bush had lower). So it seems more likely we are near the end of the economic cycle than the beginning. Another pesky problem is that Trump inherits a debt burden that is the second worst on a Debt/GDP basis (Truman was marginally higher during WWII), and, should interest rates continue to rise, the interest burden would reduce the flexibility to increase fiscal spending. Let's assume for the sake of this Surprise that we do have a Recession and that the economy and markets do begin to unwind this fall (in 1929, the economy started to turn down in July), then what? The key to having a garden variety Recession (akin to 2001, along the lines of #2000.2.0) morph into a Great Recession that melts down into #WelcomeToHooverville and potentially into the Great Depression II is a series of policy errors in response to the slowdown. What is almost eerie is that the policies that Trump promised during his campaign, and has since begun to endorse in his first weeks as President, are almost a carbon copy of the policies that sunk the Hoover Administration as they tried to fight the downturn in 1929. Policies related to Immigration (Mexican Repatriation Act), Trade (Smoot-Hawley Tariff Act) and, ultimately, a reversal of tax policy and a massive tax increase at precisely the wrong time (Revenue Act of 1932) led to an epic bust. The passage of Smoot-Hawley triggered a surge in deflation (CPI fell a massive 10%) as the entire construct backfired and both imports and exports collapsed (as other countries fought back with tariffs of their own). The biggest victim of the ensuing trade war were the guys who fired the first shot (U.S.). American exports dropped a staggering (37%) in 1930 and 1931. The real killer, though, was the total collapse of the dollar (and surge in gold) as global trade ground to a near halt. They say the road to hell is paved with good intentions, and while Hoover and the Republicans had all the best intentions when they came to office, a lethal combination of hubris, inexperience, and inflexibility led to the greatest collapse our country has ever experienced. One of Mark Twain's most famous quips is *"History doesn't repeat itself but it often rhymes,"* and Hooverville and Trumptown are beginning to sound more and more alike.

The theme of our last letter, *Save FairUS,* was that candidate Trump and President Trump would be very different, and that he would make a Center Shift to

govern from the middle after going to the extreme Right in order to get elected. We also wrote *"so it is possible that the entire hypothesis of this letter is wrong and President Trump will not move to the Center and Candidate Trump will live in the White House for four years. If that happens, we would expect this movie to end more like Hooverville than Reagantown and Mr. Trump will not get his lease extended (in fact, he might even get evicted early) and he will have to head back to Trump Tower. We are hoping for the best (but also preparing for the worst) because protecting the wealth of our clients is really important."* After the first few weeks of President Trump, we would say the odds of this Surprise coming true are (unfortunately for all of us) rising. Roger Babson has an important quote defining leadership, "***A character standard is far more important than even a gold standard. The success of all economic systems is still dependent upon both righteous leaders and righteous people. In the last analysis, our national future depends upon our national character,"*** and leadership is desperately what we are in need of today.

Bonus Surprise: Demise of Active Management Greatly Exaggerated

For the fourth time in my career (and I am not that old), Active Management (and Hedge Funds) are declared "Dead," as Passive strategies outperformed again in 2016. Similar to previous periods of Central Bank largesse, the math of capitalization weighting, exacerbated this time by "Dumb" (read rule-based) Beta ETF strategies, favored passive momentum strategies since QE began in 2009. People always "buy what they wish they would have bought," and so poured record amounts into Index Funds & ETFs in 2016 (#PeakPassive) just in time for Active Management (and Hedge Funds) to outperform in 2017 (just like 2001).

We opened the Q3 2016 section on Hedge Funds with the following paragraph and it seems to set the stage very well for this Bonus Surprise. Over the long-term hedge fund managers have historically outperformed (by almost a 2:1 ratio over four decades), primarily, we will argue, because the nature of every industry is that the most talented professionals migrate to the place where they can maximize their compensation. The best doctor, lawyer, football coach or basketball player always makes the most money. Capitalism works. Professionals produce superior results because they have an edge. They practice more, they have better coaching or they have better equipment, whatever that edge may be. We discussed last time how an edge in the investment management business can come from many different places - better technology, better analytics, better process, better people, better networks or some combination thereof. We also wrote that *"Edge does not come cheap and the genius of the Hedge Fund model (propagated by A.W. Jones and discussed in our letter titled A.W. Jones Was Right) was it provided superior levels of fees which allowed hedge funds to acquire the best talent and resources, develop the best networks and build the best systems."* We are such staunch proponents of the hedge fund model of asset management because we believe it aligns the interests of the manager and the client, insofar as the incentive is not to raise huge assets just to gather huge fees (size is the enemy of alpha), but to limit size and charge an incentive fee structure so that when the client wins, the manager wins. There will always be examples of where this relationship breaks down (either the manager doesn't acquire an edge to generate alpha or gathers too many assets and dilutes the ability to generate alpha), but the client can always choose not to maintain capital with that manager. Periodically (as noted above) we go through a period of time like today (usually caused by Central Bank easing) where hedge fund strategies underperform and a cacophony builds that they have lost their edge. Headlines tout that managers have become "rich and complacent," that "Active Management is dead," that there is "too much money chasing the same ideas," and myriad other negative "explanations" for why the high fee strategies are underperforming the low fee strategies,

all the while recommending that everyone immediately fire all the high fee managers and only buy Index Funds and ETFs. We are there now and what we know from nearly three decades of allocating capital to managers, these are the best times to maintain discipline and allocate to managers who have strong long-term track records (demonstrated edge), but have just had a difficult short-term period. The key to success it to "do the opposite of what the media reports that the big Pensions are doing. They hired hedge funds after the Global Financial crisis (chasing their strong relative returns) and are selling now to buy Passive strategies (chasing their Central Bank steroid induced strong relative returns)." As we like to say, we've seen this movie before and (spoiler alert) it ends badly.

If you are looking for Despair, Despondency and Depression in the investment universe, you need to look no further than Active Management and Hedge Funds (and in particular Long/Short Equity funds) as they just finished one of their worst years ever relative to the Passive benchmarks, trailing for the seventh consecutive year. If you read the popular press today you might think this is the first time this has happened (it isn't, it is the fourth such cycle in the past 30 years), and that things have never been this bad for Active Managers' relative performance. There is a natural cycle to markets (about seven years) where they rotate between periods that favor Active Management and periods that favor Passive Management. In the most basic terms, Active (and Hedge Funds) tends to outperform when markets are challenging (flat or down) and Passive tends to outperform when markets are ebullient (rising, and Passive wins the most when the Fed is stimulating the economy). The simplest explanation is that Passive strategies are "Dumb" (meaning they are rules-based, not unintelligent), and they must buy the assets in their Index/ETF list regardless of valuation (they are not allowed to think or use judgment). The capitalization weighting structure of most Indexes makes it even worse as they are forced to buy more of the most overvalued assets. The momentum nature of Passive nearly ensures victory over Active when markets are rising, but as the markets get increasingly more dangerous at the tail end of the bull market they also ensure that the losses during the inevitable correction will be much worse. Active managers are allowed to think and retreat from the most egregiously overvalued assets before they go over the cliff. As you might expect, investors were singing the praises of Active Management in 1970, 1982, 1995, 2004 and 2009 (the Crash Troughs), while they were singing the praises of Passive in 1976, 1991, 1999, 2007 and 2016 (the Bubble Tops). If we look back over the entire 30-year period (my investment career), Active has beaten Passive (defined as more than 50% of managers beating the Index in that year) about 60% of the years, which is expected given that market rises about 2/3 of the time. While the strings of outperformance are longer for Passive (average 7 years) and shorter for Active (average 4 years), over the whole period Active beats Passive in generating cumulative gains (the math of avoiding losses helps long-term returns more than winning in the up years). The very best managers outperform over the entire period by a significant margin, and when we look at Hedge Fund performance over the entire period relative to the long -only Index, the margin of victory is almost 2:1 (you end up with twice as much wealth by limiting the volatility of performance over time). It turns out that the old adage is true, if you take care of the losses, the gains will take care of themselves.

Despite all of this evidence, somehow investors (as a group) still don't seem to see the cyclicality of the strategy. They continually fall into the trap of buying what they wish they would have bought (and selling what they are about to need), pouring assets into whatever strategy has just had a hot period (chasing the hot 3-year dot), which explains why the average investor's returns are so much lower than the Indexes (and much, much lower that the best Active managers and Hedge Funds). Case in point, after the best five year period in the history of U.S. equity markets from 1995-1999 (the Tech Bubble), investors poured a record amount into Index Funds (ETFs weren't really

a factor then), peaking at a massive $260 billion flow in Q1 2000 (almost to the day of the peak on 3/24/00). On the flip side, not only was Active Management declared dead, but investors actually killed off a number of the best Hedge Funds (including one of the greatest of all time, Tiger Management) by redeeming en masse. Of course, we know how that story ended. Over the next decade, the S&P 500 compounded at (1.7%), while the best Hedge Funds (like Baupost and others) compounded at 17%. Active Management and Hedge Funds were declared dead again in 2007, right at the peak of the Housing Bubble, and the losses for investors who poured into Passive and Index Funds were even worse this time as the equity market fell nearly (60%) peak to trough. So what did people do at the bottom of the Global Financial Crisis in March of 2009? They sold equities and bought Hedge Funds, just in time for them to begin their seven year cycle of underperformance. There has been a lot of press about how this cycle seems to be much tougher for Hedge Funds, and that observation would be right in one specific sense – the ability to generate significant nominal returns has been impacted by the Zero Interest Rate Policy (ZIRP) that has been artificially suppressing interest rates for the past seven years. We discuss this in more detail in the Hedge Fund section in the Q4 Review above, but the short version is when a manager is long and short, there is a significant amount of cash that is held as collateral. In the "old days" a manager would earn 5% on that cash and the alpha they generated would be additive. When rates are at 0%, even with meaningful alpha generation, it is tougher to make high absolute returns.

So how have investors reacted to the lean seven years for Active managers and Hedge Funds? They have begun to vote with their feet. The flow of capital out of Active Managers (in the Mutual Fund space) started as a trickle in 2009 and has turned into a torrent as nearly $1.2 trillion has left the Active Mutual Funds for Passive Indexes and ETFs over the period ($400 billion to Index Funds and $800 billion to ETFs). The crescendo was another $260 billion (history rhymes) going into Vanguard Funds in Q3 of last year. The surge in Passive has been nothing short of breathtaking, as the number of ETFs has trebled since 2009 from 600 to over 1800, and the AUM has more than trebled from $700 billion to $2.4 trillion. In fact, today nearly 40% of equity market assets are in Passive strategies. There is a Reflexivity to this movement in that the more money that has shifted has driven up a narrow group of stocks, which has attracted more capital, which drives up the price even more, which attracts more capital, and so on. One big problem is that a reflexive virtuous cycle can turn into a reflexive vicious cycle when things finally do turn (they will turn, the economic cycle is not dead). The real problem will be that the safety valve mechanism that Active managers play (they buy the values at the bottom) will be less robust since there is less money in Active. If this all sounds circular, you are hearing it right. It is circular. The other big problem is that the rise of Passive has led to the "Turkey Problem." The turkey on the farm thinks they have the greatest life ever as they are constantly fed, don't have any responsibilities other than eating, resting and getting portly and, in fact, they do have the greatest life ever for precisely 364 days (day 365 is a downer). The same thing will be true for investors during #PeakPassive when the day of reckoning finally arrives.

Take the example of our favorite strategy to poke fun at "Smart Beta" (and in particular Low-Volatility Smart Beta). Consider the silliness of the phrase for a moment. Beta, by definition is "Dumb" (again, rules-based) because it *is* the market. You either get market exposure or you don't. It was amazing marketing but a really bad way to invest for the long-term (alpha is much better). Worse yet is the absolutely nonsensical idea of Low-Vol ETFs, where the sole criteria for buying a stock is the volatility of its price (no fundamentals, just a line on a chart), when low, buy, when high, sell. Think about the danger of this craziness for a minute. When you buy a lot of a stock (money flows into ETFs) the volatility goes down and the formula says to buy more, which lowers the

volatility, which triggers the algorithm … lather, rinse, repeat. What this does is drive stocks like Exxon Mobile (XOM) to levels of ridiculousness that seemed impossible only a few short years ago. For more than forty years, the industrial conglomerate that is Exxon Mobile (some think of it as an oil company but they actually have dozens of businesses, some of which even make less money when oil goes up) traded like an industrial conglomerate should, between 12X and 15X earnings (it is a cyclical company so should have a lower multiple). Every time it got to the high end of the range, the Hedge Funds would short it, and when it got to the low end of the range, the Value managers would buy it. The problem began when these silly Smart Beta strategies began to buy XOM at any price (because it had low vol, because they were buying it…) and today the company sells at 40X earnings. This might be one of the best shorts I have ever seen in my career. Not that XOM will crash anytime soon, but you can be short it for the next five years, using the proceeds to finance a great long and make alpha on both sides of the trade. Speaking of volatility, there is another insidious thing going on that will make the pain much more acute when the new Babson's Break occurs. There is a gigantic structural short on VIX that has been propagated by Insurance Companies (using it for Annuities hedging), and now the idea is even being sold to Pension Funds by (unscrupulous) investment banks as a means of enhancing the yield of their funds that have chronically underperformed their actuarially assumed rates. The total net short interest against VIX has never been higher and when this Alligator Jaws snaps shut there will be some huge damage done to investors. There must be some reason to think that the tide could shift in favor of Active Management and Hedge Funds in the near term, right? We think so, and we think it happens in 2017. First, equity correlations (rolling 65-day) have retreated from the highs of 2015 when they were 75% to a new ten-year low of 39%, and low correlations have always favored Active Management and stock picking. Second, cross-asset correlations have finally come down from near record levels last year, falling from 45% to 20% and this has historically been associated with strong returns for tactical allocation (long/short equity and macro hedge funds). Third, equity sector spreads have widened in recent months, as there has been more dispersion in performance due to decreasing amount of Fed largesse (total QE per month has halved since 2015). Fourth, capital flows have begun to turn negative for Hedge Funds (although modestly, only $100B out of $3 trillion last year), and that has been a strong contrarian indicator for a turnaround in relative Hedge Fund performance. Fifth, the sizeable inflows into Passive products (both Indexes and ETFs) have reached a level that has been associated with poor relative performance over the next three years. Sixth, Federal Reserve tightening cycles have historically created an environment that favors long/short strategies over long-only strategies. Finally, when the AFC wins the Super Bowl (as the Patriots just did in spectacular fashion), the S&P 500 has had a poor year, which would favor long/short over long-only (the Super Bowl indicator has been right 40/50 times and while there are many who would claim it is impossible that this could be a useful indicator, 80% is a pretty good stat).

Speaking of the Super Bowl, one of the things about the Q4 letter is that we are always writing it during the weekend of the big game and the event never fails to provide material for the Letters. We have had everything from themes for the entire letter, Defense Wins Championships, to small trivia items like the Super Bowl Indicator above, to anecdotes that support one of our core investment constructs, like how great players/investors focus on the next play rather than the last play. This last point is relevant for our topic this year, but only as a side note to the primary theme that Talent Wins (in sports, in life, and in investing) and that a poor period of performance by a hugely talented athlete (or manager) is precisely when you want to bet on them (not pull them out of the game). So, let's set the stage for our theme. The New England Patriots have been to the Super Bowl nine times (more than any other team) and are now tied for second for the most wins (5). They were the first team to ever overcome a 10-point deficit to win the Super Bowl (51

games). They were the only team in either the playoffs or the Super Bowl to come back from being down 19 points after three quarters (93 games). They were the first team to overcome having a pick-six (12 games). They were the first team to win the Super Bowl in overtime (one game). So how did a team trailing 28-3 halfway through the third quarter come back and win the biggest game in professional sports? Two words - talent and leadership. The Patriots are led by arguably (not very arguable, but everyone has their favorite) the greatest quarterback that has every played professional football. Tom Brady has won more Super Bowls than any other quarterback in history (5), has been the MVP of the Super Bowl more times than any other player (4), and holds eleven Super Bowl records including most games played (7), most touchdowns (15) and most yards passing (2,071). Granted, Brady has only the third highest passer rating in NFL history at 97.2 (the range is 0 to 158.3), trailing Russell Wilson (99.6) and Aaron Rogers (104.1), but we can safely say at this point that his total body of work would make him the G.O.A.T. (Greatest of All Time) in our book.

For purposes of an analogy, if Tom Brady were an investment manager, he would clearly be a top tier Hedge Fund - lots of talent, highly compensated and wins big over the long term. Brady's opponent for the Super Bowl was the Falcon's Matt Ryan. Ryan is a very solid quarterback whom, after a slow start to his career, has come on strong in recent seasons to be ranked only two spots behind Brady on the all-time passer rating (greater than 1500 attempts) with a 93.6. But Ryan is only 3-5 in the post-season, has only been to one Super Bowl, and has lost in the first round of the playoffs three times in his nine seasons (while Brady has won the AFC Championship 7 of last 16 years). If Ryan were an investment manager, he would be an Index Fund. We will posit here that the first half of Super Bowl LI was like 2016 in the investment world (great for Index Funds, bad for Hedge Funds), and that the second half is how 2017 will play out. It would be hard to imagine Tom Brady having a more miserable first half, going 15-25 for 179 yards with no touchdowns and an interception to yield a miserable QB passer rating of 65.2 (Brady has never scored in the first quarter of any of his seven Super Bowls. Maybe he comes out a little too hedged?). Right before halftime, Brady set one of the only Super Bowl records he probably wishes he didn't have, most interceptions (31) in the post-season (the bright side is you have to play in the post-season a lot to set it) to put his team down 21-3 going into the locker room. Ryan, on the other hand, could not have had a better first half as he went 17-23 for 284 yards and two touchdowns (no interceptions) for a perfect passer rating of 158.3 for the first time in Super Bowl history. Perhaps the adrenalin of being in the biggest game of his career fueled his other-worldly performance (the equivalent of the Central Bank stimulus injected into the markets after Brexit and the "Hopium" injected into the market after the Trump victory fueled the Indexes). Ryan wasn't done there. He came out after halftime and drove the length of the field on his first possession (eight plays in four minutes) to put the Falcons on top 28-3, and viewers all around the world were changing the channel because this game was over (Hedge Funds are Dead).

At that point, Coach Belichick had to make a decision. Should he pull Brady (fire the Hedge Funds) or should he stick to his strategy that has made him the one of the most successful coaches in history (most Super Bowl wins (5) and seven rings overall)? What would you do? What are many Investment Committees (CalPERS, NY Common etc.) doing? Belichick could have panicked and changed his game plan (and many investors do just that). He could have complained that the referees weren't calling holding on the Falcons defense (like saying the Algos and HFTs have rigged the game against Hedge Funds). He could have blamed the receivers who weren't catching the passes the way they normally do because some of his guys were out hurt. Instead he stayed calm and called plays that put the ball in the hand of his best player a record number of times (62 pass attempts). Talent Wins. In the last 27 minutes (eight minutes in Q3, 15 minutes in Q4 and four minutes in OT) Brady was nearly

perfect, engineering two touchdown drives and two 2-point conversions, to finish with Super Bowl records for completions (43), attempts (62) and total yards (466). Maybe Hedge Funds aren't dead after all. Now there is still one thing to contemplate, which is that Defense Still Wins Championships. As great as Brady was, had the Patriots defense allowed even a field goal over that stretch, the Falcons would have won. The Patriots' defense completely stifled Ryan in the last part of the game, and showed once again that when the markets get rocky, Index Funds will underperform. We believe we are on the verge of such a time (for all the reasons we have laid out in the other Surprises above), and that 2017 will be the year where Active Management and Hedge Funds rise up to regain their championship status in investors' portfolios. It would be tragic if investors pulled their MVP QB right before he was about to go on an epic run. There is another investment QB that people think is the G.O.A.T. His long-term performance is truly Hall of Fame worthy (19.7% compound return since inception, more than double the S&P 500), but even he has had some really poor halves over his career (but taking the ball out of his hands would have been a mistake). Warren Buffett was down (50%) for the year not once but twice over the decade from 2000 to 2010. Berkshire lost half its value from 1999 to 2000 (when people said the game (Tech) was passing Buffet by) and again in 2008 to 2009 (when being leveraged long stocks was a bad idea), but you rarely hear people saying that Berkshire is dead. It is funny that Buffett had the equivalent of much worse performance than Brady did in the first half of the Super Bowl, or that Active Managers or Hedge Funds had in 2016, but for some reason investors focus on his long-term performance and stick with the game plan. Maybe that is a good strategy for Active Management and Hedge Funds right now.

We wrote last time that, *"Ferris Bueller was right, 'Life moves pretty fast.' A year ago it seemed like the election would never get here, and two weeks ago it couldn't get here fast enough and now it has been over for a week it has been a blur of shock, awe, media frenzy, market gyrations, global discourse, political posturing and lots and lots of forecasting, predicting and handicapping what is likely to happen in the coming months, quarters and years. Our job in the investment business is to look at all the pertinent facts, form hypothesis and execute investment strategies to try and capitalize on opportunities that we see. Investing is all about taking intelligent risks, those risks you are compensated correctly for taking. In order to make decisions on which risks to take, you must have conviction about your ideas and your strategies."* We have great conviction that hedged equity is the best way to gain exposure to the equity markets over the long-term. We have great conviction that putting capital in the hands of the most talented portfolio managers is a winning strategy. We have great conviction that the investment environment is nearing an important inflection point, and that we are inching ever close to another Babson's Break where having a core exposure to hedged equity will be critical to preserving capital. I was meeting with a very interesting manager last week (a Tiger Grand-Cub, spun out of one of the original firms that spun out of Tiger). They are focused on healthcare and had a challenging year last year. This manager wrote in his recent letter that when things don't go as expected (like Hedge Funds in 2016 or Tom Brady in the first half of Super Bowl LI) there are four possible explanations: 1) We don't know what we are doing and we never did, 2) We know what we are doing and we stopped following the play book or lost discipline, 3) We knew what we were doing but have lost the edge, or 4) Perhaps there was an aberration in the markets (e.g., political challenges in healthcare). We think this is a great summary of what investors must attempt to discern when outcomes don't meet expectations. We have great conviction that we (as coach), and our managers (as players), do indeed know what we are doing. We have great conviction that while there were some small lapses in discipline (allowing net exposure to drift too low) we have stuck to the core of the original play book (that has provided success over the long-term). We have great conviction that the team has not lost

the edge, and, in fact, is stronger than ever having learned from our mistakes. Therefore, by process of elimination, we are left to conclude that 2016 was an aberration in the equity markets, a year punctuated by an anomalous series of events where shorts went up more than longs and low quality companies outperformed high quality companies. Looking at the scoreboard, with eight minutes left, trailing 28-3, one might be compelled to pull the QB and change the game plan. Nothing could be further from our minds. We are confident that our team will rally like the Patriots behind Brady and bring home the championship in 2017.

Update on Morgan Creek

We hope you have been able to join us for our Global Market Outlook Webinar Series entitled "***Around the World with Yusko***." We have had many interesting discussions in the last few months including: *From Surprises to Soros: The Best of ATWWY in 2016* and *Channeling Byron - 10 Potential Surprises of 2017* . If you missed one and would like to receive a recording, please contact a member of our Investor Relations team at IR@morgancreekcap.com. Mark your calendar now for our **February 22nd** webinar **at 1:00pm EST.**

We are also a proud sponsor of The Investment Institute, a newly formed Educational Membership Association for Institutional & Private Investors and Managers in the Southeast. The date of the next program will be **May 22nd-23rd, 2017** at **The Umstead Hotel & Spa, Cary, NC**. For more information on how to become a member and join this elite group please visit www.theinvestmentinstitute.org.

As always, It is a great privilege to manage capital on your behalf and we are appreciative of your long-term partnership and confidence.

With warmest regards,

Mark W. Yusko
Chief Executive Officer & Chief Investment Officer

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The index information is included merely to show the general trends in certain markets in the periods indicated and is not intended to imply that the portfolio of any fund managed by Morgan Creek Capital Management, LLC was similar to the indices in composition or element of risk. The indices are unmanaged, not investable, have no expenses and reflect reinvestment of dividends and distributions. Index data is provided for comparative purposes only. A variety of factors may cause an index to be an inaccurate benchmark for a particular portfolio and the index does not necessarily reflect the actual investment strategy of the portfolio.

Russell Top 200 Value Index — this measures the performance of the mega-cap value segment of the U.S. equity universe. It includes those Russell Top 200 Index companies with lower price-to-book ratios and lower expected growth values. Definition is from the Russell Investment Group.

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Russell 2000 Value Index — this measures the performance of small-cap value segment of the U.S. equity universe. It includes those Russell 2000 Index companies with lower price-to-book ratios and lower forecasted growth values. Definition is from the Russell Investment Group.

Russell 2000 Growth Index — this measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 Index companies with higher price-to-value ratios and higher forecasted growth value. Definition is from the Russell Investment Group.

Russell Midcap Value — this measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values. Definition is from the Russell Investment Group.

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Russell 3000 Index (DRI) — this index measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market. Definition is from the Russell Investment Group.

MSCI EAFE Index — this is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. Morgan Stanley Capital International definition is from Morgan Stanley.

MSCI World Index — this is a free float-adjusted market capitalization index that is designed to measure global developed market equity performance. Morgan Stanley Capital International definition is from Morgan Stanley.

91-Day US T-Bill — short-term U.S. Treasury securities with minimum denominations of $10,000 and a maturity of three months. They are issued at a discount to face value. Definition is from the Department of Treasury.

HFRX Absolute Return Index — provides investors with exposure to hedge funds that seek stable performance regardless of market conditions. Absolute return funds tend to be considerably less volatile and correlate less to major market benchmarks than directional funds. Definition is from Hedge Fund Research, Inc.

JP Morgan Global Bond Index — this is a capitalization-weighted index of the total return of the global government bond markets (including the U.S.) including the effect of currency. Countries and issues are included in the index based on size and liquidity. Definition is from JP Morgan.

Barclays High Yield Bond Index — this index consists of all non-investment grade U.S. and Yankee bonds with a minimum outstanding amount of $100 million and maturing over one year. Definition is from Barclays.

Barclays Aggregate Bond Index — this is a composite index made up of the Barclays Government/Corporate Bond Index, Mortgage-Backed Securities Index and Asset-Backed Securities Index, which includes securities that are of investment-grade quality or better, have at least one year to maturity and have an outstanding par value of at least $100 million. Definition is from Barclays.

S&P 500 Index — this is an index consisting of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The index is a market-value weighted index – each stock's weight in the index is proportionate to its market value. Definition is from Standard and Poor's.

Barclays Government Credit Bond Index — includes securities in the Government and Corporate Indices. Specifically, the Government Index includes treasuries and agencies. The Corporate Index includes publicly issued U.S. corporate and Yankee debentures and secured notes that meet specific maturity, liquidity and quality requirements.

HFRI Emerging Markets Index — this is an Emerging Markets index with a regional investment focus in the following geographic areas: Asia ex-Japan, Russia/Eastern Europe, Latin America, Africa or the Middle East.

HFRI FOF: Diversified Index — invests in a variety of strategies among multiple managers; historical annual return and/or a standard deviation generally similar to the HFRI Fund of Fund Composite index; demonstrates generally close performance and returns distribution correlation to the HFRI Fund of Fund Composite Index. A fund in the HFRI FOF Diversified Index tends to show minimal loss in down markets while achieving superior returns in up markets. Definition is from Hedge Fund Research, Inc.

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MSCI Emerging Markets Index — this is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The MSCI Emerging Markets Index consisted of the following 23 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.

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