CHASEFIELD | CAPITAL

Second Quarter 2017 Outlook
March 2017

China: An In-depth Look at the 2nd Largest Economy

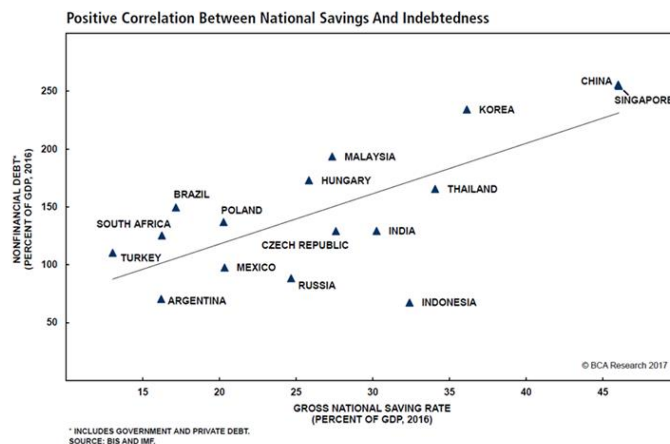
For China, Debt and Savings Go Hand in Hand

At the start of the year we wrote about key thematic drivers to the markets. These themes are structural in nature and evolve over time. We'd like to provide an update on the Chinese economy through the lens of debt, savings and demographics.

Simply put, China matters. It is the second largest economy in the world and if its growth path falters or slips into a debt crisis, waves would be felt throughout the investment world. China's GDP grew 6.8% in 2016 (significantly lower than the average 9.6% rate in the past three decades), and growth in government spending has slowed to nearly zero (from a peak of 25% in November 2015). These two data points are related, and we expect they will continue to move downward together. A watchful eye is warranted on both the debt and savings levels in China, and we'd like to analyze this relationship further.

Over time, the Chinese government has encouraged state-owned banks to lend to state-owned companies and local governments. This has supported demand. There has been much discussion that these state-owned enterprises are not profitable and that they are just piling on debt to continue operations. But if China believes that an enterprise producing something is better than one producing nothing (no matter the effects on the balance sheet), then this lending becomes another tool of monetary policy. And if that is the case, then the mountain of corporate debt that has been created is quasi-fiscal debt. In these tenuous, low interest rate times, investors are becoming more comfortable with outsized fiscal debt loads. But let's not get too comfortable.

In China, debt has served a fiscal purpose. By absorbing excess savings of the private sector, it has effectively kept unemployment low and demand steady. There is a positive correlation between savings rates and debt-to-GDP ratios in emerging economies (Chart below). We conclude that the level of the Chinese government's use of debt is to be expected when compared to ratios in other emerging economies. That does not mean it is sustainable nor susceptible to risk.



Couple this with the fact that the Chinese household savings rate is nearly 40% of disposable income. Compare that to around 5.5% in the U.S. Higher levels of savings lead to higher debt. How is this possible? Debt is formed when there is a persistent difference between spending and income. While current savings are held in financial institutions, they in-turn invest and create debt in other areas of the system. We do expect the savings rate in China will decline, but it will be a slow process. As the population ages, availability of household credit expands and a "consumer culture" grows, there will be less savings. These are slow-moving demographic components, however, which we discuss in more depth later.

All this fiscal boosting has masked the fact that aggregate demand in China remains weak. This is the other side of the savings glut. To turn this around and increase demand, the rather complex move of decreasing the savings rate is required. There are three ways to do that. First, encourage consumer consumption. However, if your citizens are uncertain about the future and feel the social safety net is not strong, then this will be slow to change. The second is to export the savings and create a current account surplus. This would require another large trading partner to run a deficit. Finding a country that would be willing to do that in this environment may be difficult. The third way is to invest domestically. This is the path China has taken, as we discussed above.

This situation has caused China to become progressively more vulnerable to changes in financial conditions. Moreover, the global markets tend to trade off when China struggles. Recall the early months of last year and the summer of 2015 for examples. With interest rates rising in the U.S., the potential ripple effects from the Chinese economy need to be monitored.

Global debt levels in relation to global GDP have increased 41.5% over last decade. The substantial increase in China alone has been significant (Right hand chart below). Unwinding this unprecedented level of debt will be a slow and fragile process. Since the economic crisis, the cost of debt service has been trending down in most areas of the world with China being the exception (Left hand chart below). Additionally, the lengthy period of low interest rates has allowed for refinancing and new debt issuance across various maturities. Any remaining high-rate bonds that are coming due soon will be refinanced at a higher rate than six months ago, but historically at a very low rate.

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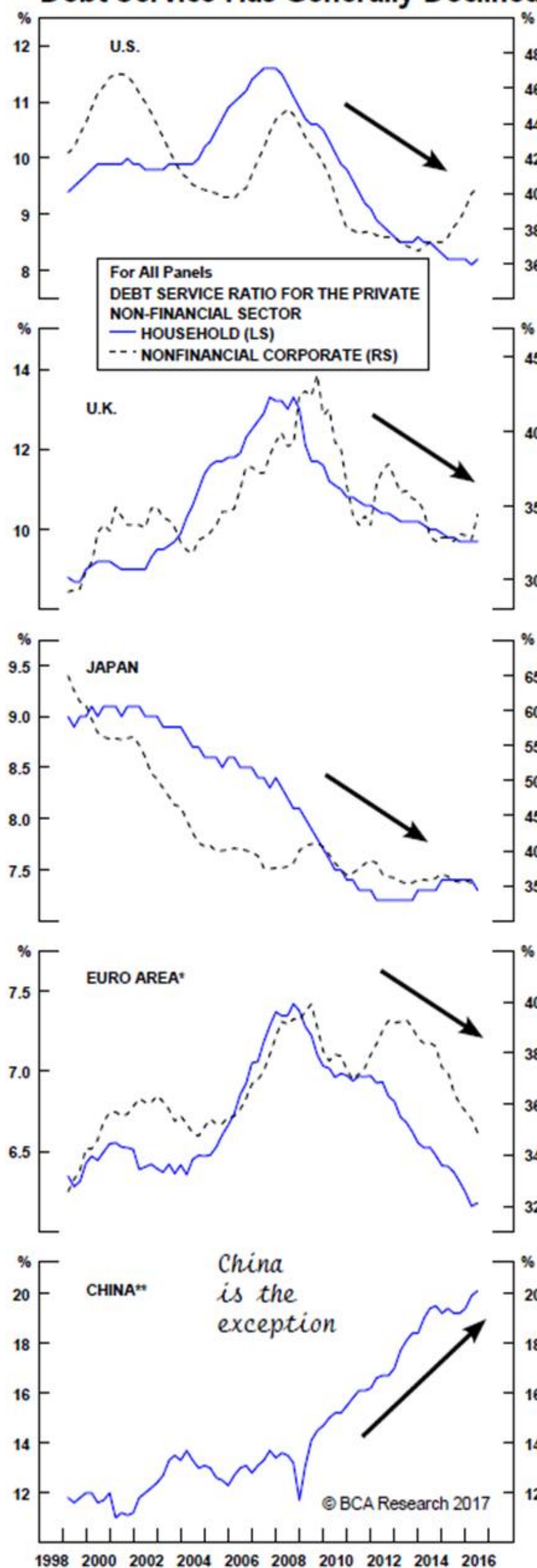
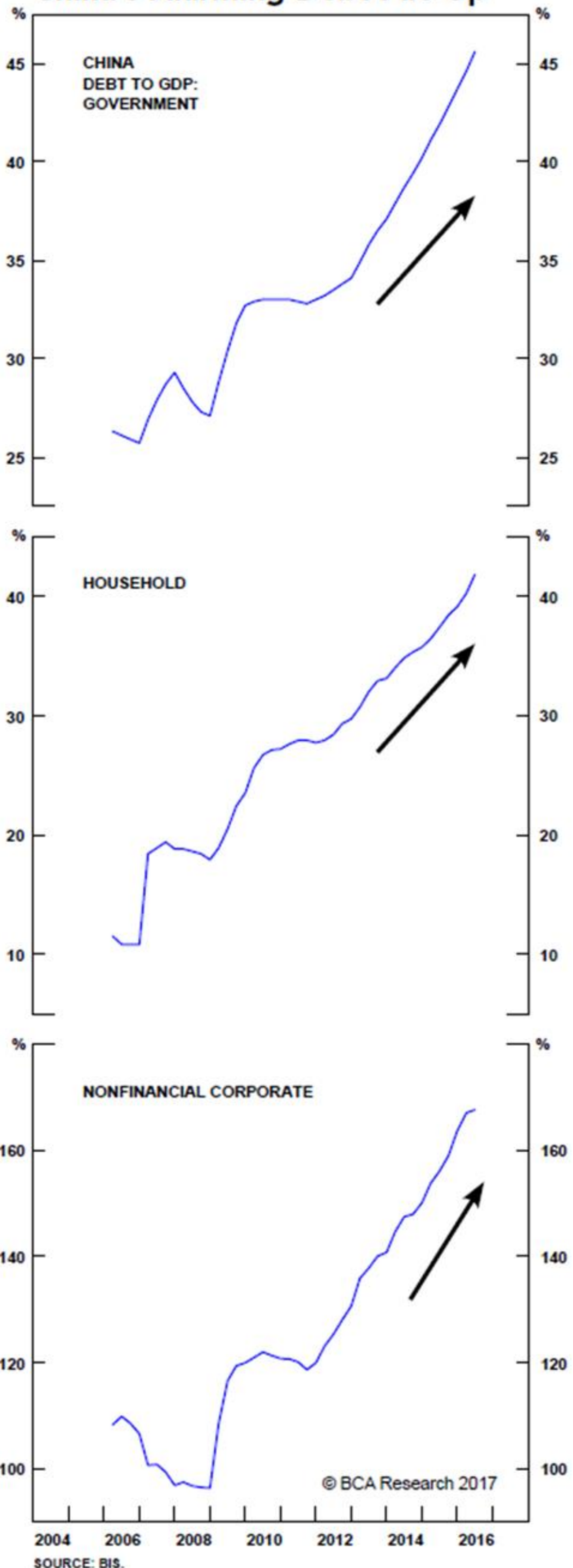


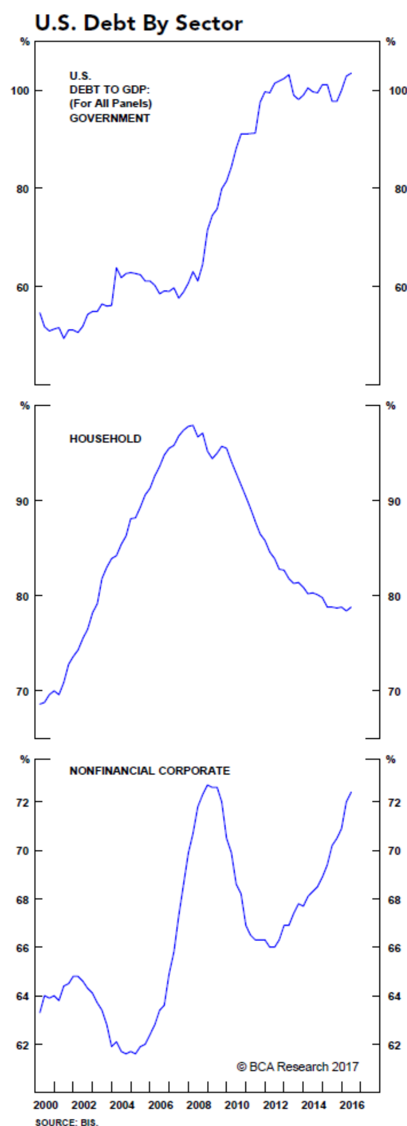
Debt Service Has Generally Declined
U.S.
For All Panels
DEBT SERVICE RATIO FOR THE PRIVATE NON-FINANCIAL SECTOR
HOUSEHOLD (LS)
NONFINANCIAL CORPORATE (RS)
U.K.
JAPAN
EURO AREA*
CHINA**
China is the exception
© BCA Research 2017
* GDP WEIGHTED-AVERAGE: FRANCE, GERMANY, ITALY, SPAIN, PORTUGAL, AND BELGIUM.
** HOUSEHOLD PLUS NONFINANCIAL CORPORATE.
SOURCE: BIS.



China's Alarming Debt Pile-Up
CHINA
DEBT TO GDP:
GOVERNMENT
HOUSEHOLD
NONFINANCIAL CORPORATE
© BCA Research 2017
SOURCE: BIS.

With that in mind, it has been estimated it will take a cumulative 3.0% rise in U.S. interest rates before cash flow effects match those seen before 2007 in all economies except for the U.K. (Source: BCA Research). It is at this point that consumer spending power could be threatened. However, we don't foresee the Fed making a move that large with the current inflation and growth forecasts. Therefore, it will not be the level that interest rates rise to, but rather the upward trend that will decrease spending in the economy over time.

This is what we mean when we say the end of the debt supercycle. For years, economies around the world have used debt as the grease to keep the wheels spinning. Now that we have reached a zero (or negative real) interest rate environment, this is not nearly as effective, primarily since the starting point for leverage is so elevated (Chart below). The risk to the bond market continues to be on the downside and, as we've said before, the combination of high savings and low demand is creating quite the riddle for central banks around the globe.

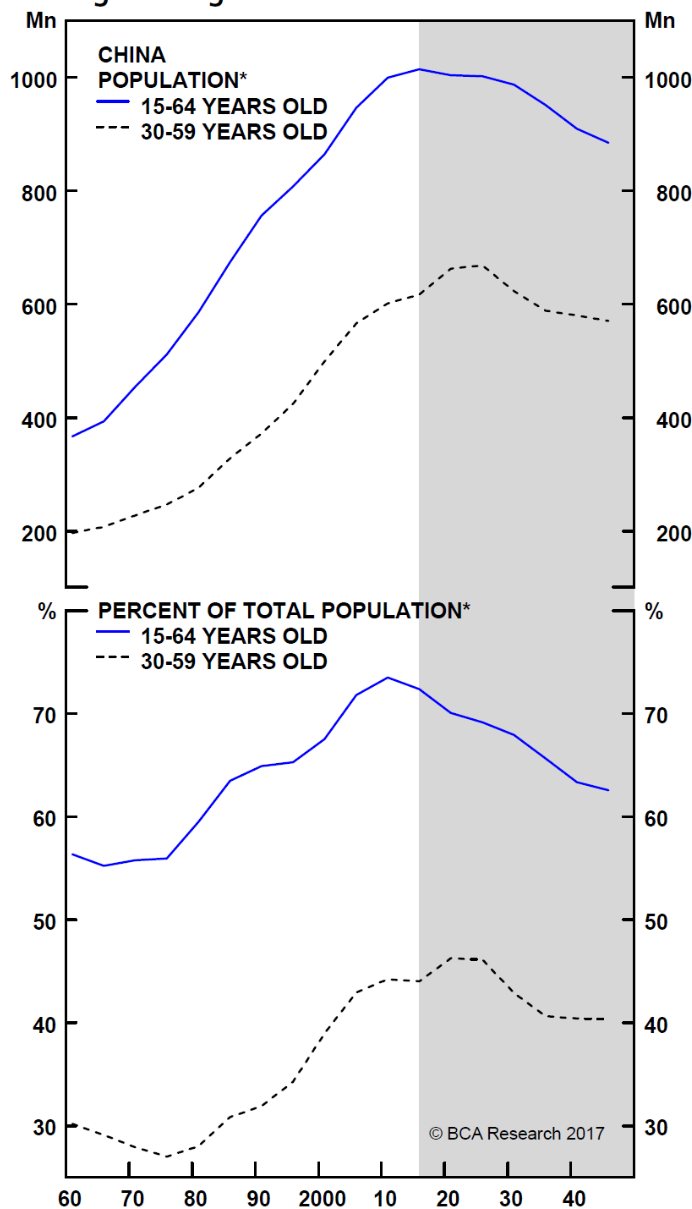


It's in the Demography

Even if China can navigate and make it to the other side of the mountain of debt unscathed, a potentially bigger problem is lurking around the corner: demographics. As with many things, there are intended and unintended consequences. For the Chinese, the one-child policy is such a case. During the period of 1979-2003, the Chinese government strictly enforced the policy. It is estimated it prevented 200-400 million births. The primary goal was to decrease the entitlement costs caused by overpopulation. While this was a success, it left a void in the natural order of generations.

Normally a population has four primary age groups, each at a different point in the financial cycle. First are the children, who are resource users and do not create any economic benefit. But then they grow up and become young workers (ages 18-45). This group are massive consumers as they buy their first homes and consume debt to support their growing families. Young workers provide most of a country's economic growth. The third group are the mature workers who are at their maximum earning level and highest tax-paying level, too. Due to the relatively lower debt level of this group, they are the economy's primary capital and investment providers. Finally, the fourth group are the retirees (age 65 plus). They are no longer producing, and therefore as a group their consumption goes down dramatically. This group is most risk-averse and focuses on volatility as their nest-eggs shrink.

For China, they have created what is commonly referred to as the 4:2:1 problem: four grandparents to two parents to one child (Zeihan, Peter. *The Accidental Superpower*). In this scenario, the youngest member is supporting four (and potentially six) other family members. This redirects financial resources inward to the family instead of into more expansive consumption patterns like homebuying. With the young supporting the elderly, their ability to be consumers themselves is significantly reduced (Chart below). This will hamper China's ability to increase their domestic consumption and decrease their export activity. Recall this is one of the ways we described to decrease the savings glut.



Furthermore, the problem can also be seen in the decline of young workers in total. It is with these workers that China's global manufacturing powerhouse was built. In the last decade alone, there has been a 40 million reduction in young workers compared to the previous generation (Zeihan, Peter. *The Accidental Superpower*). That effect is about to multiply from here.

All this is to say that while we watch the rise of interest rates in the U.S. and historically high valuations in nearly every asset class, there is just as precarious a situation happening overseas. China's monetary policymakers are not only trying to contend with their mountain of debt and stubbornly high savings rate, they are also being pressured by unstoppable demographic changes. While demographic changes can be forecast with relatively certainty given their gradual nature, the ability to unwind unprecedented levels of debt without harm is far from predictable. We will continue to keep a watchful eye on both fronts.

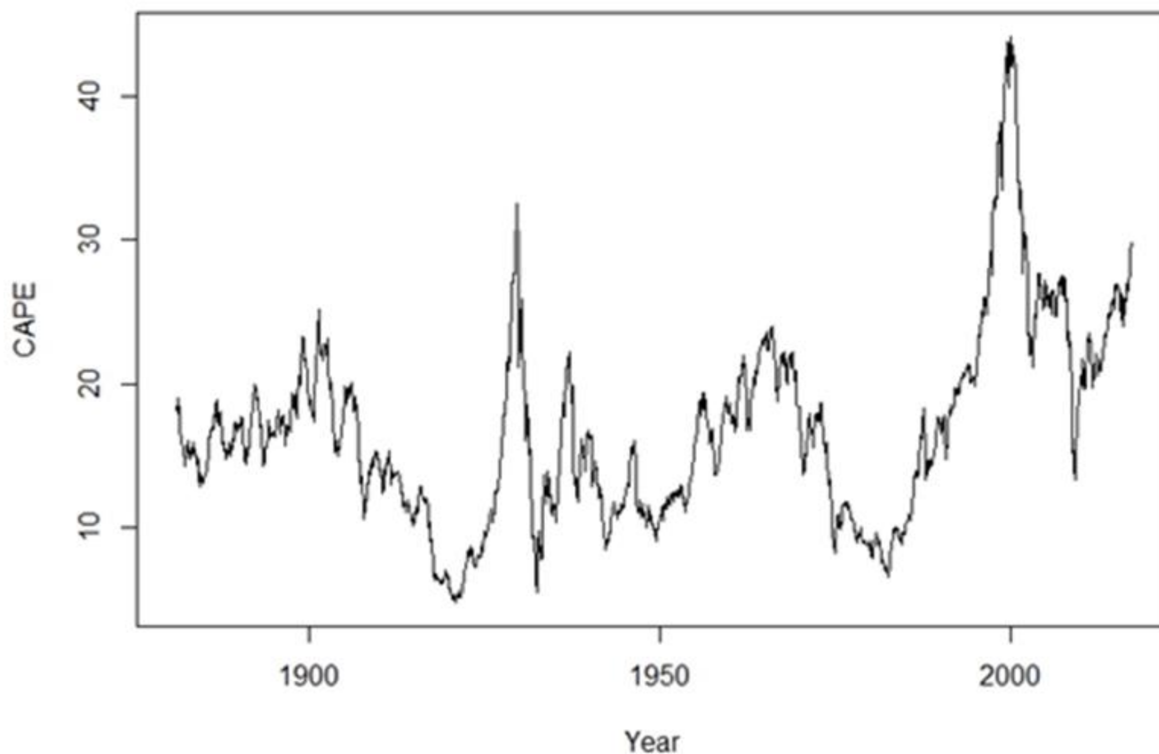
Odds are people don't know what the odds are

We are going to take a slightly different approach to our quarterly outlook this time around. A wise philosopher and baseball player said:

"You can see a lot just by looking."

Yogi Berra

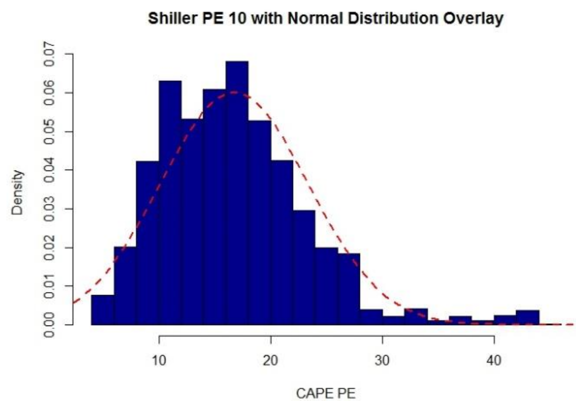
It is easy to focus on short-term movements, especially when they are as pronounced as they have been over the last 90 days. Global stock markets are up around 10% (as of this writing) in that time frame. Underweight equities during that period stings a bit. How much higher can prices go? In early 2000, the market reached valuations about 50% higher. The problem with taking a stance that PEs will continue to expand is that you must count on valuations approaching all-time highs.

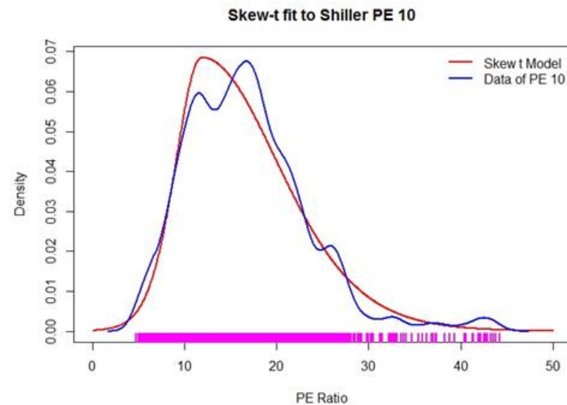


We can see by the above chart that valuations as measured by the Shiller PE 10 are approaching the second highest in its history. There are others such as price-to-book or median PE, but the story is the same across the board. U.S. equity valuations are close to being at their highest levels in history except for early 2000. We will forgo in this report trying to explain these high valuations. We leave it

for the pundits to debate the merits or forecast the future. Forecasting is a hazardous business. We deal in probabilities and recognize this is a long view. Unless you believe this time is different, then high valuations mean lower expected returns and vice versa. With this methodology, it takes great discipline and a proven process.

What about probabilities?





First, to determine probabilities you must get the distribution correct. Too often a normal distribution is assumed in financial data, but this is mostly wrong. How do you correct this common flaw in our industry? Well, with a little financial engineering and taking the advice of Yogi Berra we can see that our model fitting suggests that the best way to calculate probabilities is to fit a skewed t-distribution to our data (right-hand chart above). This provides us a fit to include bigger tails or outlier events. Removing outliers in financial data is common as well, but this too is incorrect.

Shiller PE 10 on 2017-03-01 29.7717

The Probability of Shiller PE being greater than 29 using the skewed t-distribution is:

3.21%

It doesn't say it can't happen; it just says it is unlikely.

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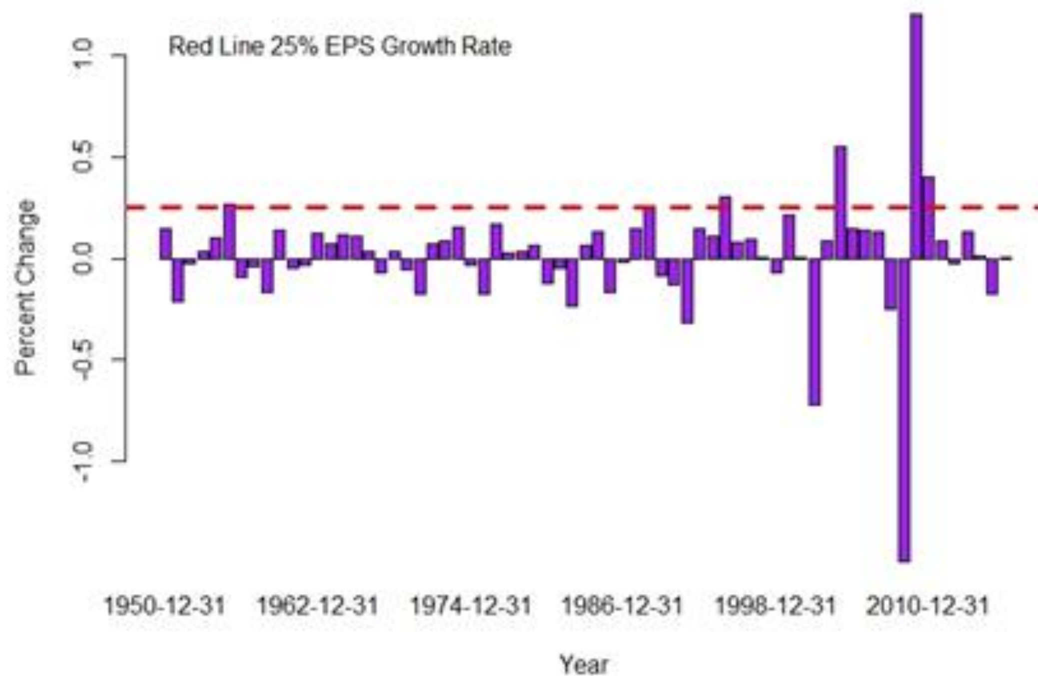
What about the most common driver of PEs?



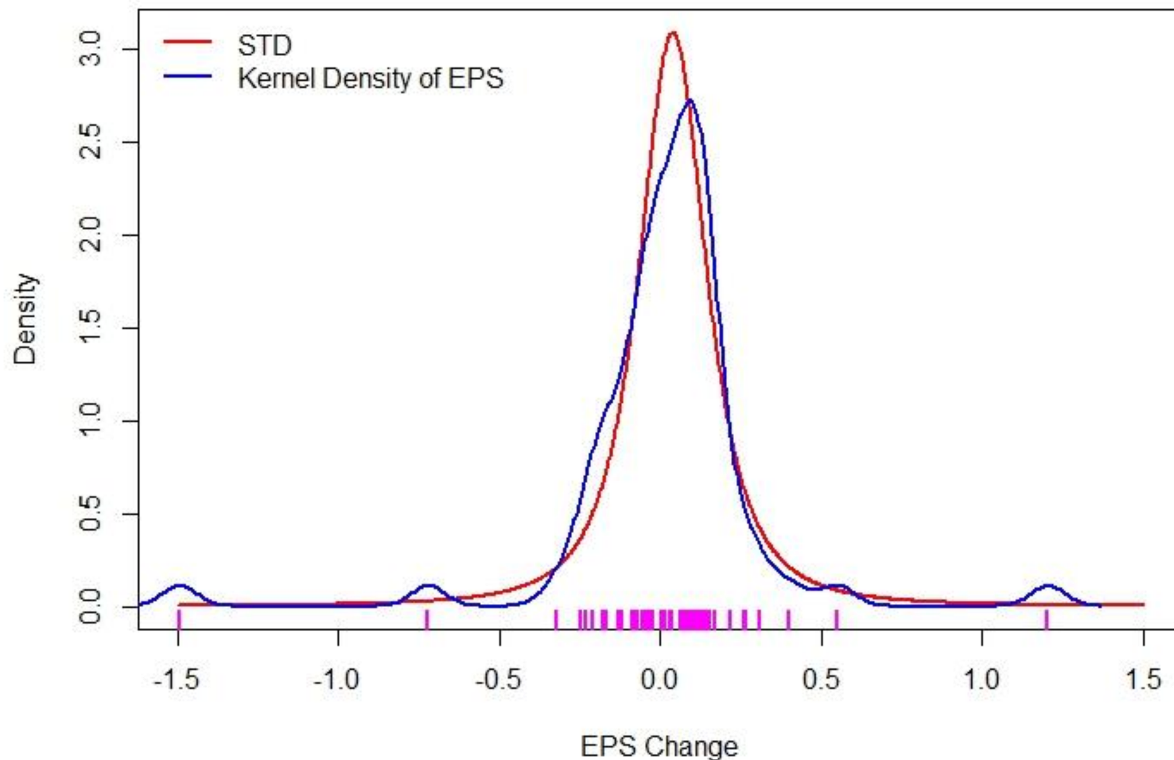
As most of you know, earnings are the "E" in PE. Where are earnings today? Earnings are down from about two years ago with a slight recovery in the 3rd and 4th quarter of 2016. Year-end 2016 reported earnings are projected to be around $95.00 per share for the S & P 500. Some use operating earnings others reported, but the projections are the same for growth for 2017. This would be roughly a 10% increase from 2015. For 2017, the projected increase is 25% from $95.00 to about $119.00. We won't argue the merit of this, but the red line above tells you how often this has happened since 1950. If one were to examine when this takes place, they would see:

EPS 25% or greater:

1955-12-31 TRUE
1988-12-31 TRUE
1994-12-31 TRUE
2009-12-31 TRUE
2010-12-31 TRUE

In looking at these events, here is a recap. GDP went from 13.8% in '52/53 to -5.9% by late '54. The stock market crashed in '87. GDP in '94 went from 5.9% to 1.4% after a series of aggressive Fed increases. Of course, in the Great Recession '08, GDP went from 2.7% in '07 to -8.2% by late '08.

Our point is that large earnings increases follow periods of economic slowdown. We can say that the energy sector has stabilized and should be accretive to earnings. We just aren't confident enough that a 25% increase year-over-year in a period of full employment, strong dollar and 8 years of recovery is warranted. If we applied the model-fitting methodology to earnings-per-share change, we would have two estimates of probabilities. Under the normal distribution you see roughly a 23% chance, and using a standard t-distribution it would be about 11%.



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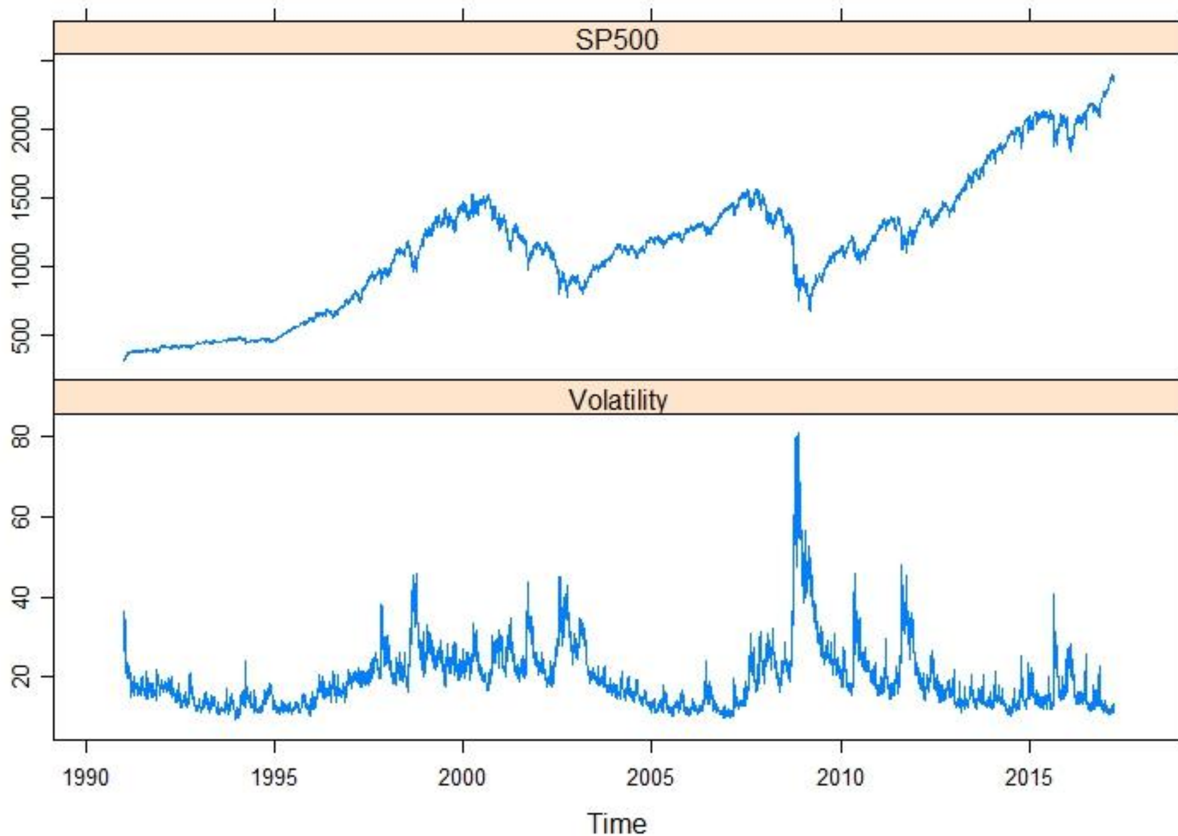
Volatility stays unusually quiet for very long periods of time, but it is non-constant and has characteristics of a stationary time series. This is a complex way of saying mean reversion. The mean is around 19.5 and the median is around 17.5. As of this writing, it has come off recent lows to around 13.5 over the last week.



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The other major part of a portfolio is generally fixed income. How do we see valuations there? We understand that it may appear to be more obvious to investors that low rates don't offer much opportunity for positive attribution to portfolios. Inflation is primarily the driver of fixed income and often trades on a spread to a benchmark or, in the case of treasuries, trading directly off inflation. There hasn't been much inflation for the last 15 years or so. In Europe and Japan, deflation has been a problem. Zero-interest rates may not be low enough in some cases!

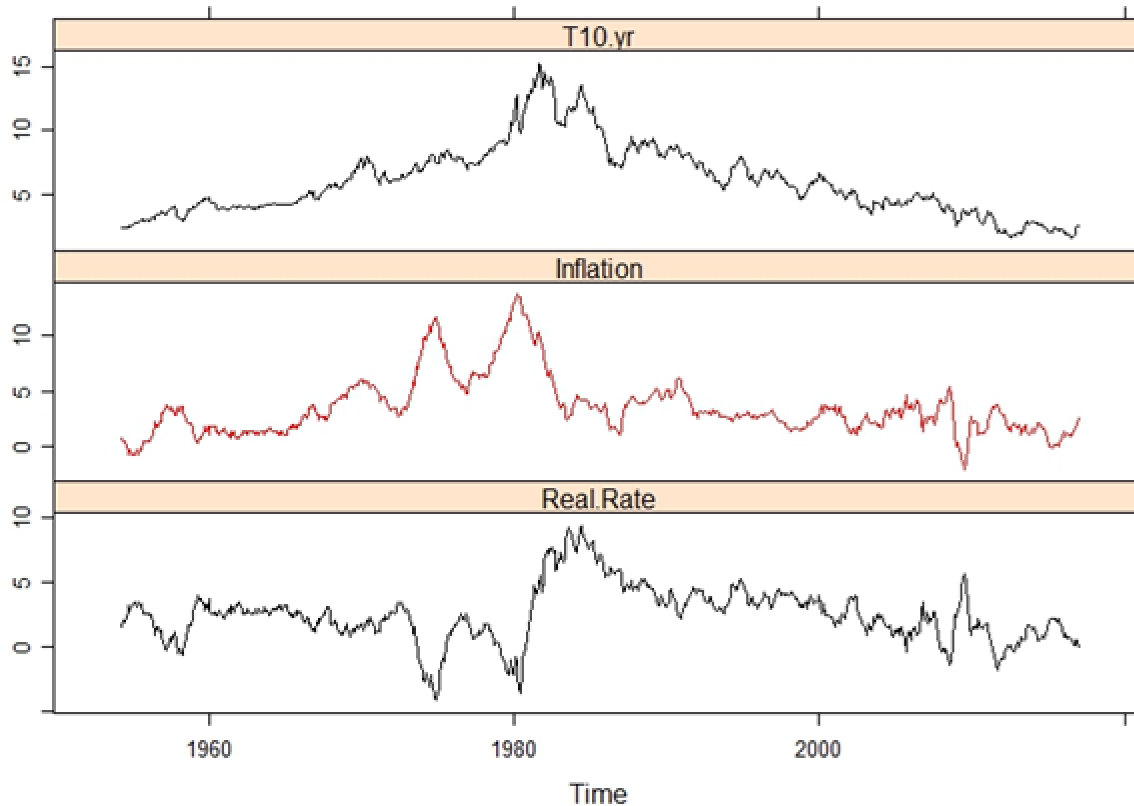
The average real rate is:

2.47% above inflation

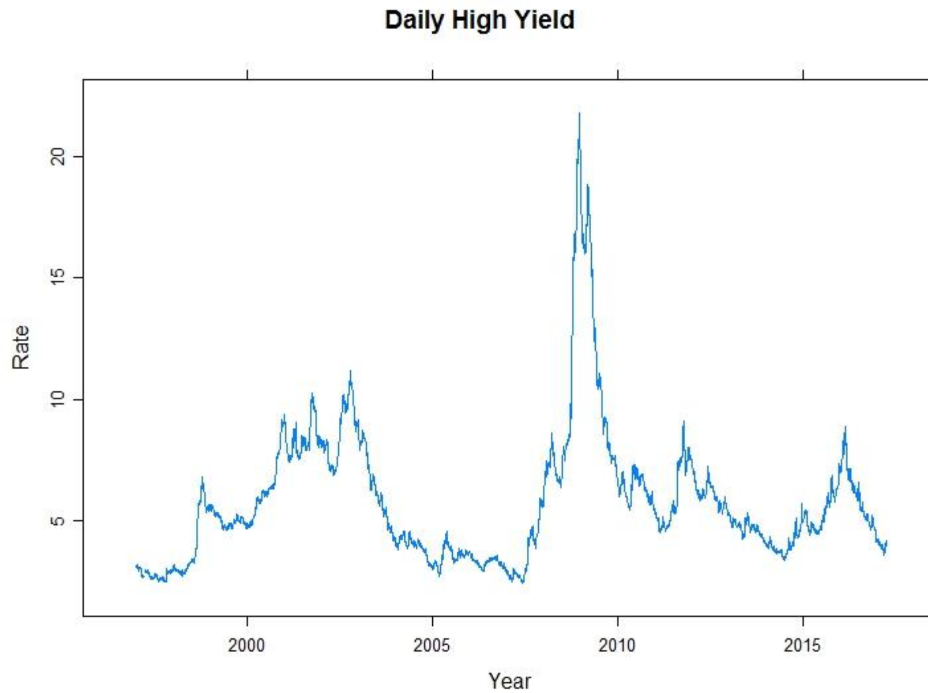
The current real rate is:

-0.04%

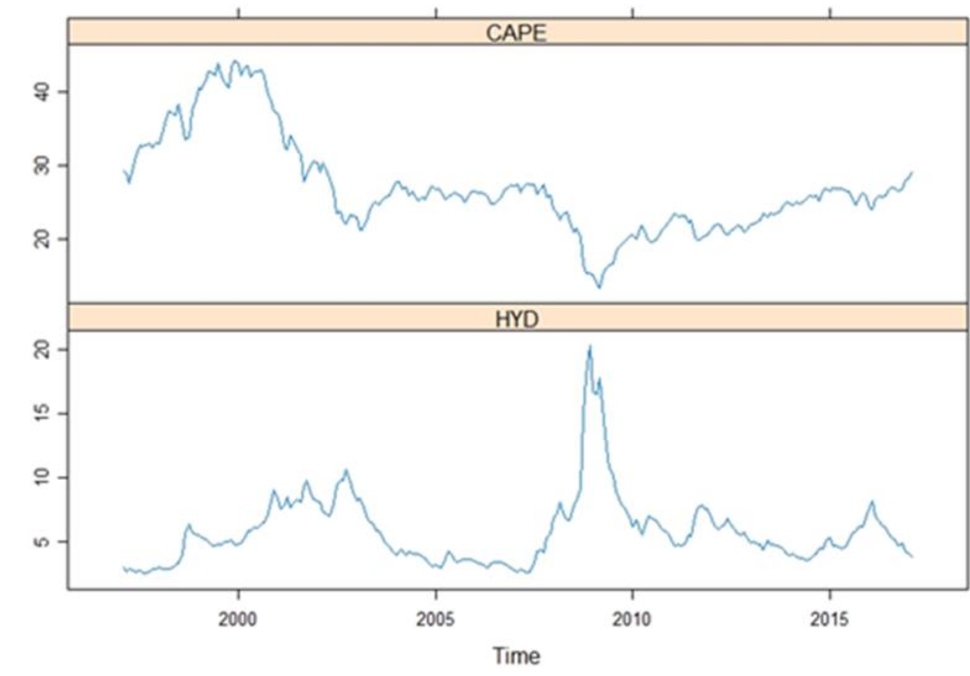
By the below chart, you can see that inflation has turned up as of late here in the U.S. We discussed this recently and feel it is too early to tell whether this is a secular upturn, but our inclination is that inflation is more durable, primarily because capacity has shrunk to meet the demand problem and full employment can lead to wage pressure. We are not advocating a return to the '70, but 2.0% inflation leads to a 4.5% treasury rate and spreads widen from there on other fixed income instruments.



Here are a couple of charts in the high-yield space. It is hard to get excited about high-yield bonds below 5%.



This below chart is the PE 10 versus high-yield.



Conclusions and Portfolio Concepts

Our conclusion is the same as it has been the last 18 months: valuations are high. When we started discussing this theme, the PE 10 was around 25. It is just more expensive!

We wrote this in June of 2015:

"Expected returns are anything but robust. Our model says equity returns are around 2% annually from June 2015 to June 2020."

Since that writing, U.S. equity returns have been around 7% annually and global returns including the U.S. have been approximately 3.5% annually. Uncertainty of our estimates are part of the risk we consider when making portfolio decisions. Therefore, we have systematically reduced equity weights over the last 18 months or so. We went from 10% underweight two years ago to about a 20% underweight currently and have shorter maturities and improved quality on our bond portfolio.

It is unlikely we will reduce further from this point forward except for rebalancing. Should equities move much higher, it would trigger a rebalance to maintain our tactical underweight position.

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