Quarterly Economic Update

September 9, 2015

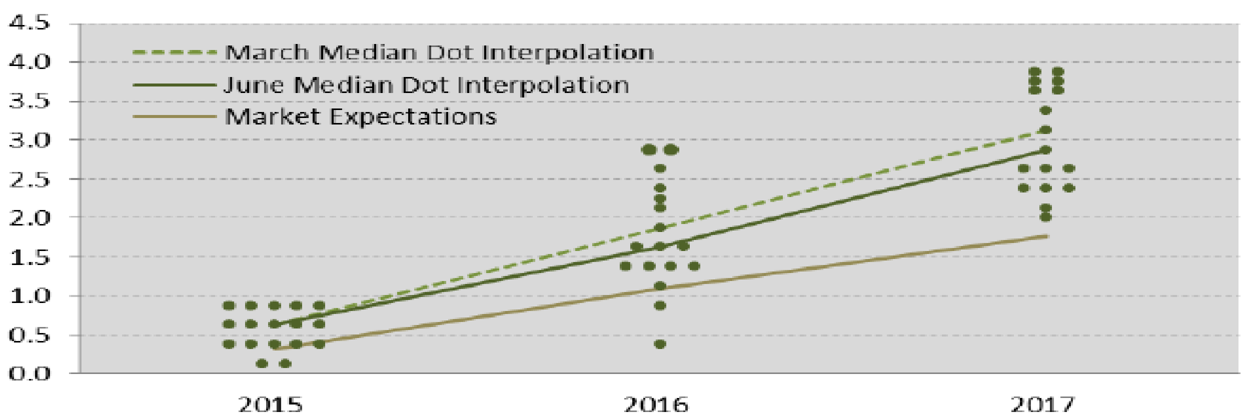
MACROECONOMIC COMMENTARY

Monetary Policy

By Bobby Long

The Federal Open Market Committee (FOMC) met in both June and July with no formal changes to monetary policy. The federal funds target rate still remains at the 0 to ¼ percent zero bound range and discussions have continued to focus on the appropriate timing of an initial rate increase. After some weaker economic data in the first half of the year, recent employment and growth data have been more constructive indicating the first quarter weakness was temporary. Inflationary readings have continued to languish, leaving FOMC members with mixed views on their confidence that inflation will move back towards their longer run 2 percent objective. For most of the summer, expectations have leaned towards an initial rate increase in the 2nd half of the year. Expectations for the exact timing of that initial rate increase have shifted with the flow of new economic data and even more so with recent volatility in financial markets. Federal Reserve Chair Janet Yellen and FOMC members have been clear that future policy decisions will be data dependent, leaving market participants anxiously trying to interpret how they view the most recent data and market conditions.

The FOMC statement following the June 16-17th meeting contained a slightly more positive view on the direction of employment and economic activity. At the time, deflationary pressures from oil and the dollar had also subsided, providing a more optimistic outlook for inflation. More importantly, the June meeting contained updated economic projections and projections on the path of the federal funds rate. Overall, the expected path of the federal funds rate shifted down from previous projections, indicating a later initial increase and a slower pace of further increases. Ten FOMC participants expressed their expectations for two or more rate hikes in 2015, which was down from fourteen participants in March. Seven participants expected one or no rates in 2015, compared to three in March. Median projections for the federal funds rate at the end of both 2016 and 2017 also came down a quarter percent, but it should be noted that the dispersion of projections for both years was fairly wide. The chart below contains dots representing participants' rate projections along with the current median path compared to their prior projections and market expectations as of the June meeting.



Sources: Bloomberg, Federal Reserve, and Cornerstone Macro.

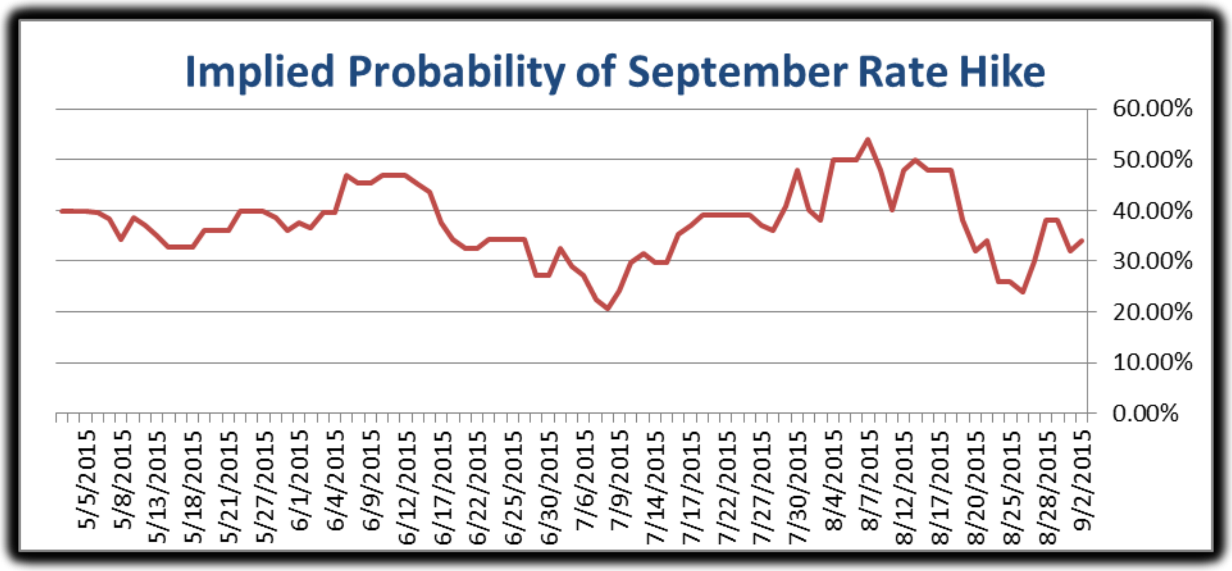
The minutes from the June meeting painted the picture of a FOMC that was becoming more confident that conditions were progressing in a way that would warrant a rate increase sooner rather than later, but were still seeking confirmation.

The July 29th FOMC statement contained incrementally more positive language around economic activity and labor market conditions, while maintaining that the risks to economic activity and the labor market were "nearly balanced." Continuing to describe risks as "nearly balanced" seems to imply a view that some elevated risks remain that committee members are not completely comfortable with at this point. Some market participants who had been looking for more direct guidance in the statement towards a policy shift viewed this as reducing the odds of a September rate increase. The statement did slightly alter its language describing conditions needed to raise rates adding the word "some" to the statement that it would need to see "*some* further improvement in the labor market," as in just a little more. The July minutes did not provide a clearer direction as to whether FOMC participants as a whole were leaning more or less towards a rate hike in September. Participants seemed to have increasing confidence in activity and employment, but the minutes indicated that concerns around low inflation and wages persisted and some participants may need more confirmation on these fronts before they favor removing accommodation.

The minutes also indicated increasing concerns around China and related emerging markets weakness and the risks it could present to the US economic outlook. The chart on the right highlights the FOMC's increasing concern and discussion regarding the risk that China represents. It should be noted that these minutes present discussions prior to the recent increase in China weakness and devaluation of the yuan, and that this increased risk may weigh heavier on those who already were concerned.

Source: Renaissance Macro Research, Federal Reserve

Prior to the June FOMC meeting, the implied probability of the FOMC increasing the federal funds target to a ¼ to ½ percent range at their September meeting was roughly 43%. Following the June meeting, this probability drifted down to a low of 20%. Upon the release of the June minutes, probabilities turned up and moved as high as 54%. As China and related concerns have increased more recently leading to increased volatility in both foreign and domestic financial markets, probabilities moved sharply lower again into the mid-20s before drifting back up to the mid-30s. The chart below shows how the implied probability of a September hike has swung wildly with new economic data, FOMC commentary, and evolving market conditions over the past several months.



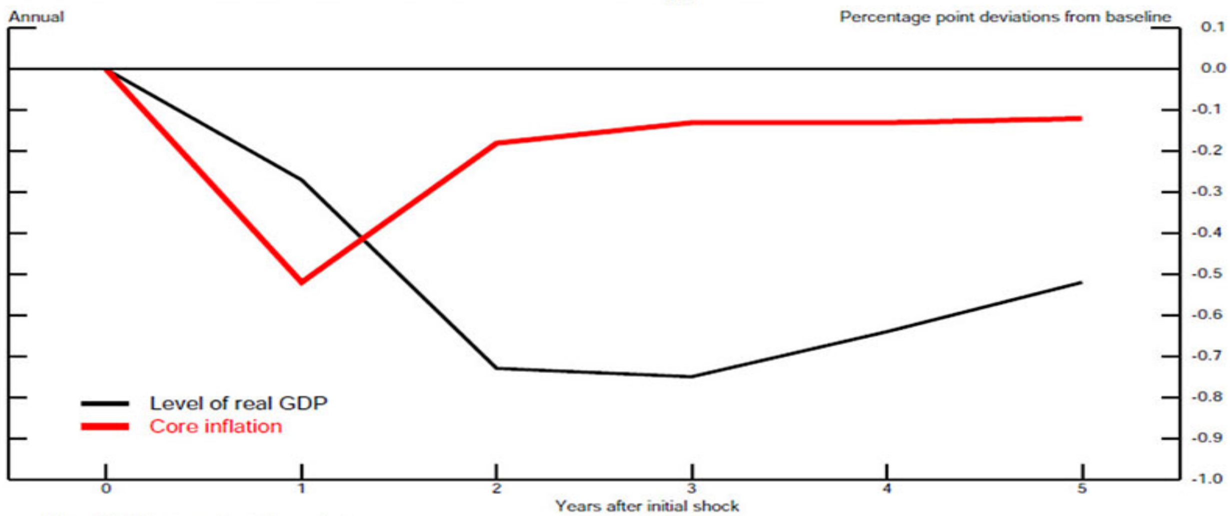
Source: Bloomberg

Considering that the June FOMC rate projections are pretty stale at this point and so much has happened since the last FOMC meeting at the end of July, it is important to look at what has changed since that last meeting as we approach the September 17th meeting. Payrolls and employment indicators have been mostly positive, showing further progress towards the goal of full employment. Wages have still not shown the strength that many would like to see and the Employment Cost Index for the second quarter moved down, dampening optimism around wage growth. Oil took another leg down following the July meeting, rebounding sharply off the bottom more recently, but remaining weak and volatile. The dollar also has appreciated further. The moves in both the dollar and oil have kept deflationary pressures present and may have reduced confidence that inflation will move towards their goal. Economic weakness in China has worsened and the decision to devalue the yuan has led both foreign and domestic financial markets lower and significantly increased volatility. The full and lasting effects of China's slowdown remain unknown, but it does represent an elevated risk.

Confidence among FOMC members that employment is moving in the right direction appears high. While measures of underemployment and labor force participation may have been progressing slower than preferred, they are moving in the right direction and the employment hurdle to begin normalizing rates is close to being checked off. It is the inflation side of the equation which continues to be a little more problematic. Federal Reserve Vice Chairman Stanley Fischer recently spoke at the Federal Reserve Bank of Kansas City Economic Symposium in Jackson Hole, Wyoming and discussed some of the deflationary pressures that have held inflation lower than the FOMC's 2 percent target. While lower inflation does represent some general slack in the economy, it has been pressured significantly by lower oil prices and a stronger dollar. Lower oil prices have more of a temporary effect and pass through relatively quickly. With oil prices having fallen so far so quickly, most of its deflationary pressures are coming through and will alleviate if oil does not continue to fall significantly further from current levels.

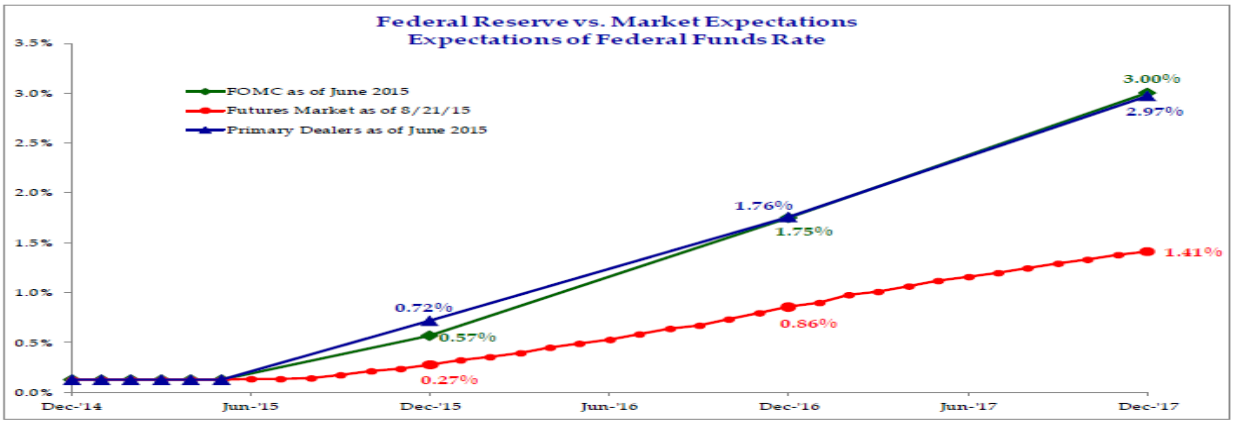
The larger and less clear effect comes from the stronger dollar. There are two aspects of the stronger dollar's effect on inflation. The stronger dollar lowers import prices, which is passed through to lower final consumption prices and lowers business costs. This flows through fairly quickly within a quarter to one year. The other aspect is the stronger dollar restrains the growth of aggregate demand and overall economic activity. This has an indirect effect on inflation and flows through with a more significant lag. The chart below provides the results of a Federal Reserve model that simulates a 10 percent appreciation of the dollar and shows the timing and magnitude of the effects on inflation and GDP. The model indicates that dollar appreciation now will most significantly affect GDP growth two years out. Based on the model, the dollar appreciation over the past year would be restraining inflation currently and over the next year while having a more significant effect on GDP through 2016 and into 2017. This is why FOMC members are concerned about significant appreciation in the dollar and consider it a substantial and hard to quantify risk.

Model Simulations of a 10 Percent Dollar Appreciation



Note: GDP is gross domestic product.
Source: Federal Reserve Board staff calculations using the SIGMA model. For background information on the model, see Christopher J. Erceg, Luca Guerrieri, and Christopher Gust (2006), "SIGMA: A New Open Economy Model for Policy Analysis," International Finance Discussion Papers 835 (Washington: Board of Governors of the Federal Reserve System, January), www.federalreserve.gov/pubs/ifdp/2005/835/ifdp835r.pdf.

With no clear policy signal and much changed since the last meeting, markets have been looking for any commentary from FOMC members that might provide some sort of guidance as to what the group might be thinking heading into the September meeting. New York Fed President Bill Dudley recently provided a more dovish tone when he expressed his view that raising the federal funds rate at the September meeting seems "less compelling to me than it was a few weeks ago." Fed Vice Chair Fischer offset Dudley's comment a couple days later however with a more hawkish tone during a CNBC interview. Fischer's prepared remarks the next day at Jackson Hole were more neutral. Yellen's more recent comments have indicated the FOMC is likely to raise rates this year if conditions warrant, but seems to downplay the initial lift-off date and stress that the path of rate increases will most likely be gradually. At Jackson Hole, Fischer also communicated a gradual pace with low inflation. However he did stress that "because monetary policy influences real activity with a substantial lag, we should not wait until inflation is back to 2 percent to begin tightening." The initial lift-off date is important, but the pace of increases is more important. There is still a significant dislocation between the market and FOMC projections on the rate path that will need to reconcile. As the chart below highlights, the market's expectations for the path of the federal funds rate (red line) is significantly lower than the FOMC's most recent projections (green line). New FOMC projections will be provided at the September meeting and will likely shift the projected path down some, but market expectations may also need to move up.



Source: Strategas Research Partners

The FOMC has not telegraphed their next move and will be watching the new economic data and the financial markets closely leading up to their September 16-17th meeting. The September meeting looks like it will truly be a data dependent decision on an initial rate increase and may be the most interesting meeting we have had in quite some time. The odds currently say no rate hike, but it is still on the table for the September meeting and new economic releases and market stability over the next couple weeks may dictate the decision. The FOMC wants to move rates off the bottom. While they maintain they have the flexibility to ease policy should it be needed, at the current zero bound range they are more limited and vulnerable to any unforeseen economic shocks. If markets stabilize ahead of the meeting and economic data continues to be constructive, they may indeed move forward with increasing the federal funds rate. If so, they would most likely communicate a slower pace and shallower path for further rate increases. Even if financial markets do calm ahead of the meeting, the prudent decision may be to wait until the picture is a little clearer and gain a better understanding of the causes and ramifications of the recent stress and instability. The markets seem to view this as a more likely option, which would shift consideration for an initial rate increase towards October or December. There are still some views that the FOMC could hold off until next year, and the economic and market data may dictate that, but barring any further instability and significant deterioration in the economy and markets this seems unlikely. The September meeting will provide updated economic projections and projections on the expected path of the federal funds rate. Regardless of the actual policy decision made at the meeting, these updated projections will provide clearer insight on the health of economic conditions and the future path for the federal funds rate.

Economic Outlook

By Hunter Bronson

Real GDP grew 3.7% in the second quarter of 2015 – at the upper end of the post-recession range. The second estimate marked real private investment up 5.2% and real government spending up 2.6%, no longer a drag on total growth. Personal consumption growth remains within the range of near decade highs - logging 3.1% in the second quarter. The labor market added 243,000 jobs each month over the past year – also near decade highs. New home sales increased 18% YoY in June and 25.8% YoY in July – the highest levels in 8.5 years. In short, most macro data indicate that domestic trend growth remains positive and healthy.

Figure 1: Real trend GDP growth remains solid in the range of 2-3%.

Employment

July non-farm payrolls, a very volatile series, registered 215,000 new jobs – growth of 2.1% YoY - the highest since the turn of the century. Month-to-month swings are largely irrelevant for forecasting purposes, but longer-term trends in non-farm payroll data are useful for forecasting labor market health or disease. A chart of annualized NFP growth (Figure 2) shows the strength of the current smoothed payroll trend.

Figure 2: Levels of growth over 1.5% indicate healthy job growth.

As we have repeated in nearly every economic update over the past year, we believe that the economy is nearing a wage growth inflection point. Typically, estimates for the natural rate of unemployment range from 5.3% to 5.5%. No matter your flavor, the labor market has delivered. The BLS July unemployment rate estimate officially hit 5.3% in July, bringing the 3-month average down to 5.4%. If the past 25 years are any indication, the chart below indicates that wage inflation should shortly follow.

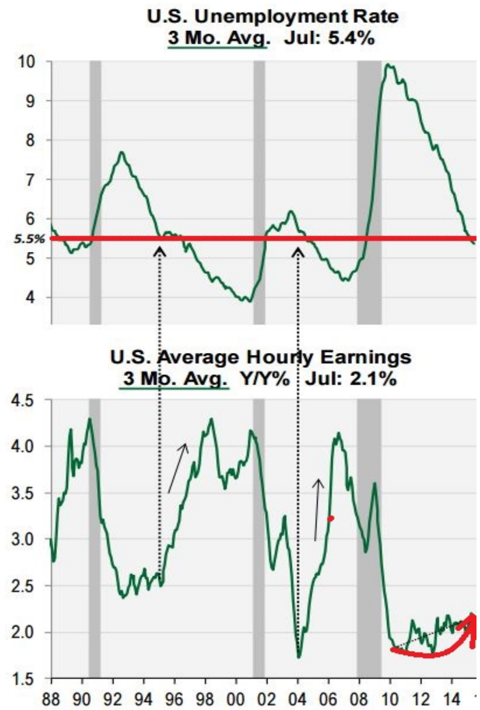


Figure 3: We believe the labor market is at its natural rate of unemployment and that wage growth is at hand.

Wage growth coupled with commodity (energy cost) weakness should provide consumers with a boost to personal free cash flows. We expect excess cash to catalyze a step-up in household formation and personal consumption expenditures – the major drivers of U.S. economic activity.

Crucially, we think that significant wage inflation (good inflation) could give the Fed a "good" reason to move off the zero-bound without spooking market participants.

Housing

July housing starts rose 25.8% YoY and is expected to continue filling pent-up demand on the back of employment gains, wage growth, the lagged effect of lower mortgage rates, and growing consumer credit.

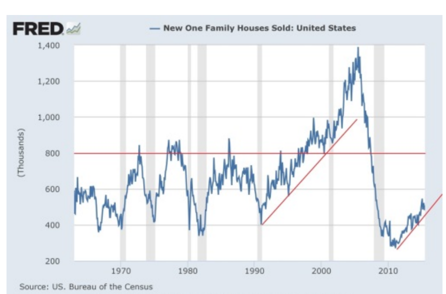


Figure 4: While not yet near the nominal level of previous bull markets, it looks as though housing starts have resumed healthy trend growth. Expect new home sales to contribute positively to GDP going forward.

Looking Forward: The Great Debate

Several financial pundits have recently worried themselves with the threat of secular stagnation. Long-term forecasting is a lot like prophecy - it is a useful tool for shaping people's reactions to the world. But in the end, nobody will remember whether you were right or wrong. It's good to have a view, but as Cassandra learned from Apollo, it's just as important to be believed. Below are some puts and takes as to why the secular stagnation crowd should or shouldn't be believed.

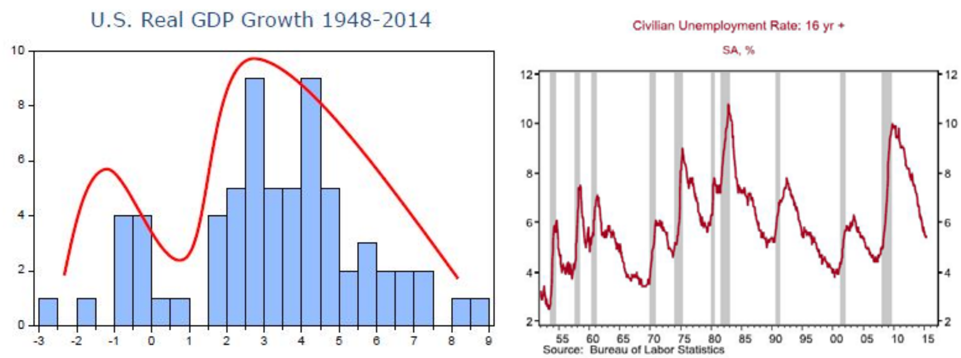


Figure 5: Central tendency of U.S. Real GDP growth. Source: Strategas

The U.S. economy and unemployment rate don't stagnate. A histogram of real GDP growth (Figure 5) shows that flat is a very strange position for the U.S. economy. A similar analysis of the unemployment rate would look the same. This is a function of how companies operate – either they are spending, investing, and hiring or they are tightening their belts. Even if potential growth has come down in the U.S., it would be highly unusual if flat became the norm.

There is no question that the developed world has been suffering from a savings glut for the better part of a decade. China has served as the global savings vacuum, kicking off an unprecedented period of overinvestment in the country (See Figure 6). Naturally, much of the global savings glut was poured into Chinese mal-investment. Perhaps now that the Chinese investment bubble is popping, global savings and investment can rebalance and real rates can normalize.

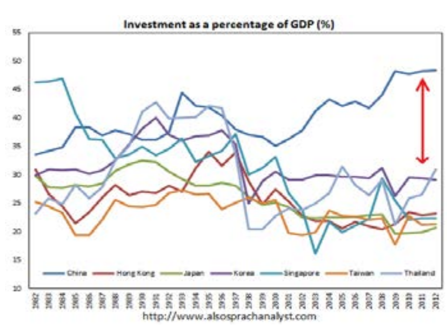


Figure 6: Chinese overinvestment – it actually got a little worse from here.

We live in a world that is rife with incredible technological innovation: quantum computing, autonomous locomotion, 3-D printed biologicals, gene modification, artificial intelligence, solar power – the list goes on. History has shown that we will experience the greatest gains in quality of life and productivity at the tangled intersections of new technologies. Humans have always struggled to predict what these future intersections will look like and have vastly underestimated their importance and proximity. We think linearly, while technology advances exponentially. It is likely that productivity gains are nearer than we think. This chart sums up the disparity well.

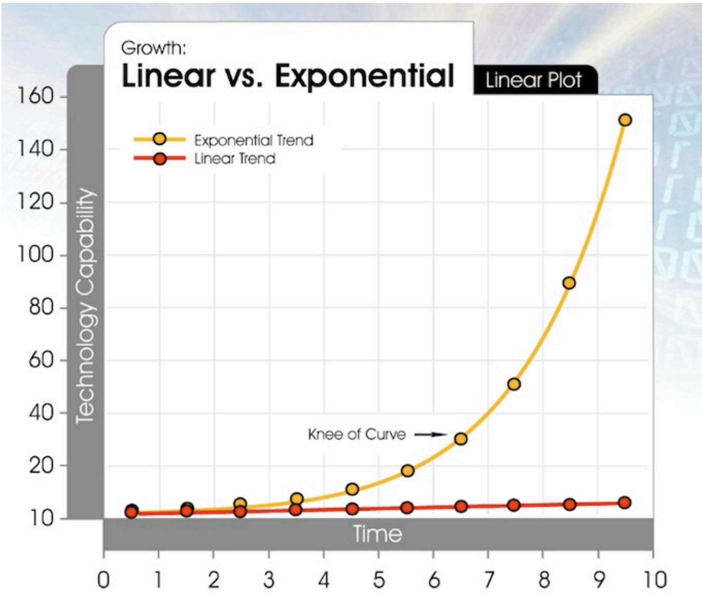


Figure 7: We have a hard time appreciating the importance of exponential advancements. Source: Ray Kurzweil

However, there are always issues to keep us up at night:

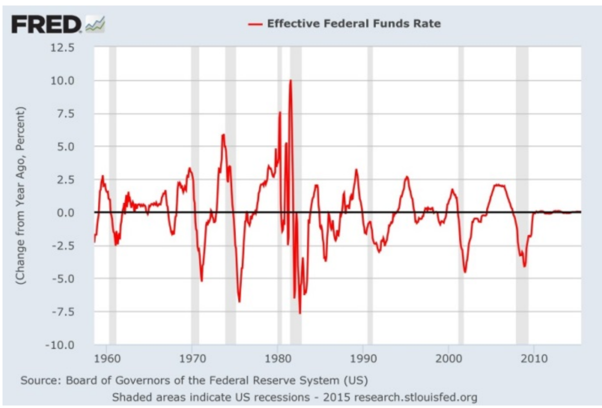


Figure 8: YoY % Change in Fed Funds rate

To steal a line from economist Don Rissmiller - if this were a medical chart, the patient looks dead. Any movement from a dead person is scary. More volatility can reasonably be expected ahead.

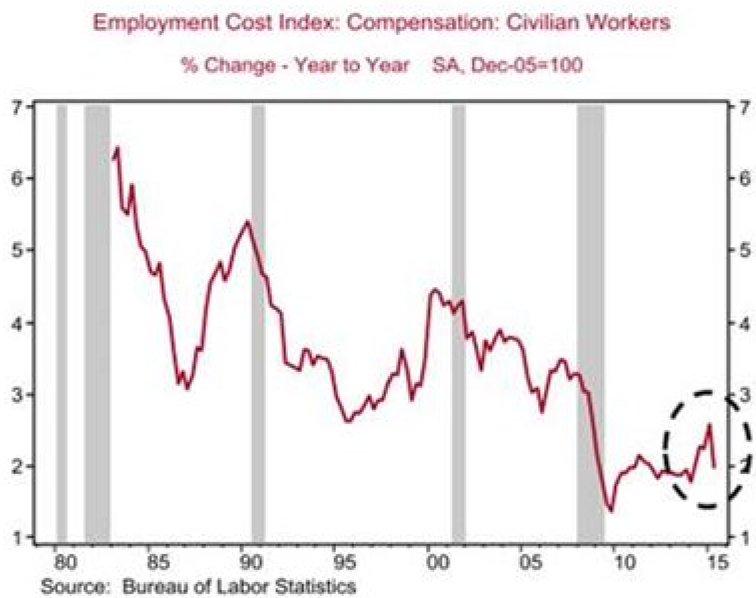


Figure 9: The ECI, a measure of wages, actually fell in Q2

Hopefully, the wage dip in Figure 9 is a blip on the scope. Falling wages coupled with unemployment crossing the 5.5% natural rate barrier would indicate a significant break from past trends. If wages fall from here, the consumer free cash flow theory would be dealt a crippling blow – this bears watching.

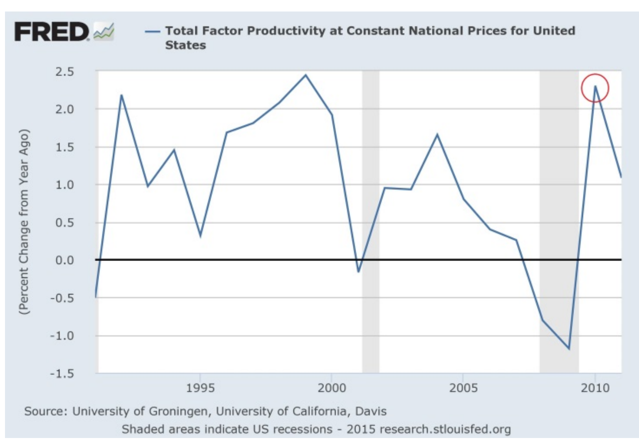


Figure 10: Total Factor Productivity has decline since 2010

The most common explanations for the decline in Total Factor Productivity range from low real rates, an aging population & declining labor force, and higher levels of consumer debt. Could it be that displaced workers are also struggling to educate themselves to reenter the labor force because of accelerating college costs? We think this is an important consideration that needs to be explored.

In sum, either you think (1) the economy is growing and unemployment falling or you think (2) the economy is shrinking and unemployment is rising. It would be highly unusual for “flat” to be reality, and we think the data indicates that the former is more likely than the latter.

Interest Rates and Fixed Income Strategy

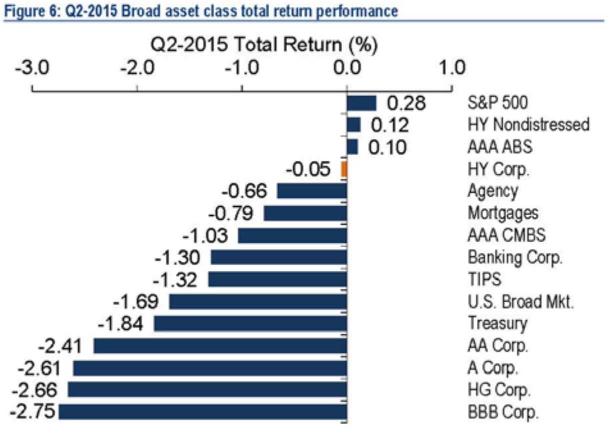
By Julie Barranco

At the time of our last meeting, we were a few weeks from the end of the third fiscal quarter. Interest rates had been somewhat choppy throughout May as economic data was picking up and consensus was growing among investors that the Fed would begin raising rates before the end of the year, most likely in September. High grade corporate new issuance was strong and a more bullish, risk-on mood was definitely in place.

June began with rates moving higher, mainly in response to stronger U.S. and European data. By mid-month the 5-year Treasury had risen to 1.79%, while the 10-year Treasury moved to 2.49% and the 30-year Treasury moved to 3.21%. Corporate bond issuance was strong early in the month and was being used mainly to support M&A activity, which has been the case with much of the issuance this year. The tone of the market changed notably however during the second half of June. Fears about Greece missing debt payments and being kicked out of the Eurozone were at the forefront once again. A referendum was then announced for early July to let Greek voters decide on whether or not to accept a bailout plan offered by the European Union which would require strict austerity measures. During this period U. S. rates were volatile, with yields falling on any negative news out of Greece and then rising on good news. At June month end rates were well off their highs of the month and still heading lower.

Despite the decline in yields in the latter half of the month, the bond market still produced negative returns for the month. Agencies and mortgage backed securities saw the least damage, with returns of (.44) % and (.77) %, respectively. Treasuries returned roughly (1.0)% for the month and high grade corporates returned (1.64)% as spreads widened, particularly in the higher beta sectors like pipelines and chemicals, as well as longer duration sectors such as railroads and utilities. For the quarter ended June 30, returns were negative given the overall upward move in rates during the time period. For the quarter, higher quality sectors such as agency and mortgage backed securities outperformed Treasuries and high grade corporates; high yield was the best performing sector for the quarter turning in a slightly positive return. The chart below shows a summary of the different sector returns for the quarter:

Figure 6: Q2-2015 Broad asset class total return performance



Source: BofA Merrill Lynch Global Research, Bloomberg

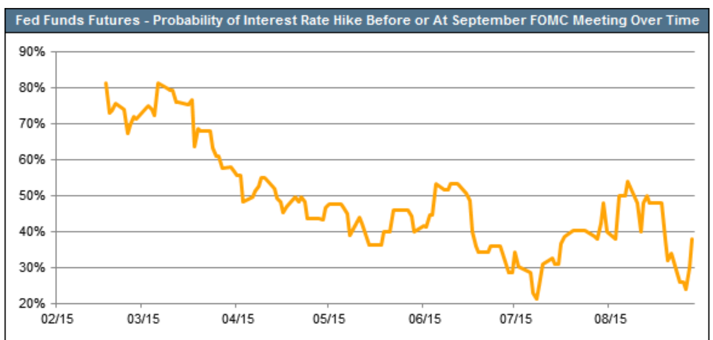
Volatility in rates continued into July. The referendum in Greece was held and voted down by the citizens. With Greece one step closer to being forced out of the Eurozone, European markets sold off and U.S. markets followed suit. With markets shifting back into "risk-off" mode again, U.S. Treasuries rallied and yields declined notably. The ten-year yield touched 2.19%, down from nearly 2.50% just a couple of weeks earlier. The Greek Prime Minister ultimately agreed to a bailout plan very similar to what was originally proposed in order to avoid a complete financial collapse. Soon after this, concerns about Chinese growth led to significant declines in their equity markets which negatively impacted the U.S equity markets as well. This, coupled with weakness in commodity prices and declining oil prices caused downward pressure on interest rates yet again. A weak second quarter Employment Cost Index reading late in the month basically led rates even lower, particularly on the longer end of the curve as this data is one of the main inflation gauges that Fed considers for monetary policy. With wage inflation showing weakness, the chances of the Fed increasing rates in September had just decreased.

For July all investment grade sectors of the bond market turned in positive returns. As one would expect, Treasury securities performed the best, returning just under 1% for the month. Mortgages returned .64%, corporates returned .54% and agencies returned .42%. High yield returned (.62) % for the month, mainly due to its exposure to commodities and the energy sector. The yield curve flattened as the long end rallied on weaker data and a strong dollar. July high grade new issue volume was strong at $129 billion. Some of this issuance was likely from deals pulled forward from later in the year to take advantage of lower Treasury yields, particularly if the Fed does begin to raise rates.

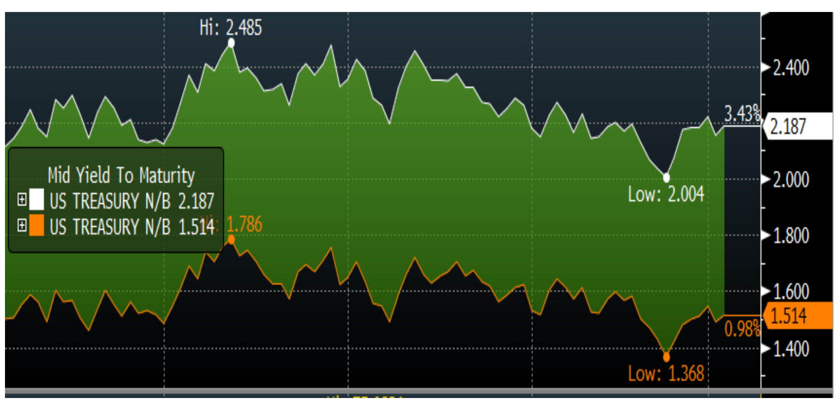
August was really no different as rates were reactionary to global market moves as well as economic data. Employment data at the beginning of the month was basically in line; however, many investors felt that this was not enough to offset the weak wage inflation data from the week before and rates began to decline again. China then devalued their currency by 2%, causing global markets to decline on further concerns about their economic growth. Oil prices continued their downward trend as well, which helped to keep inflation expectations low. Later in the month the minutes from the previous Fed meeting were released and were perceived to have a fairly dovish tone; the language did not provide any clear cut signals that an increase in September was definitely happening. Late in the month as equity markets continued to decline and approached official correction levels, Treasury yields declined as well, dipping back down to levels not seen since May.

August returns were a mixed bag – government related securities were able to eek out slightly positive returns while high grade corporates returned roughly (.67) % and high yield returned (1.75) % and has now produced a negative return year to date. High grade and high yield credit spreads have been leaking wider for a few months, high yield more so than high grade. With the volatility present in the markets and the potential for a rate hike, we could see credit continue to underperform and would expect high grade to perform better than high yield.
Prior to these events during August, Fed Fund futures were predicting about a 60% chance of the first rate hike occurring in September. After this data it dropped

down to 45-50% and we saw a few Wall Street firms change their call to a December hike rather than a September hike. By late August, after the significant decline across global equity markets, Fed Funds futures implied only a 30% chance of a hike in September. We tend to believe the chances are minimal at this point as well, and that December will be a more likely target although it could be longer. This will also not necessarily be a continuous process; there will likely be some pauses here and there to let the markets digest the increases and to reassess the move. We would expect more volatility on the shorter end of the curve than the longer end as continued low inflation data and a stronger dollar should keep longer rates from increasing too much. With that in mind, many strategists have lowered their interest rate projection for year end 2015 and into 2016. Whereas early in 2015 the majority of strategists projected the ten-year Treasury yield would be between 3.0% - 3.50% at year end, now roughly 50% project the 10-year yield will be around 2.50%-2.75% with another 25% projecting 2.25%-2.50%. The charts below depict how chances for a rate hike in September have declined, and the volatility seen in the 5 and 10 year Treasury yield over the past few months:



Source: CreditSights, Bloomberg



Source: Bloomberg 9/2/15

Despite the volatility in yields that we have experienced through the summer months, we have been somewhat active within the fixed income portfolio. Most of the recent activity has been within the corporate sector. With the heavy issuance seen earlier in the summer we were able to participate in several deals where we thought pricing was attractive. Names purchased included Comcast, CBS, Charter, JP Morgan, Key Bank, Reynolds, Heinz and Entergy within the intermediate and longer maturity issues. In most cases these securities were being offered at spread levels that were more attactive than their outstanding issues or similarly rated peers, which made them attractive on a relative value basis. With spreads moving wider the past few months there will likely be opportunities to add quality names at even more attractive levels.

In the agency debt sector we have seen spreads remain stable and fairly tight. Earlier in the summer as rates were beginning to decline we purchased an off-the-run 10-year agency bullet that was offered several basis points cheaper than comparable maturity on-the- run issues. We also added an 8 year bullet issue a little later as the downward trend in rates continued. Both of these purchases allowed us to add a little duration to this sector, which we think has been a prudent move given rate levels over the past few months. We are currently a bit underweight within this sector and would add selectively if an attractive opportunity arose.

Spreads have remained fairly stable within the mortgage sector as well. Lower rates over the past couple of months have kept prepayments steady and our activity during this time period has mainly been the reinvestment of prepayments received. We purchased two 2.5% 15-year pools and more recently a 3.5% 30-year pool. These additions allowed us to keep duration slightly long versus the Index and make sure the portfolio would benefit from the moves lower in rates. We have kept our weighting stable within this sector and look to add selectively as attractive opportunities arise.

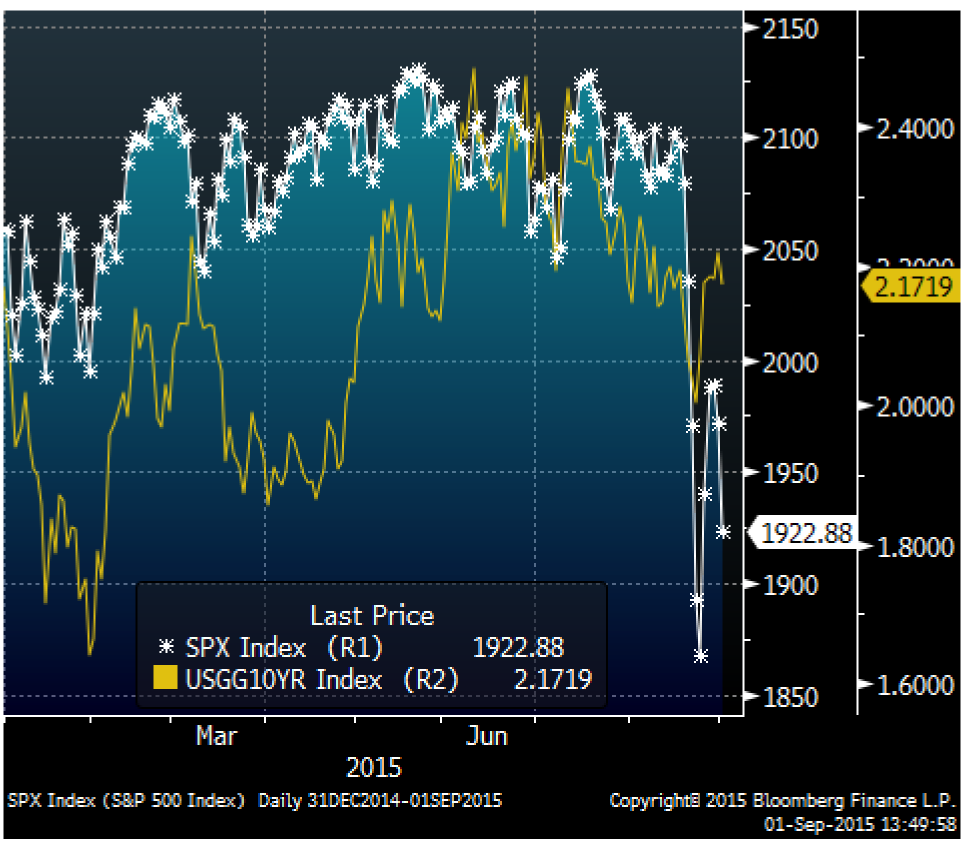
Lastly, we added to our Treasury holdings a couple times over the past couple of months as well. We purchased a block of 30-year notes in June to lengthen duration somewhat in this sector and to reduce our underweight versus the Index as rates were declining. As rates moved lower again in August we added another block of 30 year bonds to reduce our underweight even a bit more as we did not want to lag the Index. We continue to watch yield levels closely and will adjust our Treasury positions and duration as needed.

Domestic Equity Strategy

By Marc Green

In recent weeks, the debate over the health of the Chinese economy came to a boil when China devalued the Yuan on August 11th. The market has taken this as an indication that things in China were worse than feared. More recently, The China PMI came out weaker than expected, below the 50 level, which means the economy is contracting. This is at the same time that US markets had been trading in a rather tight range the past year or so. Technically the market has been damaged, and in all likelihood will need time to repair itself. Using the credit market as a cue for what happens in stocks, something has changed this time around. Usually treasuries rallied in each of the growth scares in the economy the past several years. Looking at the chart below, the 10yr treasury isn't indicating that we are headed for slower growth. There is the story that China is selling tons of their treasuries to fund their needs back home, and to a degree that has happened. In any event, the ferocity of the selloff has damaged investors' psyches, and every bear is popping onto CNBC to say I told you so. You make hay when the sun shines. Unless China truly slumps into a recession, we still think the lower and slower growth coupled with low inflation means the slow recovery/expansion continues to play out. It is hard to bust if you never boom.

<u>Chart 1</u>

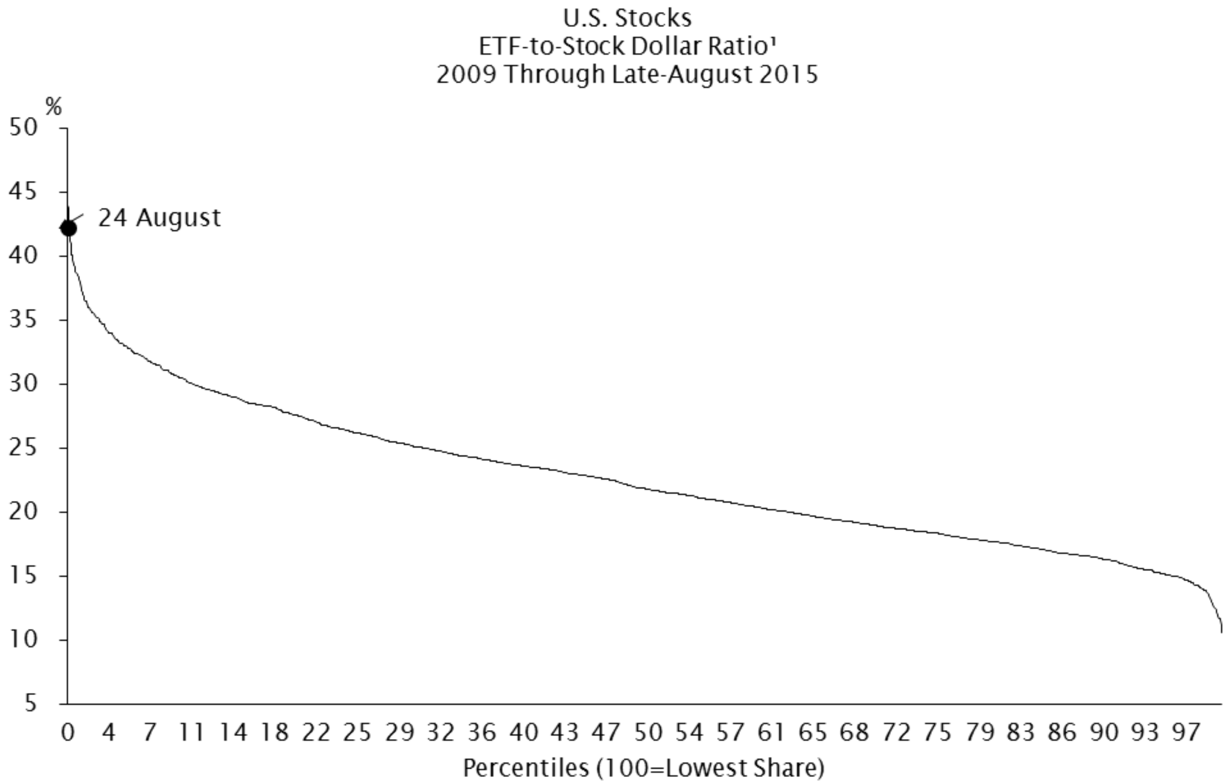


With all that has transpired the past couple of weeks, it is hard to have high conviction on your view. Domestically, we just posted 2Q GDP of 3.7%, employment has been strong, and we continue to enjoy the benefits of ample global liquidity. Inflation has been a concern recently, especially considering how well the CPI has held given what has happened in the energy space. Earnings estimates following the 2Q earnings season came in about 5% ahead of the whittled down expectations going into the quarter. Obviously there is great angst surrounding the timing of when the Federal Reserve raises the Fed funds rate. In light of recent events, one would think they might wait and see how the dust settles out before taking the plunge. If their purpose is for stable prices, full employment, and financial stability, recent market action should give them pause. With the VIX volatility index making an intraday high second only to the meltdown in 2008, there could be a lot of finger pointing at the Fed if they raise rates when markets are this unsettled. The chart below shows the VIX index over the past 12 years with reference to all the spikes(chart courtesy of RBC).

Chart 2

As you can see, the market has reacted dramatically to the China growth issue. Sentiment and expectations have been battered in a rather short period. Some of this is probably due to the way in which information is received and how investors use different vehicles to position. On Monday, August 24th when the Dow was down 1000 points briefly, the ratio of ETF to stock dollar volume trading was at a level only matched during the period when the market bottomed in early 2009. This is symptomatic of knee-jerk selling. It is easier to hit the button on one ticker than to comb through your portfolio if you want to get more defensive. Some of this showed up as several large cap stocks were trading limit down on the open. It's hard to believe that the value of GE, JPMorgan and a handful of other large cap stocks was worth 20% less than the prior week. This we think is indicative of the wild swing in sentiment and ensuing panic we have seen in August. The early look on total equity outflows last week is around $30 billion, which is more than any week in the Great Recession meltdown. That is pretty hard to believe. The following chart provided by Empirical Research shows how the market has been driven by asset allocation trades rather than single stock selling. Maybe some of the fast money and weak hands are out of the way.

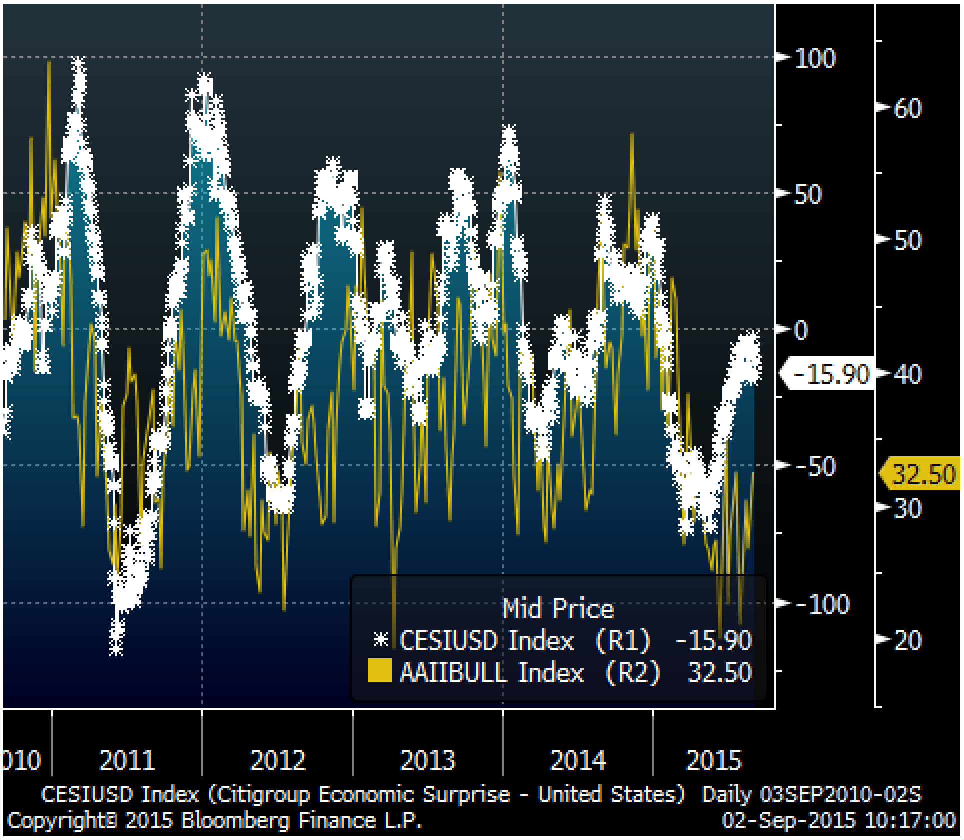
Chart 3



Source: Empirical Research Partners Analysis.
[1] ETF volume based on 29 largest ETFs of U.S.-listed stocks.

The position we find ourselves in now seems very similar to 2011 in one of the Greece crisis episodes. We have been in a slower global growth environment for maybe a year, investor sentiment has been hammered, yet we are seeing early signs of a recovery that is being overwhelmed by negative news flow out of China this time. Obviously China is a much bigger player than Greece by any measure, the point is that things are looking like they are turning up again from a cyclical standpoint. The following Bloomberg chart overlays the Citi Economic Surprise Index with the AAII bullish investors poll. You can see that the Citi chart bottomed out a couple of months ago, while investor sentiment has plummeted. Only time will tell but these two don't typically stay disconnected for too long.

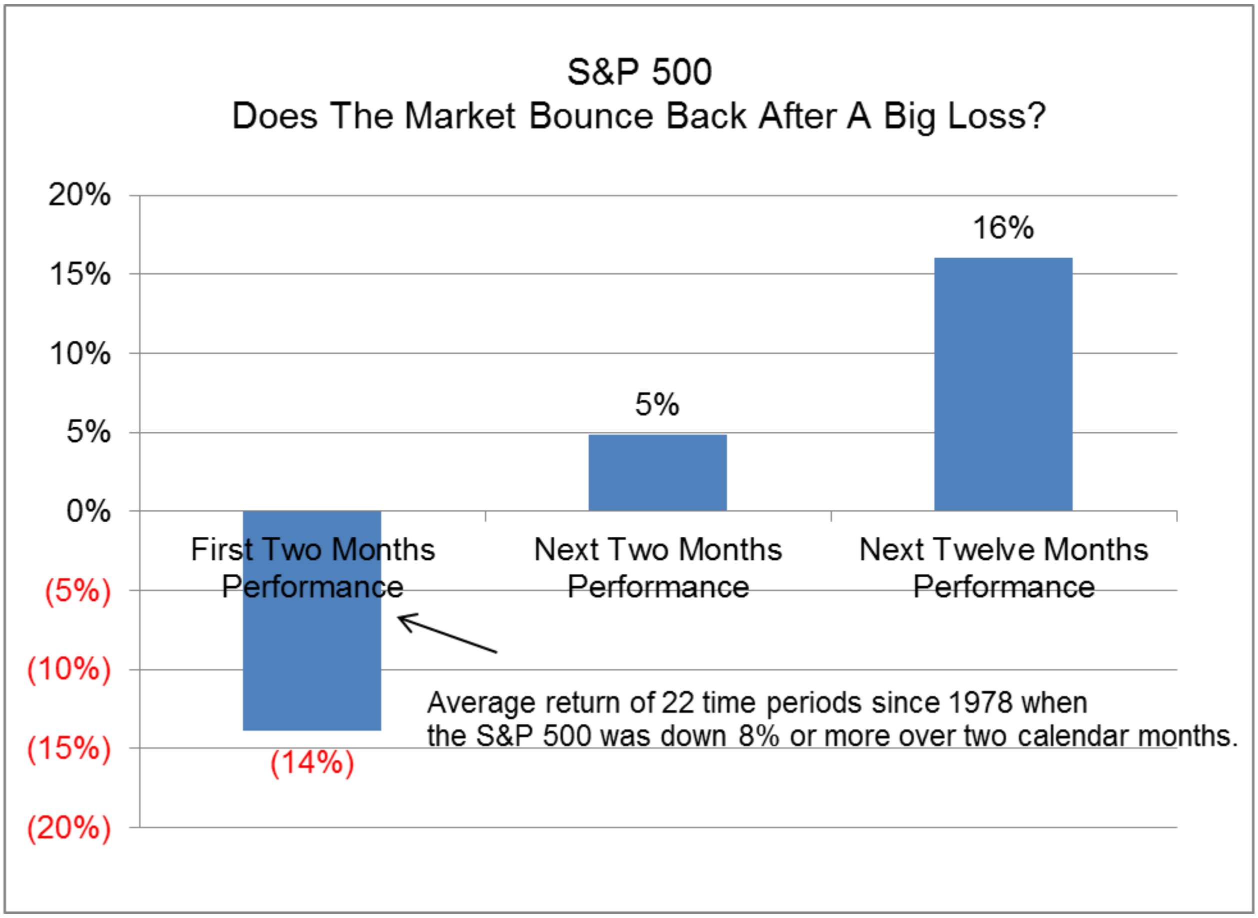
Chart 4



So what does all this mean? The usual requirements for a recession don't seem to be in place in the US. The yield curve is not close to being inverted, inflation is in check, we see little signs of a pending credit crisis, and the prospect of war seems about average with where it has been the past several years. Valuations are in line to slightly below long term averages after the pullback, and looking at the interest rate and inflation environment we are in, arguably the market multiple could be higher. Handicapping what happens in China is a tough task but most of the anecdotal evidence seems to point to something other than a hard landing. The recent steep run up in the Shanghai Composite index and subsequent crash feels somewhat fabricated, meaning that government policies and missteps caused the run up and collapse. In the event that it gets much worse in the broader Chinese economy, it is reasonable to expect a fiscal stimulus package in short order. And we still are in QE mode in both Euroland as well as Japan, so there is the tailwind of continued liquidity flowing into capital markets.

Alliance Bernstein had an interesting chart showing what the market returns have been subsequent to a period that looks like what we are in. It shows that since 1978, when you have a two month period where the market is down a minimum of 8% (average of 14%), the market is on average up 16% twelve months later.

Chart 5



In summary, we think that the indiscriminate selling we have seen in the past couple of weeks presents an opportunity to rotate positions in the active funds. The selloff for the most part has taken down the good and the bad, growth and value, leaders and laggards. In a market that has been tough to beat in recent years, dislocations like what we are experiencing hopefully allows stock picking to again lead to outperformance.

International Equity Strategy

By Steve Lambdin

The global equity markets were nearly flat for the second quarter of 2015. For most of the quarter, investors saw decent gains until selling pressure in late June from the Greek bailout situation as well as the growing speculative bubble in the Chinese equity market took center stage. A Greek referendum was called in early July where voters pushed to have government officials decline the terms of the bailout, causing an increase in equity market volatility. The real issue here is not whether Greece leaves the euro or not, but what a departure could mean for other countries which might embark on a similar path and are a much larger player in the European economy than Greece. German equities struggled in the quarter as German 10-year bund yields rose from a historical low of .1% in April up to .8% in late June. Interest rates that rise this much over a short time period make for a difficult equity market climate. However, economic fundamentals in the European economies still seemed to be improving as the monetary policy of the European Central Bank (ECB) remained quite accommodative during the period. Japanese equities continued to benefit from the reforms being initiated by the Abe government in addition to the Bank of Japan's (BOJ) quantitative easing. Even though the macro environment across most of the emerging markets remained very challenging, some of these markets did manage to post gains in the quarter as investors were drawn toward cheap valuations. As for China, investors continued to push equity markets here well into "bubble" territory in the quarter as this market has doubled over the last year and then fell into correction territory in late June as the equity market fell nearly -20%. Investors remain very nervous over the economic outlook in China as growth looks set to disappoint going forward as government officials seem to be scrambling to find anything to give investors some level of comfort in China's growth. As far as the geo-political front, things seemed to be relatively quiet in the quarter as most crisis are well known with nothing really new at this point. Looking toward the second half of 2015, the over-riding issue is the declining growth outlook in China and the effect this is having on the equity market here as well around the world. With China being the second largest economy in the world, this will have far reaching effects for most investors.

Economic growth forecast

Gross domestic product (annual % change)

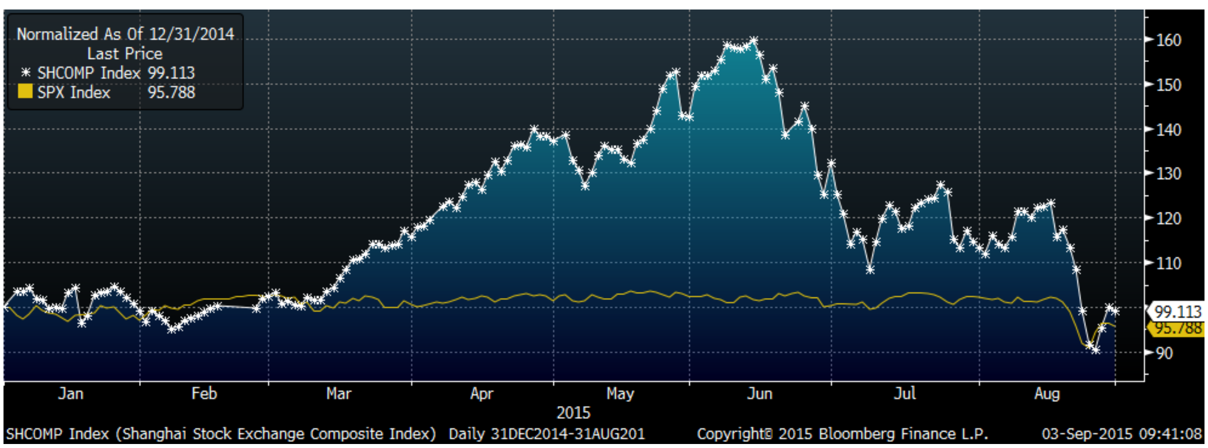
	5-year average 2010–2014	2014	2015	2016	2017	2018	2019	5-year average 2015–2019
			Forecasted data					
World	2.9	2.6	2.5	3.0	3.1	3.1	3.3	**3.0**
United States	2.2	2.4	2.4	2.8	2.5	2.4	2.3	**2.5**
Canada	2.5	2.5	2.2	2.0	2.3	2.4	2.2	**2.2**
Eurozone	0.7	1.1	1.5	1.8	1.8	1.8	1.6	**1.7**
Germany	2.0	1.6	1.7	2.2	1.8	1.7	1.5	**1.8**
France	1.0	0.4	0.8	1.3	1.5	1.5	1.2	**1.3**
United Kingdom	1.7	2.8	2.4	3.1	2.6	2.4	2.3	**2.5**
Asia-Pacific	5.2	4.3	4.5	4.8	4.6	4.7	4.6	**4.6**
Japan	−0.1	−0.1	0.7	1.4	0.7	0.8	1.0	**0.9**
China	7.3	7.3	6.9	6.7	6.6	6.5	6.2	**6.6**
India	7.2	7.2	7.2	7.3	7.2	7.3	7.3	**7.3**

Source: John Hancock Asset Management, 5/31/15.

The MSCI EAFE Index (net dividend) and the MSCI Emerging Markets Index returned +.62% and +.69% respectively during the second quarter of 2015 vs. +.28% for the S&P 500 Index. Returns were basically flat across many regions as investors became very nervous toward the end of the quarter. For the first time in quite a while, unhedged U.S. investors were helped by the U.S. dollar during the quarter as the U.S. dollar fell -4.1% against the euro, -6.2% against the British pound, and -2.1% against the Japanese yen. As was the case in the previous quarter, the Pacific region was a bit stronger than the European region as the Japanese market was the star performer during the quarter. From an economic sector standpoint, telecommunications, health care, financial stocks were relatively stronger, while utilities, technology, and industrials were the weakest. Commodity markets seemed to stabilize and recover a bit in the quarter as crude oil pushed to the upper $50's level and agricultural commodities saw strength as well.

Thus far into the third quarter of 2015, global equity markets have been put into complete disarray. The recent surprise move by Chinese officials to devalue their currency pushed global equity investors into full panic mode. The Chinese equity market, which was already at correction levels, seems to be falling each week. This market, which was up significantly in 2015, has fallen into negative territory at this point. Investors are very worried over the growth outlook here. Many fear the government officials are getting somewhat desperate in an attempt to calm investors with further interest rate cuts aimed at stabilizing investor nerves. This has sent "shock waves" into nearly every equity market around the world. We are seeing firsthand what a slowing China can mean for the rest of the world. As a consequence, global commodity prices have been hit hard as many commodities are trading at new lows not seen since the beginning of the great recession a few years back. We believe growth will stabilize at a new lower level as measures being undertaken by officials begin to take hold. However, this process will take some time and investors will remain very anxious as this unfolds. With this in mind, we expect global equity markets to remain extremely volatile as we could see further downside in the near term.

Shanghai Composite vs S&P 500 Index



Asia Update

As was the case in the previous quarter, the MSCI Pacific region was once again the best performing region in the MSCI EAFE Index during the second quarter of 2015, but only up +1.14% in USD. The Chinese and Hong Kong equity markets showed good performance as they were up +6% and +5.6% in USD respectively in the period. However, this is very deceiving, as these markets fell off substantially in late June but did manage to hold onto some level of gains in the period. The frenzied bubble of the Chinese equity market was the case for most of the quarter as investors followed the lead by the government pension fund and pushed the Shanghai Index to its highest levels since 2007. However, this ended on June 12th as this index fell over -17% over the next three weeks as investors became very nervous here as fresh growth concerns emerged to derail this ride. While this unfolded in China, things seemed a bit better in Japan as the Bank of Japan (BOJ) remained in easing mode giving investors more comfort here on the future outlook in this economy even as this economy struggles with growth. Australian equities struggled quite a bit in the period as a dependence on basic materials continued to give investors an uneasy feeling as the commodity complex continues to move downward. At this point, Asian equities look to remain very weak over the near term until we see some level of stabilization in the Chinese economy. Until this happens, developments in China will be the main driver of equity returns across the region and many indices will remain in correction territory.

Market Performance

Data as of: 30-Jun-2015

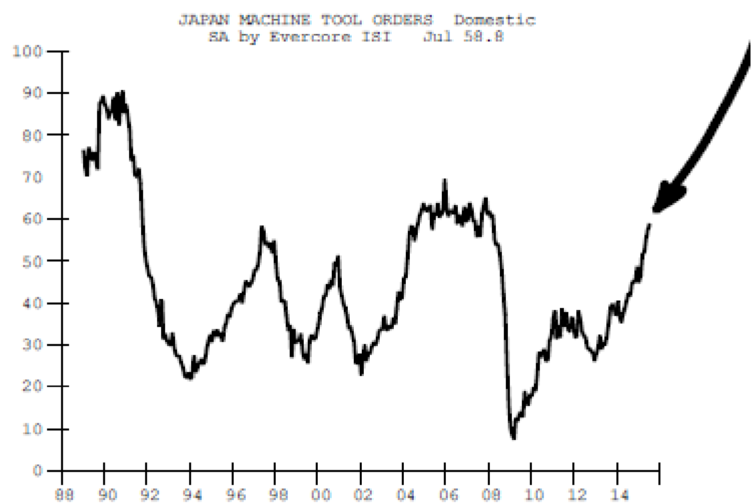
Index Name	MTD % Change	QTD % Change	YTD % Change
MSCI China	-5.62	6.04	14.65
MSCI Hong Kong	-2.77	5.56	11.90
MSCI Japan	-1.71	3.09	13.62
MSCI Pacific	-2.42	1.14	8.84
MSCI Taiwan	-3.17	1.02	5.01
MSCI Singapore	-1.33	-0.06	-1.96
MSCI Korea	-4.25	-3.71	0.41
MSCI Philippines	-1.03	-4.96	4.45
MSCI Australia	-4.64	-6.19	-3.28

Source: Factset

The Chinese economy remained rather stable in the second quarter of 2015 as gross domestic product (GDP) in China rose +7.0% from the year earlier period, which exceeded most economists' estimates. This remains right on course with government targets, but storm clouds are on the horizon. With growth in the rest of the emerging markets continuing to slip, and fresh concerns that growth may be a bit weaker in Europe and maybe the U.S., this will no doubt put pressure on the Chinese economy and growth here will almost certainly slip further to perhaps the +6.5% rate for the rest of 2015. We feel this is probably the case as government officials shocked the world by devaluing its currency by -1.9% on August 11, which was the most we can remember. This is probably an admission that growth is waning too much in the critical export market and this move is an effort to make their exports more competitive on the world markets. While this will probably help on the margin, many are not sure if this will be successful over the longer term. The People's Bank of China (PBOC) has also responded with recent interest rate cuts of the one-year lending rate as well as reserve requirements. These are all efforts to maintain its current growth outlook as the economy slowly transitions toward a more domestic focus. However, this is wreaking havoc on the world equity markets as government officials seem to be scrambling to find anything that will work. Industrial production rose +6.8% in June, while fixed asset growth slowed to +11.2% in the first seven months of 2015, which is the slowest pace of growth in 15 years. In addition, exports were only up +2.1% in June from the year earlier period, which is one of the slowest growth rates in some time. We see this as indicative of the slowing situation here in this economy. Perhaps the recent currency devaluation can help the exports regain some level of market share that probably went to the Europeans over the last couple of quarters. Retail sales seem to have stabilized a bit lately and were up +10.5% in July, relatively stable from the previous few months. A rising middle class continues to bode well for this key statistic as we move forward. Inflation remained low as consumer prices rose +1.6% in July, a slight increase from the previous few months as higher meat prices offset lower non-food inflation. Going forward, we certainly see downside in the growth outlook in this economy, but maybe not as bad as the media might be portraying. But as we have seen, any kind of measured reduction in growth has a large ripple effect being felt around the globe. We continue to expect to see more policy actions in the months to come, which will be aimed to calm things down and restore confidence in the leadership. Maybe these actions can stop a hard landing in this economy.

Source: Evercore ISI

The Japanese economy looked like a mixed bag of data points in the second quarter of 2015 as GDP fell -1.6% from the year earlier period, which wound up being slightly better than what many had expected. However, first quarter GDP was recently revised up to +4.5% from the previous reading of +2.4%, which wound up being a nice surprise. Net exports fell from the previous quarter and were responsible for a portion of the weak GDP numbers. While demand from the U.S. economy remained rather solid, the weakness in the Chinese economy and too much competition from Europe was tough to overcome. In addition, a strengthening yen was a bit of an obstacle as well. With this data in hand, we believe the BOJ will continue to be aggressive with its accommodative monetary actions to keep stimulus in full force. Industrial production continues to be all over the place as May was weak and June staged a slight rebound. We are expecting this to be a bit better in the third quarter as business spending should increase and consumption could be modestly better. Small business confidence continued to improve in the quarter and was reported at 48.8 in August, more or less about at the same levels over the last few months. We believe this key statistic can make it to the 50 level over the next month or two and be an economic shot in the arm for this economy. Consumer confidence continues to improve ever so slightly and was reported at 41.7 in June, which matched the highest level over the last year. While this is not where it needs to be, it is certainly going in the right direction. Core prices rose only +.2% in July from the year earlier, which has been in a declining trend over the last couple of months. We are not that concerned with this as falling crude oil prices are the main force here and we consider this to be good for most people. Also, a recent survey indicated most people expect prices to be higher a year from now, which is inflationary by itself. The labor market remains in decent shape as the June unemployment rate remained at 3.4% and the jobs-to-applicant ratio improved to 1.19. These are decent readings and we just need to see some solid wage increases going forward in order to get the consumer to increase spending. In the absence of what is going on in China, we would expect to see a modestly improving economy as we move into the second half of 2015. However, investors will be watching with a degree of caution to see what will happen here. But with a central bank behind this region, we see a stronger third quarter ahead of us. We just don't know if this translates into a higher equity market or not.



Source: Evercore ISI

Europe Update

Within the Eurozone economy, the overriding theme still continues to be the quantitative easing program being implemented by the ECB. President Draghi remains very confident this program will bring this region back into a decent economic growth trajectory. We are beginning to see a rise in credit demand and banks seem to be accommodating this with loan growth. This should lead to modest economic growth and should quiet any talk of deflation. However, the Greek crisis did put some pressure on equity markets across the region and pushed the region into negative territory for the quarter. The MSCI European Index (ex. U.K.) posted a very slight loss of -.79% in USD for the second quarter. Germany led the decline as concerns around this crisis remained persistent as well as the potential for a more aggressive China in the export market made for weak equity markets. In addition, the euro appreciated by 4.1% in the quarter against the U.S. dollar, the first time we have seen this in some time. But taking everything into consideration, the fall in equity prices was only very slight, somewhat surprising with everything that unfolded in the quarter. Energy prices continue to fall, which is benefiting businesses and consumers alike. Putting the Greek issues aside, economic fundamentals seem to be improving in the region, which is the desired effect from the policy actions. While what is going on in China can certainly have ramifications for this region as well, we are optimistic about business prospects going forward.

Market Performance & Valuation

Data as of: 30-Jun-2015

Index Name	MTD % Change	QTD % Change	YTD % Change
MSCI United Kingdom	-3.57	2.99	2.00
MSCI Netherlands	-2.08	2.81	7.85
MSCI Italy	-2.54	2.49	9.50
MSCI Switzerland	-4.11	1.01	5.80
MSCI France	-2.65	0.31	5.02
MSCI Europe ex UK	-2.84	-0.79	4.67
MSCI Spain	-2.14	-2.05	-2.61
MSCI Germany	-2.61	-5.59	2.23

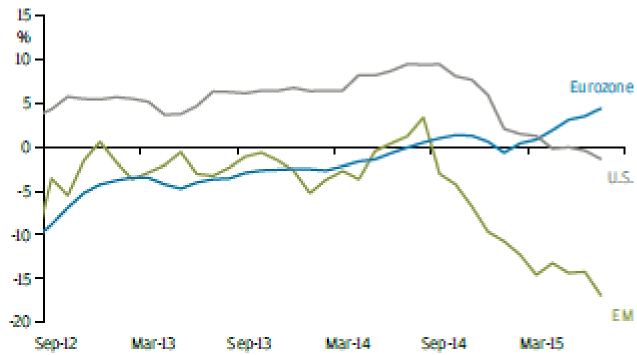
Source: Factset

The fragile recovery in the Eurozone economy seems to be the best way to describe what is happening in this region right now. Lower commodity costs and the continued benefit from the ECB offset a stronger euro in order to keep the recovery going and give investors some measure of confidence as we head into the second half of the year. Second quarter GDP rose +.3% from the previous quarter, or +1.2% from the year earlier period, which is a very slight deceleration from the previous period. The German economy rebounded just a bit, while the French and Italian were weaker than what many had expected. This was probably some level of fallout from the Greek crisis, which should not be a lasting problem. The German growth we saw in the period was from net exports and consumption, while net investment was a little weak. All in all, we believe the region's growth prospects seem good at the moment for the second half of the year. Several of the economies in the Eurozone look decently positioned over the next quarter. Industrial production still remains weak and was up approximately +1.2% in the second quarter from a year earlier. While this is nothing too flashy, we believe it is something to build upon and could get better if a few things go right later in the year. The index of executive and consumer sentiment continued to get better, reaching 104.0 in July, which is the highest level in four years. We just hope this can be sustained over the next few months in light of developments happening in China. The consumer still remains on the sidelines in this region as retail sales surprised to the downside and fell -.6% in June from the previous month, but did rise +1.2% from the year ago period. This was the first negative reading since March and shows the consumer is still very cautious across the region. Inflation remained low in the region as consumer prices only rose +.2% in June from a year earlier. These weak readings do pose some level of downside risk to the growth outlook as this can be volatile from period to period. The employment situation continues to make small improvements as the June unemployment rate was reported at 11.1%, just a bit better than a few months earlier. This is one of the most important economic statistics and we need to see this continue to improve if the Eurozone economy is to grow faster down the road.

Eurozone earnings momentum is on the up

EXHIBIT 5: EARNINGS MOMENTUM

12-month forward EPS growth, year-on-year change



Source: FactSet, MSCI, J.P. Morgan Asset Management. Data as of 7 August 2015.

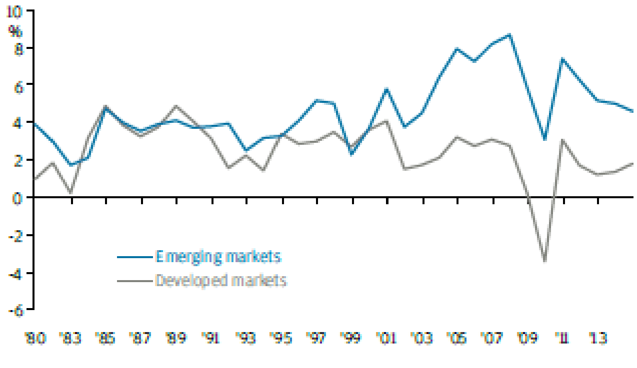
The U.K. economy has been one of the few bright spots around the globe as this economy continues to grow at a decent clip and in fact has accelerated. GDP grew by +.7% in the quarter from the previous quarter, or +2.8% from the year earlier period. It was recently reported that output in this economy is now 5.2% above its pre-recession peak and is in its longest period of continuous growth since 2008. The business services sector remained the growth engine and was responsible for +.5% of the increase in GDP in the quarter. Industrial production continues to be erratic, but was reported to be up +1.0% in the quarter, even as manufacturing was a slight drain on this number. Retail sales continue to be resilient, rising +.1% in July from the previous month, or a healthy +4.2% from the year earlier. Furniture and household electronics were particularly good as low inflation and moderate wage gains are giving consumers some level of comfort at the present time. There continues to be little price pressure in this economy as this has been the case for some time. July CPI was down -.2% from a month earlier, or up +.1% on a year over year basis. Falling commodity prices and the strong currency are serving to keep a lid on any price gains. Again, most of this stems from lower crude oil prices, which do not worry us too much at this time. At its August meeting, the Monetary Policy Committee (MPC) opted to keep interest rates at a record low of .50% and its bond purchase target remained at 375 billion pounds, as it has for quite some time. We are sticking with our current forecast that the MPC should begin to raise interest rates sometime later this year, subject to the current upheaval going on in China. The employment situation has recently been a little uneven on the margin as the unemployment rate rose to 5.6% in the three month period through June. Employment declined by 63,000 in the three month period ending in June. Wage growth continues to accelerate, rising to the +2.4% level on a year-over-year basis. We see the slight increase in the unemployment rate to be temporary in nature at this point and look for employment gains to resume over the next couple of months. Overall, the U.K. economy appears to be rather solid, especially relative to the Eurozone region and what is happening in Asia. However, the equity market here has not been immune to what has transpired around the globe and could remain very volatile over the short term.

Source: Evercore ISI

Emerging Markets

Emerging market equities managed to "eek" out another small gain in the second quarter of 2015, which is the second quarter in a row of such a gain. However, we don't see this as too much to get excited about as the world can turn in a hurry as we have certainly witnessed lately. There continues to be a large divergence in returns between countries and regions in the quarter. Countries that rely less on the commodity cycle and more of an internal focused economy have tended to be better performing. Also, economies that are able to exploit a particular niche or feed into something that has a longer term competitive advantage should perform a bit better on the margin. The MSCI EM Index (net) rose +.69% in U.S. dollar terms in the second quarter of 2015, only slightly better than the larger cap equities in the developed markets. Chinese equities fell off a cliff in late June and have continued their downward trajectory to be well into bear market territory. At this point, it's hard to tell where the bottom is as confidence in the leadership here continues to deteriorate. At this time, we are very cautious toward commodities in general and especially countries which depend more on commodities in order to grow. The potential for rising rates in the U.S. present a challenge for many emerging market economies, which can lead to capital outflows from these countries as the U.S. dollar strengthens. We sense investors are remaining very cautious toward this asset class at present until some level of confidence can be restored.

EXHIBIT 2: ANNUAL GDP GROWTH OF EMERGING VS. DEVELOPED MARKETS

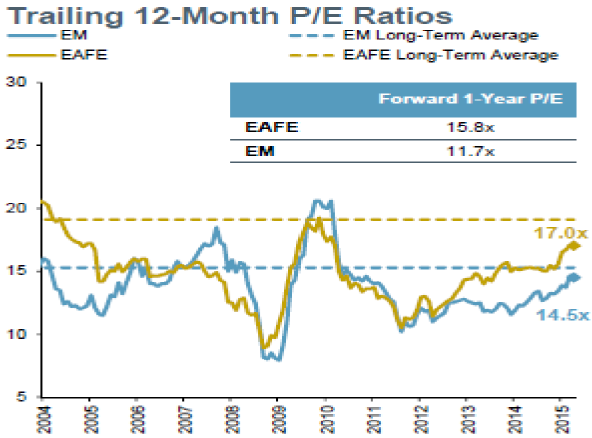


Source: IMF, J.P. Morgan Asset Management. Data as of 31 July 2015.

International Equity Activity/Strategy

At this point, it's hard to find anyone who is not concerned with what is happening in China and the effect this is having on most global equity markets. The rebalancing of China's economy from one that is export driven to more of an internal demand is preventing many challenges. A crisis of confidence is not easy to overcome and investors are pushing many equity markets into a technical correction or even into "bear market" territory. It's difficult for the world's second largest economy to slow down without it being felt across other economies around the globe. The PBOC has many options at its disposal to stabilize the situation in China and we believe this will eventually be the case. Even though this threatens other regions, we still believe growth in the European region looks decent, just maybe a tad lower than what we were expecting a few months back. Also, we believe the outlook in the Japanese economy has declined modestly as well, but we don't know to what degree at this point. The U.S. economy looks fairly solid at this point, as most of the U.S. economy is internally driven. The ECB and BOJ remain firmly in easing mode, which should ultimately bode well for these economies. While lower commodity costs should be good for manufacturing and transportation costs in many developed economies, we still see this as a negative for many emerging market economies at present.

We have taken advantage of the recent downdraft in the global equity markets to add $61 million to our emerging markets ETF (EEM) in late August as the price of EEM was below the strike price of the written puts on expiration date. We expect to continue to sell put options on EEM at prices below the current price of the security in an effort to buy some exposure into the emerging markets index if the market turns down from here. In addition, we have sold some call options on EEM at strike prices well above the current price of EEM in an effort to take advantage of premiums in the marketplace in the current state of heightened equity volatility. Premiums for doing these strategies still look attractive in the current low interest rate environment. Our current allocation to Emerging Market equities is approximately 1.5% of total assets and approximately 11.5% for MSCI EAFE equities, which remains below peer group averages. *(Charts provided by Factset,* *Evercore ISI, Fidelity Investments, IMF, JP Morgan Asset Management, MSCI, Bloomberg, John Hancock Asset Management)*



Source: Fidelity Investments Q3 2015 Market Update

The Chinese Economy and the Path to Rebalancing

Michael McNair

Anyone paying attention to the market turmoil over the last month has certainly been inundated with commentary on the current issues in the Chinese financial markets and economy. Unfortunately, the majority of commentary has done little to clarify the issues facing the Chinese economy. In my opinion, the current events taking place in China can only be put into proper context once you have an understanding of how the Chinese economic model works. Therefore, we will begin our discussion with a brief explanation of the Chinese economic growth model.

I will be using the term investment many times throughout this report; therefore, I want to make it clear that the term investment, as it relates to GDP or aggregate demand, is defined as the purchase of goods which themselves assist in the production process. The purpose of investment is to increase production to meet future consumption. For example, an investment would be the purchase of manufacturing equipment or the construction of new real estate or infrastructure. This does not mean the purchase of financial assets like stocks or bonds.

How China's economic investment growth model works

Beginning in the early 1980s a series of reforms dramatically altered the Chinese economy. For the next 30 years, China would experience economic growth unparalleled in modern history. This rapid growth has led to certain awe and mystic surrounding the Chinese economy, with many observers treating China like a special case convinced that Beijing can create growth at will and without constraints. However, as I will later show, this view is completely false. While the constraints to the Chinese growth model differ from those facing western capitalistic economies, every economic model has its own set of constraints. There is nothing "special" about the Chinese economic growth model. A version of this development model has been used numerous times throughout history and it has been extremely successful at generating rapid growth but it always eventually runs into the same set of constraints: overinvestment on a massive scale and gross misallocation of capital, which in turn leads to unsustainable debt.

China's economic model is really just a supped up version the Asian development model, used by Japan in the 1960s and 70s. Other notable historical examples include Brazil in the 1960s and 70s, the Soviet Union in the 1950s and 60s and Germany in the 1930s. The foundation of this growth model is that, through various ways, it "taxes" households in order to subsidize producers. Each investment growth model in history differs slightly in the way in which they accomplish this task. These taxes can be explicit, as they were in Brazil when the government literally implemented a large consumption tax and then directly funneled this money to producers. Others like Japan and China have accomplished this through hidden taxes and subsidies. In either case the effect of these subsidies is to significantly increase the competitiveness of domestic industry and set forth rapid growth in investment in real estate, infrastructure and manufacturing capacity but this growth eventually comes at a significant cost.

The Capital Misallocation Problem

An investment-driven growth model is just a set of economic policies that channel savings into investment by constraining (i.e. taxing) consumption and subsiding production. For poor countries with very little capital stock and insufficient savings to fund the investment needed to increase their capital stock, an investment-driven growth model can be very beneficial for an economy and can rapidly generate economic wealth. But the problem is that this model distorts incentives in a way that makes it highly susceptible to the misallocation of capital. Again, these distortions tend not to lead to capital being misallocated in an economy with almost no capital stock because almost any investment (i.e. infrastructure, machinery, etc…) will significantly increase productivity and generate a significant return. However, unless these policies that incentivize investment at the expense of household income and consumption are reversed, then the economy will eventually hit a point where it begins to misallocate capital. Further, the longer these policies continue the greater the capital misallocation will be. Yet, because these policies initially generate rapid growth, these economies almost never are willing to reverse the policies and capital can continue to be misallocated on an enormous scale for decades. China has long past the point where the growth model begins to create an inordinate amount of misallocated capital in the economy and I believe that the Chinese economy now represents the largest misallocation of capital in history. However, as long as the investment model is in place, GDP can keep growing at a rapid pace despite the fact that this growth is a result of wasted investment. This GDP growth often fools observers into thinking that this investment is creating economic wealth when it is, in fact, destroying wealth.

The problem of capital misallocation gets even worse when it is employed by a centrally planned economy that implicitly guarantees the losses in the financial system just the way China has done over the last several decades and Japan did during the 70s and 80s. This guarantee creates what is called a moral hazard problem. This moral hazard problem significantly distorts the incentives in the economy and makes massive capital misallocation a virtual certainty. If the government agrees to back the losses on an investment then an investment can only have upside. Therefore, it was completely rational for economic agents within the Chinese and Japanese economy to borrow and invest in almost any project, regardless of its economic benefit, and the bankers also were incentivized to do the lending. This government guarantee of the financial system is also a major reason why centralized economies are especially prone to engage in overinvestment and why the resulting investment bubble can grow to unimaginable levels before it inevitably bursts. It is also why the eventual adjustment is far worse for these countries.

Investment bubbles can often be hard to spot until after they bust. The US housing bubble is a perfect example. Before the middle of the last decade, there were obvious signs of a classic investment bubble in US housing, yet investment continued to pour into housing for years. Investors and authorities mistakenly believed that housing investment was needed because the rise in real estate prices showed that more housing was needed to meet the growing demand. The fact that home prices had never collapsed in our nation's history further added to confidence that capital was NOT being misallocated. Obviously, this logic was horribly wrong and authorities failed to realize that the rise in home prices was not a sign that the existing housing stock in the US was insufficient, but instead it was both a sign and cause of the bubble. But the important point is that investment bubbles are allowed to continue because there is a failure to realize that the investment is being misallocated. However, it is the realization that this process will not continue that causes the eventual bust. If banks, for example, realized that they were lending money to a bubble they would pull back on lending. While it is this realization that causes the bubble to burst, it is not the cause of the losses. The losses occurred when the lending on an unprofitable investment was made. The bursting of the bubble just serves to show the extent of to which wealth was previously squandered.

While the US housing bubble was by no means small, it pales in comparison to the scale of misallocation in China. It is the difference between empty neighborhoods in the US and entire empty cities in China. If entire cities, the size of Manhattan, were built in the US and they sat vacant for years, everyone would be aware the US has a massive overinvestment problem. Yet, somehow in an economy with household income 1/5 the size of the US there are people who fail to understand the scope of the problem facing the Chinese economy. Unfortunately for China, the real estate bubble is only the tip of the iceberg. The investment bubble and misallocation of capital is endemic to every single part of the Chinese economy. As an analyst covering companies that operate in China, it is clear as day that the return on investment for these companies Chinese operations is minuscule and easily the lowest in the world. This fact is well understood by investors and businesses, yet many investors have failed to make the intellectual leap and come to the realization that this means China has an overinvestment problem and is significantly misallocating capital. If these companies couldn't generate a sufficient profit to cover their debt servicing when their cost of capital (i.e. interest rates) was 10% below nominal GDP on average, how will they ever be able to service their debt now that nominal GDP has slowed to a level equal to or lower than their interest rates? The answer is that they will not be able to repay their debt and bad debt in the economy will explode (actually it already has but it will get much, much worse).

Debt, in of itself, is not necessarily bad and it is usually beneficial to an economy. When money is lent to an economic agent at a certain interest rate and is used to make an investment that generates a return sufficient to cover its debt servicing cost, debt has created economic wealth. This process is the life-blood of the economy. However, debt will destroy wealth in the economy when it is used to fund an investment that cannot generate a high enough return to pay back the loan and this is exactly what has happened in China. An unprecedented amount of China's investment was grossly misallocated on projects with returns well below their cost of capital. In other words, these investments are not generating enough cash to cover their interest payments, let alone the principle. This is the definition of bad debt and it represents the fundamental constraint to all investment driven growth models and for future Chinese economic growth.

Professor Michael Pettis, of China's Peking University, explains that, "The Achilles heel of the Chinese growth model is the unsustainable rise in debt that comes as a necessary consequence of capital misallocation fueled by bank lending…Capital misallocation is the inevitable consequence of high investment growth over many years in a system in which price signals are severely distorted and there is a political incentive to maximize economic activity in the near term. If capital misallocation is funded by debt, the increase in debt is necessarily unsustainable."

As we stated earlier, investment bubbles can go on for a significant period of time and while investment is booming the economy experiences rapid growth. However, a country hits their debt constraint at the point where there is a realization that the debt underlying the misallocated investment cannot be paid back. The point at which this realization comes is different in each example but the misallocation always seems to go on longer and become worse in centralized economies, with large government intervention, capital controls, shoddy economic data, and severely distorted price signals. It is also why the eventual adjustment has historically been far worse for these countries, like China.

Investors have been consistently surprised by the developments within the Chinese economy. Yet, what is so clear from the history of economies using an investment-driven growth model is that the pattern of developments is clearly a pattern. In each case these economies witnessed years of rapid growth during which these countries were labeled as growth “miracles” and observers mistakenly assume the growth was a result of the brilliant policies implemented by the countries superior leaders rather than the surge in misallocated investment and a build-up in debt. At this point in the process, even the most skeptical observers are convinced in the superiority of these economies. Throughout history, investors have been fooled into believing that these growth “miracles” can continue on for decades. In the 1980s it was a forgone conclusion that Japan would overtake the US as the largest economy in the world just as any informed individual in the 60s, including President Kennedy, was sure that it was only a matter of time before the USSR’s economy surpassed the US. Only a few years ago there was widespread belief in the superiority of the Chinese economic model and it was hard to find anyone who didn’t believe that China’s economy was healthier than the US economy. But the pattern experienced by all the previous investment growth countries continued with China and eventually, returns on investment fell to the point that a significant amount of their investment could not generate a return high enough to service their debt despite the high economic growth. By 2011, an increasing amount of debt was being used to roll over the existing debt that couldn’t be serviced and less was going to increase investment and GDP. As a result, growth in the economy unexpectedly slowed and this put further pressure on businesses ability to service their debt. The result was an explosion of bad debt in the economy. In an attempt to insulate themselves from absorbing the cost of these debts, both domestic and foreign economic agents are altering their behavior in a way that automatically causes growth to slow and debt to rise. This is the point at which China has hit its debt capacity constraint. Every investment driven economy in history has eventually hit this constraint and it always happens quickly and unexpectedly. The important point is that once this debt constraint has been hit growth slows significantly and the policy responses that have typically reignited investment growth now fail. In every case, once the investment driven economy has hit its debt capacity the economy was forced to abandon its growth model and rebalance the economy.

Unfortunately, the history of the rebalancing process is crystal clear, in every case in which an economy has been forced to transition away from the investment growth model the economy endured years of economic hardship. These are the countries that experienced “lost decades”.

If, as I strongly suspect, China continues to follow the pattern of events experienced by the other investment driven economies, it will only be a matter of time before the consensus on China’s superior leadership completely reverses and observers start blaming the foolish policies of China’s incompetent bureaucrats for the country’s economic plight.

Will China Experience a Financial Crisis?

In his 1867 paper, "On Credit Cycles and the Origin of Commercial Panics", John Mills wrote that "Panics do not destroy capital; they merely reveal the extent to which it has been previously destroyed by its betrayal into hopelessly unproductive works." In China, capital has already been destroyed but it has yet to be recognized; therefore, it must be recognized in the future. What Mills calls a panic or better known to us as a financial crisis, is simply the process of recognizing the losses. However, a financial crisis is not the only way that losses are recognized in an economy. Losses can also be recognized through many years of much slower growth in which the excess debt is gradually written down.

A financial crisis is similar to a bank run. It occurs when the liquidity needed to bridge the gaps created by a mismatch between assets and liabilities suddenly becomes unavailable or insufficient. Insolvency itself is not a sufficient condition to cause a financial crisis. The crisis only happens when creditors finally refuse to roll over the liabilities that can't be serviced out of existing assets. The conditions required for a financial crisis are:

1. Significant mismatch between assets and liabilities.

2. A period in which slower than expected growth and faster than expected credit growth create uncertainty over how higher debt servicing cost will be assigned to different sectors of the economy. This uncertainty causes these economic agents to take actions to insulate themselves from taking the losses, but this automatically has the effect of increasing the fragility of the financial system (for ex. capital flight).

3. A shock in the economy is transmitted to the financial system (for example, this can be a fall in home prices to which the banking system is highly exposed)

China certainly has an enormous amount of insolvent borrowers with significant mismatches between their assets and liabilities. They are also currently undergoing a period of unexpected slow growth and an unexpected explosion in debt. However, I do not believe that China will experience a financial crisis. This is because Beijing's implicit guarantee of most of the country's financial system ensures that much of the mismatch between assets and liabilities is spread out on a system-wide basis. Therefore, as long as investors remain confident that Beijing will continue to provide liquidity to any part of the financial system and even assume the debt of insolvent borrowers it is unlikely that deposits will flee the banking system to such an extent that it creates a financial crisis.

But remember, a financial crisis is not the only way that losses can be recognized. Instead, I believe that most of the bad loans within the Chinese banking system will continue to be rolled forward and the losses will only slowly be written down over a period of a decade or more. However, this process of recognizing the losses will consistently lower Chinese growth over this period and it will also cause an explosion of debt by the Chinese government as they are forced to cover the losses in the private sector. This is exactly the adjustment process taken by other centrally planned economies using an investment-driven growth model. The rebalancing process undertaken by Japan is a great example for those of us trying to predict China's economic future. Despite widespread insolvency and bad debt throughout the

Japanese financial system, Japan never suffered a financial crisis. Instead, the government's control over the banking system ensured that their banks had sufficient liquidity to roll over the bad debts and these losses were either recognized over time or were transferred to the government. While the government's backing of the financial system prevented a financial crisis it arguably came at the detriment of the Japanese economy. As we mentioned earlier, this guarantee created a moral hazard problem that significantly contributed to the investment bubble but it also ensured that Japan would suffer decades of slower growth. A financial crisis can be extremely brutal as economic growth collapses, but it ensures that the losses in the financial system are recognized in a timely manner. The upshot is that economic growth will quickly return once these losses have been assigned. Remember that the losses have already been made when the investment was wasted; therefore, slowly recognizing losses, as in Japan’s case, only serves as a detriment to the economy. While it does spread the losses out over a number of years rather than a short time period, the problem is that this debt overhang creates uncertainty about how the losses will be assigned and it causes economic agents to act in ways that creates a self-reinforcing process between slowing growth and growing debt (for example, wealthy individuals might take their money out of the country, investors might shorten maturities or raise required interest rates, business might disinvest, etc…). This is exactly what is happening in Greece and growth will not return until Greece defaults on their debt and the losses are assigned.

I believe that there are two main reasons that most analysts and economist have gotten the Chinese economy so wrong over the last few years. The first is that they failed to understand that debt capacity always acts as a constraint to the investment growth model. In fact, they failed to realize that debt was even a problem as recently as just a few years ago, despite the fact that the debt bubble started becoming unsustainable over 10 years ago. While anyone who understood the nature of the Chinese growth model knew that China’s overreliance on investment to drive growth combined with distorted incentives in the credit markets, significantly repressed interest rates and rampant moral hazard made the gross misallocation of capital and the resulting mountain of bad debt inevitable.

The second reason that analysts have been blindsided by slowing Chinese growth is that in their understanding of the economy, debt only plays are a role to the extent that it will create a financial crisis. So while most analysts have at least now owned up to the fact that the Chinese economy is the most indebted in the world (The evidence is now so clear it would be really hard to deny) their analysis of this debt is constrained to the extent that they believe it will cause a financial crisis. My inbox is cluttered with reports explaining that China is not at risk of a banking crisis because, “the government has enormous scope to lower reserve requirements and further increase liquidity to the banking sector.” Technically, I do not disagree with this statement. As I have already stated, I do not believe that China will experience a financial crisis. What I disagree with is the analysis that fails to understand that debt will significantly constrain China’s future growth regardless of whether the country experiences a banking crisis. Just as debt didn’t cause a financial crisis or banking collapse in Japan, yet the drag on Japanese growth due to this bad debt far exceeded the damage done to any other country that experienced a financial crisis.

China’s Rebalancing Process

In any economy, there are only three sources of aggregate demand: 1) domestic consumption 2) domestic investment and 3) net exports (trade surplus adds to demand while a trade deficit subtracts from demand)

As you will recall, the investment growth model is all about constraining domestic consumption and subsidizing production and investment. Therefore, it should not be a surprise that the hallmark of an economy employing a version of the investment growth model is extremely unbalanced growth. The fundamental imbalance in China is the exceptionally low consumption share of the economy.

Over the last thirty years, Chinese consumption growth has significantly lagged GDP growth while investment has consistently grown much faster than GDP. At the start of the economic reforms in the 1980s, consumption in China was already among the lowest in the world at 52% of GDP. However, as China began implementing the reforms that suppressed household income and subsidized investment, the consumption share of China's economy dipped to an alarming 46% of GDP by the late 90s. This was a level only a handful of countries have ever experienced and even then only during a financial crisis. The imbalance continued to get worse and by 2005 consumption declined to a historically unprecedented 40% of GDP. Leaders in Beijing became alarmed and set out creating a series of policy measures aimed at reversing this trend. However, despite Beijing's best efforts consumption as a percent of GDP continued to plunge, reaching a staggering 34% in 2011. This is the lowest level ever recorded in any economy, let alone in an economy as large as China's (for comparison sake, globally consumption accounts for 65% of GDP).

The reason that Beijing was alarmed by this shockingly low level of consumption is that, by definition, China was overly dependent on investment and their trade surplus for growth. Further, China's economy had become so unbalanced that it became evident that they could not continue to count on these two sources to generate rapid growth.

In the 1990s investment accounted for 23% of Chinese GDP. But the structural distortions inherent to the growth model caused investment to surge and by 2011 investment accounted for a completely unprecedented 50% of GDP. This is the highest level recorded by any economy in history.

A natural consequence of China's investment growth model is that the economy tends to create far more production than it consumes. This excess production must be exported to foreigners for consumption. Therefore, China can only continue to grow investment as long as the rest of the world is willing to consume the excess production this investment eventually creates. Further, as China grew over the last several decades, the larger the gap between their production and their consumption became and the more Chinese exports the rest of the world had to consume.

The problem for China is that their trade surplus has become far too large. Therefore, they can no longer count on the rest of the world to absorb their excess production. The global economy is too weak and countries will no longer allow China to increase their trade surplus at everyone else's expense.

The size of China's trade surplus is literally, historically unprecedented. Before the start of the financial crisis, China had the highest trade surplus as a percent of global GDP ever recorded. The previous holder was Japan in the late 1980s, which was also a result of their investment-driven growth model, and the US during the 1920s, which was due to the unique circumstance surrounding the destruction of Europe's manufacturing capacity in WWI. The fact that China's trade surplus has surpassed these previous "record holders" becomes even more astonishing when you consider that the Japanese economy in the 80s and the US economy in the 20s had a share of global GDP two to three times that of China in 2008. A trade surplus of this magnitude places an incredible amount of pressure on the economies of the rest of the world. As a result, it is obvious to me, as well as the leaders in Beijing, that the rest of the world will not be willing to continue to absorb China's unprecedented trade surplus. In other words, China can no longer continue to count on a growing trade surplus to fuel their economic growth.

The inability for the rest of the world to absorb their trade surplus is the other constraint facing China's investment growth model. Because they cannot rely on the rest of the world to absorb their excess capacity, China must abandon the growth model and reverse the severe imbalances built up in the economy. This is an extremely important point because it means that even if China had not hit their debt capacity constraint they would still be forced to abandon their growth model and rebalance their economy because they have hit this trade constraint.

The act of rebalancing means that the consumption share of the economy must increase significantly. The only way this is possible is if consumption grows faster than GDP and investment either contracts or grows slower than GDP.

I believe it is important to walk through some numbers to show how difficult it will be for China to transition their economy. If you assume that consumption as a percent of GDP gets to 47% in the next decade (still an extremely low number even compared to the other major investment driven economies throughout history like Korea, Brazil, Japan, USSR) then consumption will have to grow multiples of GDP for years, despite the fact that consumption has not surpassed GDP growth in almost 30 years. More specifically, the table below shows the relationship between GDP and consumption growth that would need to occur in annually in order for China to hit that 47% level in 10 years:

Avg GDP Growth	Avg Consumption Growth
0%	2.8%
2%	4.9%
4%	6.9%
6%	9%
8%	11%
10%	13%

For reference, since 2001 Chinese consumption growth has averaged just 4.5% and has never been more that 5.6%. Consumption will no doubt have to grow relative to GDP (meaning investment grows below GDP) but that does not mean consumption or the economy will boom. I think they will find, like Japan did, that overall consumption is stubbornly correlated with investment growth rates (through downward pressure on household incomes) and they will be forced to adjust the same way Japan did (even though Japan was far less unbalanced): with a sharp drop in GDP growth coupled with a much slower drop in consumption growth and negative investment growth rates.

China has only just started what will be a long and difficult adjustment process in which I believe consumption averages 3-4% while GDP growth is likely to average only 1 – 2 % for the next decade. But notice that if I am correct, consumption growth will not be much lower than the 4.5% annual growth seen over the last decade. This is exactly what has happened in Japan as they have rebalanced over the last 25 years. Despite GDP growth averaging just 1 – 2% consumption has consistently grown faster than GDP and this growth rate has only been about 1% slower than it was during the 70s and 80s. It is for this reason that Japan has not experience social unrest despite the sharp drop in Chinese GDP and it is why I do not believe China will experience social unrest as GDP growth slows.