Quant Coalescence

By: Melissa Wieder, CFP®, Director Institutional Services

Collaborative insight provided by CIO Michael Chapman

We will soon "Cruz" into earnings season for 1st quarter 2016 and so far the downward revisions are "Trumping" the upward revisions, as Bulls may need to prepare to "Feel the Bern". "Hillaryious", right? Okay, maybe not so much. Obviously, I am watching too much political commentary, but be honest….so are you. In reference to earnings, the following statistics are credited to Factset's John Butters in his March 24th, 2016 "Earnings Insight".

- For Q1 2016, the estimated earnings decline is -8.7%. If the index reports a decline in earnings for Q1, it will mark the first time the index has seen four consecutive quarters of year-over-year declines in earnings since Q4 2008 through Q3 2009.
- As of December 31, 2015 the estimated earnings growth rate for Q1 2016 was 0.3%. All ten sectors have lower growth rates today (compared to December 31) due to downward revisions to earnings estimates, led by the Energy sector.
- For Q1 2016, 93 companies have issued negative EPS guidance and 26 companies have issued positive EPS guidance.
- The forward 12-month P/E ratio is 16.5. This P/E ratio is updated based on Tuesday'sclosing price (2055) and forward 12-month EPS estimate ($124.30).
- On a per-share basis, estimated earnings for the S&P 500 for the first quarter have fallen by 9.3% since December 31 (to $26.42 from $29.13).

This is where it gets interesting. If you extrapolate the downwardly revised 1st quarter 2016 S&P 500 earnings estimate over the entire year of 2016, you get ($26.42 x 4)=

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$105.68. If you use the current P/E of 16.5 to calculate the forward value of the S&P 500, the result would be a level on the S&P 500 of 1743. That is over 15% lower than the current level of 2055. On the flip side, if the market *remains* around its current levels, we would have to adjust our P/E ratio to 19.45 (2055/$105.68).

These valuations are always a moving target though, because both the P/E (16.5 in this case) and the actual earnings on the S&P 500 ($26.42 estimate in our example) fluctuate. To make it more confusing, future *expectations* of BOTH of these numbers fluctuate continuously. In addition, one has to choose to follow the valuation based on one year *forward* expectations of earnings OR one year *trailing* actual earnings numbers. GAAP earnings or GAAP excluding unusual items, anyone? Oh yeah…and don't forget to consider if you want to look at the*median* or the *mean* when trying to determine if the current S&P 500 valuation is above or below what has been seen historically.

So, is the market cheap and a good buy *or* expensive and a screaming sell? Even at 16.5 (let alone our 19.45 calculation), the forward P/E of the S&P 500 is above the 5, 10 and 15 year averages: 13.6, 14.1 and 16 respectively. All things being equal, the market has to either go down, earnings have to improve dramatically for the remainder of the year or the market has to be comfortable trading at very high forward multiples.

As an example of the above mentioned moving targets, in October of 2014 Goldman Sachs estimated that S&P 500 earnings for 2015 would come in at $122. In July, 2015 this estimate was revised down to $114. In September, 2015 it was revised to $109 and in January, 2016 the 2015 full year number was revised to $106. This certainly begs the question, "How reliable is the current $124.30 estimate for 2016 earnings on the S&P

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500?" If we extrapolate our above estimate for 1st quarter 2016, it looks like another year of an overshoot of about 20%.

***Side note, the earnings on the S&P 500 quoted above are based on the sum of the earnings of all 500 companies in the S&P 500, both negative and positive. This is a method of valuing the overall equity market by looking at all 500 companies in the S&P 500 as ONE company. In other words, how much is an investor paying for the estimated (forward) or trailing (actual) earnings of "the market".

The graph below is another indicator that shows the headwinds that equities are facing. It shows changes in corporate debt since 1996, represented by the blue line. The green line graphs changes in corporate earnings over the same time period. As one can see, earnings have gone negative year over year for the first time since 2009, while corporate debt is growing at the highest it has in 20 years. The trend is also similar to the years before the Great Financial Crisis, when companies continued to accelerate their debt as earnings were dropping. This problem is amplified by two factors. Number one; the Federal Reserve has begun raising interest rates, which will increase the burden of this debt AND make it harder for the debt to be refinanced when the time comes (if it can be refinanced at all, as will likely be the issue with many energy companies). Second, this debt has not been taken on to invest in projects that have a positive Return on Investment to increase future earnings. This debt was largely brought on to increase earnings in the absence of increasing revenues via stock buybacks. As Paul Harvey used to say, "Now you know the rest of the story." In reality, we don't know exactly how this will unfold. What we do know is that this is all happening at a time when earnings estimates are being downgraded and the cost to service this debt may be going up.

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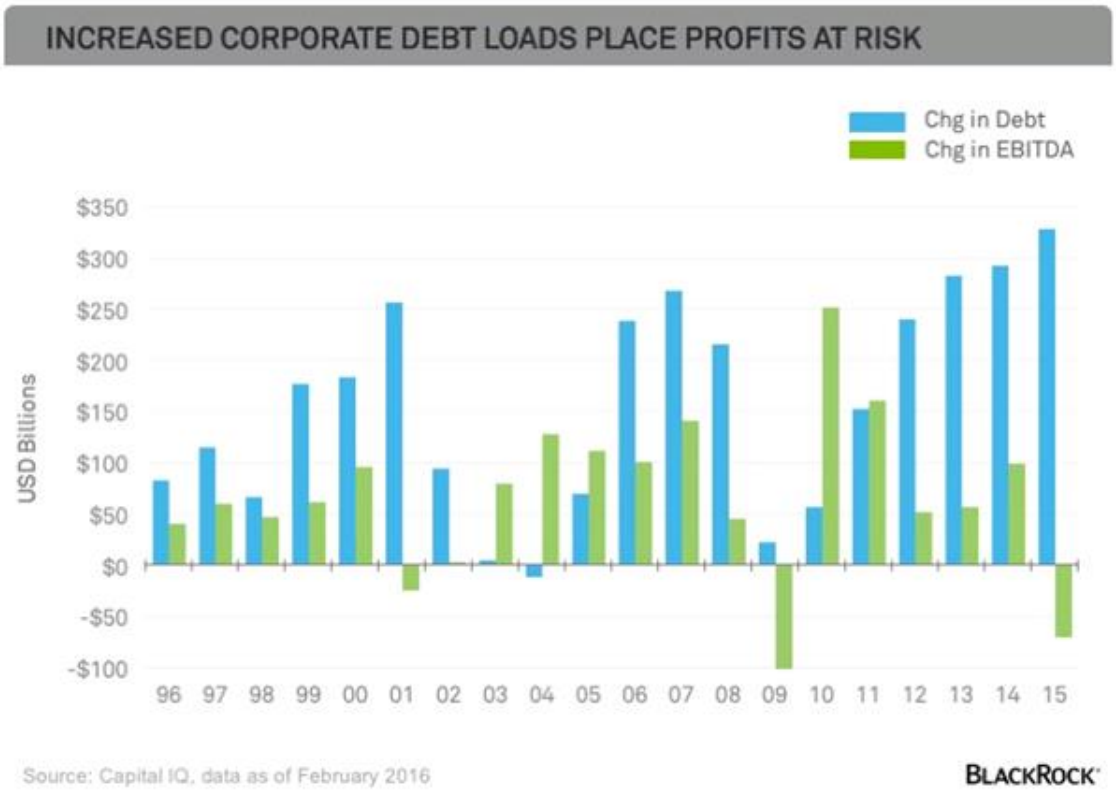

What is my point? The point is that it is very difficult to determine if the market is fairly valued at any time. There are so many actual final numbers that will be estimated and subsequently revised, such as sector and overall earnings and macroeconomic indicators of the health of the world economy. In addition to that, one has to consider investor psychology, risk appetite and the current financial needs of institutions and sovereign governments. This is why as portfolio managers, we prefer to use multi directional, quantitative models. The benefit is that we have the opportunity to make positive returns in any market conditions AND we don't rely on predicting investor sentiment or predicting hits or misses in estimates. Our models follow the money by

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looking at data points that have historically shown where “the crowd” is going and where “the crowd” is exiting.

The March allocations theme has been interesting, as we see gold continue to do well in both up and down markets. This is most likely explained by the new Central Bank and worldwide phenomenon known as “NIRP” that we explained last month. As a reminder, NIRP is an acronym for the unchartered waters of Negative Interest Rate Policy. This uncertainty of what all of this could mean with no precedent makes gold attractive. We also see continued allocations to dividend paying equities, utilities, consumer staples and global bonds. Global bonds have also been a good place to be in March, as they have gone up in price as negative interest rates have been announced. New Zealand equities in our international allocations have seen an increase of over 13% month to date. The currency allocations continued with the U.S. Dollar and the Japanese Yen.

PCM Strategies: 03.2016 Allocations*

*(Please note that performance numbers on the website for indexes do not include dividends and are appropriately calculated sequentially.)

1. **PCM US Bond Total Return Index sm: U. S. Treasuries of multiple maturities**
2. **PCM Absolute Bond Index sm: Emerging Market bonds and International treasuries.**
3. **PCM Absolute U.S. Sector Index sm : Utilities, consumer staples and cash equivalent**
4. **PCM U.S. Industries Total Return Indexsm: , : Utilities, consumer staples, inverse Dow Jones, cash equivalent**

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5. **PCM Absolute Equity Income Indexsm : Dividend paying equities, utilities and cash equivalent**
6. **PCM Emerging Market Total Return Equity Indexsm: Cash equivalent and equities in the Middle East**
7. **PCM Total Return Portfolio Indexsm and PCM Stable Growth Plus+ Portfolio Indexsm: International bonds, gold, and dividend paying equities are all major themes in these portfolios.**
8. **PCM Global Tactical Indexsm: Japanese Yen, 20 year U.S. Treasuries, gold, cash equivalent and International Treasuries**
9. **Global Macro Indexsm: Gold, U.S. and International Treasuries and inverse Europe and far East**
10. **PCM Alpha 1 Indexsm: 7-10 year U.S. Treasuries**
11. **PCM Absolute Commodities Indexsm: Gold and Livestock**

PCM was recognized as a "Top Gun" for our performance during the volatile 3rd quarter of 2015 by Informa Investment Solutions. Four of our models were in the top 10 performers out of hundreds of products and money managers.

PERFORMANCE RECOGNITION: 3rd Quarter, 2015

Informa Investment Solutions' (PSN) Ranks PCM "Top Gun" Products

- **PCM Protective Equity - (Top 10/#5) All Cap Universe *(543 products in the All Cap universe)***
- **PCM Diamond - (Top 10) US Balanced Universe *(314 products in the US Balanced universe)***
- **PCM Global Macro - (Top 10/#2) Global/Intl Balanced Universe**

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- **PCM Global Tactical - (Top 10/#8) Global/Intl Balanced Universe *(297 products in the Global/Intl balanced universe)***

*****We have enhanced our website AGAIN at http://www.pcminvestment.com. You can now see performance of our indexes (previous day and month to date) on our streaming ticker. We include performance for both our indexes and our composites, as applicable. You will be asked to enter your email address to get into the website. There will be no password required, so you won't have to worry about forgetting it. This is partly due to helping us stay in compliance with requirements in our industry that we know who has reviewed our website content. Please use the website link above to see all of our indexes and composites.**

In addition to the above mentioned "Top Gun" performance awards from Informa Investment Solutions, PCM composites have been previously recognized for performance by Informa Investment Solutions; the PCM Absolute Bond Composite^{sm} for the three year performance ending the 4th quarter of 2014, as well as previous awards for 1-year trailing performance and 3-year trailing performance. As of 2nd quarter 2014, the PCM Absolute Bond Composite^{sm} and thePCM Absolute Commodities Composite^{sm} both won a "Top Gun" award for performance in their respective category for the 1-year trailing performance period, with the PCM Absolute Bond Composite^{sm} also winning the "Top Gun" award for 3-year trailing performance. The PCM Alpha 1 Composite^{sm} was awarded the "Top Gun" performance award for the 1st quarter of 2014. We are very pleased to see these particular multi directional strategies being recognized, as the PCM Absolute Bond Strategy^{sm} and PCM Alpha 1 Strategy^{sm} are particularly timely for where we are in the current market cycle.

To view Morningstar Fact sheets of all of our index models, please visit our website atwww.pcminvestment.com under the "PCM multi-directional Strategies" tab.

Quant Coalescence

About "PCM Quant Coalescence"

Welcome to Provident's bi monthly "Quant Coalescence" communication. We suspect that many of you are no different than us. That is to say that when our quantitative models rebalance every 2 weeks for some indexes or once a month for other indexes, you sometimes find yourselves asking "What is behind a rotation into that ETF?" This communication is our opportunity to "unite for a common end" with our clients and partners; keeping you updated on our thoughts and perspectives. As you know, our indexes are based on an absolute approach: we strive to make money in up markets or down markets, while trying to greatly minimize loss in any market environment.

Our indexes are also quantitative, reflective of our systematic, unbiased and technical approach. Since our indexes are unbiased, the quantitative models would obviously at times rotate into positions that cause us to scratch our heads. Nevertheless, being so close to the analysis as it unfolds, allows us to quickly begin to validate the fundamental reasons behind the quantitative "following of the money." At other times, the trades are not validated right away; the story unfolds as the days pass. We have been very excited about many of these "validations" and "ah ha" moments. We had another "ah ha" moment when we decided that these insights would also be interesting to those who have entrusted us with their financial peace of mind. Our goal is to be short and to the point, specific to what is happening in our indexes rather than a lengthy macroeconomic perspective.