

The S&P 500 / NIPA Profits Model...

Will it Take 5 Years for Corporate Profits to Catch Up to the S&P 500?

The Takeaway:

As of 1Q 2015, the actual level of the S&P 500 was 115% of my NIPA profits-driven model value. Between the 4Q 2008 low and 1Q 2012 NIPA profits increased by 98%, but since 1Q 2012 corporate (NIPA) profit growth has stalled. The future is notoriously difficult to discern. That said, it may take roughly 5 years (until 4Q 2020) until corporate profits have “grown into” the current level of the S&P 500. If so, the S&P 500 may make little headway (and / or be vulnerable to downside corrections) for the next several years.

The BEA's (Bureau of Economic Analysis) release of its advance estimate of 2Q 2015 GDP also contained its annual revisions of all the NIPA (National Income and Product Accounts) data going back to 2012. Figure 1 plots the previously published data for NIPA profits (corporate profits with inventory valuation and capital consumption adjustments) versus the revised data. As can be seen in Figure 1, while the annualized level of NIPA profits was revised higher for 1Q 2012, the profits data was revised lower for every subsequent quarter, with the largest negative revisions occurring from 2Q 2012 through 2Q 2014.

As can also be seen in Figure 1, both the previously published and the revised NIPA profits data show a fairly sharp drop between 4Q 2014 and 1Q 2015 (at \$2,012.5 billion the annualized level of NIPA profits as of 1Q 2015 was actually a bit below the \$2,016 billion recorded 3 years prior, in 1Q 2012). The same type of drop in NIPA profits was seen in the first quarter of 2014 when, just like this year, 1Q GDP was soft. Profits bounced back in 2Q 2014 and I'm assuming the same thing will happen in 2Q of this year (the BEA's first estimate of 2Q 2015 NIPA profits will be released on August 27 along with the second estimate of 2Q 2015 GDP). Patterned off of what happened in 2Q 2014, I'm assuming that the annualized level of NIPA profits largely bounced back to a \$2,098 billion annualized level in 2Q 2015.

To estimate what happens to the path of NIPA profits after 2Q 2015, I start with my \$2,098 billion 2Q 2015 estimate and then apply the quarterly NIPA profits growth rates implied by the CBO's January 2015 Baseline projections (which can be accessed from this [link](#)). The resulting future NIPA profits projections are illustrated in Figure 2.

As I am wont to recite, “Predicting the future is a hazardous endeavor”. The future path of NIPA profits may or may not adhere to the projected path illustrated in Figure 2. That having been said, per the projected path shown in Figure 2 **the annualized level of NIPA profits will not exceed \$2,348.4 billion until 4Q 2020. I highlight the \$2,348.4 billion level because, per my S&P 500 valuation model, that is the annualized level of NIPA profits that would produce a model value of the S&P 500 of 2100** (please see Figure 3). The S&P 500 closed yesterday just whisker below 2100 (at 2099.85) and 2100 has also been my yearend 2015 target.

Figure 1

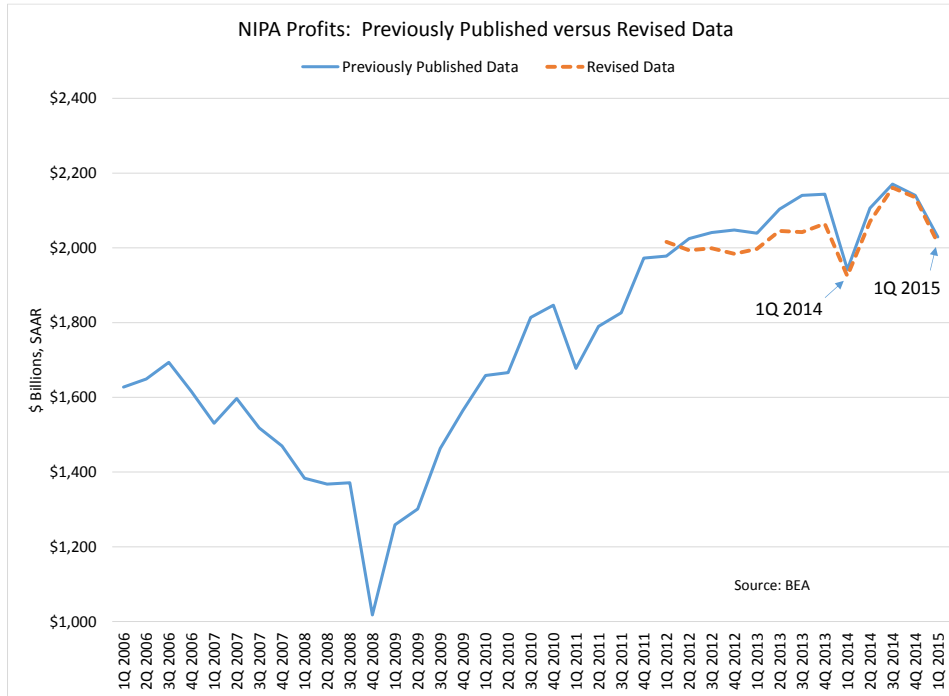


Figure 2

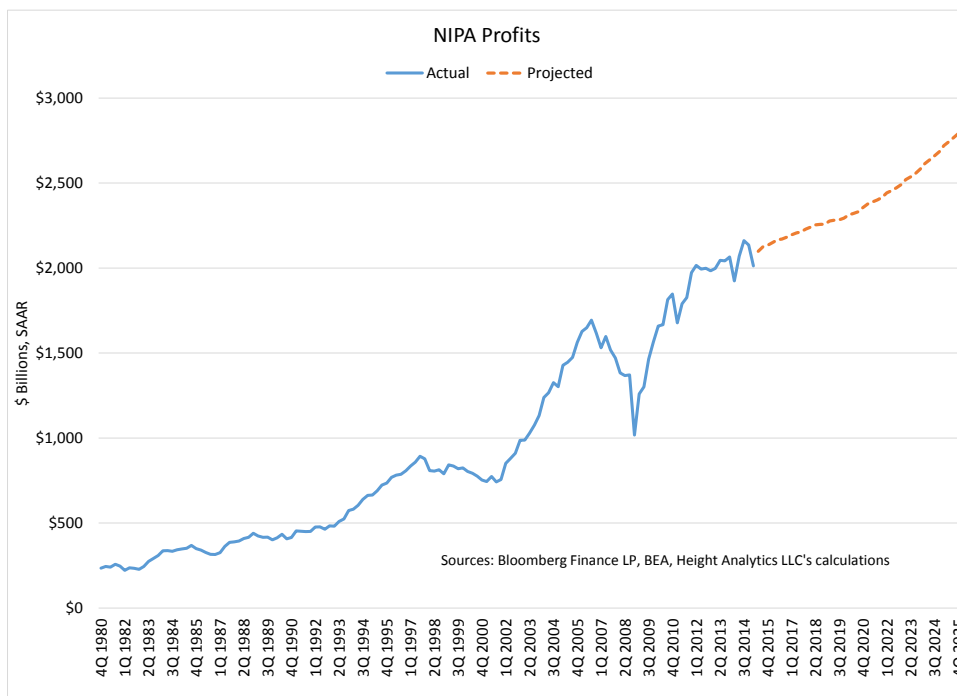
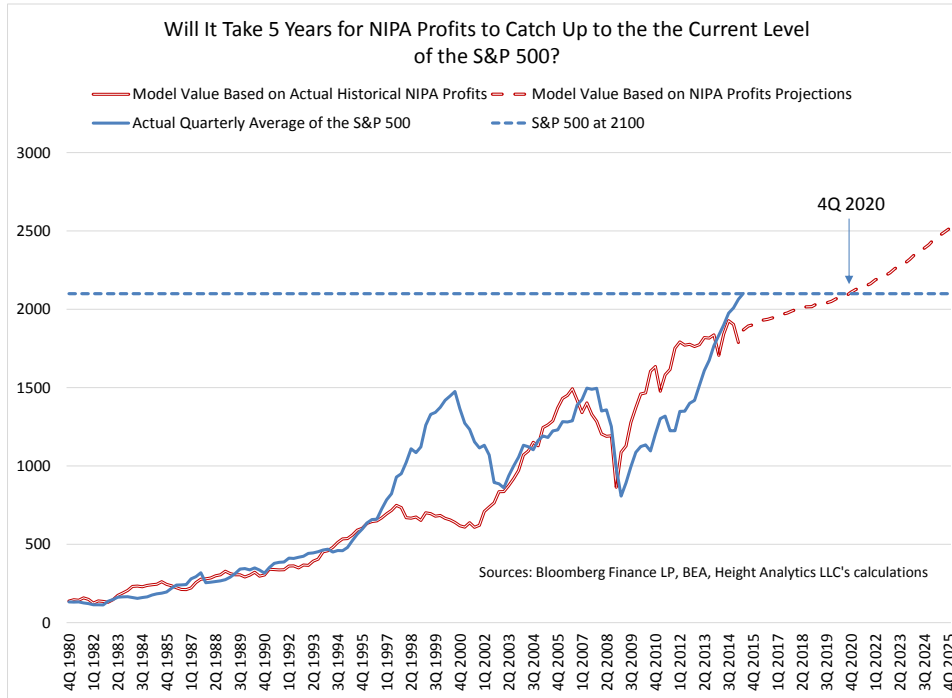


Figure 3



For the benefit of those who may not be familiar with it, this may be an appropriate point for a quick review of my S&P 500 valuation model:

It is a very simple regression model in which the independent variable (X) is the annualized level of NIPA profits and the dependent variable (Y) is the average quarterly closing level of the S&P 500. The time periods from which the equation is derived are 4Q 1980 through 4Q 1996 and 4Q 2002 through 1Q 2008 (time periods which exclude both the inflation and deflation of the tech bubble and the financial crisis and its aftermath). The r-square is 0.975. It is basically a “regression to the mean” model. As can be seen in Figure 4, which plots the actual average quarterly closing level of the S&P 500 against the model value for the S&P 500, and Figure 5, which plots the actual average quarterly closing level of the S&P 500 as a percentage of the model value of the S&P 500 (a statistic I term “relative valuation”), the actual level of the S&P 500 can be (and typically has been) either above or below the model value, and sometimes by a significant amount (and often for an extended period of time). Nonetheless the actual level of the S&P 500 has always eventually reverted back to (or quite close to) the model value (or has thus far, anyway – I’ve been running some form of this model since the early 2000’s when the tech bubble began to deflate).

Between 1Q 2009 and 4Q 2013 the actual level of the S&P 500 was below the model value, and at times well below the model value (as of 3Q 2010, for example, the relative valuation was 68.32%), suggesting that the actual level of the S&P 500 would eventually rise. The relative valuation broke above 100% in 1Q 2014 (107.47%) and as of 1Q 2015 (the most recent quarter for which an actual NIPA profits estimate from the BEA is available) the relative valuation was 115.36% (please see Figure 5). Based on my estimate of the annualized level of NIPA profits in 2Q 2015 (\$2,098 billion) the relative valuation in 2Q 2015 was 112.49% (an actual average closing level of 2101.83 in 2Q 2015 divided by a 2Q 2015 model value of 1868.42).

Figure 4

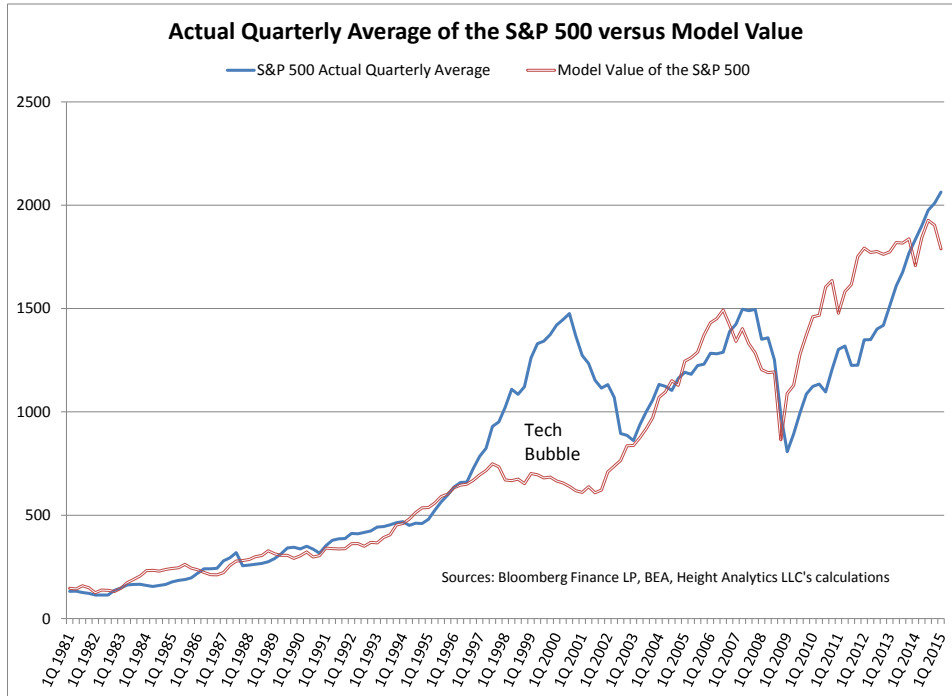
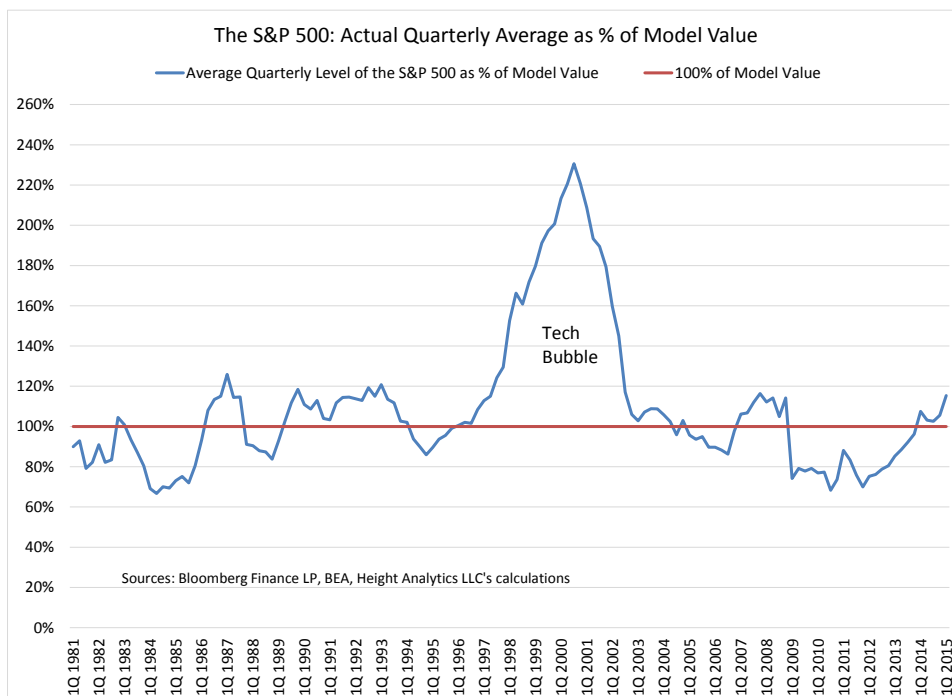


Figure 5



Per the projected NIPA profits path depicted in Figure 2, the annualized level of NIPA profits in 4Q 2020 would be \$2,356 billion, producing a model value for the S&P 500 of 2108 which, assuming the relative valuation of the S&P 500 is exactly 100% in 4Q 2020, implies virtually no price appreciation for the S&P 500 for the next 21 quarters. If the relative valuation in 4Q 2020 remains at 112.49% (my estimate of the relative valuation as of 2Q 2015) then the implied actual level of the S&P 500 as of 4Q 2020 would be 2371 (a 2.34% annualized rate of return – excluding dividends - between 3Q 2015 and 4Q 2020 assuming a 3Q 2015 starting price level of 2100).

Now it is certainly possible that the projected path of NIPA profits depicted in Figure 2 is too pessimistic and that returns from the S&P 500 over the next 21 quarters will be significantly higher. That said, it is also possible that the projected path of NIPA profits is too optimistic. Again, the projected path of NIPA profits depicted in Figure 2 (after 2Q 2015) is based on NIPA profit growth rates implied by CBO projections, and the CBO does not project recessions. If in fact we have a recession sometime over the next 5 years the level of NIPA profits as of 4Q 2020 could well be lower.

It is also possible that, for whatever reason, in the post-Great Recession, post-financial crisis world my S&P 500 model (which is based on pre-Great Recession, pre-financial crisis data sets) no longer works and that the actual level of the S&P 500 will, in the future, be higher than that which the model suggests. Maybe, but the same logic / suspicion that the model no longer works could have been invoked in 2010 when the relative valuation averaged just 74% of the model value.

My crystal ball is opaque and, as previously stated, predicting the future is a hazardous endeavor. With those caveats having been voiced, the future I perceive through the lens of my S&P 500 valuation model is one of low price returns for the S&P 500 - very possibly for years to come.

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