US Recession - An Opposing View

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A large number of reputable analysts and companies are forecasting a new U.S recession on the immediate horizon. Attracting the most attention is ECRI, which made a public recession call on September 30th and several television reaffirmations since. But an examination of a broader range of other composite economic indicators shows that sole reliance on ECRI's forecast would be misplaced.

On a more recent video clip, ECRI's CEO, Lakshman Achuthan, commented the recession could occur anytime within the next nine months. That would imply the call has a 12-month horizon from initiation. Indeed, a recession call 12 months out on the eve of the second year of an expansion is out of the ordinary if one considers the average length of post-war expansion of 61 months.

ECRI's track record may be beyond reproach according to many of the investing community but in reality this call has a long look-ahead horizon. Moreover, we should be uncomfortable making investment decisions upon a single source, no matter how above-reproach the forecaster's track record. Many people take the ECRI Weekly Leading Index (WLI) readings as on-going confirmation (or denial, as the case may be) of its call, given that the WLI is all that is publically available, but ECRI goes to pains to point out that their recession calls involve much more than just the WLI but a host of "long leading indicators."

The ECRI Weekly Leading Index (WLI) on its own is actually one of the least reliable indicators for forecasting or predicting recession. My firm has taken 15 reputable U.S composite indicators that date back at least seven business cycles and comprehensively compared the National Bureau of Economic Research (NBER) recession dating prowess from a number of aspects such as false positive rate, AUC, NBER capture rate, and NBER lead and lag.. If one was predisposed to the use of a *single* indicator for making recession calls (not wise) my advice is to examine the freely available Philadelphia Fed Aurora Diebold Scotti Business Conditions Index (ADS) or the Chicago Fed National Activity Index (CFNAI) for more accurate track records.

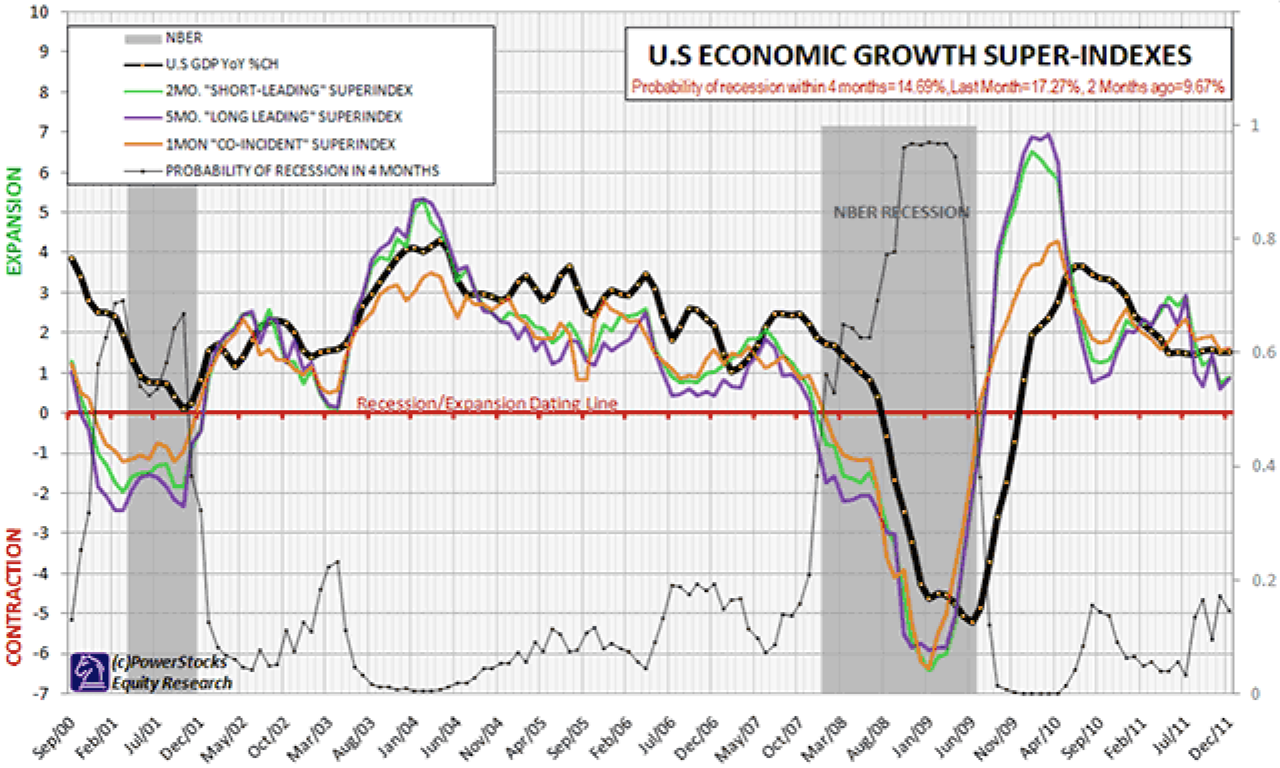
Looking at paid-for subscriptions (although they make monthly readings available to the public) you can do even better with the e-Forecasting.com monthly LEI (eLEI) or their monthly GDP time series. All these indicators in an appropriate recession dating model capture 90% or more of NBER recession months with at most one or two false positives, whereas the WLI captures 75% at best with at least three outright false positives since 1968.

The argument, test-methodology and research regarding which single composite indicator is best at dating and forecasting recessions in another topic altogether, but the key is you can make far more informed and accurate recession forecasts with multiple indicators than with any single one on its own, regardless of which mathematical model you use.

Let's examine our own forecast to provide an alternate view to those currently doing the rounds. The *PowerStocks Research Weekly SuperIndexes* are merely weighted indexes of nine popular and publicly available composite indices that provide a co-incident recession signal, a two-month lead recession signal and a five-month lead recession signal. They are composites of composites (super-composites); hence the term "SuperIndex." The nine underlying composites and associated weightings used in the index were chosen on the basis of their individual recession dating/forecasting prowess (measured by many metrics) and are in no particular order:

1. The Philadelphia Fed Aurora-Diebold Scotti Business conditions Index (ADS)
2. The Philadelphia Fed Business Outlook Survey (BOS)
3. The Conference Board Leading Economic Index (LEI)
4. The Conference Board Employment Trends Index (ETI)
5. The e-forecasting.com monthly Leading Index (eLEI)
6. The e-forecasting.com monthly GDP series (eGDP)
7. The Institute for Supply Management ISM Report on Business (PMI)
8. The Chicago Fed National Activity Index three-month average (CFNAI-MA3)
9. The ECRI Weekly Leading Economic Index (WLI)

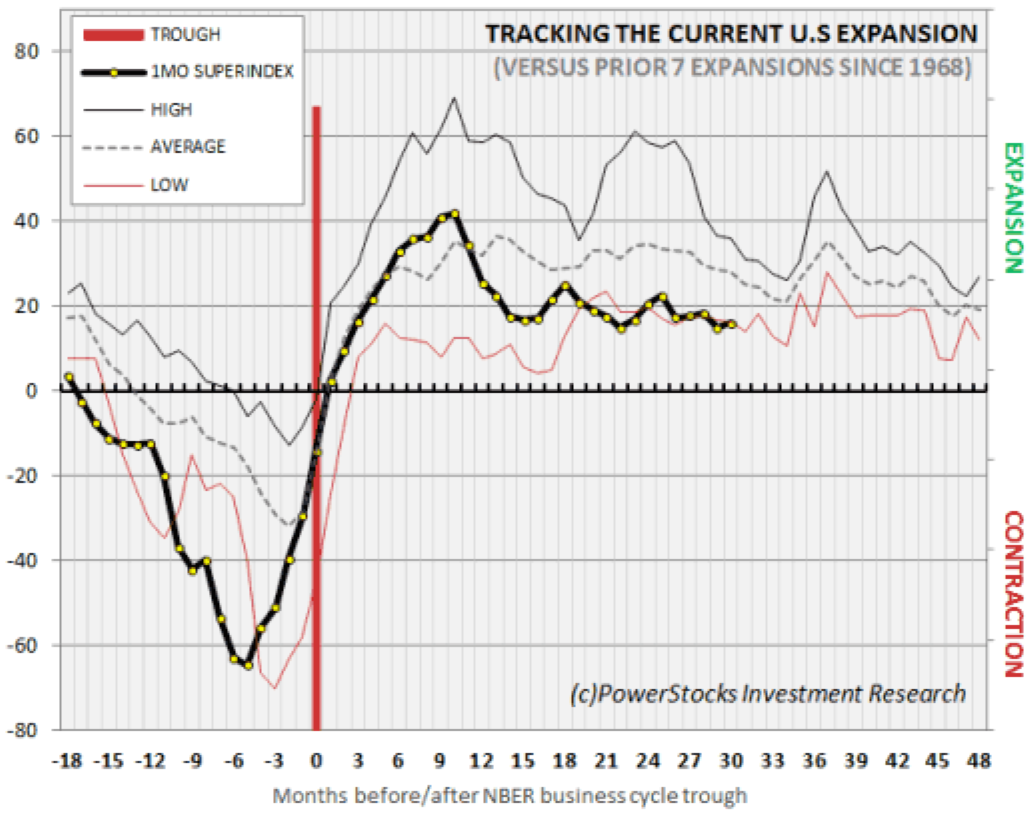
The nine composites above result in about 28 updates to the SuperIndexes on a monthly basis as underlying data become available, but we publish an update weekly for subscribers. The relationship between the SuperIndexes and more recent NBER recessions and US monthly GDP output are shown below as at December 29, 2011 together with the probability of recession from a nine-factor multivariate statistical probability model. We can see the probability of recession within five months is a lowly 14.69%, a not-uncommon level for the latter stages of an expansion as shown in the 2001-2007 period.



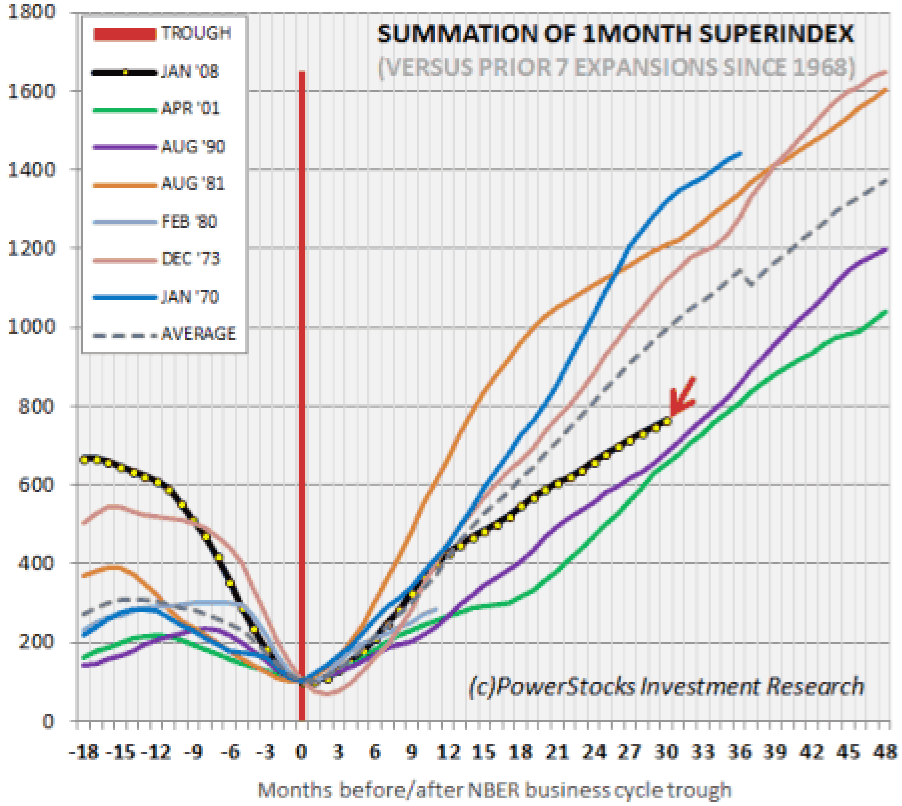
The SuperIndexes are rate-of-change oscillators (representing economic growth) and make their respective recession calls whenever they dip below zero on the Recession/Expansion Dating Line. Once they dip below this critical threshold, recession probabilities mount exponentially. Each SuperIndex had zero false positives in the seven recessions since 1968 and captured (correctly flagged) 97% or more of NBER recession months, with AUC accuracy of 97% or more. There is no doubt that strain in the economy has resulted in a rise in recession probability since August 2011 and clearly the three SuperIndexes are on a worrying downward trend, but no more concerning than those trends displayed in March 2003, Sept 2005 and July 2006, none of which led to NBER-dated recession.

So while we are by no means "out the woods," it is premature to issue a death certificate at this stage. Make no mistake – all it takes is three to four months of concerted and persistent downward pressure on the bulk of the nine components of the SuperIndex and we would quickly be in recession territory. If you examine past recession SuperIndex signatures, none were a slow decent into recession – but a rapid decline downwards with recession probabilities skyrocketing. But until that steep descent occurs, wait before prescribing time-to-live for a terminally ill patient.

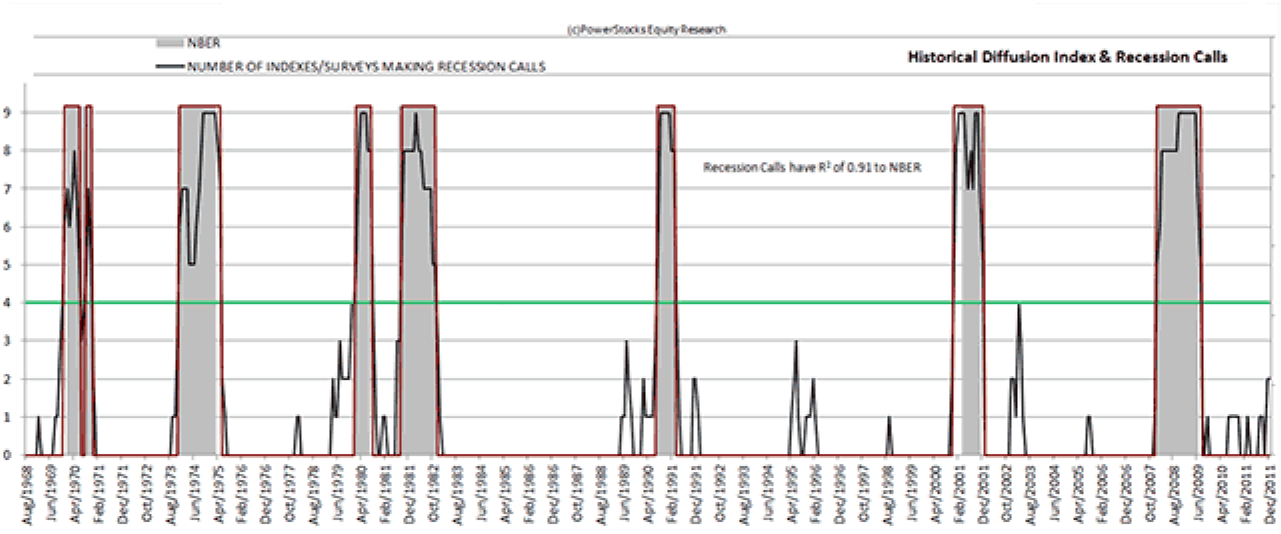
It is also illuminating to examine this current expansion in the context of prior expansions, as shown by the graphics from our SuperIndex Recession Report. The first chart depicts the current growth progress in relation to x-months before or after the NBER cycle business trough. Plots to the left of the vertical red line are months before the business cycle trough (representing contraction) and those to the right represent expansion following the trough. We depict the all-time high, the all-time low and the average of prior expansions for each month before and after the business cycle trough so we can compare the current expansion in relation to past ones. We see the current expansion got off to an average growth rate start for the first five months, then geared up to above-average growth rate for the following six months. It has registered below average growth rate for the last 19 months, in fact hugging the lowest growth rate of all prior expansions presently.



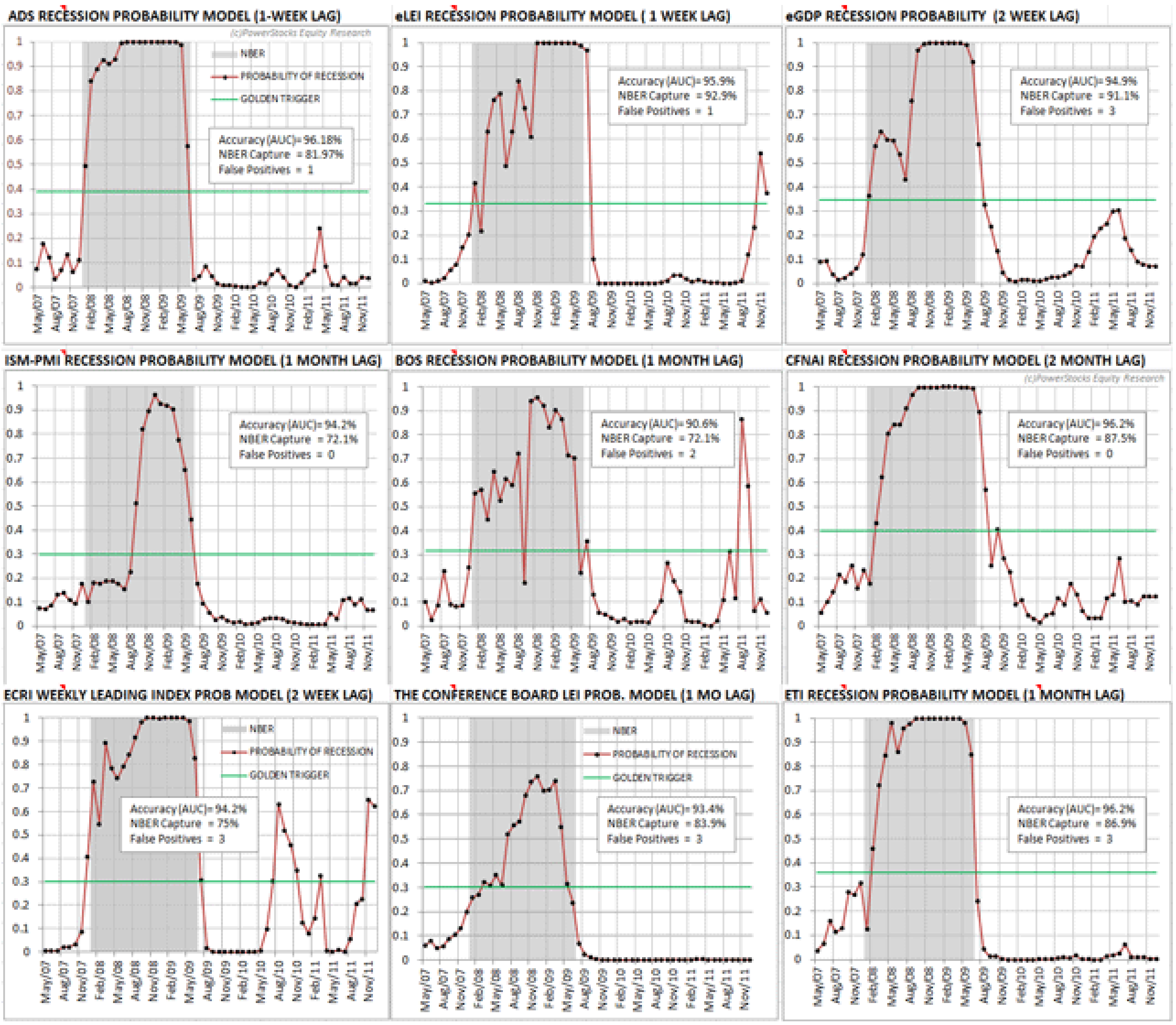
The second chart represents growth rate summation to give an idea of cumulative expansion progress versus prior cumulative expansion progress. The legend refers to start dates of prior recessions. This is of course a concern, hinting at the vulnerability of the current expansion to external shocks. Clearly it would have been much nicer to see an above-average expansion underway together with the current SuperIndex levels. So while the current SuperIndex levels themselves are not a cause for immediate recessionary concern, the US economy is surely more vulnerable at this point than prior expansions – which tempers our view.



One other signal we like to observe when assessing if we are in a recessionary environment is the SuperIndex DIFFUSION – how many of the nine components of the SuperIndex themselves are in their respective recessionary territories (based upon optimal individual recessionary models). Right now, only the ECRI WLI and the e-forecasting.com eLEI are in recessionary territory. As you can see from the historical chart below, once can only safely proclaim recession or not depending on whether the diffusion is above or below three (one false positive historically) or four (zero false positives historically). Two recession calls does not a recession make. Granted, the recession calls of the diffusion offer more of a co-incident view but at least for now we know we need two more systems to dive into recession territory before we can make any proclamations.



While it is interesting to observe in the above chart that only two of the nine components are currently flagging recession, it is also prudent to observe the probability state of those systems not yet flagging recession as shown below. These are maximum-likelihood single-factor logit statistical models built from the unmodified underlying time-series, and configured with “golden triggers” that are thresholds above which the respective probabilities must rise or fall to initiate a recession call/end for the series being studied. These triggers are optimized to give the individual probability model the best-fit to historical NBER dates from a false positive, area under curve fit, lead/lag etc. perspective. As you can see, all the other systems are way below their respective recession call triggers.



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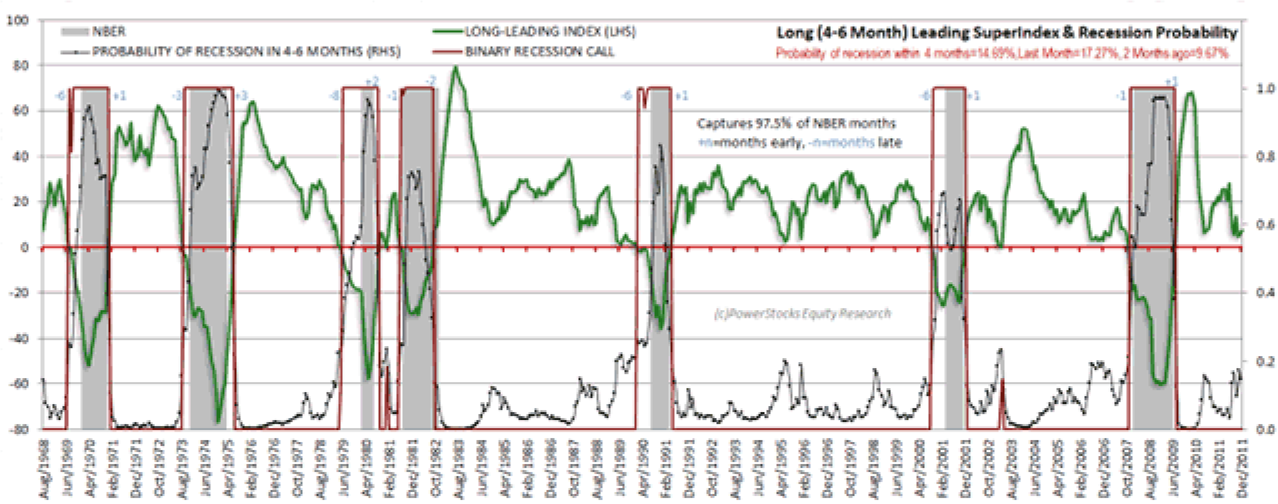
From an actionable point of view, investors should focus on the “long leading” five-month SuperIndex. This recession signal has presaged an average 28% drop in the US stock markets in six of seven occasions. The two-month, co-incident and diffusion indexes are more useful when it comes to confirming real-time presence of a recession or not. They are also our “safety nets” should the long-leading SuperIndex prove suboptimal in recession lead-dating. The long-term history of the five-month SuperIndex (providing on average a five-month lead to NBER recession) is displayed below. We are certainly “vulnerable” to recession at current levels but it is by no means a “done deal” on the four to six month horizon.



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