

The Labor Market Growth Index (LMI) groups together in a weighted composite, six labor-market related measurements provided by the Bureau of Labor Statistics (BLS) normally within the first week of the month. The data represents the prior month. Each of the six indicators chosen from the many provided by the BLS, have been found to be very reliable in describing and predicting the turning points in the U.S economic cycle as marked out by the National Bureau of Economic Research (NBER).

The composite Labor Market Index, which we call the LMI, provides a view on U.S economic growth and turning points purely through the lens of labor market data. The LMI provides very robust and accurate economic growth measurement and warnings of potential turning points in the economy. It also serves as an authoritative, at-a-glance representation on general U.S labor market conditions from varying aspects.

The growth rates used for the various BLS labor-market components are proprietary, but have been optimized to maximize each indicator's NBER recession dating capability whilst minimizing false positives and false negatives and providing rapid detection of directional changes in the underlying data that forewarn of approaching turning points.

Whilst each of the six indicators' growth rates are very respectable descriptors of U.S expansions and contractions, the composite LMI out-performs each one of them individually. The weights of the various labor market indicators used in the construction of the LMI are indicated on the various growth-rate charts below.

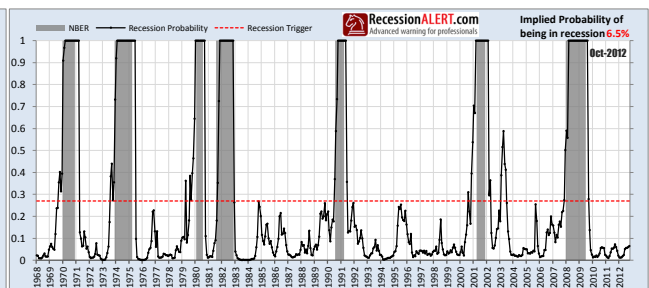
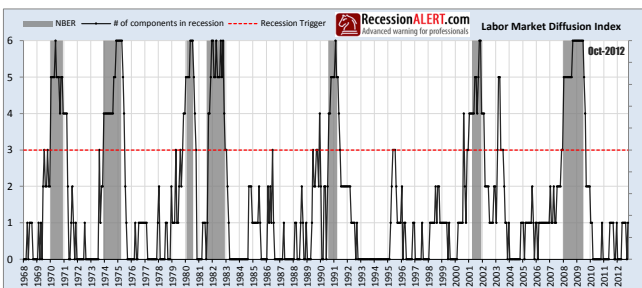
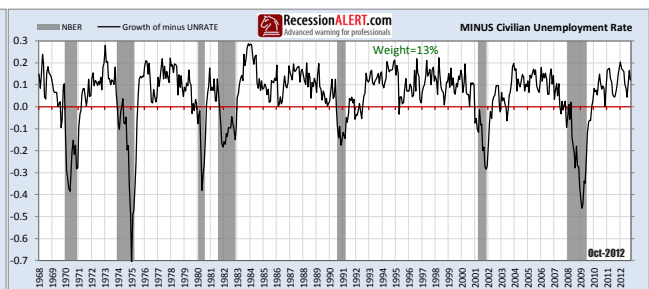
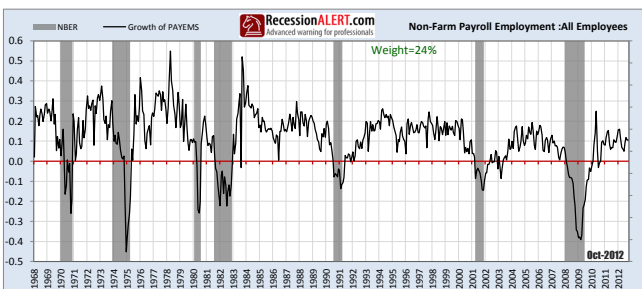
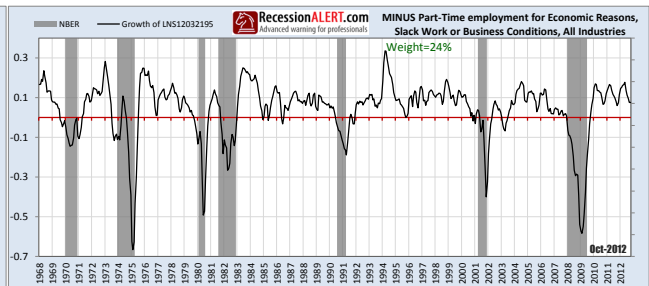
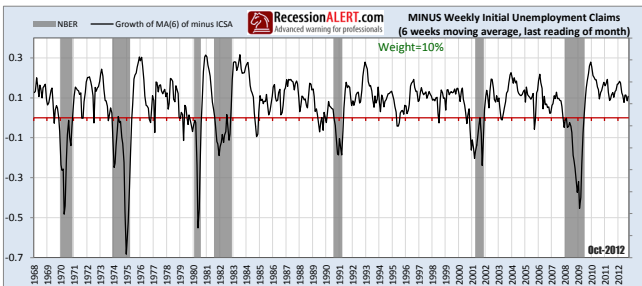
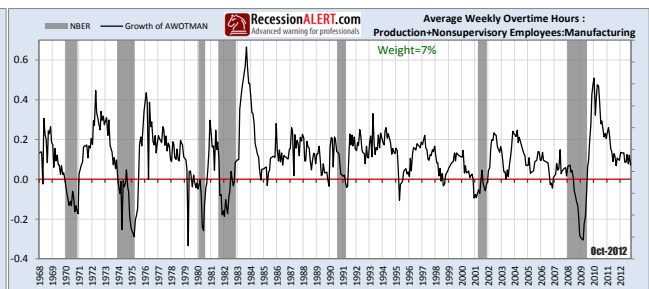
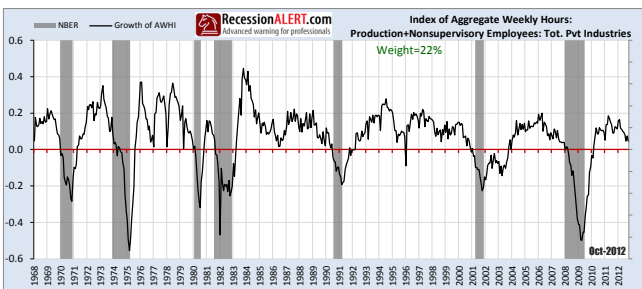
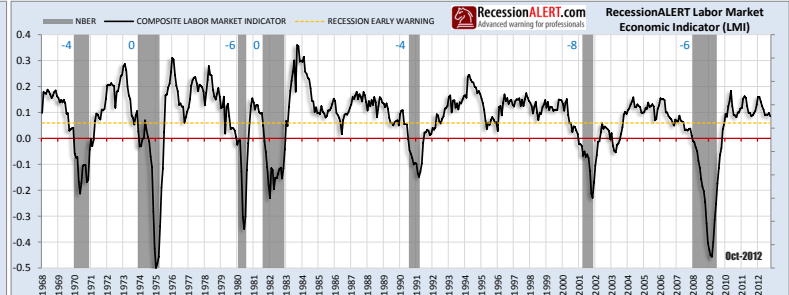
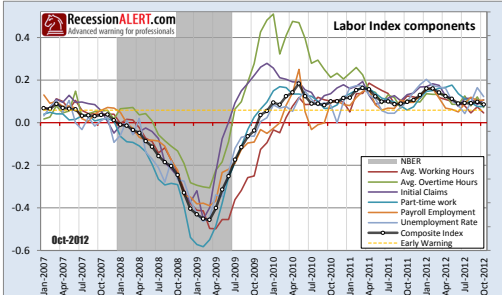
There are two recession triggers provided for the LMI. The first, indicated by the dashed amber line in the below chart, is an advance recession warning that provides leads to NBER recession indicated by the little blue numbers at the top of the chart. A "-3" indicates a 3-month lead, "+1" indicates a 1-month lag and "0" indicates a co-incident recession signal. A signal generated by two consecutive LMI readings below this threshold eliminates any previous false positives (false alarms). The red solid horizontal line at the zero level provides for a co-incident recession signal.

We also track a Recession Diffusion Index at the bottom of the report which shows how many labor-market indicators are at recessionary levels. When this gets to 4 or more, recession risks escalate dramatically. When 3 consecutive months pass with a reading of 4 or more, recession probabilities are virtually certain (100%).

The last chart is the Implied Recession Probability which uses the six labor market component growth rates together with stylized facts about the Recession Diffusion Index to determine precise mathematical probability of currently being in a recession. Readings above 0.27 provide recession warning whilst those above 0.6 virtually guarantee recession with zero historical false positives.



For best reading, select **VIEW**→**ZOOM**→**FIT VISIBLE**  
(or hit Control-3 on keyboard)



**MODEL RISK EXCLUSION:** Although many of our models rely heavily on back-testing, optimisation and probability methods, please note that past performance is NO GUARANTEE for future returns. No system devised by man can perfectly predict the future, let alone the future of the markets and economies. What we have are sets of mathematical models that use historical data and varying hypotheses to pinpoint places in time when the STATISTICAL LIKELIHOOD of calling the start and end to recessions is the greatest. In the midst of all the best mathematical models, you can have geo-political events, wars, terrorist attacks, natural disasters and even nuclear accidents that tip everything upside down. This is always a risk factor you need to factor in on any recession call no matter how confident you are in a signal. The LMI is created through mathematical and statistical optimisation techniques that best fit the historical NBER data. There is no guarantee that out-of-sample performance will match that of prior in-sample performance.

**EXTERNAL RISK EXCLUSION:** Recessionary risk from possible external shocks have not been built into the probability models, namely a steep & protracted Euro-zone recession, an EU member sovereign default or credit event, hard landing in China, failure by congress to re-ach agreement on deficit reductions, further possible U.S credit rating downgrades, Iran tensions/conflicts and oil-price shocks. The probability models just look at what we are seeing in the US economy itself and do not take into account these external factors (since in our view, this would be speculation and we just want to deal with hard real numbers). Should these external shocks come to light or their risks elevate, they will certainly show up in the US economy and/or the various indicators somewhere and then be detected by our models, but until then we do not speculate on the probability of the se external risks.

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