

The U.S. Business Cycle in the Context of the Yo-Yo Years

March 2013

Lakshman Achuthan
Co-Founder & Chief Operations Officer

Economic cycles are an inherent part of how every market-oriented economy in the world operates, and what happens around cycle turning points has always been ECRI's primary focus.

From this perspective, with the onset of the Great Recession – even before the Lehman Brothers collapse – we started to see some striking patterns emerge. In the summer of 2008, we recognized that we were on the cusp of the worst global recession since the early 1980s, and *then* we got Lehman.

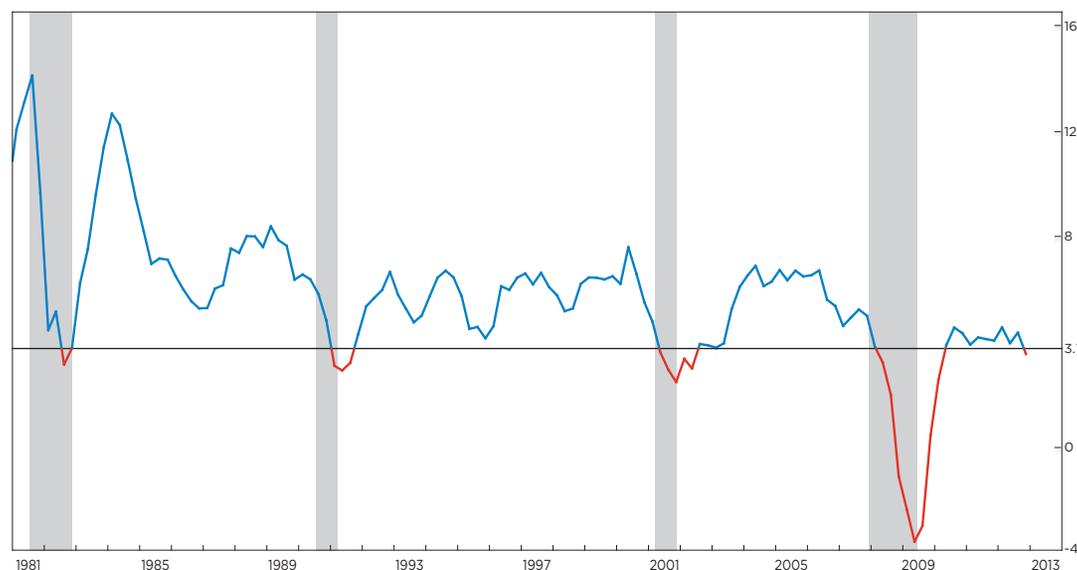
What we also began to understand that summer was an ominous pattern suggesting an era of more frequent recessions than anyone was used to.

We concluded that, because of the decades-long pattern of falling trend growth and the end of the Great Moderation in cycle volatility, we were entering what we called ↗ *“the yo-yo years,”* characterized by more frequent recessions in most Western developed economies, and more cyclical volatility for most developing economies.

It is now well known from the Reinhart and Rogoff work that, following financial crises, economies tend to experience unusually weak growth. But what the decades-long pattern suggested, even before the financial crisis, is that we were set to see a weak economic recovery, in any case.

Because the weakness of the revival from the Great Recession is almost universally blamed on the financial crisis, there is a broad consensus that the economy will return to much stronger trend growth after the deleveraging phase ends. But the implication of “the yo-yo years” thesis is that there is no clear reason for this longer-term pattern of weak growth to go away, even when deleveraging does come to an end. Indeed, the current evidence suggests that we are *already* in the yo-yo years for the U.S. and most other major developed economies. ■

Nominal GDP, Year-over-Year Growth (%)



Shaded areas represent U.S. business cycle recessions.

It was against this backdrop, in late September 2011, that ECRI made a recession call. A couple of months later, in December 2011, we clarified our view of the likely recession timing, saying that we thought it would begin by mid-2012, but not be recognized before the *end* of 2012.

We said this because, over the last six recessions, the median lag between the recession start date and the first *negative* real-time GDP print had been half a year. As it happened, in January 2013 there was a negative GDP print, consistent with our

belief that the recession had begun around mid-2012.

For about 30 seconds after the data release, analysts considered the possibility of recession – before rushing to rationalize the negative print as the best-looking contraction one would ever see. They blamed defense spending and inventory drawdowns in Q4 – while glossing over the conspicuous jump in those same items in Q3.

To see through such quarter-to-quarter gyrations, it helps to look at year-over-year real GDP growth which dropped to 1.6% in Q4 – a

reading rarely seen outside of recession.

Let us not forget, as well, that this weak GDP growth comes after trillions in “money printing” by the Fed and other central banks. *Now* there is talk of nominal GDP targeting. With that in mind, please look at the recent behavior of year-over-year *nominal* GDP growth, which has dropped to 3.5%.

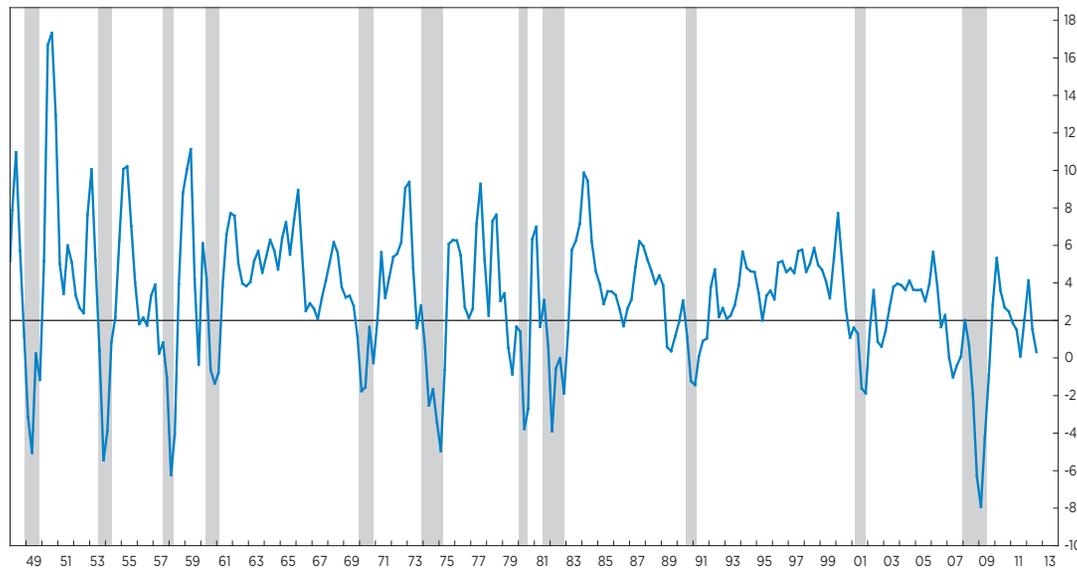
This chart begins in the early 1980s. Based on the full 65 years of historical data, nominal GDP growth below 3.7%, which is marked off by the horizontal line, has *always* occurred in a recessionary context – without exception.

This chart is consistent with a mild recession. Yet, we have all heard lots of commentary that we’re in a “2% economy” – not that great, but as long as the economy stayed above recessionary stall speed it would be okay.

But, are we really above stall speed? About two years ago the Federal Reserve Board published a study that investigated various stall-speed measures, including GDP and Gross Domestic Income (GDI), which should theoretically be identical to GDP but for the statistical discrepancy.

The Fed study concluded that the best stall-speed measure may be the two-quarter annualized growth rate of real GDI, and when that measure fell below 2% it was a recession signal, because the economy would stall out. ■

Real GDI, Two-Quarter Change (%, annualized)



Shaded areas represent U.S. business cycle recessions.

Here is a historical chart of the two-quarter annualized percent change in GDI, with a horizontal line placed at the Fed's 2% stall-speed threshold. You can see why they believe that historically that has been a fairly reliable recession signal, because it has never dropped clearly below that threshold without there being a recession.

It is not unusual to see this measure drop below the 2% stall speed, pop up briefly, and then fall back as recession begins. So where were we in 2012?

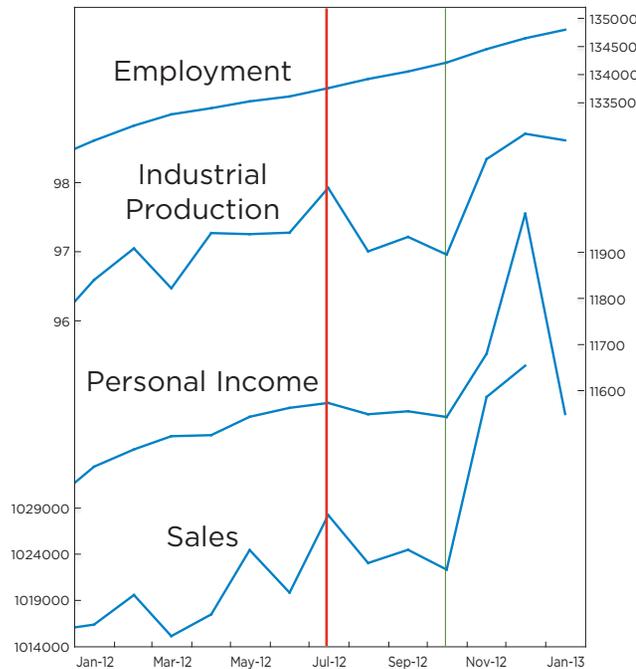
All the way to the right of this 65-year

chart we see this measure decline in the second quarter of 2012 to 1.5%, below the stall-speed threshold. And in the third quarter of 2012 it dropped further to 0.4%. So by last summer it had already spent *two quarters below stall speed*.

You may recall that in the run-up to last fall's election, the jobless rate was falling so rapidly that some even questioned how real the decline was. But in light of the Fed's stall-speed measure, their pledge last September of ongoing quantitative easing makes more sense.

So that is the evidence from GDP and GDI, and you can begin to draw your own conclusions about the U.S. economy and if it is in recession. But what about the other key coincident indicators? ■

U.S. Coincident Indicators



In addition to GDP, these key coincident indicators are used to determine official recession dates – and, to the extent they have risen recently, the evidence for a recession having begun around mid-2012 would certainly appear less persuasive. However, we would caution that the data should not simply be taken at face value, for three reasons:

1. temporary distortions due to special events like the rebound from Superstorm Sandy, and precautionary actions by companies and individuals in the lead-up to the “fiscal cliff”

2. the heightened probability of significant downward revisions to data following business cycle peaks

3. skewed seasonal adjustment factors

Regarding the first point, the temporary distortions due to Sandy and fiscal-cliff-related apprehensions are evident in the data for November and December, when a number of coincident indicators spiked up after October (vertical green line), most prominently income and sales.

In particular, many companies and

individuals pulled income forward from 2013 into late 2012, including special dividends, bonuses and other income, which in turn probably combined with other year-end tax concerns to temporarily boost sales. Together with the rebound from Sandy, this is part of the reason why manufacturing and trade sales likely received a year-end boost.

As these temporary distortions pass, those coincident indicators are likely to pull back towards their earlier downtrends. Indeed, the latest (January) data on personal income shows just this sort of correction.

Meanwhile, employment is still rising, but manufacturing employment has declined since July, and so has employment in residential building construction. Of course, employment can be a bit of a lagging indicator, and this is more so in some recessions than in others. In at least one atypical case, during the 1973-75 recession, the first eight recession months saw positive job growth. Is that unusual? Yes, but not unheard of.

Of course, all of this data is subject to revision, but at the moment, July looks like the high point for three out of these four measures (vertical red line), before the year-end spikes, which is consistent with an ongoing recession.

Separately, regarding the second point, a major issue making real-time recession recognition more difficult is the probability of significant downward revisions to the coincident indicator data. A detailed ECRI



investigation with regard to the growth rates of key coincident indicators revealed a tendency for upward revisions in the lead-up to and including the business cycle peak, and downward revisions following that peak.

Also, in almost all cases, the downward revisions following business cycle peaks have become increasingly pronounced in recent recessions – especially in the 2001 recession, and still more so in the 2007-09 recession – even for the months preceding the Lehman Brothers failure when that recession was relatively mild. This pattern is very clear within the payroll employment data.

Today, thanks to belated revisions, we know that between the January 2008 peak in payroll jobs and August 2008 – the month before the Lehman failure – the economy lost almost three-quarters of a million more jobs than was evident in real time on the day Lehman Brothers collapsed, nine months inside of the 2007-09 recession.

It turns out that for April through August 2008, which were pre-crisis recessionary months, the average downward revision has been 140,000 jobs per month, not materially different in magnitude from the preliminary 157,000 January 2013 increase in payroll jobs. The August 2008 payroll jobs number, for example, has been downwardly revised by 186,000 jobs. That is just the downward revision, not the jobs number itself. Likewise, for those five pre-crisis months in 2008, the average downward revision for industrial production growth has been 0.44% per month, compared with the average increase

of 0.12% per month seen since July 2012. There are similar findings for personal income and sales.

What about GDP growth, which has been revised up to 0.1% from -0.1% for the fourth quarter of 2012? Please recall that at the time Lehman collapsed, the latest release showed an upward revision to second quarter 2008 annualized GDP growth from 1.9% to 3.3%, following a positive first quarter. Second quarter 2008 annualized GDP growth has subsequently been revised down *by* 2.0%, and the first quarter *by* 2.7% (no, those are not misprints). Indeed, revisions to GDP growth for the first two quarters of the two previous recessions – which have almost always been downward – have also been in the range of *two to four percentage points* per quarter.

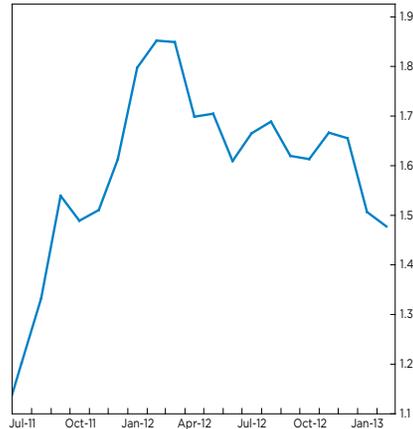
So Q4/2012 GDP growth could easily be revised down to a clearly negative number, and that would also be true of Q1/2013, if we see later downward revisions of the same order of magnitude as seen in recent recessions. That would make the third quarter of 2012 – which includes July 2012 – the cyclical peak for GDP. Similarly, downward revisions are quite possible for the other coincident indicators, and some of what we see at this time as modest but positive job growth could also be revised away.

Finally, with regard to the third point, there is a problem with the seasonal adjustment factors used to estimate these monthly data, stemming from the unusually deep contraction in late 2008 and early 2009 that was likely interpreted by standard

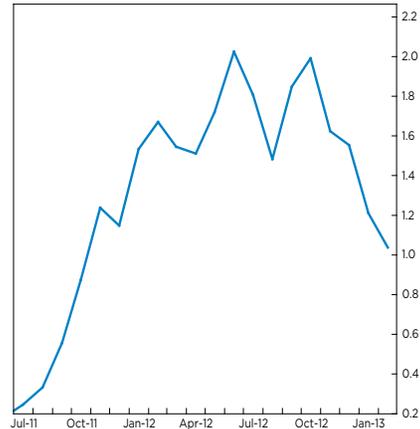
seasonal adjustment programs as a lasting change in the seasonal pattern itself, rather than being an isolated event. So, in recent years, the seasonal factors for the fall and winter months have effectively been expecting the data to be so weak that they are being adjusted upward in a way that makes them look fairly strong. In other words, algorithms on autopilot are probably making weak data seem not so weak in the fall and winter months. We have been speaking extensively to the data producers, both government and private, and our ongoing investigations suggest that this problem has not gone away. Rather, it has simply fallen off the radar screen of most observers.

But a simple way to minimize this seasonal adjustment bias is to look at the year-over-year growth rates of the data, which perform a sort of automatic seasonal adjustment. ■

**Total Nonfarm Payroll
Employment, Year-over-Year
Growth (%)**



**Total Household Survey
Employment, Year-over-Year
Growth (%)**



To avoid the aforementioned skew in seasonal adjustment factors, we are simply looking at the year-over-year growth rates since mid-2011. Through February, we see that payroll job growth has dropped to an 18-month low (left-hand chart) and household job growth has fallen to a 16-month low (right-hand chart).

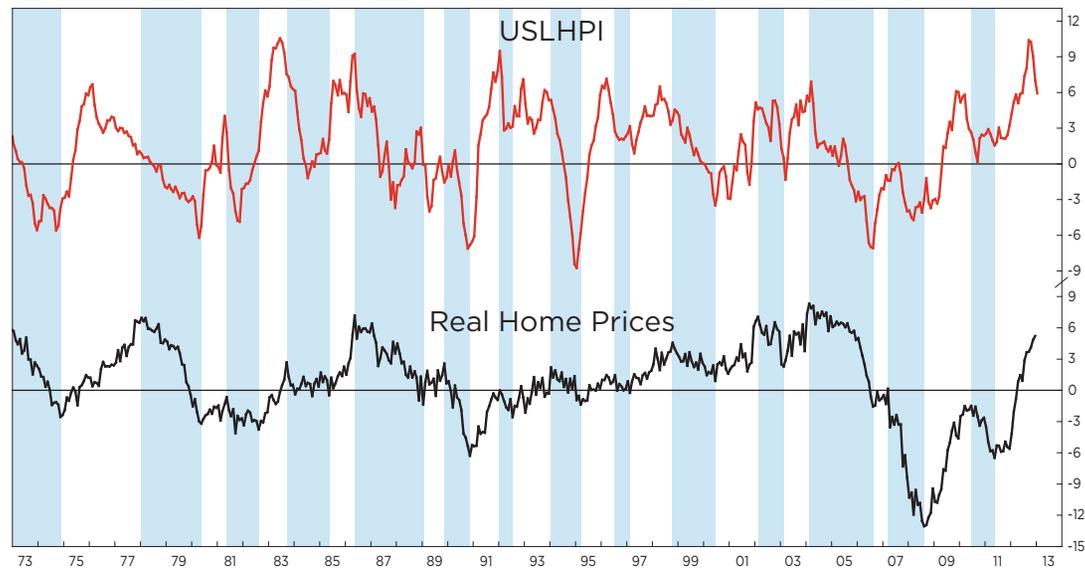
Indeed, these pictures of job growth shown by both the establishment and the household surveys are quite similar, and affirm that job growth is rolling over rather than improving. The so-called “improving trend”

in job growth is largely illusory, according to both the establishment and household surveys. *Quite simply, U.S. job growth is worsening, not getting better.*

In time the revisions will help clarify these data, but keep in mind that the first benchmark revisions for payroll jobs for the period in question will not be released for almost another year.

So this is why we do not see much strength in these coincident indicators. But what about the housing recovery? ■

U.S. Leading Home Price Index and Real Home Prices, Year-over-Year Growth (%)



Shaded areas represent cyclical downturns in U.S. real home price growth.

This is a 40-year chart of the year-over-year growth rates of ECRI's U.S. Leading Home Price Index and real home prices.

Last April, we made a home price growth upturn call that has been clearly vindicated. In fact, home price growth is at a seven-year high.

But please note that the leading index growth rate has dropped in recent months. It is a bit premature to predict a cyclical downturn in home price growth, but we are watching this closely. Of course, home prices are not the same as housing activity. ■

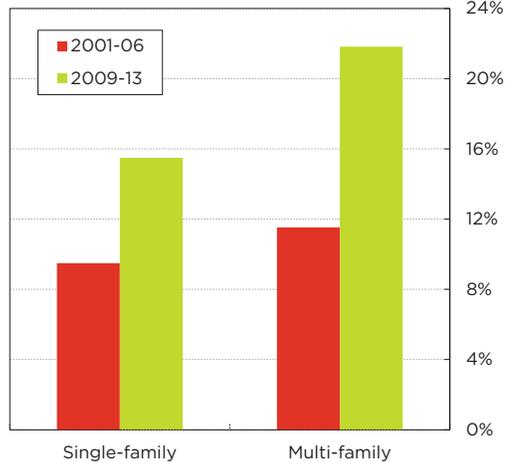
U.S. Housing Starts



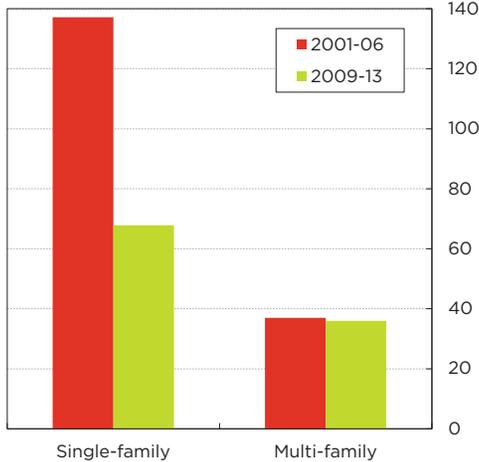
Shaded areas represent U.S. business cycle recessions.

Here you see a chart of housing starts. The upturn is real, no doubt, but please note that housing starts have risen during some past recessions, in particular the 2001 recession, which also saw a rise in home prices. But just how powerful is the housing starts upturn? ■

Changes in Housing Starts,
(%, annualized)



Changes in Housing Starts,
(Absolute numbers, annualized)



In the left-hand chart, the red bars show the annual percent increases in starts during the housing boom from the post-9/11 low to the 2006 high. The green bars show the percent increases in starts from the date of the 2009 low in single-family starts to the present. The left-hand pair of bars refers to single-family homes, and the right-hand pair to multi-family homes. By this measure, according to the left-hand chart, the current housing starts upturn is stronger than it was during the housing boom, especially for multi-family homes.

On the right-hand side is the same chart, but in terms of *absolute* increases rather than *percent* increases. So it shows the increase in the *number* of housing starts, and it suggests that for single-family homes the pace of increase is half of what it was during the boom. Multi-family home starts, which have been the stronger housing segment because of rental demand, are growing at roughly the same pace as during the last boom.

In other words, because the absolute *level* of starts is so much lower than it was before the bust, it plays a *much smaller role* now in

boosting GDP growth, essentially a fraction of a percentage point per year.

Meanwhile, there has been some improvement for employment in overall construction, especially after Superstorm Sandy. But please recall that in residential building construction, which is what these charts are all about, employment has *declined* over the last six months, and that is also true of manufacturing.

So, home *prices* have been in an upturn and that is a good thing. But that does not do as much for activity, and especially for employment, as many people would hope. ■

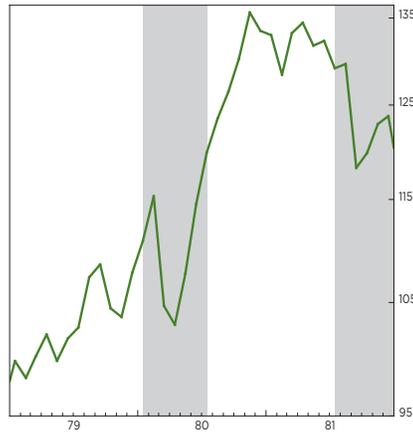
Business and Consumer Expectations



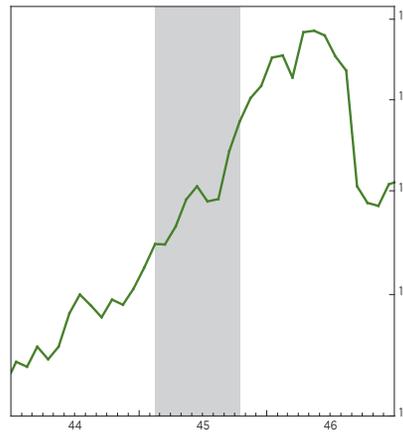
Another “green shoot,” at least until a few months ago, was the rise in consumer confidence. But in this chart, with the bottom line showing the University of Michigan’s consumer expectations index, one finds that, as usual, it has turned down following the earlier downturns in business expectations (top line) and small business optimism (middle line). This cyclical sequence is normal in the U.S. The red lines show the current levels of each. In essence, consumer and business expectations are languishing at recessionary readings, as you can see from this long-term chart. ■

We now turn to the third example of stocks rising through a recession. This was in 1926-27, during the Roaring Twenties. ■

**Stock Prices,
1980 Recession**



**Stock Prices,
1945 Recession**



Shaded areas represent U.S. business cycle recessions.

But of course, there is the elephant in the room, the impressive upturn in stock prices. How can we possibly be in a recession if the stock market is doing so well?

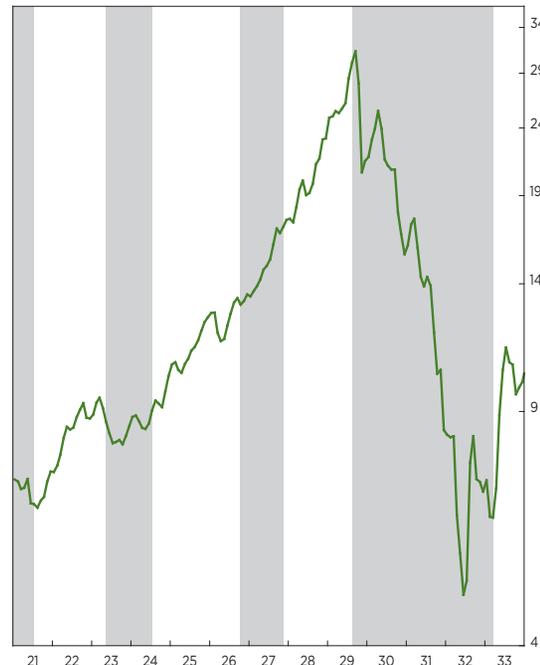
Sometimes people forget that the stock market is not the economy. Like home prices and construction activity, cycles in economic growth and stock prices do not always move together.

It is true that 80% of the past 15 recessions had associated equity bear markets, but in three of those 15 recessions there were no cyclical downturns in stock prices.

Specifically, this happened in 1980, 1945 and 1926-27. The chart on the left shows that, after the 1980 recession began, the S&P fell 17% in 30 trading days, but then took off until the next recession came into sight. This was no bear market.

In 1945, shown on the right side, there was a recession due to the demobilization following World War II, and stock prices ran up through that recession. But they turned down in 1946, and jumped around a bit until hitting their cycle low during the 1948-49 recession.

Stock Prices, 1926-27 Recession



Shaded areas represent U.S. business cycle recessions.

To be clear, the Roaring Twenties were different in many ways from what we have today. However, the 1920s also saw a lot of leveraging up by consumers and in the financial sector.

This chart starts with the end of the 1920-21 depression and runs through the end of the 1929-33 depression. Stocks dropped a bit ahead of the 1923-24 recession, but not really in the lead-up to the 1926-27 recession. Instead, stocks rose by *over 30%* during that recession. They then went on to rise another *80-plus %* before peaking in September 1929,

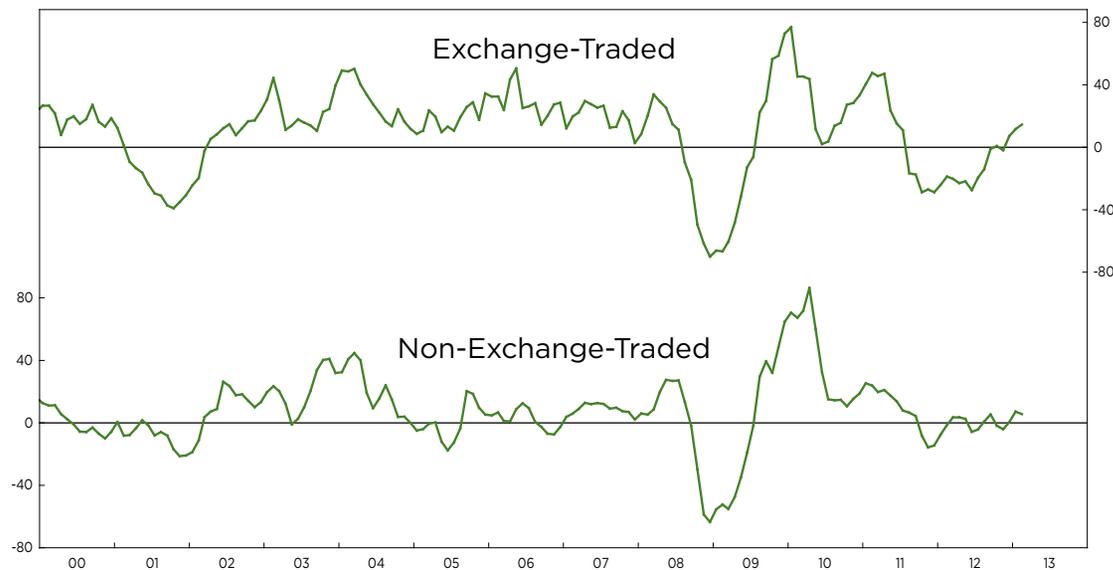
one month after the 1929-33 recession began, and one month before the October 1929 market crash. *So when people say that we cannot be in recession now because stock prices are rising, it is important to know that we have seen this movie before.*

And by now, we all know that the Fed's objective is for people to move into risk assets, like stocks, to help create a wealth effect. Here is Mr. Bernanke in his own words from a press conference last September:

“We are trying to meet our maximum employment mandate, so that's the

objective... [T]he tools we have involve affecting financial asset prices, and ... those are the tools of monetary policy... [M]any people own stocks directly or indirectly. The issue here is whether or not improving asset prices generally will make people more willing to spend... And if people feel that their financial situation is better because their 401(k) looks better ... they are more willing to go out and spend, and that's going to provide the demand that firms need in order to be willing to hire and to invest.” ■

JoC-ECRI Industrial Price Index, Exchange-Traded and Non-Exchange-Traded Components, Growth (%)



In a whole range of financial markets essentially targeted by the Fed, it is not easy to tell the extent to which a market price reflects actual economic fundamentals. But ECRI has a way to get some insight into this issue, relatively cleanly, specifically, through our Journal of Commerce-ECRI Industrial Price Index.

What is special about this commodity price index is that about half of its components are exchange-traded commodities, but the other half are not traded on any exchange. So logically, the

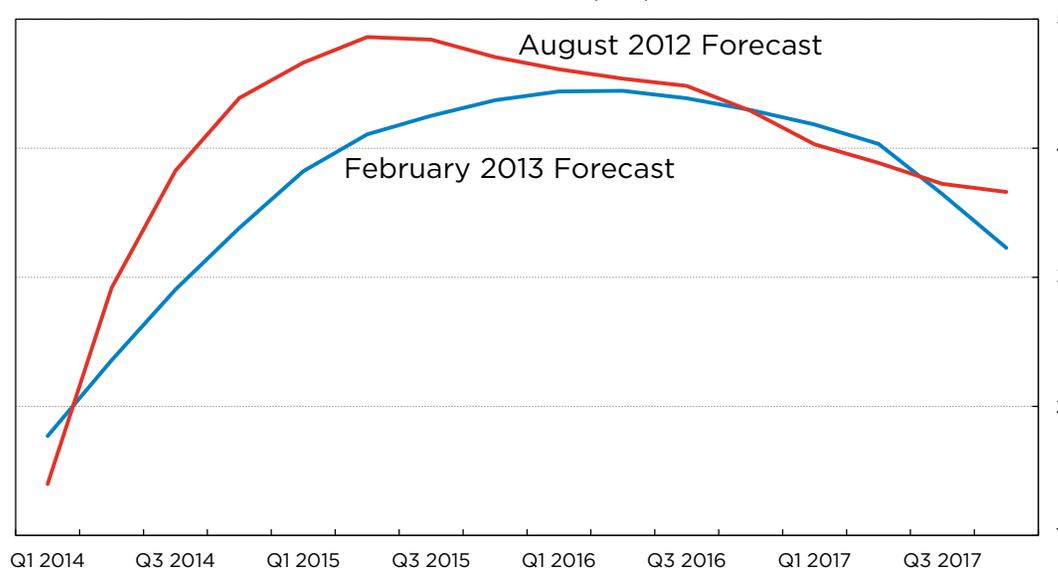
exchange-traded commodities are susceptible to the risk-on trade, while the non-exchange-traded commodities are driven primarily by economic fundamentals. The growth rate of our commodity price index has clearly been rising, but in this chart we have separated the index into two groups: exchange-traded and non-exchange-traded commodities.

As the chart shows, its advance is being driven almost wholly by the surge in its exchange-traded components (top line), rather than its non-exchange-traded components (bottom line). What this

suggests is that market prices, including stock prices, can be misleading as indicators of economic fundamentals, especially under the current circumstances.

Once again, the implication is that central bank “money printing” can help boost market prices, but that has not translated into improved economic fundamentals. ■

CBO Real GDP Projections, Year-over-Year Growth (%)



Nevertheless, the idea that we are in a “2% economy” with “green shoots” of stronger growth ahead persists. One example of this optimism is the Congressional Budget Office’s real GDP growth projections from last summer (red line) and then their updated projection from February (blue line).

Last August they expected real GDP growth to rise above 4% by 2014 and to remain up there for over two years. Now they have pushed back their timeline a little, but they are still expecting us to accelerate above 4% growth by mid-2015, and stay there

for a couple of years.

We all know they have been making forecasts like this for years, in the hope that the rebound is just around the corner. And please remember that these forecasts form the basis for both parties’ budget projections in Washington. Wall Street’s forecasters may *seem* more reasonable than Washington’s, but, to be clear, they say we are in a 2% economy now, and will accelerate well above that by the end of the year into 2014, so that is not so different.

Now think back to our earlier discussion about the yo-yo years and how we are not

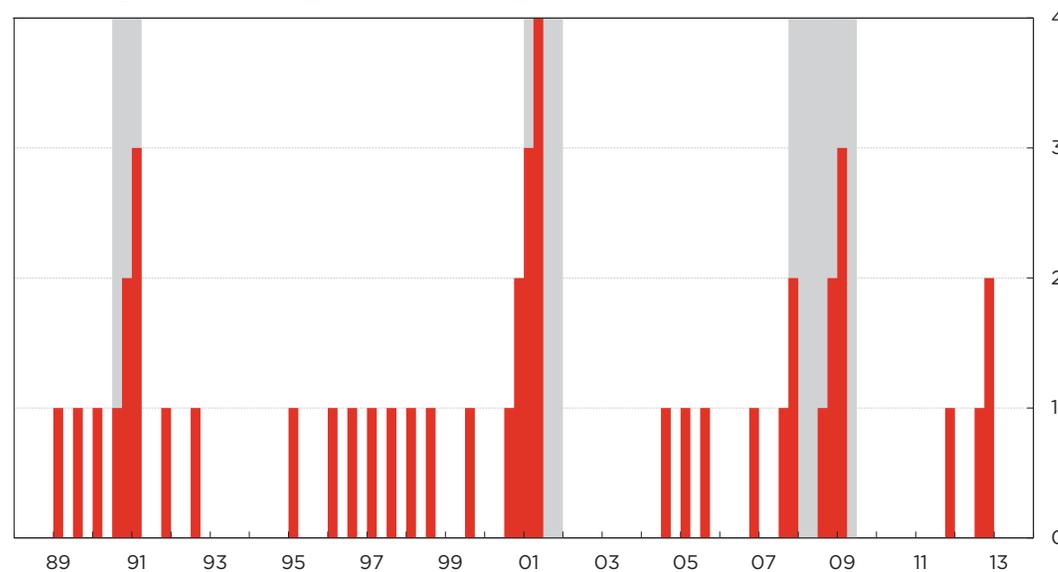
anywhere near these assumptions. Remember, we have averaged just 1.6% annual GDP growth since the beginning of the century.

Switching back to reality, recall the Gross Domestic Income chart that we saw earlier, and that this measure has dropped to 0.4%. But everyone still calls it “a 2% economy” in the hopes we are just above stall speed, which we clearly are not.

Please also recall the nominal GDP chart. In principle, central banks can influence nominal GDP growth, and in trying to do so they have pushed trillions and trillions of dollars into the banks, and yet the net effect is that nominal GDP growth has dropped into recession territory. So how realistic is it to believe that this time monetary policy will override the business cycle and stave off recession indefinitely?

Another implication of this recessionary performance of nominal GDP growth is its impact on companies’ earnings, which of course are in nominal dollars. ■

Consecutive Negative Quarters of Operating Earnings Growth



Shaded areas represent U.S. business cycle recessions.

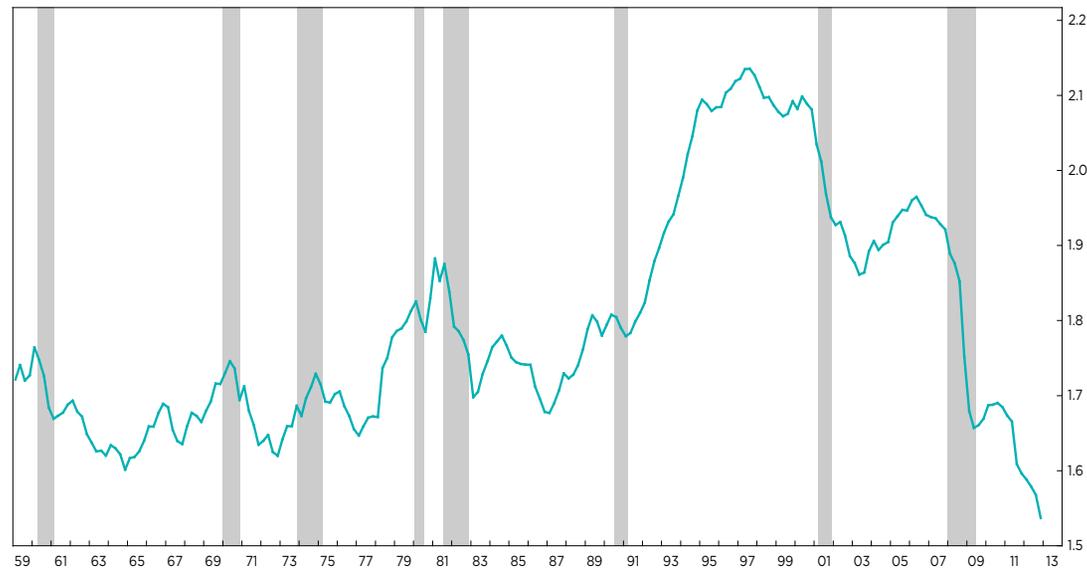
This is a bar chart of S&P 500 operating earnings growth going back a quarter of a century on a consistent basis, as we understand from S&P. Others can choose their own definitions of operating earnings, but this is the data from S&P. In this chart, the height of the red bar indicates the number of consecutive quarters of negative earnings growth.

It is interesting that, historically, there have never been two or more quarters of negative earnings growth outside of a recessionary context. On this chart, showing

the complete history of the data, the only times we see two or more quarters of negative growth are in 1990-91, 2000-01, 2007-09 and, incidentally, in 2012. This data is not susceptible to the kind of revisions one sees with government data. The point is that this type of earnings recession is not surprising when nominal GDP growth falls below 3.7%. So, even though the *level* of corporate profits is high, this evidence is also consistent with recession.

So how can this be happening with all-in, “whatever it takes” central bank easing? ■

Velocity of Money



Shaded areas represent U.S. business cycle recessions.

The velocity of money – the ratio of nominal GDP to the money supply – has *plunged* to record lows. Indeed, it is instructive to look at what happens to money velocity during recessions on this chart. Quite simply, one does not see the kind of plunge we have today outside of recession.

Here we see the reality of how quickly Fed policy has been losing traction since 2011, yet many choose to believe that this time is different. ■

Conclusions

- ▶ **The Yo-Yo Years are here.**
- ▶ **U.S. economy is below stall speed by Fed's own measure; GDP growth is recessionary; and corporate profits recession is underway.**
- ▶ **The business cycle cannot be repealed in market economies.**

In the prior 222 years, we had experienced 47 U.S. recessions. The Fed cannot repeal the 48th recession, and there is no reason why the economy would not recover from the 48th recession as it has recovered from the previous 47.

This is just the business cycle, which includes expansions and recessions and is part and parcel of how a free market economy operates. Pretending otherwise will not make it go away.

The yo-yo years present a major challenge, especially because unemployment is likely to cycle around high levels, along with government budget deficits. But we should also be very concerned about the unintended consequences of futile efforts to repeal the business cycle itself. ■

Summing up, we are already in the yo-yo years, which amounts to more frequent recessions in the West, and more cyclical volatility for the rest.

Secondly, what we see here – an economy growing below stall speed, nominal GDP growth below the historical recessionary threshold, an earnings recession, and plunging money velocity – are the hallmarks of a recession. Separately, we are not seeing signs of an imminent growth upturn that so many claim to see.

Basically, as long as there are economic

cycles, one cannot have such weak growth manifest itself as some sort of “new normal” low-growth, recession-free, muddle-through economy.

Moreover, the yo-yo years are rooted in long-term structural issues, and we are currently in a cyclical downturn. Monetary policy cannot make these hard realities go away, but central bankers' attempts to counter all of this amounts to pushing on a string, and when that does not work, pushing even *harder* on the string.

That said, a recession is not a calamity.