Flawed Assumptions and Grand Experiments

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This year began with recession fears throwing a spotlight on the elephant in the room. As the cover of *The Economist* put it a few weeks back – central banks may be out of ammo to fight recession... ■

The Elephant in the Room

How and why did we get here?

As students of the business cycle we have a perspective that is different from that of most mainstream economists. Because of our focus on cycles, we have a good handle on what is cyclical and, by elimination, what is not.

This is why, back in the summer of 2008, pre-Lehman, we were able to first identify the long-term pattern of weaker and weaker growth during successive expansions, stretching back to the 1970s. In fact, Eduardo, your *New York Times* colleague, Floyd Norris, wrote about our findings at the time.

In April 2009, in the depths of the Great Recession, the talk at the London G20 conference was all about Depression, but that same month ECRI predicted that the U.S. recession would end by the summer of 2009. And so it did.

By early 2010, the reality of the new expansion had engendered expectations of a V-shaped recovery, given the depth of the downturn. As I recall, there was much talk of the so-called "Zarnowitz Rule" invoked by the IMF's late Michael Mussa, to the effect that the deeper the recession, the stronger the initial stage of the revival.

Wouldn't you know it, that quickly got simplified to: "the deeper the recession, the stronger the revival," dropping the key qualifier, "initial stage."

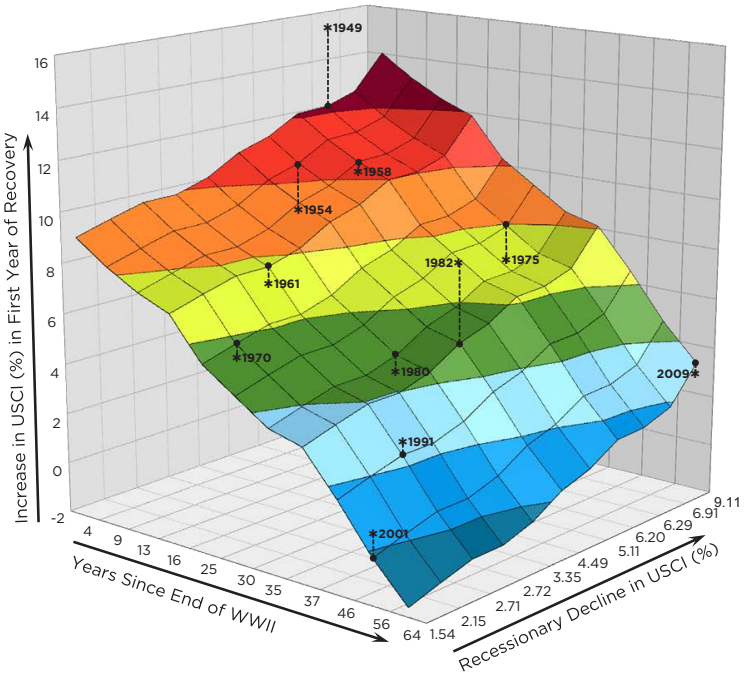
Perhaps this simplified version gained so much traction because it fit well with Milton Friedman's plucking model, where he envisioned output as a string attached to an upwardly sloping ceiling, being occasionally plucked down by recessionary shocks; following which the string snaps back to the upwardly sloping ceiling, again in line with the simplified Zarnowitz rule.

The gap between these flawed expectations of revival and the reality of growth slumping in the so-called "recovery summer" of 2010 supported the case for what became a Grand Experiment, starting with QE2 that fall, intended to boost the economy to "escape velocity;" in other words, to boost the economy to a self-sustaining course, back to "business as usual," with long-term trend growth around 3%.

But instead of questioning those assumptions, after years of zero interest rate policy (ZIRP) and quantitative easing (QE) failing to achieve that objective, the Fed and other central banks kept doubling down.

So, let's examine the assumption, is there any relationship between the severity of a recession and the strength of the subsequent revival? ■

USCI Growth (%) During First Year of Recovery



At last year's Minsky conference, I showed that the conclusion we had first reached in the spring of 2009 had been vindicated. Meaning that the first year of recovery from the Great Recession was pretty much in line with historical experience, while, as for the rest of the expansion, the business cycle owed us nothing more.

Let's look at the evidence.

This is a regression surface that supports the idea that the strength of the *first year of revival* depends on the depth of the recession, which is what Zarnowitz and Mussa meant, before their words were taken out of context.

The chart also shows something further. The strength of the first year of revivals has been declining over the decades. We use the analogy of a rubber ball that gradually loses its elasticity over the decades. Like that rubber ball, the economy still bounces back stronger in the initial period following deeper recessions, but with its elasticity gradually declining, the strength of the first year rebound is diminishing over time.

The chart shows two independent variables – the time elapsed since World War II (left horizontal axis) and the depth of recession (right horizontal axis). Here we use a broad measure of U.S. economic activity, which is ECRI's U.S. Coincident Index, subsuming the aggregate measures of output, employment income and sales.

The dependent variable is USCI growth in the first year of economic recovery (vertical axis). The relationship among these variables is statistically significant and explains three-quarters of the variance in the strength of the recovery in the first year of recovery.

The regression surface slopes downward on the left side, showing that, as years pass, the rate of growth in the first year of expansion declines. The ball becomes less bouncy, so to speak.

The upward slope on the right side shows that, when recessions are deeper, you then see a stronger rebound in the first year of expansion.

The stars mark the actual strength of revival in the first year of recovery, and the dots on the regression surface mark the corresponding regression estimates.

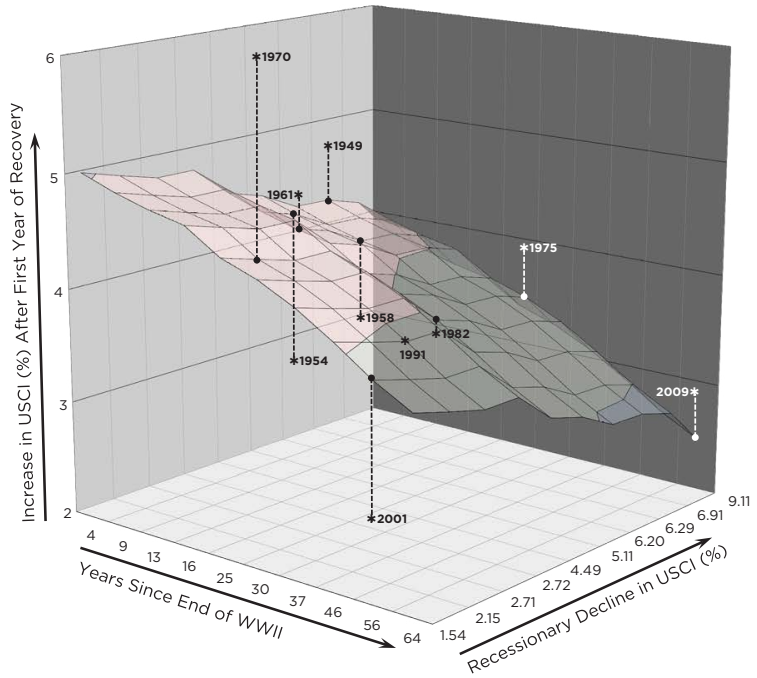
I would encourage everybody to look at this chart more closely later on, but let's highlight the first year of recovery following the recession that ended in 2009... where you can see that if we'd had that severe a recession in the late 1940s, we would have expected a rebound on the order of 14%, up here.

Also, it's only because the recession was so severe – all the way back here – that we managed a rebound over 3%. In other words, if the recession had been half as deep, the expected rebound would be less than 1% in the first year in terms of USCI growth.

At the end of the day, this chart tells us that the size of the V-shaped recovery in the first year of revival is linked to both the depth of the recession and the passage of time, a proxy for structural change, which we will soon touch on.

However, following the first year of recovery, it's a different picture. ■

USCI Growth (%) After First Year of Recovery



This chart is very similar to the previous one, with same independent variables: the passage of time and the depth of recession.

The crucial difference is that the dependent variable on the vertical axis is the average pace of growth during the expansion *following the first year of recovery*.

Notably, in sharp contrast to the results shown in the previous chart, this relationship is not statistically significant, which is why we faded out the colors.

If anything, to the extent that there is any loose relationship, it is the opposite of what one might expect.

While the slope of the regression surface along the left horizontal axis is still downward-sloping, the one along the right horizontal axis is now also downward-sloping. This suggests that deeper recessions may actually be associated with more sluggish economic growth following the first year of revival.

That observation flies in the face of how most people believe the economy "should" perform, but deeper recessions are sometimes followed by weaker growth after the first year of expansion.

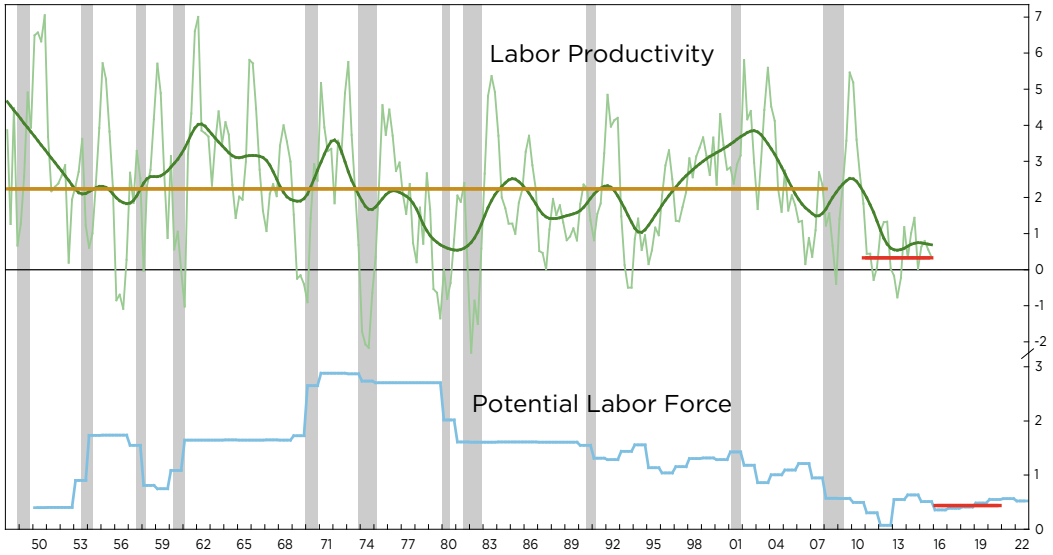
Basically, there is no real relationship here. After the first year of recovery the pace of growth has little to do with the depth of the earlier recession.

To be clear, we are not suggesting that this is a model anybody should use to design policy.

The point is that the evidence raises considerable doubt that, beyond the first year of revival, V-shaped recoveries repair the damage done by deep recessions.

Furthermore, the real issue remains the long-term decline in trend growth, which even extraordinary monetary policy efforts cannot change. ■

Growth in Labor Productivity and Potential Labor Force (%)



Shaded areas represent U.S. business cycle recessions.

Last June, we underscored the simple math underlying the decline in trend growth.

As you know, labor productivity growth and potential labor force growth add up to potential GDP growth.

The Congressional Budget Office now pegs potential labor force growth at 0.4% a year for the next five years, and that's pretty much set in stone. You see it here as the horizontal red line in the bottom panel of the chart.

Meanwhile, productivity growth has averaged 0.4% a year for the last five years, shown by the horizontal red line in the upper panel. In the words of Fed Vice Chairman Stanley Fischer, it "has stayed way, way down."

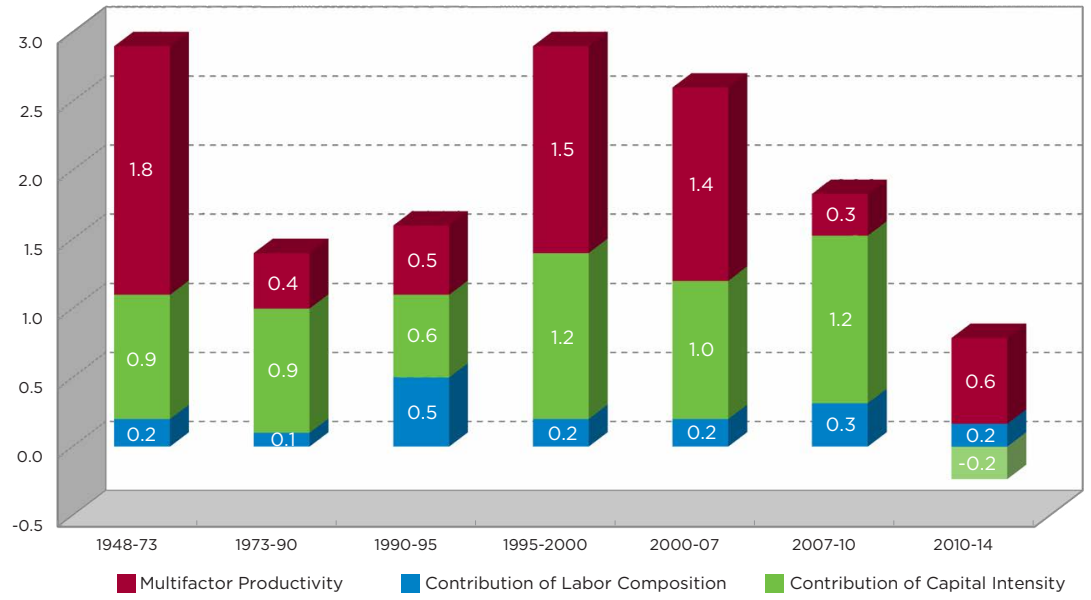
As to where it's going from here, Cleveland Fed President Loretta Mester thinks it will revert to its post-WWII average of around 2¼ percent, shown by the horizontal gold line.

Yet Mr. Fischer noted that "productivity is extremely difficult to predict," and only went as far as to say that it "will *perhaps eventually* return" to its earlier pace (italics ours).

But if things stay around where there are, we're looking at 0.4% productivity growth plus 0.4% potential labor force growth, adding up to 0.8% longer-term real GDP growth.

Potential labor force growth is just about demographics. But if you dig into what's driving this drop in productivity growth, you find something interesting. ■

Contributions to Productivity Growth, Percentage Points



This chart shows that there has been a steady fall in labor productivity growth and a noticeable shift in its sources of growth over the years.

But, eyeballing the previous chart, it looks like the post-World War II history of productivity growth has unfolded over several phases. So it's instructive to break up the period judgmentally, starting with the initial 1948-73 period of relatively strong productivity growth, followed by a slump that lasted until the early 1990s, and so on, and ending with the period following the Great Recession and its immediate aftermath.

It is instructive to break out labor productivity growth into growth in labor composition (the quality of labor); capital intensity (the ratio of capital to hours worked); and multifactor productivity, a measure of the combined influences of technological change, higher efficiency, returns to scale, reallocation of resources, and other factors affecting economic growth, over and above the individual effects of capital and labor.

From 1948 to 1973, a period that saw labor productivity growth average almost 3% per year (first bar), multifactor productivity (red portion of bar) was the overwhelming driver of labor productivity growth, followed by capital intensity (green portion of bar).

The contribution of multifactor productivity then collapsed, causing labor productivity growth to fall by about half to 1½% per year between 1973 and 1995 (second and third bars), but then rebound between 1995 and 2007 (fourth and fifth bars), basically remaining robust until the eve of the Great Recession.

What jumps out is the period following the initial recovery from the Great Recession (rightmost bar), where the contribution of capital intensity went negative, after being in the ballpark of 1%, give or take, in the entire post-war period.

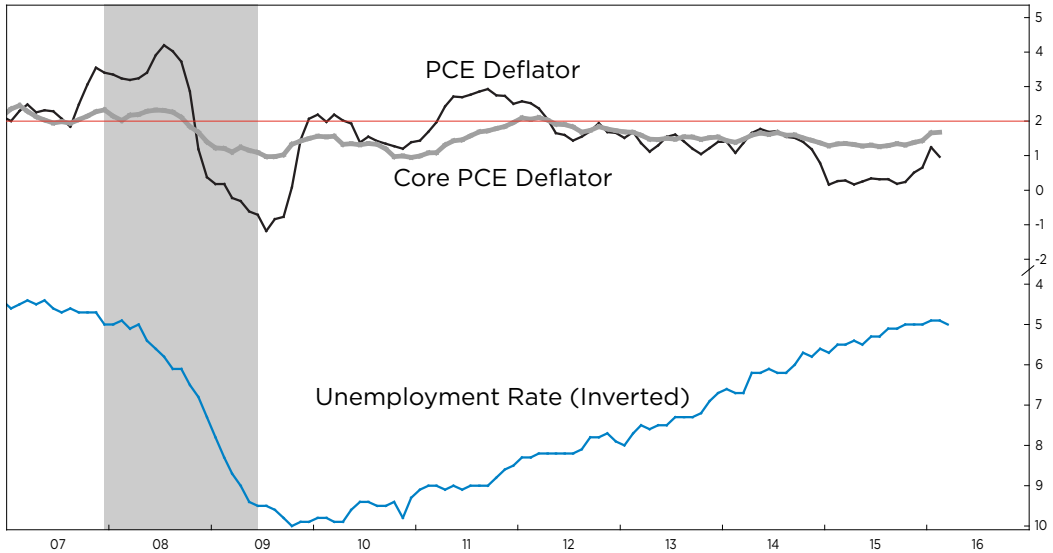
So while multifactor productivity and labor composition have been making modestly positive contributions in recent years, that of capital intensity has turned negative despite cheap money and the average age of private nonresidential fixed assets being near a half-century high.

Please recall that the ratio of capital to hours worked defines capital intensity. What's happened is that economic growth, such as it is, has been skewed toward growth in the number of hours worked, largely in lower-wage service sector jobs, while capital investment has taken a huge hit.

Basically, without a revival in capital investment, we are unlikely to see much of a recovery in labor productivity growth.

But notwithstanding this long-term structural problem, the Fed is pretty close to meeting its dual mandate, right? ■

Fed-Mandate-Related Metrics: Inflation and Unemployment Rate (%)



Shaded area represents U.S. business cycle recession.

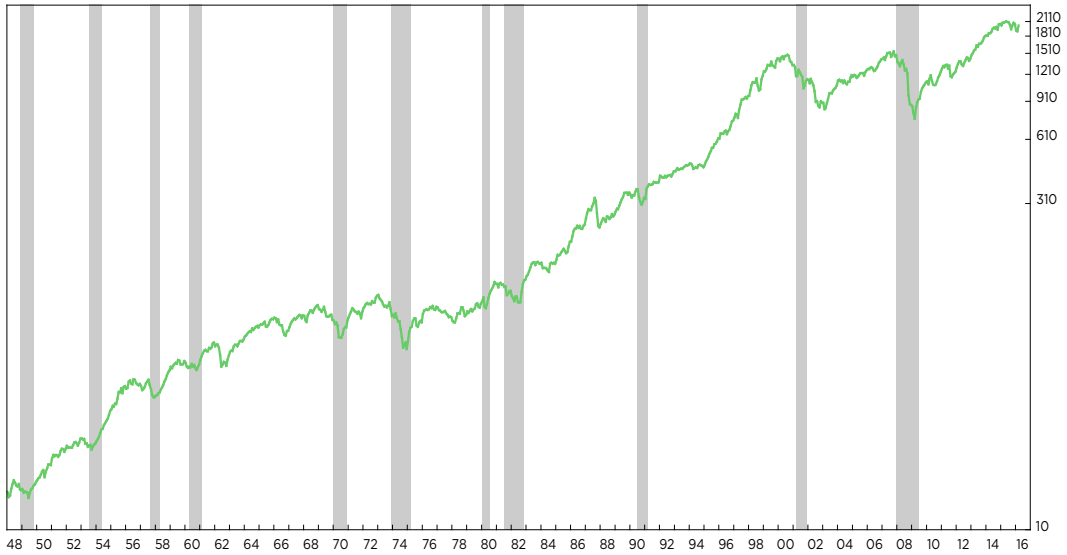
As we know, the unemployment rate has been falling steadily for years, and is now practically at the Fed's shrinking estimate of the non-accelerating inflation rate of unemployment (NAIRU).

And inflation, including, in particular, the core PCE deflator, is pretty close to the Fed's 2% target. And yet the Fed seems pretty "dovish."

So what's the problem?

One could argue that it's what has effectively become the Fed's third mandate... ■

Stock Prices, S&P 500 (1941-43=10)



Shaded areas represent U.S. business cycle recessions.

I don't think it's news to anyone that every time the market has faltered following the financial crisis, the Fed has turned "dovish" in some way, shape or form. This chart suggests why that may be.

Perhaps it's because the recessionary bear markets in the 21st century, around the 2001 and 2007-09 recessions, are bigger than any other post-World War II bear market.

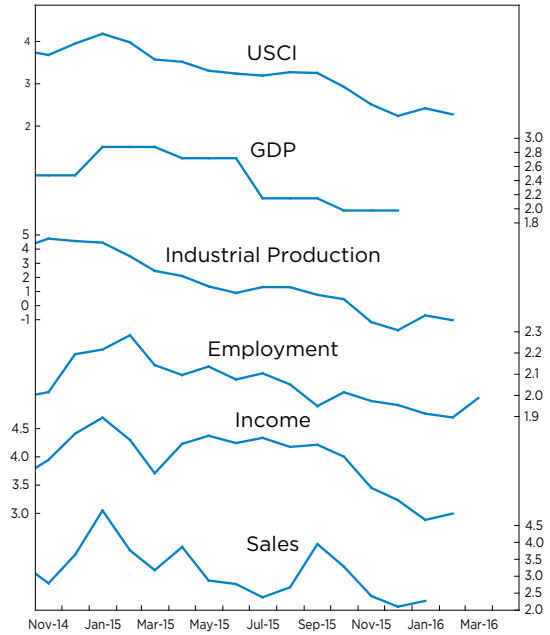
If the Fed really does consider avoiding a major bear market to be part of its informal mandate, you can understand why a recession must now be avoided at any cost.

Or perhaps it's not about "us," but rather about "them," meaning it's all about global growth, given that the word "global" was mentioned 22 times in the latest Fed minutes.

If it's global growth that's the problem, ECRI's view has been for a while that we are in a global slowdown that will continue for the foreseeable future, so it's hard to see those concerns receding in short order.

But for over a year, ECRI has argued that this is about the U.S. economic cycle. ■

U.S. Coincident Indicators, Growth Rates (%)



Sure we've seen relatively decent job growth. But year-over-year (yoy) growth in nonfarm payroll jobs has been trending down since early 2015.

And, as you see, so has GDP growth, even without Q1 data.

Meanwhile, yoy industrial production growth is also trending down, and remains near a six-year low.

You can see similar downtrends in yoy income and sales growth, which are around 1½- and 2-year lows, respectively.

That's why growth in the U.S. Coincident Index (USCI) has been falling rather steadily since the start of 2015, and is now hovering near a 2-year low. By the way, this is the same measure of economic growth used in the earlier regressions.

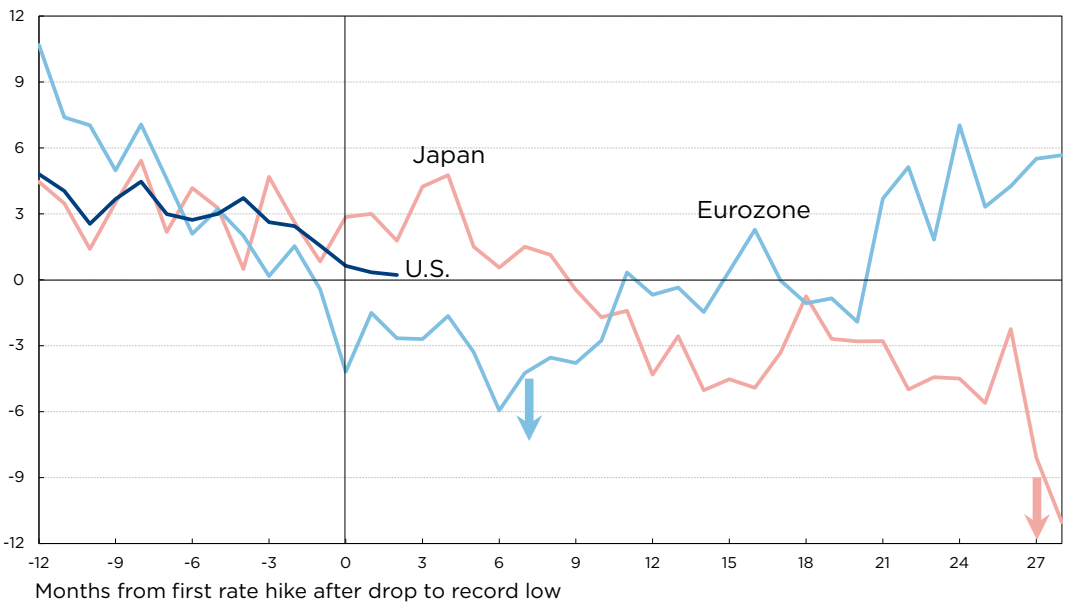
These concerted declines in output, employment, income and sales growth, resulting in a USCI growth downturn, constitute the hallmark of a growth rate cycle downturn, meaning a full-blown cyclical slowdown, on top of the long-term structural decline in trend growth.

Understanding this, we warned last summer that the Fed's rate hike plans were on a collision course with the economic cycle.

So the Fed started its rate hike cycle a year inside a growth rate cycle downturn, something it has never done before. This may be why the Fed is having trouble following through on its rate hike plans, even though its dual mandates have essentially been met.

Under these circumstances, can the Fed hike rates much further?

In fact, will they actually have to backtrack and cut rates the way the European Central Bank (ECB) did in 2011? ■



Let's look at the circumstances under which the ECB and the Bank of Japan (BoJ) reversed their last rate hike cycles, in terms of ECRI's Eurozone and Japanese Long Leading Index growth rates.

The light blue line is the growth rate of ECRI's Eurozone Long Leading Index, and the vertical black line shows where the ECB started hiking rates in 2011.

The blue down arrow shows where they had to reverse course and cut rates just seven months later, after Eurozone Long Leading Index growth had plunged deep into negative territory.

The red line shows Japanese Long Leading Index growth, beginning in the mid-2000s, and the vertical black line once again shows where the BoJ started hiking rates in 2006.

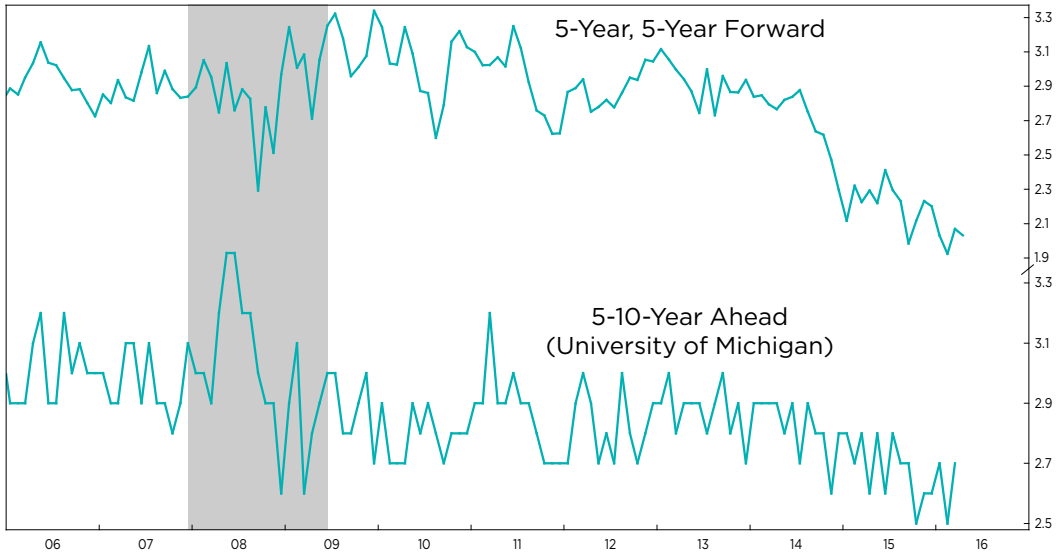
Japanese Long Leading Index growth actually improved for a bit, before starting to sink, and it was not until 27 months after the first rate hike that the BoJ reversed course and cut, as shown by the red arrow, following a plunge in Japanese Long Leading Index growth.

Now, the shorter, dark blue line shows current U.S. Long Leading Index growth, with the black vertical line marking off the timing of the Fed's December 2015 rate hike.

It's interesting to see that it's right in-between the other two, and while we'll have to wait and see how it evolves, the chart suggests a reasonable chance that the Fed will find itself backtracking. But what does that look like if you're out of ammo?

The point is that, for central banks in general, credibility is the most important asset, and even for the Fed, this next chart raises questions. ■

Measures of Inflation Expectations (%)



Shaded area represents U.S. business cycle recession.

Here we have both the market-based and survey-based five-to-ten-year-ahead inflation expectations hovering around record lows.

It is notable that these numbers are much lower than during the Great Recession, but what's remarkable is how much they've dropped since 2014.

This is about the Fed's credibility in keeping inflation around its target, not in the next few years, but in the next decade. To cite St. Louis Fed President Jim Bullard, these inflation expectations are "a rough measure of Fed credibility with respect to its 2% inflation target." Yes, there's been a good correlation between crude oil prices and 5-year, 5-year forward inflation expectations, but it may have persisted for a reason. It may be because a plunging oil price could threaten lenders to energy producers and jeopardize the financial system. Simultaneously, falling oil prices may be seen as a symptom of rising recession risk, while also increasing the probability of deflation that naturally boosts real interest rates, stymieing the Fed and making monetary policy less potent. Of course, anytime the Fed's perceived impotence increases, so does the disbelief in its ability to meet its inflation target, even in the longer run. ■

October 2015: Too Big to Fail

And this is not just about the Fed, which undertook a Grand Experiment of an extended ZIRP and QE. There are actually three grand experiments that are too big to fail, and yet they are at risk of failing.

Following the Global Financial Crisis, China launched not only massive monetary easing, but truly colossal fiscal stimulus that included pouring nearly one and a half times as much concrete in the three years ending in 2013 as the U.S. had in the entire 20th century. The resource bust that followed has sent deflationary shockwaves around the globe, and the repercussions are not over yet.

Years of robust growth had fostered the belief that China was led by infallible technocrats who always knew what levers to pull, and when. But their handling of the stock market crash and exchange rate volatility since last summer undermined confidence in China's ability to pull off a tricky transition to a consumer-driven economy, even though they've calmed market jitters for the moment. Please recall, the latest Fed minutes mentioned the word "global" 22 times.

We've talked about the Fed's predicament, but the real issue is the fear that, in the event of another recession, the U.S. will essentially "become Japan." Hence the concern about falling long-term inflation expectations.

But if you do "become Japan," Abenomics was supposed to be the way out. Yet after three years, Abenomics is clearly failing, with GDP falling in five of the 12 quarters since its launch. Two years ago, Japan had its fourth full-blown recession since 2008, and last year it had negative GDP growth in two of four quarters. Looking ahead, we're monitoring the risk of yet another Japanese recession in 2016, which would be a deathblow to Abenomics.

This is quite a global predicament to be in after years of unprecedented stimulus.

In the summer of 2008, before Lehman blew up and many years before the secular stagnation debate, we showed that the pace of expansions had been stair-stepping down since the 1970s.

We've also shown why the case for a strong recovery beyond the first year following a deep recession is not supported by the evidence, as we had originally concluded way back in 2009.

Therefore, the discourse among policymakers, trying to explain their disappointment and prescribe additional solutions, has been based largely on flawed assumptions that trend growth was actually higher than it's turned out to be, and that we were somehow owed a return to that long-term trend.

As a result, policy initiatives designed to blast the economy toward "escape velocity" wound up being not only misguided, but also futile.

As Sherlock Holmes observed in "A Scandal in Bohemia," "It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts."

Thank you.

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We would submit that the first step in correcting this mistake is to restart the theorizing from a closer look at the evidence.

And we would also heed the advice of another well-known investigator. Carl Sagan used to say that "extraordinary claims require extraordinary evidence."

Similarly, if you're going to embark on Grand Experiments, you'd better make sure that your assumptions are rock-solid. But as we've shown, there should have been serious doubts about some key assumptions underlying central bank policy.

Ultimately, only policies that genuinely address the challenges of demographics and productivity have a chance to succeed. Meanwhile, the notion that the Fed can indefinitely forestall the 48th recession in U.S. history remains wishful thinking. ■