

The “Subpar” Recovery: A Longstanding Misunderstanding

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and the longer-term structural backdrop can lead to this kind of forecasting whiplash.

Understanding how the two interact offers a better sense of Global and National Recovery Prospects, including some bad news, but also some good news. ■

The topic of recovery prospects in the context of re-regulation is a very important one.

The focus on regulation in the wake of the crisis is understandable, and today, over six years later, there's still widespread debate about why we didn't do better.

Six years ago, in April 2009, with the resurrection of risk following the latest Minsky moment, the talk at the G20 conference in London was all about Depression.

That same month ECRI predicted that the U.S. recession would end by the summer of 2009, and, expecting widespread disbelief, we recalled Pigou's 1920 observation that “The error of

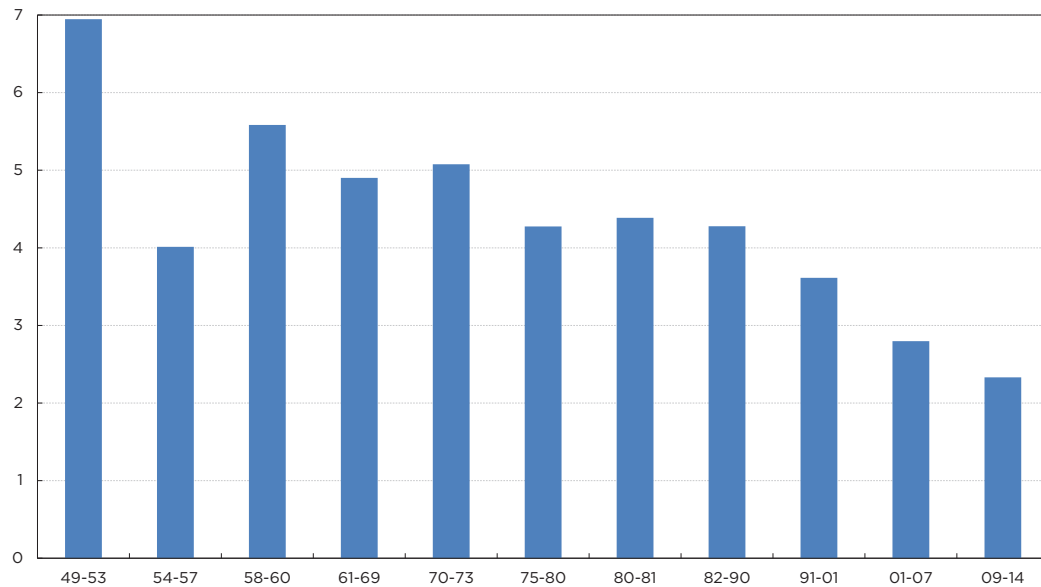
optimism dies in the crisis but in dying it 'gives birth to an error of pessimism. This new error is born, not an infant, but a giant; for (the) boom has necessarily been a period of strong emotional excitement, and an excited man passes from one form of excitement to another more rapidly than he passes to quiescence.”

And so it was, until about a year later, by which time the reality of the new expansion had engendered expectations of a V-shaped recovery, given the depth of the downturn.

That's *quite* a change from the Depression talk.

Today I'd like to lay out for you how the confusion between a shorter-term cyclical view

Falling U.S. GDP Growth (%) During Expansions



Our study of the business cycle helps us separate shorter-term *cyclical*, and longer-term *secular*, patterns.

In the summer of 2008, *before* Lehman Brothers failed, we were looking at a version of this chart, which shows the pace of growth during post-World War II economic expansions, deliberately excluding the recessions.

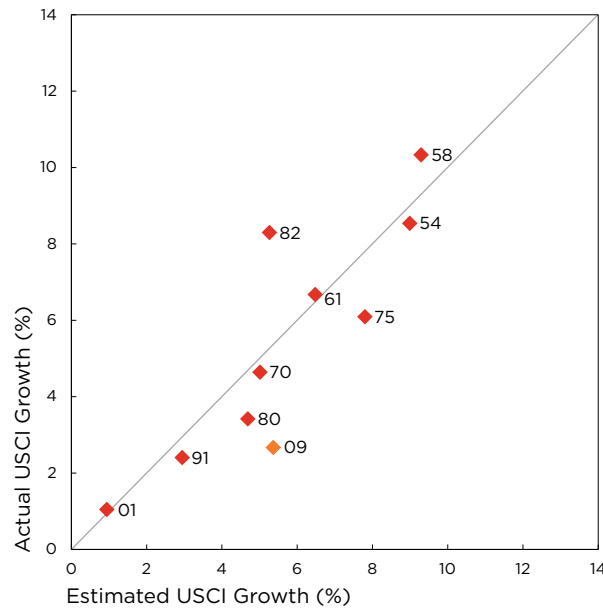
What jumped out at us is this pattern of falling U.S. GDP growth during expansions. Going back at least to the 1970s, growth has been stair-stepping down during each successive expansion. We concluded the next economic expansion would be “feeble,” and as you see from

the last bar, that *is* what has happened.

About a year into the recovery that started in June 2009, the White House proclaimed “the recovery summer.” It soon became a truism, to quote one prominent economist, that “big recessions are followed by robust recoveries.”

While this is historically *incorrect*, there is some truth to it. ■

First Year of Recovery, Two Independent Variables



This chart is borrowed from a forthcoming paper in the journal *Challenge*, co-authored by Anirvan Banerji and myself.

Students of the business cycle have long known that the initial strength of the revival from recession is correlated with that recession's severity. The key phrase being *initial strength*.

In this chart we measure the strength of the first year of recovery in terms of the increase in ECRI's U.S. Coincident Index, which is a comprehensive measure of economic activity subsuming the key indicators of output (including GDP), employment, income and sales that are used to determine official recession dates.

The chart shows the results of an OLS regression, with the two independent variables being the depth of the recession; and the passage of time, reflecting the pattern of weaker and weaker expansions shown in the previous bar chart.

As you see, the estimated strength of the rebound on the horizontal axis, and the actual strength on the vertical axis, are pretty strongly correlated.

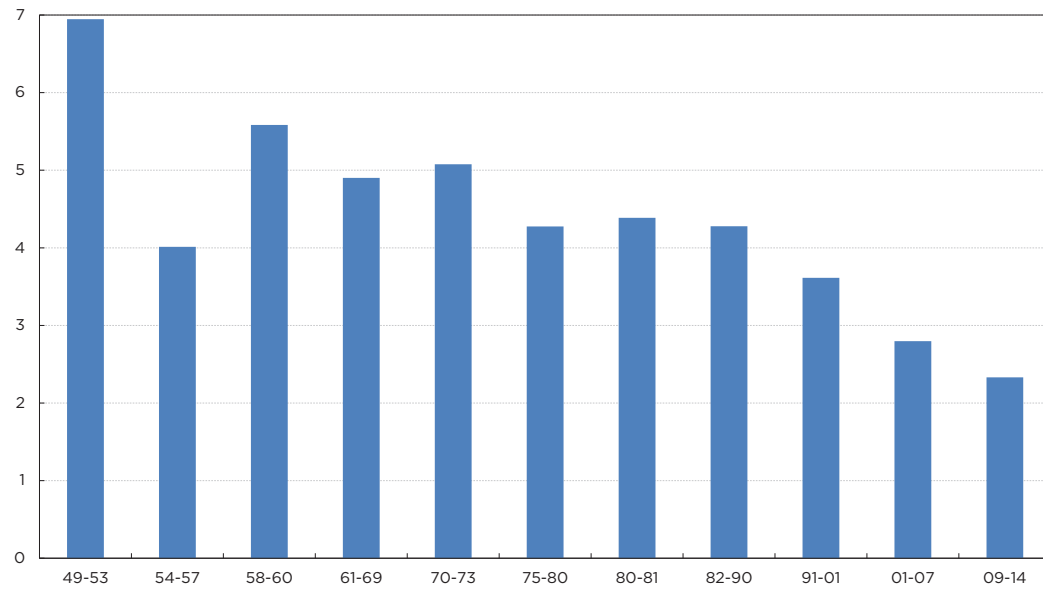
But, if you look at the relationship between the severity of recession and the pace of recovery *after* the first year, there is essentially no relationship, whether or not you factor in the passage of time.

I haven't included it here, but it looks nothing like this chart, and I would encourage those of you interested in the details to look at our working paper, already on our website, businesscycle.com.

So the first year of recovery was *not* particularly out of line with historical experience, as you see here ('09). *And as for the rest of the expansion, and this is key, the business cycle owed us nothing more*, based on the historical data.

So the very idea that this has been a sub-par recovery is a long-standing misunderstanding. ■

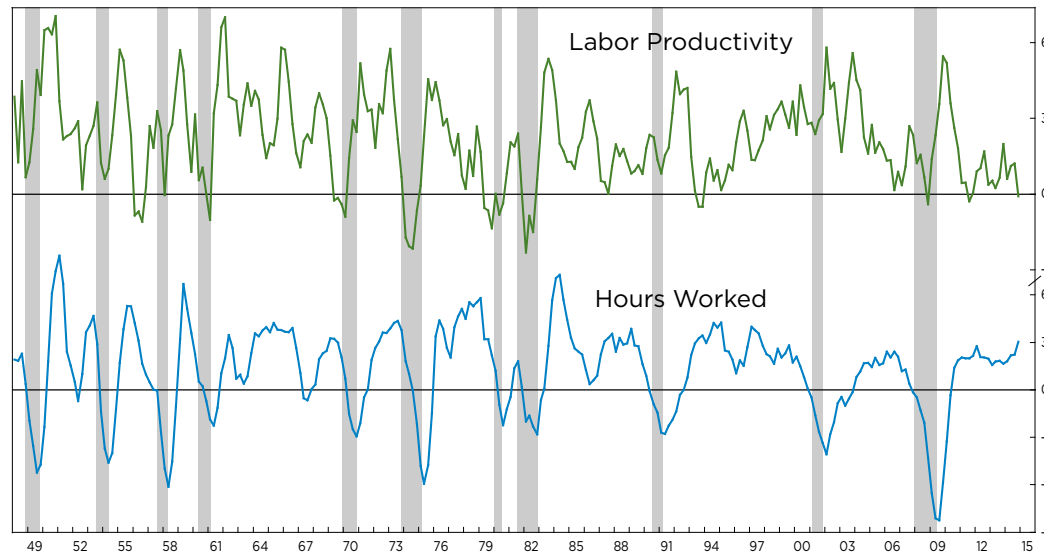
Falling U.S. GDP Growth (%) During Expansions



Now, back to this pattern of falling GDP growth during successive expansions.

Why has that been happening? ■

Growth in Labor Productivity and Hours Worked (%)



Shaded areas represent U.S. business cycle recessions.

Quite simply, because of developments in the growth of output per hour, which is productivity growth, and growth in hours worked. Taken together, they add up to real GDP growth.

Here we see those two charted and, over the last few expansions, one or both of these have been flagging.

Most recently, hours worked did pick up last year, which should have boosted GDP growth, but year-over-year (yoy) productivity growth went *negative*, and that weakness is not just about the latest data point.

For the past four years productivity growth has averaged *just half a percent per year*, which

may be why Fed Vice-Chairman Stanley Fisher recently lamented that productivity growth has stayed “way, way down.”

Now it is often assumed that productivity growth will rebound to its post-World War II average, between two and two and a half percent a year. But you know what they say about assumptions, and to quote Fisher again, “productivity is extremely difficult to predict,” and “will *perhaps eventually* return” to its earlier pace. In other words, there is no strong reason why the half a percent a year average pace of the last four years should change anytime soon.

Turning back to growth in hours worked, it

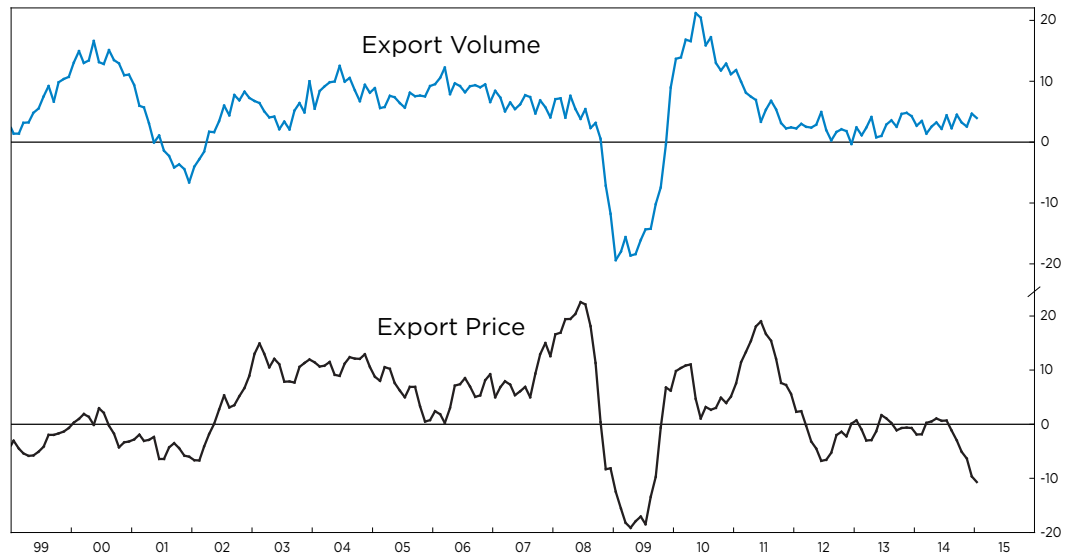
basically fluctuates around the longer-term trend for potential labor force growth, which the CBO says will stay at half a percent a year, at least for the next *decade*, and this is pretty much set in stone, given the demographics.

Adding up the likely growth of these two measures, half a percent for productivity, plus half a percent for hours worked, gives us one percent longer-term *real* GDP growth, unless there is a good reason for productivity growth to pick up over the next few years.

What we’ve covered so far suggests that this is not really about a “sub-par” *cyclical* recovery. Rather, given the *secular* backdrop, the business cycle owes us nothing more.

And this is not just about the U.S. It is happening around the world, and global phenomena need global explanations. ■

World Export Volume and Price, Growth Rates (%)



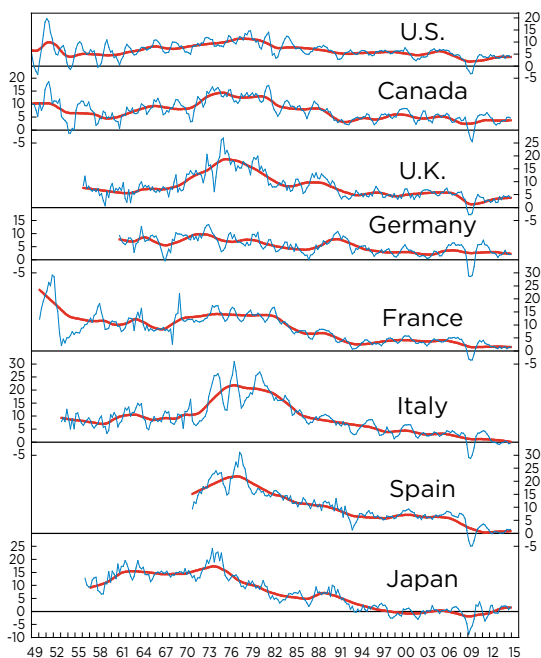
Eleven trillion dollars: that's how much of so-called Quantitative Easing the world's central banks have done since 2008. To put that in perspective, with eleven trillion dollars you could pay off pretty much all U.S. household debt – all mortgages, all car and student loans, credit cards – you name it.

So what did the global economy get for all that QE?

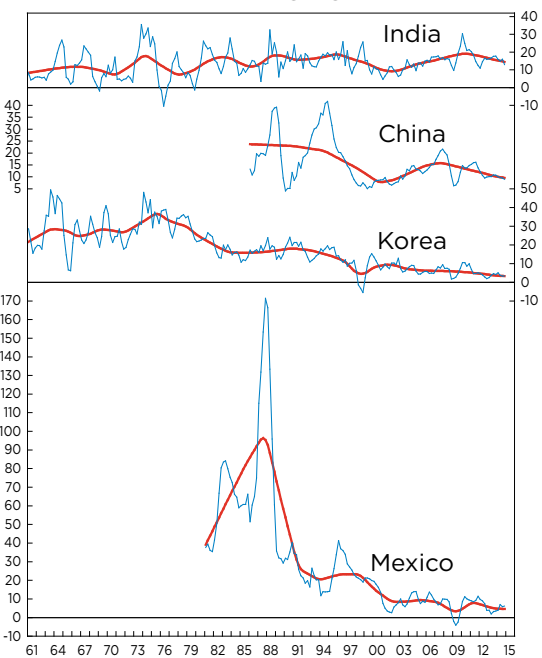
Following a post-recession pop, world trade growth collapsed, as you see in the top, blue line, and that's even with prices falling over the past three to four years, shown by the lower, black line.

Having just talked about trend, *real* GDP growth, let's unify that with what's happening to prices by looking at... ■

Actual and Trend Nominal GDP Growth (%) in Advanced Economies



Actual and Trend Nominal GDP Growth (%) in Emerging Economies



...trend *Nominal* GDP (NGDP) growth: for the advanced economies on the left, and emerging ones on the right. The blue lines are actual, and the red lines are trend.

Near the top of the left-hand chart you can see that after decades-long declines, the longer-term trends in NGDP growth have fallen to just $3\frac{3}{4}\%$ in the major English speaking countries of the U.S., Canada and the U.K.

In Germany, which has worse demographics, it's a little over $2\frac{1}{4}\%$, while in both France and Japan it's fallen to $1\frac{1}{2}\%$. In Spain it's below 1% and in Italy it's practically at zero.

Policy makers in these economies, when asked about growth prospects, often congregate

around plans to export more, particularly to emerging markets.

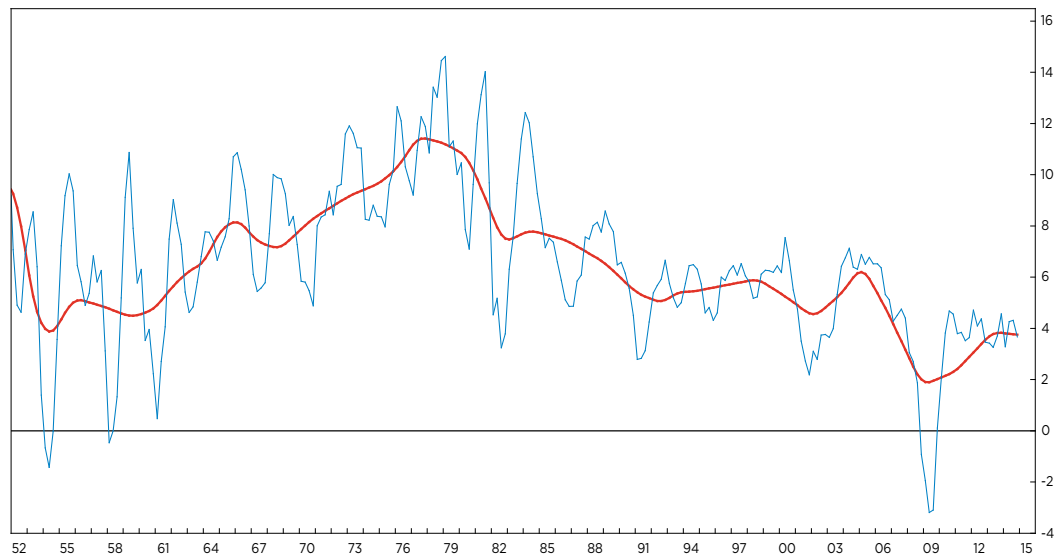
Please note that for Korea, in the middle of the right-hand chart, trend growth for NGDP has already dropped to three and one third percent, *less* than the U.S.

And China has slipped below 10% and Mexico is now below $4\frac{3}{4}\%$. Only in India is it a bit different, it slipped to $14\frac{1}{2}\%$, though partly due to a desirable decline in inflation.

The *main* point to take away from this slide is that the long decline in trend NGDP growth is truly global.

Now let's zoom in on the U.S... ■

Actual and Trend U.S. Nominal GDP Growth (%)



...where trend growth is down to 3¾%, which is a lot less than the 5% NGDP growth target that's often mentioned in policy circles – 3% real GDP growth plus 2% inflation.

A few minutes ago we talked about half a percent productivity growth in recent years, plus half a percent potential labor force growth in the coming decade, adding up to something closer to 1% trend *real* GDP growth.

On the inflation side, can we arrive at the Fed's 2% target and stay there?

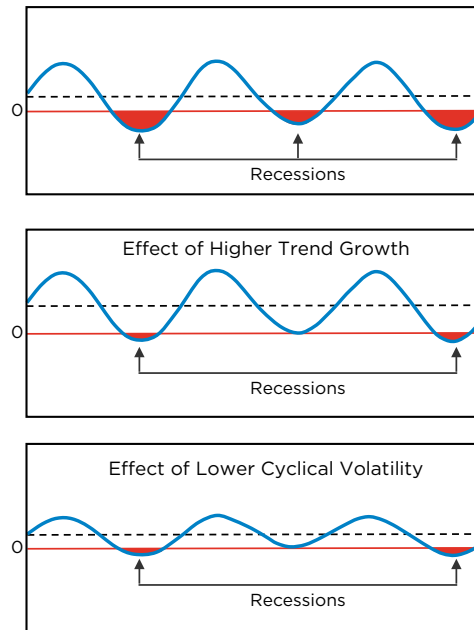
You all saw that earlier multi-year export price decline, and I suspect that Mr. Alpert may also have something to say about this in a moment.

Even if we do get to 2% inflation, looking at the possibility of trend *real* GDP growth moving towards 1%, *nominal* GDP growth, where the trend is already down to 3¾%, is apt to fall further.

We all know there's more debt in the world today than ever before in human history. In theory, the debt can be paid off with the help of real growth, or inflation, which are brought together in these NGDP measures. So we may want to consider the implications.

Now back to the issue of trend real GDP growth moving towards 1%. And what does that do to the business cycle? ■

A Stylized View of Recession



For starters, let's think about the business cycle in the abstract.

The blue line in the top panel depicts real economic growth cycling up and down like a sine curve. Every time it dips below zero you get negative growth marked off by those red areas which are recessions. The horizontal dotted line shows the long-term trend growth rate, with economic growth cycling above and below.

Suppose all this stayed the same except that *trend growth was shifted up*. Now consider the blue line in the middle panel – it dips below zero less often, resulting in less frequent and milder recessions. This is what we've seen in some of the

emerging markets that have strong trend growth.

Turning to the lower panel, this time we keep *trend growth unchanged*, but instead *tamp down the cycle volatility* and that results in smoother, tamer business cycles. Again, economic growth dips below zero less often, and we get less frequent and milder recessions.

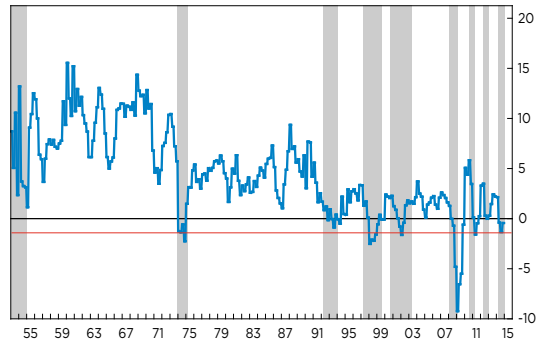
So, there are two fundamental ways to get less frequent recessions: raise long-term trend growth or tamp down cycle volatility.

The latter is what happened in the U.S. from the mid-80s through 2007, the so-called Great Moderation of the business cycle, during which we had long expansions.

Volatility returned with a *vengeance* during the Global Financial Crisis, but then, as we'll discuss in a moment, for somewhat unexpected reasons, we got what we call the *Greater Moderation*.

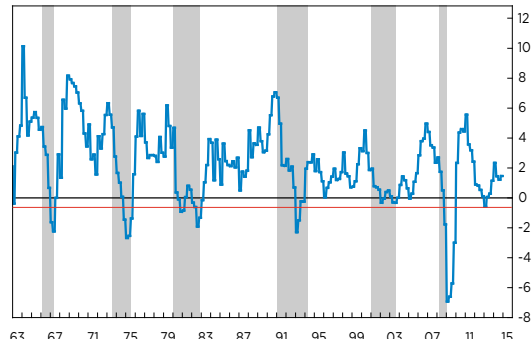
Let's turn from these stylized concepts to real data. ■

Japanese GDP, Growth Rate (%)



Shaded areas represent Japanese business cycle recessions.

German GDP, Growth Rate (%)



Shaded areas represent German business cycle recessions.

First, let's look at Japan on the left side, which has had 1% average real GDP growth since the early 1990s. During that time they experienced seven recessions shown on the right half of that chart by vertical shading, including *four* recessions since 2008.

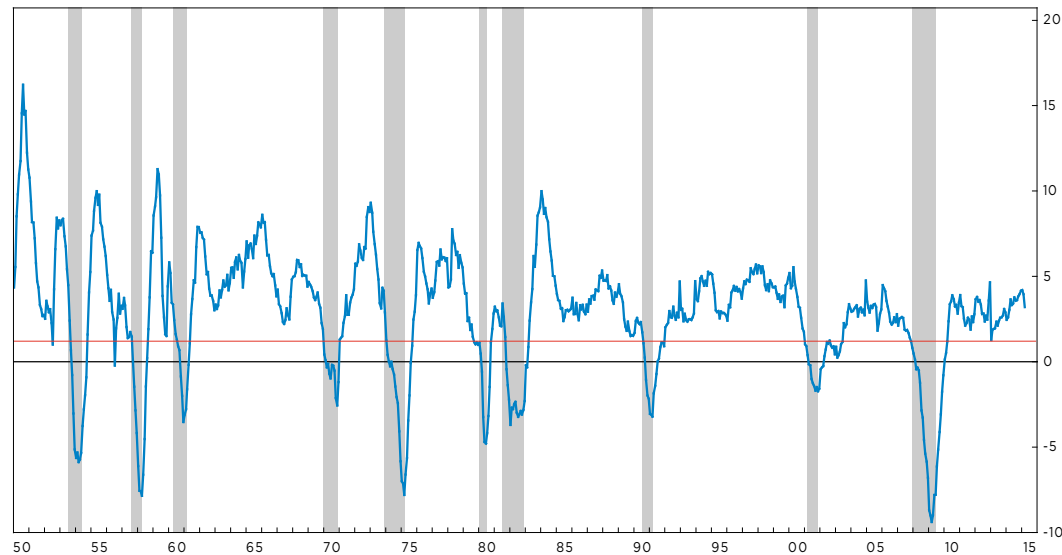
That's what very low trend growth can do, you tend to "yo-yo" in and out of recession.

How about Germany, which is considered to be a much stronger economy?

The red horizontal line shows the latest low point in yoy real GDP growth, where it dropped to -0.6% a couple of years ago, which we've only seen around recessions in the past.

Although employment didn't actually decline, Germany did see two back-to-back negative GDP quarters in 2012-13, and, in that sense, its worst *non-recession* ever. ■

U.S. Coincident Index Growth (%)



Shaded areas represent U.S. business cycle recessions.

Here we have the growth rate of ECRI's U.S. Coincident Index from 1950 onwards.

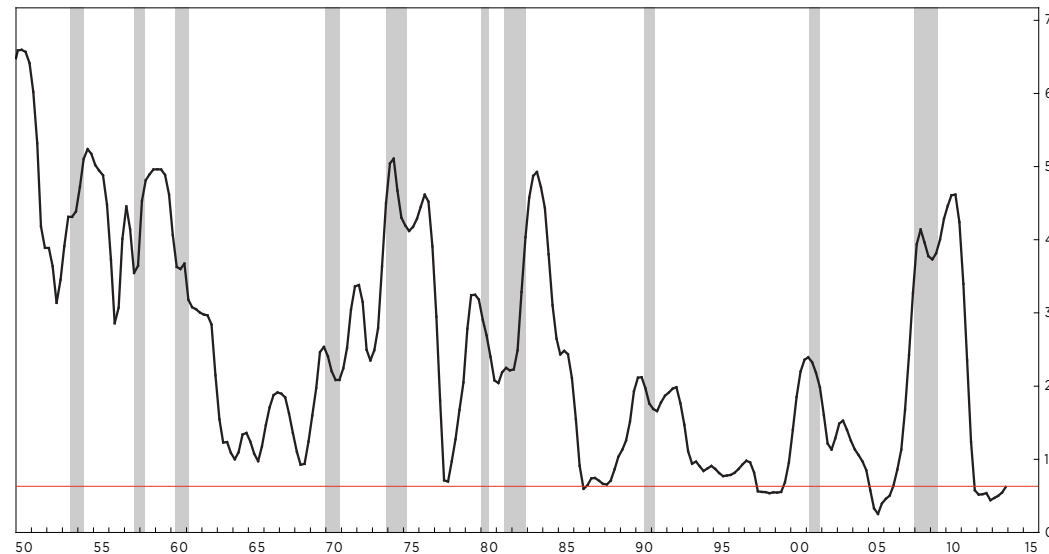
Please recall that it includes the key measures of output (including GDP), employment, income and sales that are used to determine official U.S. recession dates.

The red line shows it fell in the late 2012/early 2013 period, to a low never seen away from recession, except during the 1952 and 1956 steel strikes.

In other words, that was the worst *non-recession* in over half a century, but it was not the recession that *ECRI* had expected.

How did the U.S. avoid recession? ■

Volatility of U.S. Economic Growth (%)



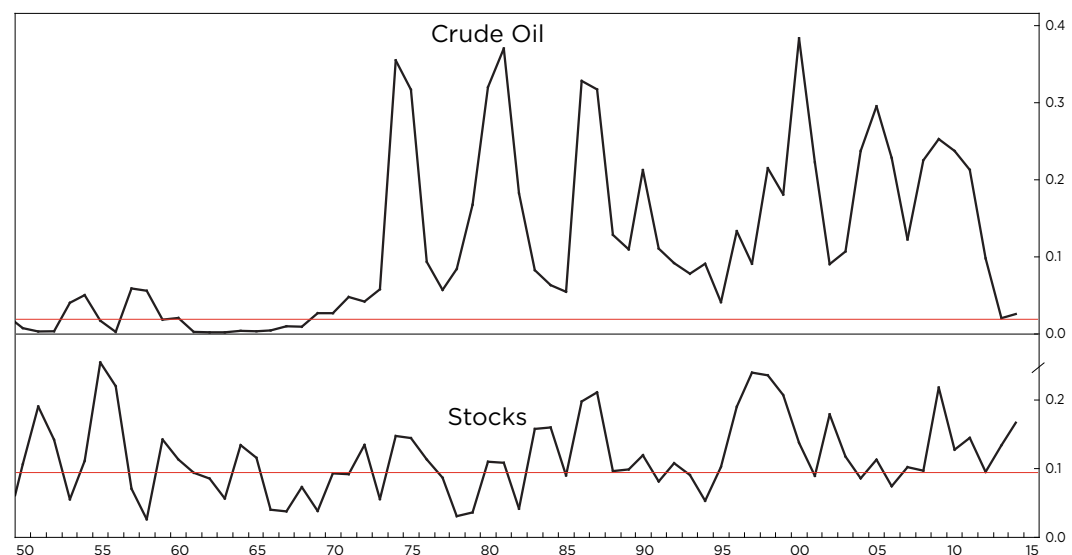
Shaded areas represent U.S. business cycle recessions.

Unexpectedly, the cyclical volatility of U.S. economic growth – as measured by the three-year centered standard deviation of yoy growth in our Coincident Index – plummeted below 0.6 by late 2011, the red line here, from a *three-decade* high the previous year.

Furthermore, it's now stayed below that threshold for the longest stretch on record.

This is going way beyond a return to the Great Moderation, to what one might call the *Greater Moderation* – and it's important to understand why. ■

Volatility of Crude Oil and Stock Price Growth (%)



The critical clue comes from crude oil price volatility, which, as the top line shows, had collapsed by 2013.

As the former head of BP’s global economics team noted last year just before oil prices started plunging, “the oil price has been above \$100 for three years in a row, the highest ... such period ever, but extremely stable, the lowest three-year volatility since 1970,” *when prices were fixed*. While there were supply disruptions, he said, “[t]he cumulative level of these disruptions over the last three years is balanced almost one by one, almost barrel by barrel, by the increase in tight oil production in the U.S. So it’s an absolute

fair statement to say [that] if we had only had the disruptions ... you would have seen oil prices shooting up.”

Thus, despite a fairly normal pattern of supply disruptions, oil price volatility fell to a *four-decade* low, marked off by the top horizontal red line.

This happened, in large part, because of what’s been called the fastest ramp-up in oil production in history, creating an unusual period *devoid of oil shocks*. Of course, oil shocks have helped trigger almost every recession since the 1970s.

Meanwhile, with the trillions in international QE amounting to not just a “Fed

put,” but a “global central bank put,” for equities, stock price volatility shown by the black line on the bottom, hit a six-year low in 2012, marked off by the lower horizontal red line.

Primarily due to the singular absence of oil shocks, abetted *secondarily* by the drop in stock price volatility, economic cycle volatility plunged, and stayed at extreme lows for the longest period on record, as shown in the previous chart.

This happened even as trend GDP growth clearly downshifted further.

Looking ahead, can oil shocks still be kept at bay in the coming months and years? History doesn’t encourage such a belief.

The point is that, with really low trend growth, unless we are lucky enough to keep enjoying super-low economic volatility, we are really skating on thin ice.

Remember, a decade ago, many people, especially central bankers, thought they’d engineered the Great Moderation. As a result, people thought they could continue to do so.

Today, the lack of volatility is again being widely attributed to the central banks, and again the expectation is that they can keep volatility down indefinitely.

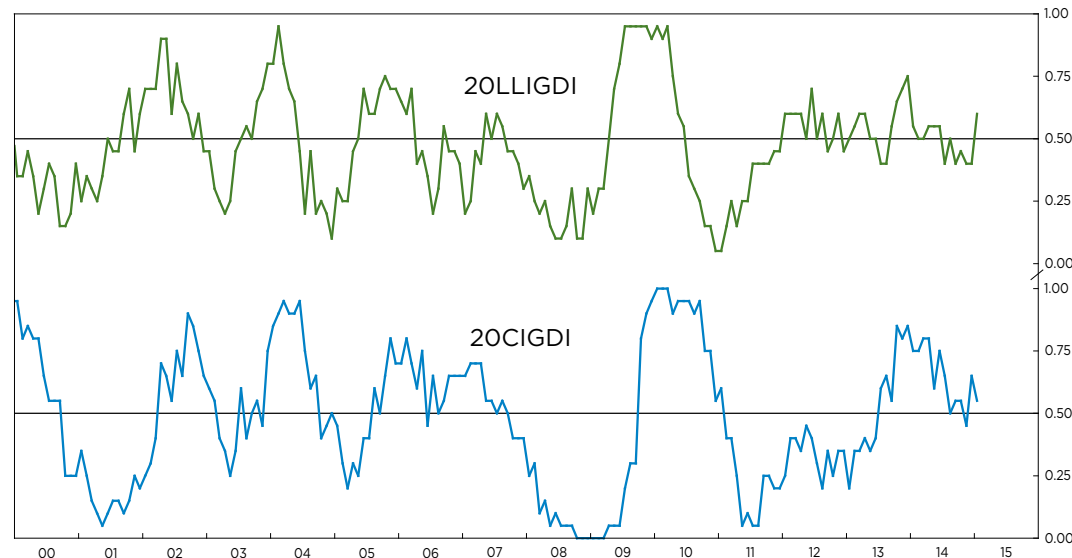
So to sum up, contrary to what many may believe, this was not a sub-par recovery from a *cyclical* point of view.

Rather, it reflects a decades-long secular decline in trend growth that’s not going away anytime soon.

Certainly one can debate policy steps that can help at the margin, especially in the longer-run, but there’s really no quick fix.

Now I did promise you some good news, and we *do* see some on the cyclical front. ■

Diffusion Indexes of 20-Country Long Leading and Coincident Index Growth



This is a chart of two diffusion indexes.

The top line is the proportion of ECRI's Long Leading Index growth rates for 20 countries that had strengthened over a one-year time span.

It's meant to anticipate cyclical turns in the bottom line, which is a similar measure based on ECRI's Coincident Index growth rates for 20 countries.

In July of last year, when the consensus was pretty upbeat about global growth, the top line had already started to plunge, so we correctly predicted the global slowdown that subsequently unfolded.

As you know, this was accompanied by sharp

declines in prices of not just crude oil, but also a broad range of industrial commodities.

However, this 20-country leading index has turned up lately, and the coincident measure is also starting to follow suit.

What it adds up to is a likely reacceleration in global growth this year, although less so in the U.S., where the dollar is acting as a bit of a headwind.

For now, we could very well see a host of central bankers pat each other on the back, in the belief that their policies are working. Like everyone, they are subject to attribution bias: so when good things happen, they like to take

credit, just as Mr. Bernanke did for the Great Moderation in a speech a decade ago. When bad things happen, it's somebody else's fault, or due to external circumstances.

Bottom line, notwithstanding these cyclical ups and downs, the inexorable decline in trend growth is here to stay. ■



Thank you.

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