



Today I'd like to share with you what I think is an unusual perspective, rooted in our group's longtime focus on business cycle research.

As you know, most analysts are working from pretty much the same toolkit – using some variation of econometric modeling as the foundation of their thinking.

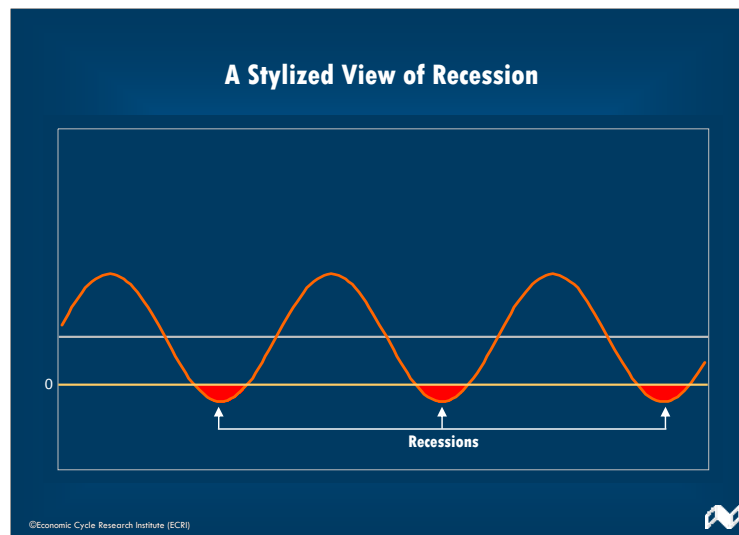
But at ECRI we're not economists. We are, and have been for generations, students of the business cycle.

To be clear, our analysis is not model-driven.

Rather, it is based on insights into the dynamics of the business cycle.

>>> Let's begin with a simple question about business cycle basics...

How do you get a recession?



One way to think about it is that in market economies economic growth cycles up and down around some sort of long-term trend.

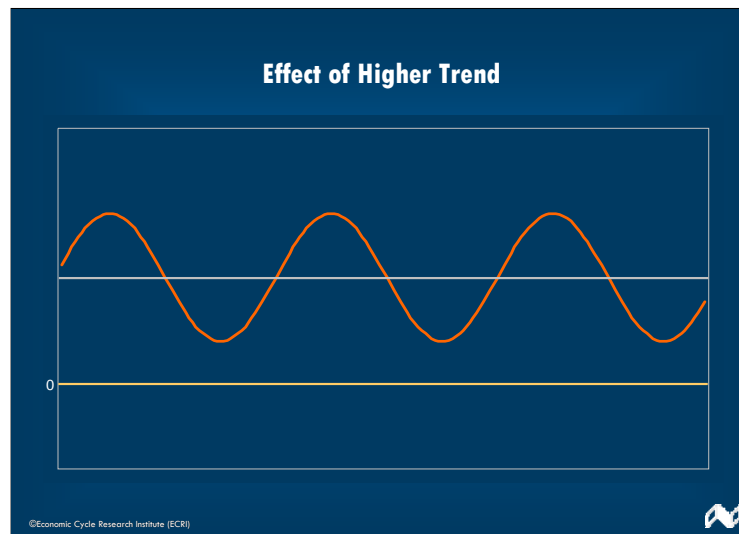
Take a look at this rather simplistic picture, sort of a stylized view of recession which is meant to make a straightforward point: every time economic growth cycles below the zero line you get a recession.

Here's the zero growth rate line

Here's economic growth cycling up and down around trend growth,
and these red areas are recessions.

So how could we minimize recession frequency, and move towards very long expansions, preferably without recession for decades?

>>> In principle its quite simple, all we need to do is take the wavy line and lift it up and we get this...



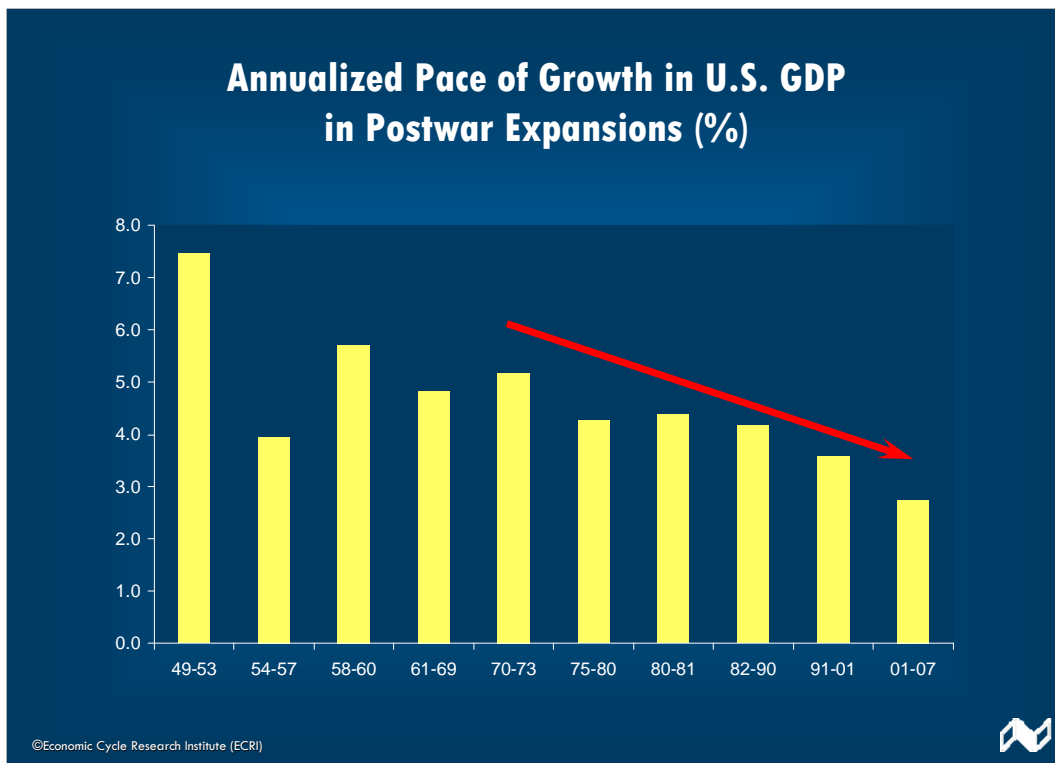
As you see, the only difference in this chart is that the trend line has been shifted higher.

And now, economic growth remains above zero.

The poster child for this approach is of course China which has had 10% trend GDP growth for two decades without a recession, because even while experiencing notable downswings in economic growth it's very hard to go from a 10% trend growth rate to below zero.

We've seen similar experiences in India since the mid 1990s and postwar Western Europe.

>>> With this in mind, let's move from a stylized view to reality in the United States.



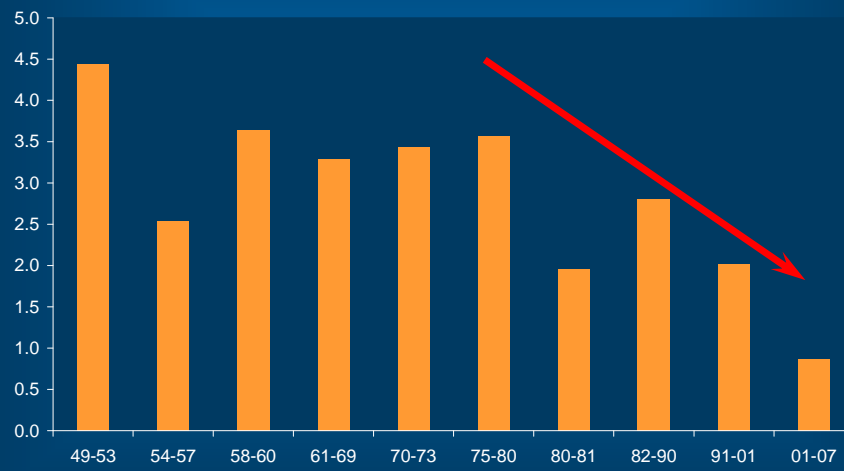
Here's how things looked **BEFORE** the Great Recession.

Each of these bars shows trend U.S. GDP growth in successive postwar expansions.

What you see is that trend growth has been stair-stepping down at least since the 1970s, and the 2001-2007 expansion clearly had the lowest trend GDP growth of any postwar expansion.

>>> How about another key coincident indicator, employment?

Annualized Pace of Growth in U.S. Employment in Postwar Expansions (%)



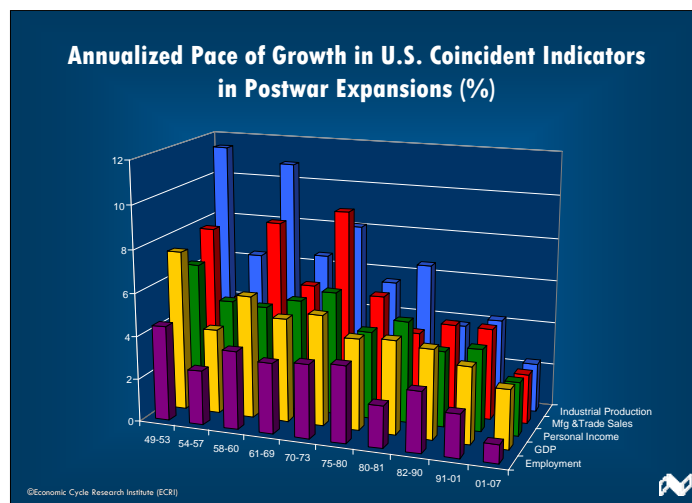
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OKAY

So much for employment.

>>> Let's broaden this exercise to include **all** the key coincident indicators.



This may look like a complicated chart, but the point is simple.

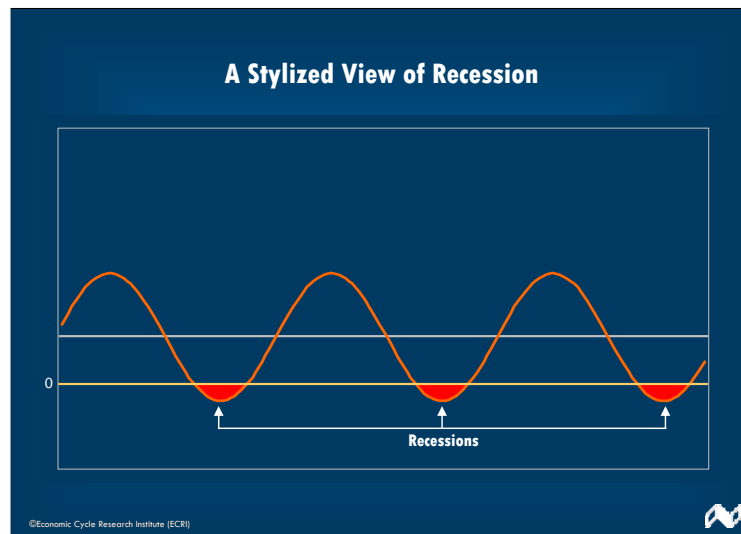
It's not just employment and GDP, which are the first two rows of bars, that have been stair-stepping down over decades -- it's also income, sales and industrial production.

On all counts trend growth in the U.S. has been falling in successive expansions, and this was clearly the case **before the onset** of the Great Recession.

In fact, in August 2008 this chart was picked up by Floyd Norris at the *NY Times*, but since that was just before the Lehman failure – not a lot of people paid attention.

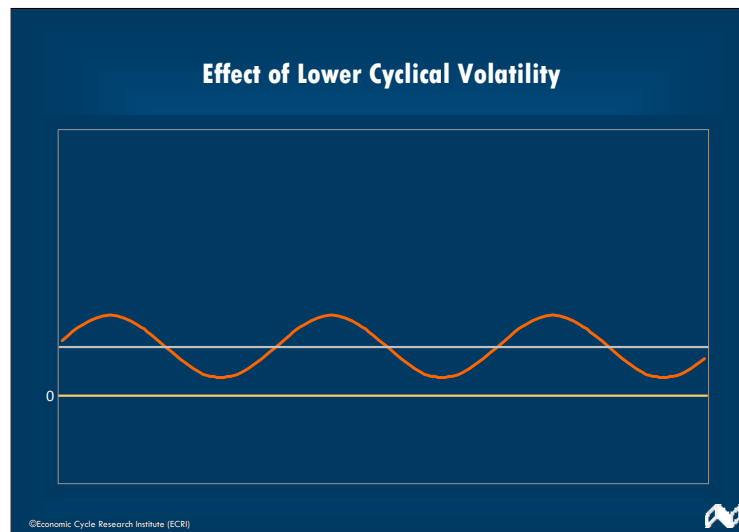
So, in the context of raising trend growth to reduce recession frequency, we're clearly going the wrong way.

>>> Well, back to square one!!



Looking at the basic challenge, if raising trend growth looks like a non-starter, how else to reduce recession risk?

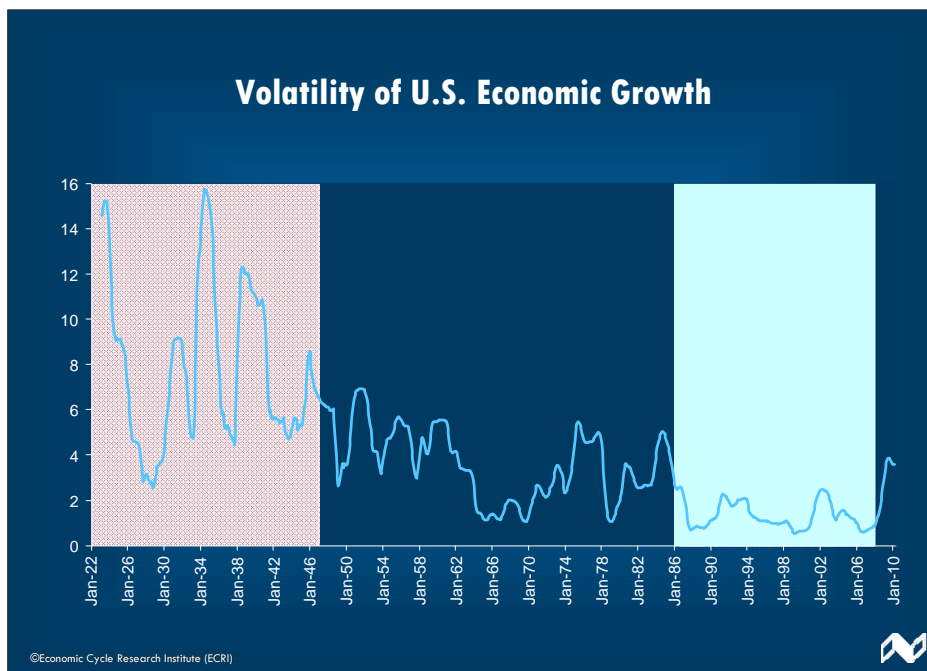
>>> How about squishing the wavy line and making it flatter -- like this?



This is the same as the previous picture with one key difference: the economic growth curve shows less cyclical volatility, so even though trend growth didn't go up, economic growth no longer cycles below zero.

This was at the heart of the so-called Great Moderation of business cycles that gave us long expansions and a couple of mild recessions from the mid 1980s through 2007.

>>> Again, let's see how we're fairing in terms of reality...



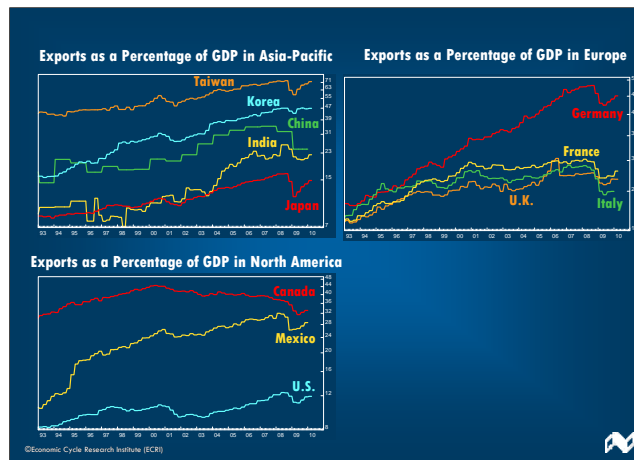
Here we have the volatility of U.S. economic growth going back to the early 1920s.

In the first part of the 20th century cyclical volatility was really high, a lot of boom-bust which quieted down significantly in the postwar period. Then, starting in the mid 1980s it calmed down even further, and here's the period many call the Great Moderation.

After the 2007 - 2009 recession I shouldn't have to tell anyone that the Great Moderation seems to be history.

But I know there are still some who believe that we're going back to the Great Moderation and that the Great Recession was a one-time anomaly.

>>> To judge if a return to the Great Moderation is likely, we need to understand why people think it happened in the first place. There's actually quite a bit of academic literature aimed at this question and the focus lands on three different threads of reasoning – 1) better supply chain management, 2) better monetary policy, and 3) luck.



In the context of the supply chain theme, let's look at exports as a percentage of GDP since the end of the Cold War. What you find is a remarkable pattern.

In practically every case export dependence has risen dramatically;

Since 1990 in China, Japan and Germany exports as a percentage of GDP have doubled.

In India its tripled, and in the U.S. we've seen a 50% rise in exports as a percentage of GDP up to 12%.

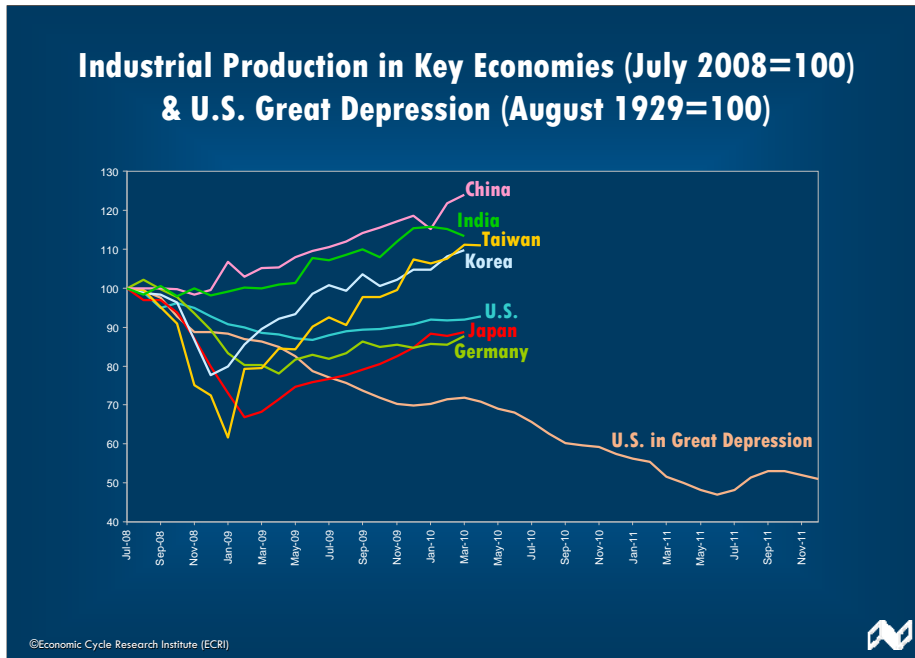
Overall, in the twelve economies shown on these charts, exports as a percentage of GDP have more than doubled to 35% since 1990.

What unforeseen risks go along with this picture? After all, during the 1990s boom prominent observers declared that "globalization would help bring about the end of the business cycle," as strength in one part of the world balanced out weakness elsewhere.

What they missed has long been called the Bullwhip Effect, where relatively mild fluctuations in end demand are dramatically amplified up the supply chain, just as a flick of the wrist sends the tip of a bullwhip flying in a great arc.

Now, because even state of the art supply chain management systems are **always** blindsided by cyclical turns in front-end demand, the Bullwhip Effect makes greater export dependence very dangerous to supplier countries, actually adding to cyclical volatility... which of course, is the opposite of moderating cyclical volatility (or squishing the wavy line shown a couple of slides back).

>>> Let's take a look at how this manifested itself during the recession.



After two decades of increasing export dependence this is what happened.

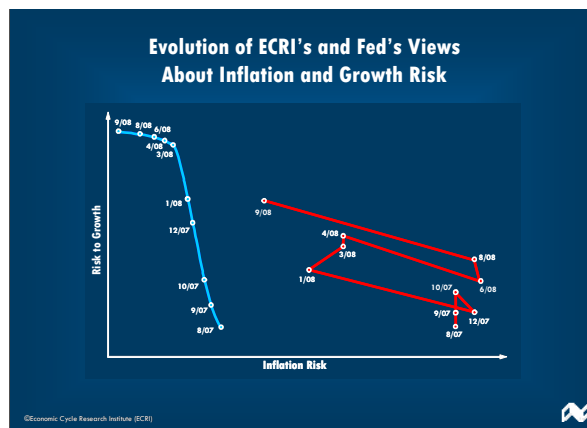
In comparison to the decline in U.S. production during the Great Depression (longer line), look at how production in Japan, Germany, Korea and Taiwan fared during the 2007-2009 recession.

In each case the downturn in production was much sharper.

This real-world experience is far from the aforementioned theory that better supply chain management would help smooth out the business cycle.

Given this picture, I don't know that you can rely on supply chain management to help resurrect the Great Moderation.

>>> So what about the other argument, which is that monetary policy timing skills have improved so much that we can reliably pull off soft-landings?



Well, this chart shows ECRI's interpretation of how the Fed's assessment of inflation risk and risks to growth evolved in the lead up to the Lehman crisis. You also see how our own views evolved in that timeframe.

We tried to make this as unbiased as possible. We based each data point on official Fed statements on the one hand, and the performance of ECRI's Weekly Leading Index of economic growth and the Future Inflation Gauge on the other (which, by the way, are both released publicly).

What this shows is dramatic.

In contrast to a steady and more timely evolution of ECRI's views whereby recession risk was increasingly trumping inflation risk, the Fed's position effectively showed their views flailing back and forth until they belatedly recognized the reality of recession following the Lehman failure.

It's actually instructive to look at each of the points in time and understand just how far behind the curve they were, but I'll just ask you to think back to June 2008 <POINT TO DATE> when, based on what the Fed was saying, Fed Funds futures were pricing in 100 basis points of tightening from 2% - 3% by year end.

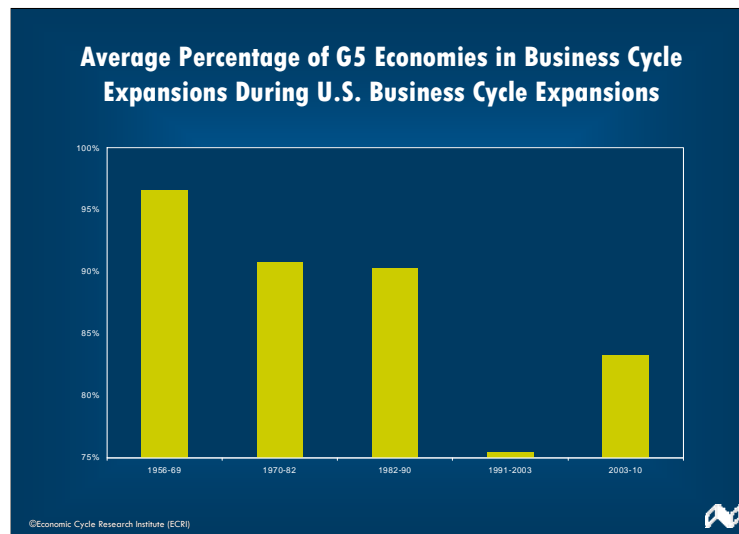
To be clear, this was when we were already six months into the recession.

But this episode is hardly an exception. Think back a few more years to June of 2003 when the Fed cut rates to 1% to battle deflation risk. In just a matter of weeks following that cut, GDP growth was already surging to a **20-year** high.

With episodes like these it's hard to argue that we have good monetary policy timing.

Who knows, they might get their policy timing just right this time around. As the New York State lottery slogan goes, "Hey, you never know."

>>>This brings us to the 3rd explanation offered by academics for the Great Moderation, which is luck



Now, if you look at this chart showing the synchronicity of international expansions, what jumps out -- as missing -- is the 1990s, which was at the heart of the Great Moderation.

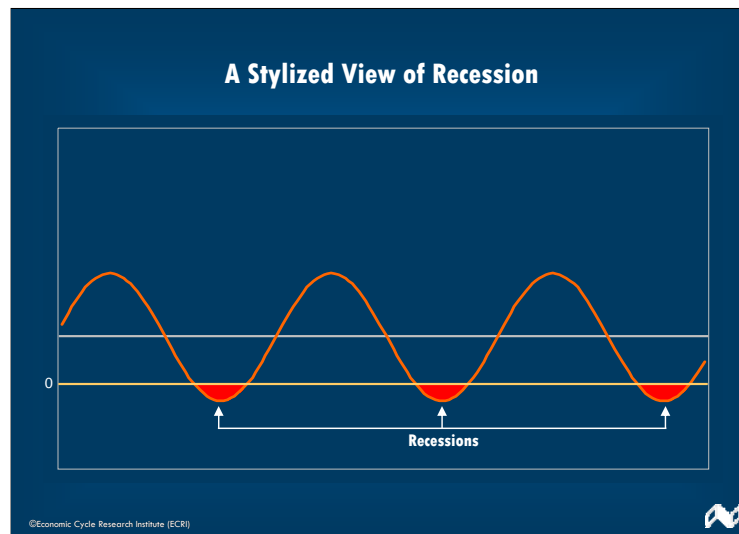
In essence, during that time the major economies took turns going into recession, with the English-speaking recession in the early 1990s being followed by recessions in Japan and continental Europe and so on.

As a result there was significant disinflationary global over capacity that enabled the Fed to remain relatively loose without a major inflation problem. This was in addition to capacity unleashed by the end of the Cold War.

What happened for those dozen years was hardly by design, nor was it a lasting pattern.

Essentially, it was luck.

>>> Let me ask -- are you comfortable counting on a repeat of this sort of good fortune as it were? If not, we must return to the now familiar slide.



To be clear, we are really talking about higher cyclical volatility, not a return to a super-mild business cycle.

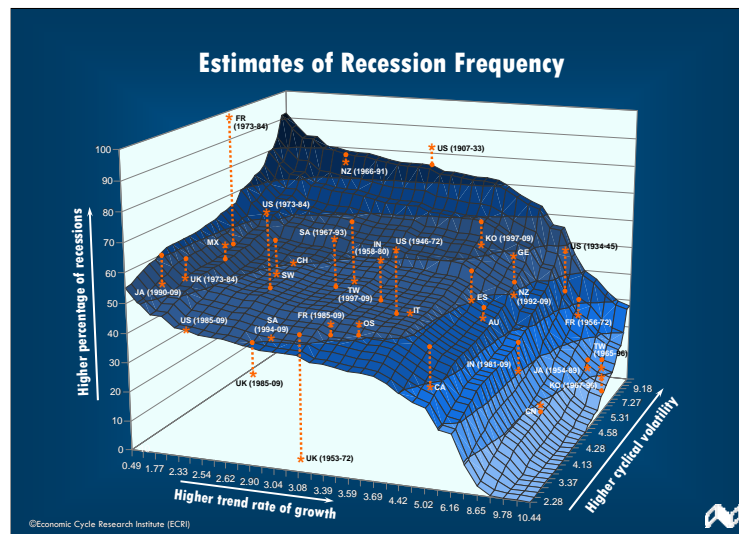
And remember, we're also talking of a well-established pattern of lower trend growth.

This is exactly the **opposite** of what we'd like to see in the context of this chart. We'd like to see the trend line rising, **but it's falling**.

We'd like to see the wavy line flatten, **but instead the swings are bigger**.

>>> Still, how well does this chart conform to reality?

In the real world is the length of expansion driven by trend growth and cyclical volatility as the chart suggests?



Here we pull together the international evidence showing that trend growth and volatility largely explain the length of expansion.

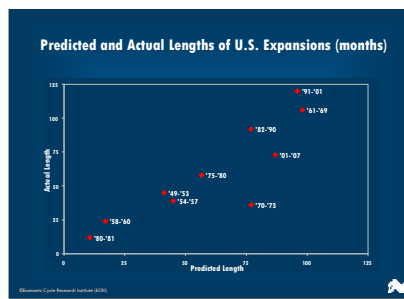
What you see is a three dimensional regression surface relating trend growth and cycle volatility on the two horizontal axes, to the vertical axis showing the percentage of slowdowns that become recessions

The asterisks are the actual percentages, and the dots are the regression estimates.

So, when you have high cycle volatility and low trend growth you have the most slowdowns becoming recessions <TOP AREA>

And when you have lower cycle swings and higher trend growth you have more soft landings without recession <BOTTOM AREA>

>>> Let's boil this all down to the U.S. experience...



Here on the horizontal axis we have the predicted length of U.S. expansions based simply on trend growth and volatility. On the vertical axis you have the actual length of expansion.

You can see there is a pretty good relationship with trend growth and volatility explaining 70% of the variance in the length of expansions.

So what I'm sharing with you today is **much** more than theoretical.

The convergence of a pattern of lower and lower trend growth combined with higher cyclical volatility it just **dictates** more frequent recessions.

Quite simply, in the coming decade we're unlikely to see the kind of long expansions that we've become used to since the early 1980s. Rather, we're likely to see more **frequent** recessions.

This view is in **sharp** contrast to the forecasts of most economists and their models, which show a relatively smooth projection into the future.

Maybe these forecasts show anemic growth with a few bumps and squiggles thrown in, but that is a far cry from the **cyclical instability** that we foresee.

Why should anyone care if we're right? Let me offer a few things to think about:

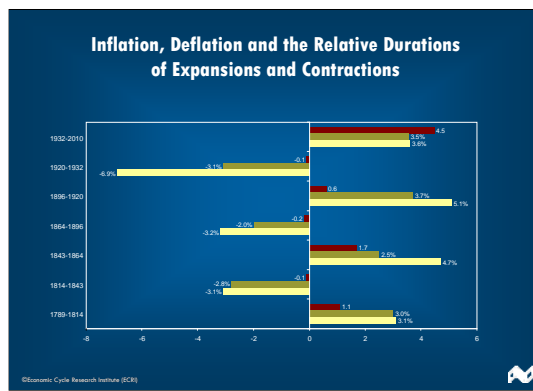
For policy makers a key takeaway is that the next recession will begin long before the jobless rate is anywhere near full employment, with the attendant monetary and fiscal policy implications.

For investors, the problem goes further in that recessions are associated with major bear markets. So more frequent recessions demand the ability to ride the cycle in both directions, not a buy-and-hold mindset.

Separately, frequent recessions tend to raise the equity risk premium and crunch P/E multiples. Case in point is the U.S. economy which between 1969 and 1982 saw four recessions in 13 years. During that time the stock market gyrated quite a bit but ended up where it started, even though earnings had clearly risen.

Even worse is Japan, which has also seen four recessions since the popping of its asset bubble and the Nikkei is now about a quarter of its 1989 value, again even though earnings are up.

>>> Which brings me to the worst case scenario...



This chart shows *alternating inflationary and deflationary* ERAS in the U.S. over the last 220 YEARS.

The green and yellow bars represent the average rate of inflation in each era as measured by the CPI and WPI respectively.

So we've had four inflationary and three deflationary eras, each including several business cycles.

The **red bars are where things get interesting** as they show the average length of expansion relative to the average length of recession in each of those eras.

When the red bars extend to the right, more time on average is spent in expansion than contraction. When the red bars extend to the left, more time on average is spent in recession than in expansion.

It is **striking** that in every era where the economy spent more time in recession it resulted in sustained deflation.

This worst case scenario, where frequent recessions also mean we're spending more time in recession than expansion, is not without precedent. In fact this is the essence of Japan's challenge.

Well, I think I've made my case. To wrap up, the business cycle landscape is likely to be quite different in the coming decade, resulting in a profound shift in the kinds of challenges that decision makers are likely to face.