



The Trick to Predicting Recessions

A primer on predicting the unpredictable.

At the end of 2008, the **Queen of the United Kingdom** asked a group of academics from the London School of Economics why nobody had predicted the recession that was just beginning to bite. She wasn't the only one who asked this **question**. Estimating the probability of a recession has so far proven to be a challenging task. Each cycle looks slightly different from the previous one. Trying to come up with precise indicators of crises leads to either over-predicting them or missing their timing because unknown risks are underestimated.

The United States entered its longest expansion on record (10 years) as of June 2019, and there are increasing questions about whether any reliable indicators can help us forecast the next turning point.

Here is a short guide to consider the difficult task of predicting recessions.

It all starts with statistical patterns

Predicting the future first requires a clear understanding of the past. Are there obvious statistical patterns that are observed before a recession? There are some, although their statistical power is limited. Here are three that are related:

1. Recessions always follow expansions – that's what we call the business cycle. The history of the US

cycle is well documented by the **NBER Business Cycle Dating Committee**. The longest expansion on record had been from March 1991 to March 2001, exactly 120 months. And that's precisely the number of months of the current expansion. Other countries have enjoyed longer expansions (Australia is celebrating the 27th year of its business cycle), but these tend to be the exception rather than the norm.

2. The US does not seem to be able to sustain a low unemployment rate for years on end. When "full employment" is attained (or even before), unemployment bounces back up as the economy hits a turning point and the US enters a recession. See Figure 1 where unemployment creates a V shape around recessions, as I wrote in **a previous post**.

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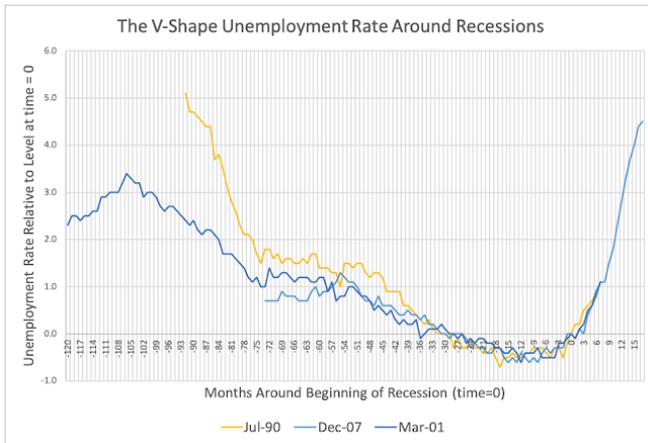


Figure 1: Unemployment around recessions

3. In a well-known statistical pattern, the **yield curve tends to invert** before a recession. The difference between long-term and short-term rates, which is usually positive, declines during an expansion. It reaches negative territory a few quarters before a recession starts (see Figure 2, which illustrates the difference between 10-year and 3-month interest rates).



Figure 2: Difference between 10-year and 3-month interest rates

As an expansion continues, we see both a gradual decrease in the unemployment rate and a flattening of the yield curve. This should not be a surprise, as the unemployment rate declines, central banks raise short-term rates. But what is interesting is that the US (so far) has not been able to reach a state where the yield curve remains flat for a long period of time or, equivalently, the unemployment rate stays low for several years. **Both the slope of the yield curve**

and the unemployment rate follow clear V-shape paths. And this is a likely link to the length of the expansion: When the recovery starts, both unemployment rates and the slope of the yield curve come down from high levels and as they reach their lowest possible levels, they bounce back – defining a limit for how long expansions last. In the current 10-year-long expansion, even though the US started with 2009’s high unemployment level, it must be very close to full employment (and the yield curve is flat or inverted).

These three statistical patterns point to a US recession over a short horizon: Expansion is longer than ever; unemployment is very low; and the yield curve is inverted.

But could these be statistical patterns without an obvious causal argument? Can we observe something different? Yes, but one cannot ignore the fact that these three statistical patterns are robust and consistent across all previous cycles. In other words, if the US were to continue its current expansion for a few more years then it would point to "this time is different".

Can this time be different?

Is it possible that the risks or imbalances that led to previous recessions are either absent or better managed today? Maybe. It is true that the US stock market does not look as expensive as it did in the **year prior** to the 2001 recession. It is true that housing markets are not in the same bubble territory created prior to the 2008 recession. But we need to remember that in those years, we also underestimated the relevance of those risks. Just before the Great Recession, US Federal Reserve officials **praised the resilience** of the US financial system in the face of a possible fall in housing prices. Perhaps we are failing to see other relevant risks today that are particular to the current cycle.

And let's not forget that, even after the fact, some recessions are not clearly preceded by excessive imbalances. The 1990 US recession, for example, seemed to be an accumulation of **smaller risks** combined with geopolitical events (such as the invasion of Kuwait by Iraq). And while geopolitical events are difficult to predict, it is not hard to produce a list of the potential threats the world faces today (from **Brexit**, to **trade** conflicts, to the potential instability of the **euro area**, to the conflict between the **US and Iran**).

Statistical patterns suggest that a US recession is imminent. Can this time be different because we cannot identify imbalances as large as in previous recessions? Perhaps, but to rule out a recession, we first need a guarantee that there are no other (hidden or underestimated) imbalances present and

that we will manage to navigate all the current economic, political and trade risks without a significant global slowdown. Such a scenario is possible but, given the track record, the statistical bar for making such a forecast seems quite high.

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