Rethinking the yield curve inversion

By Alex Newman

Financial markets often fixate on the shape of the yield curve for government debt. Most of the time, this curve is ‘normal’ – that is to say, continually rising. This is also rational. The market prices longer-dated bonds more expensively than short-term notes because investors demand greater compensation for waiting longer for the bonds to mature. The longer an investor must wait for this to happen, the greater the potential threats from inflation, interest rate increases or default.

But in recent months, markets have been nervously anticipating the inversion of the yield curve, a rare event when longer-dated bonds are cheaper than their shorter-term equivalents. When this happens, historical precedent suggests economic recession is close.

These signals have been flashing throughout 2019, but hit a psychologically significant marker just over a fortnight ago, when for the first time since 2007 the price of two-year US Treasuries fell below their 10-year counterparts (2s10s). UK yield curves inverted on the same day. The market has sent its message, loud and clear: we should expect both economies to soon slow or even contract.

It was against a similar backdrop in February 2006 that Jonathan Wright of the US Federal Reserve Board published a paper on inverted yield curves and recessions. In it, he notes that the issue was at that point “topical”, as the curve had started to show signs of inversion.

Wright starts from the viewpoint that “growth, recessions, and interest rates are all endogenous and any association among them is purely a reduced form correlation”. In other words, economic contractions are not the inevitable conclusion of monetary policy, market sentiment or asset prices. But he also cites a series of studies that show that inversion has “a negative statistical relationship with real GDP growth over subsequent quarters, and a positive statistical relationship with the odds of a recession”. In other words, inverted yield curves do have predictive powers.
This is borne out in the historical record, as the chart above shows. Although the lag between an inversion of the 2s10s spread and a recession has varied, the phenomenon has been consistent since the 1970s. Economists’ predictive powers have proved far weaker.

The recession predictor: when yields invert

Source: Federal Reserve Bank of St Louis

However, the broader accuracy with which an inverted yield curve can predict a recession is a moot point. For one, the global evidence isn’t as strong. The UK track record has been mixed. There was no inversion in Germany ahead of the eurozone crisis, which led to a recession. Australia has seen several inversions and no recessions over the past three decades, during which time Japan has faced multiple recessions and no inversions.

Added to this, we have fewer historical examples to draw conclusions from. For most of the past five decades, the global economy has been growing, leading investors to expect further growth, and the rising prospect of contractionary monetary policy to cool off the threat of
inflation. As such, the yield curve is normally sloping up. The inverse implications are less clear.

Furthermore, not all inversions are equal, just as no two recessions are the same. Those that start from a high overall level of interest rates imply tight pre-existing monetary policy, and an expectation among investors that this will get looser. So even though the inversion of the US and UK yield curves were preceded by gradually rising interest rates, few would claim that the global economy has been running hot at any point in the past decade. Neither would anyone claim that monetary policy has been anything but benign.

Consensus is starting to coalesce around the likelihood of a recession

This, for Mr Wright, is an important point. “The shape of the yield curve that has historically been the strongest predictor of recessions involves an inverted yield curve with a high level of the nominal funds rate,” he notes. The starting point matters.

So too does the shape of the inversion. To Mr Wright, “it is not clear that the spread of short-term interest rates over the yield on a long-term bond should necessarily capture all the information in the yield curve about the likelihood of a recession”. As such, financial markets’ obsession with the 2s10s spread could be overdone. Analysts at Bank of America and Duke University’s Campbell Harvey – who originally uncovered the predictive powers of an inverted yield curve – think shorter-term spreads are better predictors.

However, consensus is starting to coalesce around the likelihood of a recession. And the inverted yield curve’s track record in predicting each of the past eight US recessions will have played into this. Might this time be different? Investors would be brave to assume so, although it’s worth remembering that interest rates aren’t the only measurement to follow. Oil prices, for example, have surged ahead of every other US recession since the 1970s, and are arguably a better indicator of consumer sentiment. With WTI crude at $55 a barrel, off 20 per cent over the past year, the world’s largest energy market is hardly flashing red.

For further information, see ‘The Yield Curve and Predicting Recessions’ – a staff working paper by Jonathan Wright of the US Federal Reserve Board’s Division of Monetary Affairs, and published by the Fed in February 2006.