Upended

BY VANESSA SUMO

Yield-curve watching has become somewhat of a pastime for forecasting enthusiasts. The fascination is understandable. The yield curve, or a comparison of interest rates on government bonds of different maturities, has been an impressively reliable indicator of future economic growth. And lately, the shape of the yield curve has been notably flat, leading many to wonder if it might just tip over and whether that could portend a recession.

The curve begins on the left with the shortest-maturity bonds and ends on the right with the lengthiest, from three months to 30. An inversion of the curve, or when the yield on a short-term bond is higher than that on a long-term bond, has correctly predicted every single recession in the United States since 1950, with the exception of one "false" signal in 1966. It predicted the recession in 1990 five quarters earlier, and when the yield curve inverted in 2000, a recession followed two quarters later. No wonder markets recently took notice when the yield on the 2-year bond crawled above that of the 10-year bond several times between late last year and March. In early June the yield on the 10-year bond closed lower than the fed funds rate for the first time since April 2001.

Why is an inverted yield curve so alarming? An upward sloping yield curve is the result of investors' expectations that interest rates will rise in the future. The yield curve also slopes upward because investors demand a risk premium for the uncertainty of holding a bond that matures further away in the future. Usually, a positively sloped curve indicates good times ahead. As the economy rapidly expands, markets expect future interest rates to rise because of potentially higher inflation, which the Fed will stave off through rate hikes.

An inverted yield curve, on the other hand, can be a harbinger of a recession. It suggests that investors anticipate future yields to fall because they expect a slowdown to occur, which could eventually prod the Fed to stimulate the economy through lower interest rates, as it has done at times in the past. But an inverted curve also can be a measure of the sometimes inevitable effects of monetary policy. In an effort to squeeze out inflation, the Fed can increase short-term rates high enough that a recession becomes likely.

Some analysts argue that today's flatness and periodic inversions of the yield curve need not be interpreted this way. Looking at the spread — or the slope — of the yield curve alone may not capture all the information that is useful for forecasting future output.

In a recent paper, economists Andrew Ang of Columbia University, Monika Piazzesi of the University of Chicago, and Min Wei of the Federal Reserve Board of Governors attempt to disentangle and condense the information embodied in the yield curve by choosing a small number of variables that have the most explanatory power for predicting GDP growth. They find that, first, the yield spread and, second, the level of the nominal short-term rate together capture almost all of the useful information contained in the yield curve. In particular, they find that it is the nominal short rate rather than the slope of the yield curve that provides the most predictive power.

> "What Does the Yield Curve Tell Us about GDP Growth?" by Andrew Ang, Monika Piazzesi, and Min Wei. *Journal of Econometrics*, March-April 2006, vol. 131, issues 1-2, pp. 359-403.

These results lend support to former Federal Reserve Bank Chairman Alan Greenspan's view on why today's yield curve should be interpreted carefully. Like Ang, Piazzesi, and Wei, Greenspan believes that it is the short rate that underlies much of the yield curve's predictive ability. Specifically, in testimony before the Joint Economic Committee in November 2005, Greenspan noted that a flat or inverted curve could signal weaker economic growth ahead, but that depends on how far the real fed funds rate is from its long-run level.

Another reason why some economists think that an inversion may not mean a recession involves the level of another interest rate — the long-term one. Even though the Fed has increased its target rate 17 times since June 2004, inching it up from 1 percent to 5.25 percent, long-rates have remained stubbornly low at around 4 percent to a little more than 5 percent. Analysts point to low inflation expectations and increased demand for long-term bonds by foreign governments intervening in currency markets and by baby boomers preparing for retirement as some of the reasons why yields at the long end have remained subdued and the curve persistently flat. These are reasons that do not necessarily portend an economic downturn.

Greenspan points out that even as the yield curve was flat from 1992 to 1994, a long sustained period of economic expansion followed, not a recession. The yield curve is a powerful tool, but it may take a careful dissecting of levels and spreads to decipher what it's trying to tell us. **RF**