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Is There Still a Message in the Inverted Yield Curve?

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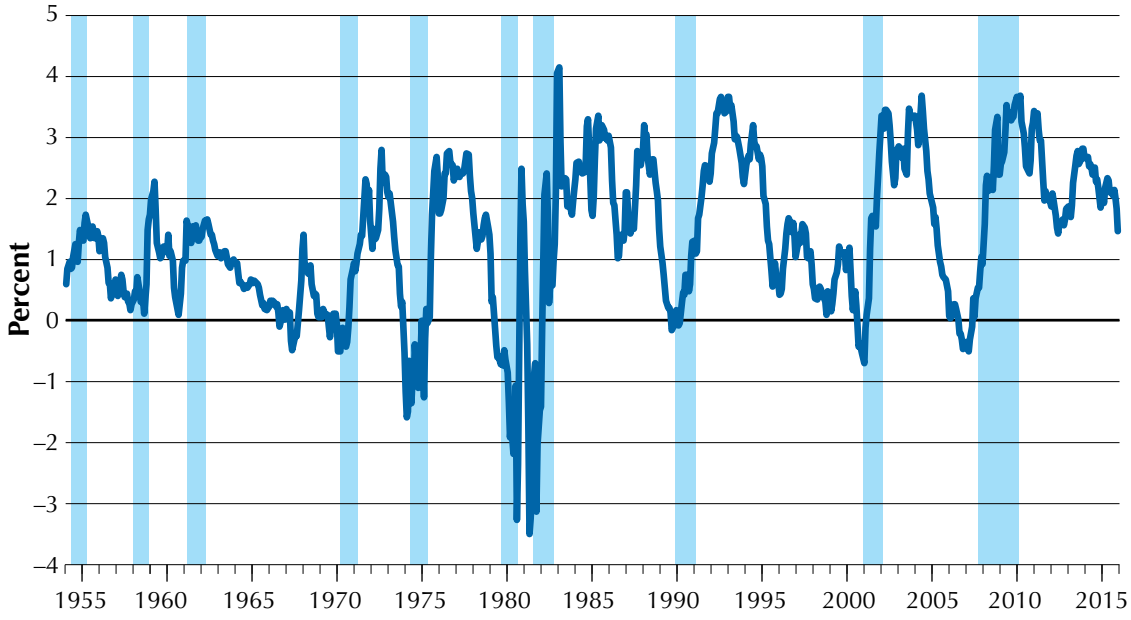
Historically, before each of the last seven recessions, short-term interest rates rose above long-term rates, producing what economists call an inverted yield curve.

Long-term interest rates are typically higher than short-term rates because investors usually require a premium to invest for the long term to compensate for additional risk. The relation between short-term and long-term rates is often displayed using the yield curve. The yield curve is a plot of the yields of similar securities with different maturities at a given time. If it inverts (that is, when short-term interest rates rise higher than long-term interest rates), investors consider short-term investments as higher risk than long-term investments. As a result, they want a higher return for assuming more risk in the short run and are less willing to lend at lower rates for longer periods.

The slope of the yield curve, also called the term spread, is often measured by the difference between the rate on ten-year Treasury notes and three-month Treasury bills. The term spread reflects the premium risk demanded by investors investing in long-term treasuries, as well as expectations about the future path of interest rates on short-term treasuries. The monthly average spread between the ten-year constant maturity rate (U.S. treasuries actively traded non-inflation-indexed issues adjusted to constant maturities) and the three-month secondary market rate (Treasury bills sold at public auction through competitive bids) on a bond-equivalent basis turned negative before each recession from January 1968 to January 2016 (see figure).

The level of spread has been shown in the past to provide an accurate signal of a forthcoming recession. One reason is that, conceptually, the level of the spread already corresponds to a forward-looking expected change in interest rates. The relationship between inverted yield curves and recessions is well established, but the exact timing of when the recession begins is harder to predict.

Treasury Spread: Ten-Year Bond Rate Minus Three-Month Bill Rate



Notes: Monthly Average. Recession shaded areas.
Source: Author's calculations, based on data from Haver Analytics and the National Bureau of Economic Research.

It is useful to examine the circumstances associated with inversion of the yield curve in the past and evaluate whether future situations will be different, like the movements in long-term interest rates and inventory accumulation. Another consideration is that wider long-term spreads may suggest a higher degree of uncertainty about long-term growth and bond yields. In addition, as yield curves behave differently across different subsets of time, the use of the yield curve to predict recessions or other changes in the economy may need to be reconsidered. Importantly, if the relationship is not consistent between different periods, care should be taken when using the relationship to make policy recommendations.

On the eve of last December's federal funds rate increase by the Federal Reserve, those monetary policy changes appear to have most directly influenced the short end of the yield curve, although they may affect the level of long-term rates through expectations. An increase in the short-term policy rates frequently results in higher longer-term rates as well, though the rise at the long end is typically smaller. At times, the long rates move in the opposite direction. For either case, if persistent, they may result in an inversion of the yield curve. If the rise in the fed funds rate is large, the short rates could move above long rates. Such a hike is likely to slow the economy. That is why the Federal Reserve's strategy to increase the fed funds rate in a slower manner is important to avoid leading to a possible inverted yield curve.

If interest rates start to rise with inflation, to the Federal Reserve long-term inflation target of 2 percent, we must remind ourselves that however accurate past signals of the yield curve have been, it is impossible to guarantee the same cause/effect results in the future. Until proven otherwise, it is a good indicator to observe and forecast the future.

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