



Making forecasts

Will an inverted yield curve predict the next recession ... again?

by Will McIntosh, Mark Fitzgerald and John Kirk

“If I knew that, I would be on my yacht right now!” is the common cry from researchers when asked to predict the next recession. For decades, even the most astute forecasters have struggled to foresee economic downturns. In 1929, the Harvard Economic Society famously declared a depression was “outside the range of probability,” and shortly thereafter, the U.S. economy sank into the deepest depression on record. Similarly, a 2007 survey by Blue Chip Economic Indicators projected 2.2 percent GDP growth in 2008; instead, the economy declined -0.3 percent.

This is not to say forecasting is futile; in fact, there is significant merit in developing a strategic economic outlook. Unfortunately, many recession indicators tend to be unreliable. One signal, however, has foreshadowed the previous seven U.S.

recessions. For many interest rate watchers, the yield curve inversion has become synonymous with economic slumps, which raises the question: Can we count on the inverted yield curve to be a leading indicator of the next recession?

What is an inverted yield curve?

The most commonly cited yield curve compares U.S. Treasury rates across various durations. (For this article, we define the yield curve spread as the difference between the 10-year Treasury rate and the three-month Treasury rate.) In most market environments, the curve is positively sloped, with longer-term bonds having higher yields than shorter-term bonds, consistent with the liquidity preference theory of the term structure of interest rates, which essentially states investors require

a premium for securities with longer maturities because they have greater risk. Investors can calculate the yield spread by subtracting short-term securities from longer-term securities.

With the 10-year Treasury note currently near 2.23 percent and the three-month Treasury bill at approximately 0.05 percent, for example, the yield spread is 218 basis points, 32 basis points below the average spread since the recession officially ended in 2009 but still well above the long-term average spread of 138 basis points since 1959. Thus, a significant cushion currently exists. Should the yield spread fall below zero, an inverted curve would occur. Since 1968, an inverted yield curve has only happened seven times; however, each occurrence preceded a recession. On average, this ominous indicator appears one year prior to the recession, but lead times have varied from five to 16 months (see graph below).

What causes an inverted yield curve?

The Fed's monetary policy tends to be a catalyst for yield curve inversions. It is worth noting the Fed only sets the target federal funds rate, the rate banks charge each other on overnight loans, and it is the base rate for all other interest rates in the U.S. economy. If the federal funds rate, for instance, increases 25 basis points, the baseline expectation would be for longer-term rates to move upward as well. While the relationship is not linear or one-to-one, a positive correlation exists between the federal funds rate and longer-term yields.

In some instances, however, these rates do not move in tandem, particularly in the short term. In many cases, the impetus for the Fed to raise interest rates is to prevent the economy from "overheating," with the premise that higher lending costs will

reduce demand for credit (such as car loans, business loans and mortgage rates). This is a delicate balance, as these rate adjustments tend to have the desired effect on the economy in the near term, but ultimately, a number of market factors (including inflation expectation, employment growth and global economic conditions) determine how long-term rates respond. In fact, market participants often view an increase in short-term rates as a signal economic growth rates will slow, placing downward pressure on longer-term rates and potentially leading to an inverted yield curve.

Will a yield curve inversion occur when the Fed raises interest rates? Several factors need to be considered before answering this question. To start, the Fed has not raised interest rates since 2006, even though economists have predicted a rate increase essentially since the Great Recession ended. For argument's sake, assume a rate hike occurs in fourth quarter 2015. Does that mean a recession is imminent? Probably not. Even if the Fed raises interest rates, it does not constitute an inverted yield curve until short-term rates exceed long-term rates. For this to occur, a rate hike would have to overcome the current yield spread (which we noted earlier currently has a substantial cushion of 218 basis points), and that assumes long-term rates remain flat, which is uncertain given current global economic conditions.

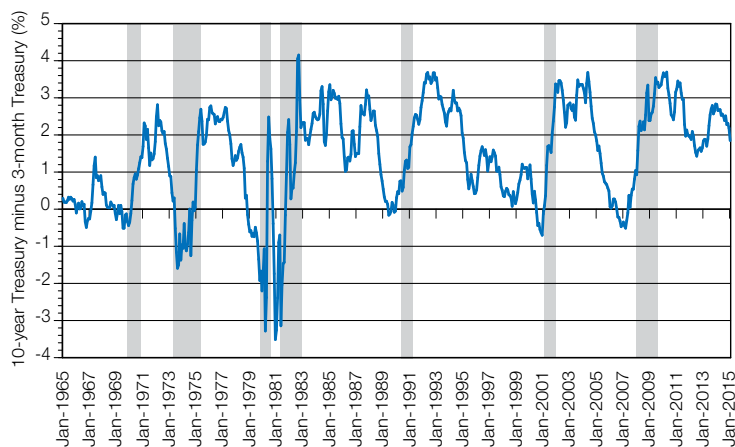
Ultimately, the pace and scale at which the Fed raises rates will be critical in determining whether the yield curve inverts. Federal Reserve Chair Janet Yellen recently echoed this sentiment in a June 2015 press conference: "I want to emphasize sometimes too much attention is placed on the timing of the first increase. What should matter to market participants is the entire trajectory of expected policy."

The consensus has been that Fed officials would eventually raise rates in modest increments of no more than 25 basis points per quarter by the end of 2015, but Yellen's comments seem to indicate the frequency of interest rate hikes could vary substantially depending on the Fed's economic outlook. Most economic forecasting firms are not anticipating an inversion of the yield curve at any point in the near future. The recent forward rate curve (which is a snapshot of where the market expects interest rates will be in the future) projects an inverted yield curve, but not until 2020 (see graph on page 70), suggesting the recovery still has significant room to run (data for forward rate curve is as of July 27, 2015).

What does this mean for real estate investors?

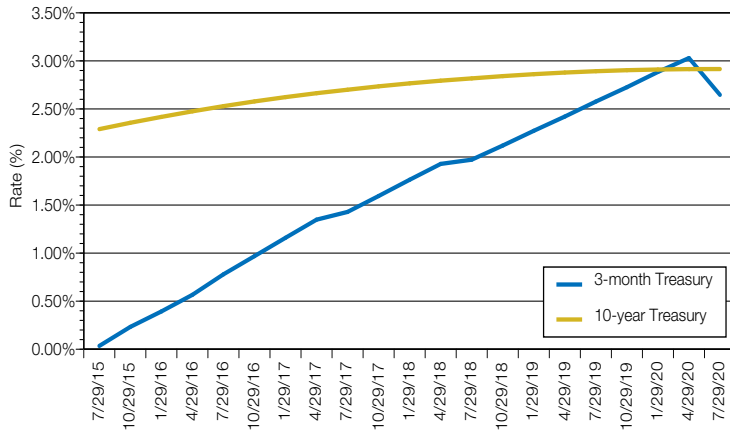
There are several potential takeaways for investors. First, while an exogenous event certainly could lead to a downturn in the economy without a yield curve inversion, real estate investors should

Inverted yield curve has been leading indicator for the past seven recessions



Sources: Federal Reserve, USAA Real Estate Company

10-year and three-month Treasury forward rate curves



Note: Data for forward rate curve is as of July 27, 2015
Sources: Bloomberg, USAA Real Estate Company

be mindful of the indicator's historical context and not fall victim to the "this time is different" mentality. The previous seven recessions were each unique in their own respects; nonetheless, a yield curve inversion preceded each downturn. The inverted yield curve is far from perfect as it does not predict the magnitude or length of the subsequent recession, but it is an insightful tool that can be even more robust when combined with other economic variables.

Second, investors should be cognizant of not overleveraging, particularly as the Fed increases the cost of debt as a means to slow the economy. This is a critical issue given the role debt plays throughout the commercial real estate industry. It is plausible some planned investments will become less attractive as the cost of capital rises, development projects that are in progress could be difficult to refinance as credit tightens, and some assets with long-term leases will be subject to duration risk as interest rates rise. This is not to say debt financing is a bad thing, but the consequences of overleveraging become magnified in a rising interest rate environment.

Lastly, we believe it is essential to always probe for opportunities. Even though the Fed has not raised rates in nearly a decade, and the first increase likely will bring a sense of uncertainty, these are times when astute investors can capitalize on mispriced assets and market inefficiency.

As short-term interest rates begin inevitably to rise in the future, investors should monitor changes in the slope of the yield curve, given the potentially predictive power of yield curve inversions. ❖

Will McIntosh is global head of research at **USAA Real Estate Company**. **Mark Fitzgerald** and **John Kirk** are research analysts with the firm.

Avanant Ad
4/C