RBC WEALTH MANAGEMENT
Global Insight
Focus Article

In conversation: Paying attention to the yield curve

What the yield curve may be saying about the prospects for economic growth and the direction of financial markets.

Jim Allworth & Craig Bishop

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All values in U.S. dollars and priced as of May 31, 2018, market close, unless otherwise noted.

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Focus article

In conversation: Paying attention to the yield curve

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The shape of the yield curve—or more specifically, the difference between long- and short-term interest rates—has become a much discussed topic of late. In the U.S., the gap between the yield on the 1-year Treasury note and that on the 10-year note has narrowed from a comfortably wide 160 basis points (1.60%) back in early 2017 to a narrower 70 basis points (0.70%) recently.

Some have suggested this narrowing means the U.S. economy is slowing and may be headed for recession. Here we discuss what the yield curve may or may not be saying about the prospects for economic growth and for the likely future direction of bond yields and stock prices.

Q: Can we gauge how close we are to the end of the cycle by looking at the yield curve?

Jim Allworth; Investment Strategist: The general idea is that a steepening yield curve, where long rates are rising faster than short rates, indicates that credit is easy to access and is regarded as a harbinger of faster economic growth to come. But a flattening curve signals that credit is becoming more difficult and expensive to access and that growth will slow. That's been more or less true over at least the past 70 years, although the relationship has not always been as tight as most would like.

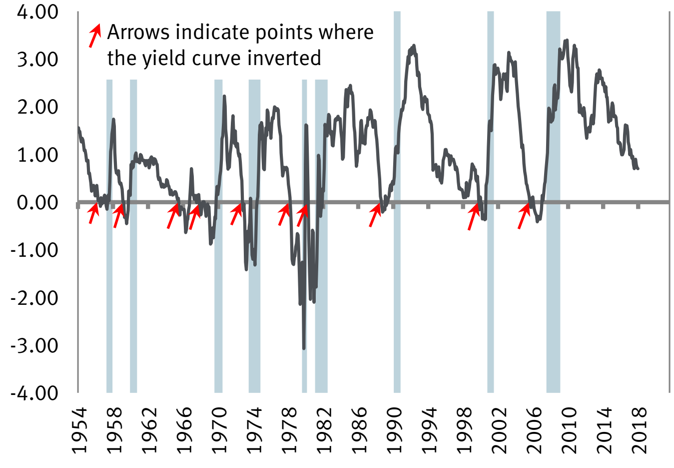
However, focusing solely on the U.S., there is a signal given by the yield curve that should not be ignored when it occurs and that's inversion—when short-term yields rise above the prevailing long-term bond rate it indicates credit conditions have become unusually restrictive and that there is a very high probability that a recession will arrive within about a year.

There hasn't been a recession in more than 60 years that wasn't preceded by an inversion of the yield curve. And there was only one time when an inversion wasn't followed by a recession—1965–66—but there was quite a dramatic slowdown in GDP growth around that time, from 10.2% in Q1 1966 to just 0.3% in Q2 1967.

On average, the yield curve has inverted 14 months prior to the onset of a recession (median 11 months). The shortest "early warning" was eight months. However, if you don't have inversion, flattening doesn't tell you much other than that the economy may be slowing down.

And, of course, nobody rings the bell when a recession starts. In fact, the National Bureau of Economic Research, which is charged in the U.S. with formally ruling

Yield differential between the U.S. 10-year Treasury note and the 1-year note



Note: Shaded areas indicate recessions
Source - RBC Wealth Management, U.S. Federal Reserve, National Bureau of Economic Research

Yield curve inversions lead recessions by about a year on average.

on when each recession starts and ends, usually makes those calls a year after the fact. In the intervening period, when the recession is actually underway but not yet officially acknowledged, there's usually a lot of diverging opinions between those who think that a recession has started and those who think that somehow or another one will be avoided.

Q: Would you call inversion the opening bell for the countdown to a recession?

Jim: Yes, but there are a number of other indicators, including unemployment insurance claims, which bottom a year or so before a recession starts, and the unemployment rate, which bottoms two or three months before a recession starts.

Even after inversion occurs, it's typically months or quarters before the economic downturn gets underway.

Considering the yield curve by itself, there are two things to note. One, that inversion has been a reliable precursor of recessions, and two, that even after inversion occurs, it's typically months or quarters before the economic downturn gets underway.

Q: Does the U.S. yield curve drive other curves around the globe?

Craig Bishop; Lead Strategist, U.S. Fixed Income Strategies: Not necessarily, but it may lead other sovereign curves to move in that direction. The shape of the curve depends more on levels of an economy's growth and central bank policies. The U.S. curve began to flatten really with the Fed's first rate hike in December 2015. As other central banks have moved to become less accommodative, the Bank of Canada for example, their respective curves have also flattened. Today, yield curves are flatter in both the U.S. and Canada than in the U.K. and Europe because the Fed and Bank of Canada are both further along the path to normalizing policy than other central banks, certainly ahead of the European Central Bank.

Our outlook has focused on the synchronization of global economies and changes in central bank policy. As a result, yield curve shifts in the U.S. should ultimately filter through to other regions.

Yield curve track record

Month yield curve inverts	Month recession begins	Interval (in months)
Dec '56	Sep '57	9
Sep '59	May '60	8
Apr '68	Jan '70	21
Mar '73	Dec '73	9
Sep '78	Jan '80	16
Sep '80	Jul '81	10
Feb '89	Jul '90	17
Apr '00	Mar '01	11
Jan '06	Dec '07	23
	Average	14
	Median	11

Source - RBC Wealth Management, U.S. Federal Reserve, National Bureau of Economic Research

The yield curve has typically inverted about a year before a recession begins.

Jim: If you actually plotted the yield curve of other economies, say, of Canada, the U.K., Germany, and Japan, and looked for a similar pattern to that in the U.S. where inversion consistently precedes a recession, you would be less confident in your conclusions. That is because trade and therefore the respective currencies are so much more important in those economies than for the U.S. Exports range between 30% and 40% of GDP for those countries but just 14% for the U.S.

Q: There's a lot of focus on the 10-year Treasury yield going through 3%. Why are investors fixated on that level?

The Fed doesn't tighten with the intention of inducing a recession; its unstated goal is to produce a "soft landing."

Craig: Many investors, for some time, have been expecting rates to rise. The 3% level was an important psychological barrier that once pierced was looked at as confirming those bearish expectations. 10-year yields hadn't been that high since the "taper tantrum" of 2013.

Recently, expectations of higher inflation, strong growth, and a more aggressive Fed combined to push the 10-year yield to just over 3.10%, its highest level in seven years. We don't think yields will move very far past that level. They have since settled back to 2.90%, and longer term we see the Fed's forecast for a peak fed funds rate of 3.25%–3.50% by 2020 as a good guidepost for the peak in 10-year yields in this cycle.

It's worth remembering that the Fed doesn't tighten with the intention of inducing a recession; its unstated goal is to produce a "soft landing." To accomplish this, policymakers seek to head off the buildup of inflationary pressures while maintaining growth and employment.

Of course, the wild card is always inflation. Our forecast has inflation moving up to 2.5% this year before subsiding to 2.25% in 2019. The Fed has indicated it's not going to get too fussed about inflation running moderately above its long-term 2% target, which would suggest its deliberate, patient approach to normalizing rates is what we should expect.

Q: What is the relationship between an inverted yield curve and equities?

Jim: There's always been a bear market when you have had an inverted yield curve, or if not a bear market, a retrenchment. So in that one instance in 1966 when the yield curve inverted but no recession ensued, there was an eight-month 22% decline in the S&P 500.

Generally speaking, if the yield curve inverts the economy contracts, and so do profits.

Profits are leveraged to economic growth, so they usually go up faster than the economy grows and they come down more quickly than the economy contracts. Recessions also tend to reduce confidence in the future, so the price-to-earnings (P/E) multiple comes down. You've got the "E" (earnings) coming down and the "P" (price) falls even faster because investors lose faith in the ability of the economy to recover.

Yield curves aren't like dominoes in that they flatten, and then invert, with a recession to soon follow.

Today's narrowing gap between short-term rates and longer bond yields puts us in a watchful, vigilant state of mind. We are not alarmed by the flatter yield curve—but we'd like to get the bear market call right when one eventually arrives.

Q: There are several yield curves and we've cited a couple in this piece; which one should we look at?

Craig: The key to having confidence in using the yield curve as an indicator is the availability of data over a long period of time. The market and the Fed, as noted in the minutes of the Federal Open Market Committee's May meeting, are following movements in the 2-year/10-year curve, and in past research pieces the Fed has suggested the 3-month/10-year curve may be the best market barometer.

We will somewhat split the difference on the short end of the curve and use the 1-year/10-year curve, for which the Fed provides the longest stretch of consistent data. But we don't expect signals generated by any of these three curves will prove to be contradictory or meaningfully out of sync when viewed as possible recession indicators.

The final word

We are approaching uncharted waters across a number of fronts—the current U.S. economic expansion is moving into its 10th year and the Fed is continuing on its path to gradually raise rates in hopes of engineering a soft landing. Needless to say, investors are cautious and looking for indicators to guide them; history shows the shape of the yield curve to be one of the best. But, as we suggest, yield curves aren't like dominoes in that they flatten, and then invert, with a recession to soon follow. It takes time for this sequence of events to fully unfold, if that's what's going to happen, which affirms to us the next recession is not on the near-term horizon.

Research resources

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