

Should we worry about the yield curve?

If and when the yield curve inverts, its signal may well be premature.

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Key takeaways

- The market seems obsessed with the yield curve and its impending inversion.
- Historically, an inverted yield curve has been a reliable indicator of recessions.
- This time around, that signal could be premature because an important component could be missing.
- That component is the cost of capital, as expressed by the spread between the Federal Reserve policy rate and R-Star.
- Historically, it has taken both an increase in the cost of capital and a decrease in the availability of credit to lead to recession, and we are still a long way off from that scenario.

Everyone's talking about the yield curve!

An interesting thing happened during a recent client roadshow: at every Q&A, someone would ask me about the yield curve—stating with absolute certainty that it will soon invert and cause a recession, as outlined in a recent *New York Times* article—and ask why I'm not more worried that the signal that has predicted every recession is about to appear again.

I'm a contrarian at heart, so when I see that even general investors are laser-focused on an impending inversion, I wonder: What are the chances that it will be either a false positive or at the very least highly premature? My guess is that the chances are decent that it will be the former, and rather high that it will be the latter.

My hunch is that a yield curve inversion alone is not enough to kill the current expansion. The level of interest rates relative to the so-called natural rate, or "R-Star," matters as well. (R-Star is the theoretical rate of interest, as calculated by the U.S. Federal Reserve, at which the economy would be in balance between growth and inflation.) In my view, it

would take a one-two punch of rising rates plus an inverted yield curve to really derail things.

A one-two punch

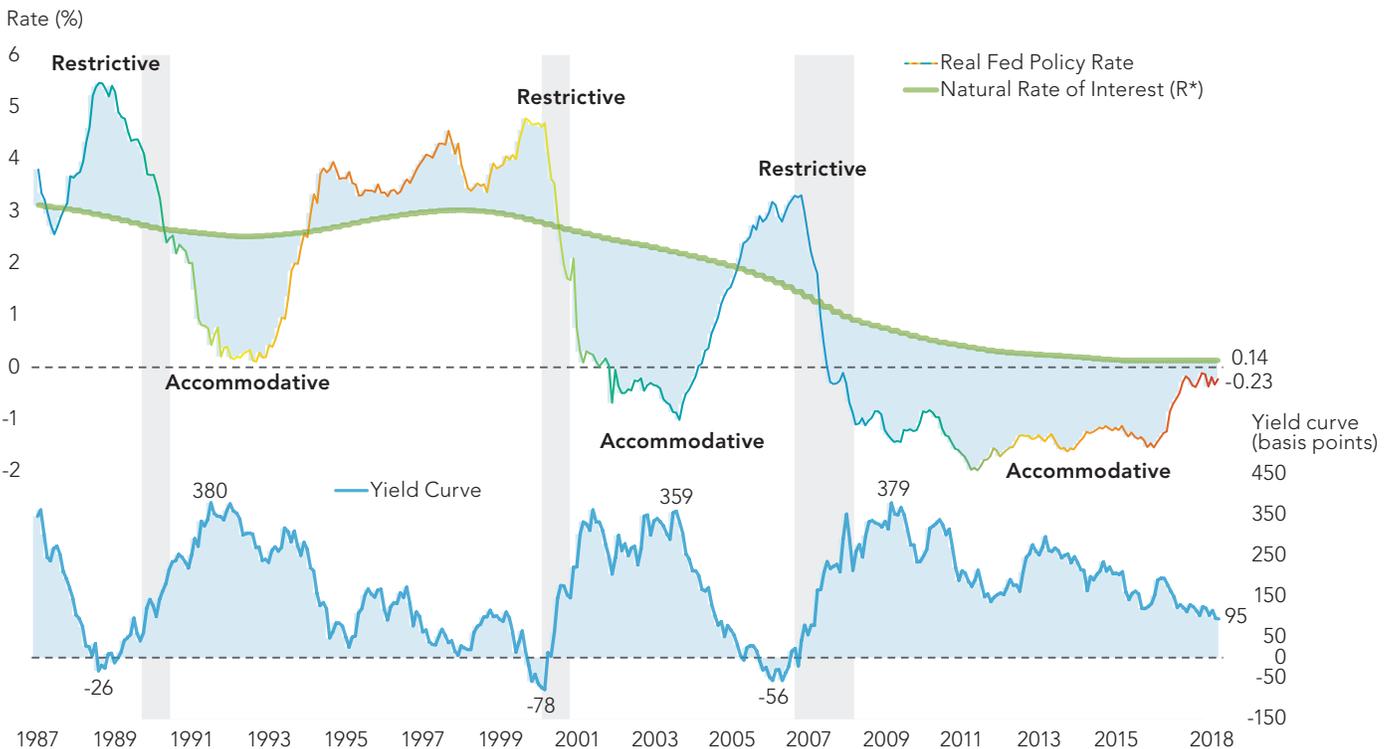
To me, this is intuitive: You need both the cost of capital to rise AND its availability to contract for economic activity to grind to a halt. Historically, these two factors have tended to occur at the same time. The former happens when the Federal Reserve pushes policy interest rates well above neutral; and in the process the latter happens as banks' net interest margin (the difference between what banks earn on loans and pay on deposits) turns upside-down as the curve inverts. When both

conditions are met—voilà!—we have a credit crunch on our hands. Cue the recession playbook.

One chart I like to show (Exhibit 1) is the “real” (inflation-adjusted²) federal funds rate relative to R-Star. I think the upper graphic nicely illustrates the entirety of the Fed cycle from accommodative (loose) to restrictive (tight) and back, and shows that cycle extremes tend to happen when the policy rate rises to at least 2 percentage points above the natural rate. That is the point at which the curve also tends to invert—and therefore the point at which capital has become too expensive as well as difficult to obtain. Inversions, depicted in the lower part of Exhibit 1, occur when the difference between 3-month and 10-year Treasury yields (3m10y) goes negative.

EXHIBIT 1: Compared with the natural rate (R*), real U.S. monetary policy might not be extreme

Fed Interest Rate Cycles (1987 to 2018)



Sources: San Francisco Federal Reserve, Haver Analytics, Fidelity Investments; monthly data as of June 30, 2018.

Now, if I take the 3m10y yield curve and flip it around on its horizontal axis, you can see an almost perfect overlay between the shape of that graph and the one depicting the spread between the real federal funds policy rate and R-Star (Exhibit 2).

So, where are we today? The natural rate is estimated to be around 0% to 0.5% (and rising),³ and core inflation (PCE) is around 2% (and rising).⁴ That means that nominal R-Star is somewhere around 2.0%–2.5% and rising. With the current Fed policy rate at 1.75%–2.0%, the real policy rate is still below the natural rate, that is, still below neutral. That to me suggests that despite the now seven hikes, the Fed is still slightly accommodative in terms

of monetary policy. Meanwhile, the 3m10y difference is currently just shy of +100 basis points (bps).⁵

So, all good: At 100 bps there's still cushion in the yield curve and a policy rate that is not even at neutral. But markets are always looking ahead, so let's look at what the next few years might bring.

The road ahead

With the Fed suggesting six more hikes through 2020 to a median dot⁶ of 3.25%–3.5% and the market pricing in three more hikes (to 2.67%), let's assume for now that the fed funds rate will rise to 3.0% in 2020. If by then nominal R-Star has risen from roughly 2.0%–2.5% to, say,

EXHIBIT 2: The yield curve aligns well with the Fed spread

10-Year Minus 3-Month Treasury Yields Versus Real Fed Funds Rate Minus R* (1987 to 2017)



Source: Bloomberg Finance L.P., Haver Analytics, Fidelity Investments; monthly data as of June 30, 2018.

2.5%–3.0%, then monetary policy would still be neutral two years from now, and certainly well short of the kind of restrictive extremes that have caused previous recessions.

If by then long rates are still around 3.0% (always a big assumption of course) the yield curve would be as flat as a pancake. Combine this with a policy rate that is merely neutral, then in my view that should not be enough to trigger a recession.

In other words, Wall Street may be premature in extrapolating recent trends into an end-of-cycle scenario.

Risks

What are the risks to this outlook? One is a scenario in which the Fed keeps hiking rates but R-Star fails to rise. The result would be a policy error by the Fed, in my view, as an excessive gap would open up between the policy rate and the natural rate at a time when that is not justified. I think the long end likely would sniff this out immediately, and we could end up with a situation where short rates rise and long rates fall, causing the curve to invert. That would be your one-two punch.

It's hard for me to see the natural rate not climbing in the coming years, especially following the capital-spending cycle now underway, but if rising trade tensions cause companies to become more cautious, then growth could slow down, taking R-Star with it.

Another risk is that the market is underestimating the impact from the Fed's shrinking balance sheet, otherwise known as quantitative tightening (QT), the reverse of quantitative easing (QE). If the reduction in the balance sheet is a form of policy tightening, then that means there is more going on in this Fed cycle than just the rising policy rate. According to our estimates, the Fed's balance sheet will shrink by \$1.5 trillion by the end of 2021 (it's currently at \$4 trillion). How much that is worth as a form of tightening is something that probably no

one has a clear handle on, but in my view the \$1.5 trillion contraction in the Fed's balance sheet over the coming three years has to count for something.

Back in the QE days (2008–2014) the Atlanta Fed published a "shadow" funds rate, which incorporated the impact of QE. By that measure, the shadow funds rate stood at –3.0% in 2014 when the actual fed funds rate was at zero. This suggests that the \$3.7 trillion worth of QE had the impact of an additional 300 bps of rate cuts. Let's assume that the Fed reverses half of that in the coming few years—and its impact is proportional to QE—then perhaps we should add 150 bps to the terminal fed funds rate in order to arrive at a shadow terminal funds rate. That suggests that in a few years the nominal shadow funds rate would have climbed to 4.5% instead of 3.0%. If by then nominal R-Star is at 2.5%–3.0%, Fed policy will have turned outright restrictive.

The term premium (TP)

There is at least one other aspect to consider when thinking about the yield curve, and that has to do with the premium normally commanded by longer-term Treasuries. Looking back to the chart that compares the 3m10y yield curve with the spread between the fed funds rate and R-Star, we can see that the curve appears to be flatter than would otherwise be suggested by the Fed's rate policy.

That difference likely comes from the fact that the 10-year term premium is currently negative (per the New York Fed's estimates⁷). This is hardly an exact science of course, since the term premium is derived and not observed (just like R-Star), but some basic regression analysis on my part suggests that were it not for QE the 10-year term premium would be positive instead of negative. That regression is based on trends in inflation and the supply/demand dynamic for Treasuries. In particular, the latter

has had a big impact on the term premium since 2008, when the QE era began.

So, if the Fed continues to shrink its balance sheet, I believe the term premium should eventually turn positive again, especially at a time when there is increasing supply from the Treasury. That should in theory provide an offset to the flattening of the yield curve, because the term premium by definition affects the long end of the curve more than the short end. That suggests that it would take more rate hikes than are currently expected to invert the curve.

Conclusion

Despite all the hand-wringing in the market, we are not yet close to an inverted yield curve, in my view. Moreover, if and when it does happen (2020?), it may not have the same negative impact that it had in the past, unless by then the Fed's policy rate is also well above the natural rate.

I never want to be that person that says "this time it's different," and I am not saying that now. What I am saying is that the sell signal from an inverted curve may prove to be premature, unless the Fed tightens much more than what is currently priced in.

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Endnotes

¹ The U.S. Federal Reserve generally uses R-Star to denote the rate that would keep the economy operating at full employment with a stable inflation rate, and where the demand for capital is in equilibrium with the supply of capital.

² Using the U.S. Federal Reserve's preferred "core" PCE (personal consumption expenditures) price index, which excludes food and energy prices.

³ San Francisco Federal Reserve, Haver Analytics, Fidelity Investments; monthly data as of June 30, 2018.

⁴ Personal consumption expenditures (PCE), Bureau of Economic Analysis of the Department of Commerce, June 2018.

⁵ Bloomberg Finance L.P., Haver Analytics, Fidelity Investments; monthly data as of June 30, 2018.

⁶ Per the "dot plot," a graph showing where each of the 16 members of the Federal Open Market Committee (FOMC), the Federal Reserve's rate-setting body, expects the policy rate to be at the end of various calendar years and in the long run. The dot plot is published after each meeting of the FOMC.

⁷ Source: U.S. Federal Reserve, as of June 28, 2018.

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