

The Flattening Yield Curve

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Cam Harvey looks at the yield curve today through the lens of his 1986 pioneering work on yield-curve inversions and their foreshadowing of economic downturns.

This Conversation is based on

**The Real Term Structure and
Consumption Growth (October 2005)**


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 **Conversations**


 Jim Over the past few months, there has been considerable discussion about the flattening US yield curve. We'll be talking about what this trend foreshadows and what it means for investors. Cam, in 1986, you pioneered work that demonstrated the shape of the yield curve foreshadows economic downturns. What did that work entail?


 Cam *That early work was actually my dissertation at the University of Chicago, and I published a paper on the same topic in 1988.* My research looked at the cyclical properties of the slope of the yield curve, which is the difference between a long-term US Treasury yield and a short-term US Treasury yield. Typically, the long-term Treasury has a higher yield than the short-term Treasury, but in certain situations this relationship is inverted, so that the short rate is higher than the long rate. I found that an inverted yield curve was bad news for the economy, foreshadowing a recession.*


 Jim And how has it done since then, out of sample since 1988?


 Cam *As a researcher, you're often disappointed because your findings get weaker after publication. But surprisingly, in the four recessions that followed my dissertation, the yield curve inverted before every single one of them, including the global financial crisis, and also—and this is surprising too—it hasn't provided any false signals so far.*


 Jim So far. And so one story for this could be that the Fed increases short rates and it slows down the economy too much. Is that the rationale, or are there other stories behind this?


 Cam *In my 1986 dissertation, I posited a fairly simple theory that interest rates have two components: an inflation (or nominal) component and a real component. The real component is linked to real economic growth. Whenever the real return over the longer horizon is less than over the shorter horizon, it's bad news for growth, and we can anticipate that the US economy is going to slow down. The evidence is supportive of that.*


 Jim So, as we know, the Fed has been doing quantitative easing over the last five to eight years, and they've bought a lot of longer-term debt, which has potentially pushed down interest rates. Do you think, under these circumstances, that an inversion could be a false signal this time?


 Cam *You make a very good point that although this indicator has worked in the past, maybe it won't work in the future because of Fed intervention. It's possible. I will say that the history of Fed intervention is actually a long history. Indeed, part of the quantitative easing was the so-called Operation Twist, but the original Operation Twist was in the mid-1960s, so in a way the Fed has a long tradition of intervening in this market. I would actually argue that the Fed interventions were more effective earlier in the sample, because the markets have gotten so big now. Even with all of these interventions since the 1960s, we still have an accurate predictor and no false signals yet.*


 Jim *In 1986 when you were doing this work, you were the only person, or potentially one of only a few folks, looking at this relationship. Today, talk of an inverted curve is all over the news. Do you think a potential or developing inversion could be a case of investors preparing for future downturns, and even be a reinforcement mechanism, so if investors think things are going to turn bad, therefore they will?*


 Cam *Yes, the so-called self-fulfilling prophecy is a possibility here. Again, the track record of the indicator is pretty good. We don't know if it is going to work in the future, but there's no structural reason to think the indicator is broken. We do know other things, such as that the business cycle has become much less volatile. That observation is potentially consistent with the idea that investors are getting better at looking at these indicators and making adjustments that effectively smooth out the fluctuations in the business cycle. Indeed, during the global financial crisis 10 years ago, the drawdown in GDP was less than 5%. That is much less volatile than what we've experienced historically.*

 Jim *When the yield curve inverts, it doesn't necessarily mean recession tomorrow or next week. There is some amount of lag. So, in your work, how long is that lag? What is the variation in that?*

 Cam *In my research, the lag is usually 12 to 18 months. That's the lead time before a recession. I also looked at other indicators like the stock market, and the stock market is famous for giving false signals. The best false signal was Black Monday in 1987, a dramatic decrease in the stock market. People said, "Well it's going to be a recession in 1988." But the yield curve was positively sloped and I said, "No, it's going to be 4% growth or more." My forecast was an outlier, but it turned out that my forecast was pretty close to being realized at 4+% growth. So be careful of the stock market. It's all over the place. You make an excellent point about timing. Even though a recession might be within the next year and a half, it's still possible the stock market could continue to rise leading up to that recession.*

 Jim And as I read about, or hear pundits talk about, the yield curve and inversion, there are always arguments about whether it's the 5-year/2-year slope, 10-year/3-month, 10-year/2-year, you know, pick your slope. What have you found?

 Cam *I think we need to go with the original research. In 1986, I looked at two parts of the yield curve, the 5-year note minus the 3-month bill, and the 10-year bond minus the 3-month bill. The crucial thing is to use a very short-term interest rate. Those two yield spreads are highly correlated. I get nervous when I see people talking about the 10-year minus the 2-year. I got all these emails last week about the 5-year minus the 3-year inverting, saying "Happy Yield-Curve Inversion Day!" An investor can data mine to find a piece of the yield curve—maybe it's the 11½-year minus the 7¾-year—that has an inversion. That doesn't mean anything. I think we need to go with the original un-data-mined theory, which is based on a longer-term rate and a 3-month rate, and the inversion importantly needs to last for a quarter. If it's a day, so what? GDP is measured quarterly, so we need to measure this quarterly also.*

 Jim This is very helpful. Thank you. To reiterate and summarize, we should be looking at the long-term rate versus the short-term rate, and understand that the slope should stay inverted for at least a quarter, and that the recession that follows might be down the road multiple quarters, or even a year or more.

 Cam *That's correct.*

Endnote

* Harvey, Campbell. 1988. "The Real Term Structure and Consumption Growth." Available at SSRN.

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