The Yield Curve and Recession Forecasting

For years economists and fund managers have used an inverted yield curve as a predictor of a coming recession. In 1996, the New York Fed published a paper touting the predictive value of the spread between the 10 year Treasury note and the 3 month Treasury bill in forecasting recessions:

“The yield curve—specifically, the spread between the interest rates on the ten-year Treasury note and the three-month Treasury bill—is a valuable forecasting tool. It is simple to use and significantly outperforms other financial and macroeconomic indicators in predicting recessions two to six quarters ahead.” (See full paper)

Here, the Fed cites the spread between the 10 year and 3 month treasuries. While different measures of yield curve slope are used in practice, the basic definition is the same, namely that short-term yields are higher than long-term yields.

Great Track Record...

Let’s take a look at the 10 year vs. 2 year spread (another common measure) over the past 30 plus years. On Chart 1, the blue line represents the spread and the gray bars indicate a recession. As you can see whenever 10’s/2’s spread goes negative (2 year yield is greater than the 10 year), a recession is not far off. Since the 1970’s, this spread has gone negative before every recession, which makes it a useful tool in determining if a recession is coming. However, that may be where its predictive power ends.
...There’s Just One Problem

As mentioned above, using the yield curve slope to predict recessions only works in the sense that it will tell you if a recession is coming. It can’t with any pinpoint accuracy, predict when. This is the central problem with using yield curve inversions to forecast recessions. Furthermore, one can argue that yield curve inversions do not trigger a recession, but rather signal that monetary policy has been restrictive enough to cause one.

The uncertainty surrounding the timing of a recession post inversion may help to explain why for instance in 2006, Frederick Furlong of the Federal Reserve Bank of San Francisco wrote:
“In the current economic environment, we cannot be sure that a flattening or an inverted yield curve has the same meaning as in the past.” –Yield Curves & Recessions, 2006

In other words: this time it’s different. It also may explain why the Fed during the 2004-2006 tightening cycle ignored the inversion signal and continued to raise rates (Chart 2).

Two Types of Flattening

During the past year we’ve had a relatively sharp decline in the 10/2’s spread but we’re still roughly 120bps from an actual inversion (Chart 1). This decline has occurred not because of a rise in short-term rates, but a fall in the long-end of the curve. We call this type of curve shift a “Bull Flattening” (Chart 3). When short-term rates rise more than long-term rates, as in 2004-2006, it is called a “Bear Flattening” (Chart 4).
To go from today’s yield curve slope to an inversion, the Fed will have to act. When they begin to raise rates, the short-end of the curve will ultimately push higher and if there isn’t a similar reaction on the long-end, et voilá... inversion.
The Long End is the Key

It’s not a question of if the Fed will raise rates, it’s when. And when they do, it will be up to long maturities to hold up their end of the bargain in order to stave off the curve slope going negative. While we think an inversion and subsequent recession are a long ways off, there exists enough demand on the long end of the curve to prevent a substantial rise in those rates.

We see two forces at work that will ultimately keep a lid on long-term rates:

1.) Global Savings Glut - The world is saving at an ever increasing rate (Chart 5). This excess in global cash will likely find its way into U.S. Treasuries because of both their credit quality and attractive valuation.

(Chart 5)

Global Savings (as a % of GDP)

Source: Bank Credit Analyst

2.) Relative Value Trade - is the 10 year treasury at 1.66% really attractive to global investors? Relative to other sovereign bonds, absolutely (Chart 6).
Would you rather own a Spanish 10-year at 1.41%, or have your savings be backed by the full faith and credit of the U.S. Government for an extra 25bps? On a relative value basis, treasuries are cheap... I guess you could always pay to park your money in Switzerland for 10 years!

(Chart 6)

<table>
<thead>
<tr>
<th>Global 10-Year Bond Yields - 1/30/15</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1.66%</td>
</tr>
<tr>
<td>Italy</td>
<td>1.59%</td>
</tr>
<tr>
<td>Spain</td>
<td>1.41%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.33%</td>
</tr>
<tr>
<td>France</td>
<td>0.53%</td>
</tr>
<tr>
<td>Germany</td>
<td>0.30%</td>
</tr>
<tr>
<td>Japan</td>
<td>0.27%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>-0.11%</td>
</tr>
</tbody>
</table>

Source: Bloomberg

Conclusion

To sum it all up, yield curve inversions are a very powerful tool in viewing the effects of restrictive monetary policy and to a certain extent in forecasting recessions. So what does today’s curve tell us about the economic outlook? Well, we’re still a long way off from an inversion and for that matter, a recession. However, when the Fed begins to act and short-term rates begin to rise, there will exist enough downward pressure on long-term rates such that an inverted yield curve is a real possibility. Once that happens, it will be interesting to see how many economists will say “this time it’s different.”