



HEAD OVER HEELS FOR THE YIELD CURVE

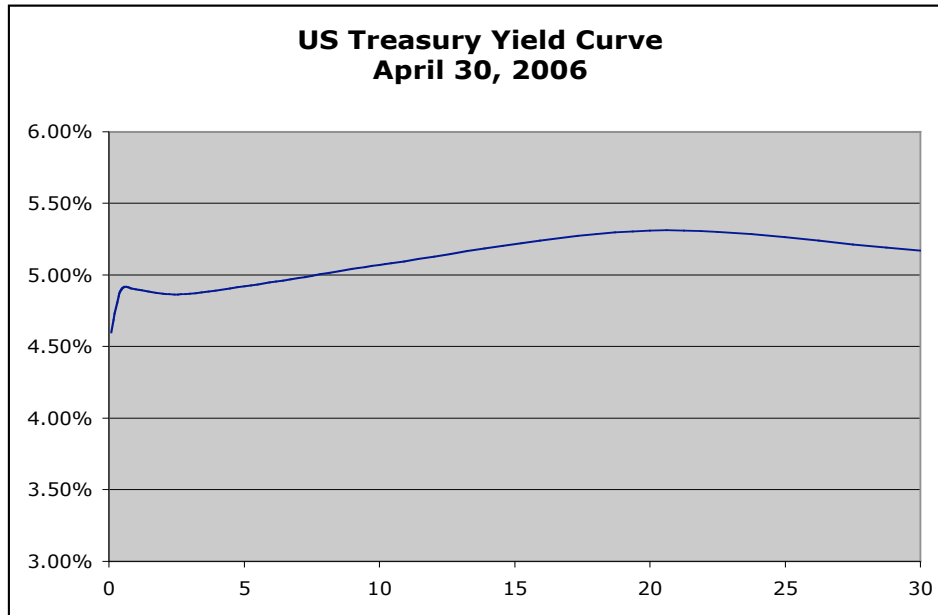
The stock market is a forum for resolving differences of opinion and preference into prices. It's a rough-and-tumble environment in which buyers try to exploit what they consider low prices by trading with sellers, who try to capitalize on prices they view as high. Traders and analysts spend vast resources trying to predict trends, tease out loose threads, and otherwise look for ways, in Keynes's memorable phrase, "to beat the gun."¹ These many participants, all trying to do the same thing, produce large amounts of information, which quickly finds its way into prices. There's no shortage of informed opinion, but truly tradable information is precious.

The financial press, the brokerage houses, market watchers and even the email spammers spin out an endless, inescapable stream of market "intelligence." Much of it is entertaining, thought-provoking, informative, or educational. But before you rely on any of it for predictions, ask yourself this: If this analysis is so good, if this information is so hot, why don't they keep it for themselves? If it isn't good enough *not* to publish, then why should I trade on it? With this in mind, let's look at recent reaction to changes in the shape of the yield curve.

THE YIELD CURVE AND THE EQUITY MARKETS

The yield curve is simply a graph of the yield on US Treasury securities against the maturity of those securities. Most of the time, longer-dated Treasuries have higher yields than shorter ones, giving the yield curve an upward slope. Financial economists sometimes call the yield curve "normal" if it slopes upward. Sometimes, however, short-term rates climb past long-term rates, and the yield curve slopes downward. If an upward slope is "normal," then when the yield curve slopes downward, economists say the yield curve is "inverted." The figure below shows the US Treasury yield curve as of April 30, 2006:

¹ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (1935), Chapter 12-V. If you've never read this chapter, you really should.



Source: US Treasury Dept, Bureau of the Public Debt. As of 4/30/06

The yield curve displays interest rates. What could that have to do with the stock market? Our financial system is so complex, with so many forces pulling in all directions, that finding strong relationships between economic variables is difficult. Forecasting economic movements from current data is even harder. So the financial community has an understandable interest in a series of papers that conclude that the shape of the yield curve — in particular, the relationship between the yield on a 3-month US Treasury bill and on a 10-year Treasury note — is a pretty good predictor of recessions. A good sample from this literature is a 1996 New York Fed research paper, “The Yield Curve as a Predictor of US Recessions,” by Arturo Estrella and Frederic S. Mishkin.² They use statistical techniques to make a persuasive case that when the ten-year yield is well above the three-month yield, the probability of a recession in the next year is low, but a recession is more likely when those yields are closer together, and most likely when the short-term yield is well above the long-term yield.

Remember Greenspan’s “conundrum?” Testifying before Congress on February 16, 2005, then-Fed Chair Alan Greenspan remarked, “For the moment, the broadly unanticipated behavior of world bond markets remains a conundrum.”³ He was referring to a surprising

² The full citation is Arturo Estrella and Frederic S. Mishkin, “The Yield Curve as a Predictor of US Recessions,” Federal Reserve Bank of New York, Current Issues in Economics and Finance, Volume 7, Number 2, June 1996. http://www.newyorkfed.org/research/current_issues/ci2-7.pdf

³ Testimony of Chairman Alan Greenspan: *Federal Reserve Board's semiannual Monetary Policy Report to the Congress*, Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, February 16, 2005, <http://www.federalreserve.gov/boarddocs/hh/2005/february/testimony.htm>

decline in long-term interest rates in major world markets, in spite of the Fed's program of increasing short-term rates. The US market was part of this trend; with short-term rates rising and long-term rates falling, the US yield curve was flattening. Mr. Greenspan's remarks signaled that he found this development surprising.

After Mr. Greenspan's "conundrum" remark, market Cassandras (or Chicken Littles, depending on your point of view) began warming up their audiences for yield-curve based predictions of recession. During 2005, the Federal Open Market Committee raised its target for the (overnight) Fed Funds rate by 0.25% at each of its eight meetings, but the ten-year yield inched up from 4.24% at the end of 2004 to just 4.39% at the end of 2005. This substantial flattening of the yield curve created a great deal of excitement among the bears.

THE URGE TO PREDICT THE NEXT DISASTER

One of the strangest behaviors in the financial markets is a widespread taste for predicting disaster. Pessimistic forecasts, in the right doses, make for useful reading, since they remind us that investing is a risky pursuit. But if you accord them too much weight, you'll never put your capital to work. So why do we find so much professional pessimism in print? Some of it may be the inevitable offshoot of previous failures to predict unanticipated market shocks. Some may be purely cynical salesmanship — plausible arguments designed to sell particular investment products that ostensibly "hedge" the market.

There's another reason the financial press constantly seems full of predictions of disaster. It's the asymmetry of rewards for being right. If you predict a huge rally and the market goes up, nobody cares. But if the market collapses, you're a fool or a knave. Conversely, if you predict a disaster and the market goes up, everyone will soon forget, but if the market goes down sharply, they're likely to remember you for a long time. Perhaps the best example of this is Elaine Garzarelli, the analyst that made a name — really, a career — for herself by predicting a sharp market correction a week before the dramatic market break of October 19, 1987. She now runs a subscription newsletter service — and she still prominently advertises the remarkable market call she made nearly twenty years ago, along with other, more modest successes.

Now, the pessimists aren't always wrong, and neither are they always wrong-headed. But the incentives of the marketplace create a surplus of pessimistic forecasts. In the past eighteen months or so, analysts have treated us to predictions of horrible stock market performance based on claims of resurgent inflation, rising interest rates, possibly collapsing real estate values, enormous trade and budget deficits, rising oil prices, and geopolitical worries. Now add to all these reasons to predict a market break a plausible case for an impending inversion of the yield curve, and you have an excellent illustration of the perils of prediction.

THE CURVE FINALLY INVERTS — SORT OF

At the end of 2005, the yield curve finally actually inverted, at least a little bit, if you looked at it in just the right way. On December 27, the two-year Treasury yield edged up to 4.35%, while the ten-year yield was 4.34%. The inverted yield curve was suddenly the talk of the town – well at least the talk of those few bears at work on Wall Street that week after Christmas — and the stock market fell. The S&P 500 dropped by about –1% on December 27, and by –1.6% the last week of last year. A typical story on the inversion appeared in the Milwaukee *Journal-Sentinel*, where Tom Saler wrote in January, “Not that you lost any sleep over it, but the stock market threw a shoe last month when yields on 10-year Treasury notes briefly dropped below those on two-year Treasuries. In the parlance of Wall Street, that's called an inverted yield curve.”⁴

The feared market break never materialized. With the yield curve still slightly inverted, the stock market started 2006 strongly, rising +3.74% by January 11. On January 17, the three-month T-bill yield reached 4.38%, passing the 10-year's at 4.34%, and the market reacted again, giving back a portion of its early gains. In mid-February, with the two-year yield above the ten-year yield, the market Cassandras, while carefully hedging their predictions, began squawking more insistently. Typical of bearish market letters from that time was that of John Mauldin, who mostly sells hedge funds. In December, he stressed the importance of the yield curve, but cautioned against reading too much into the slight inversion then. In February, though, he wrote:

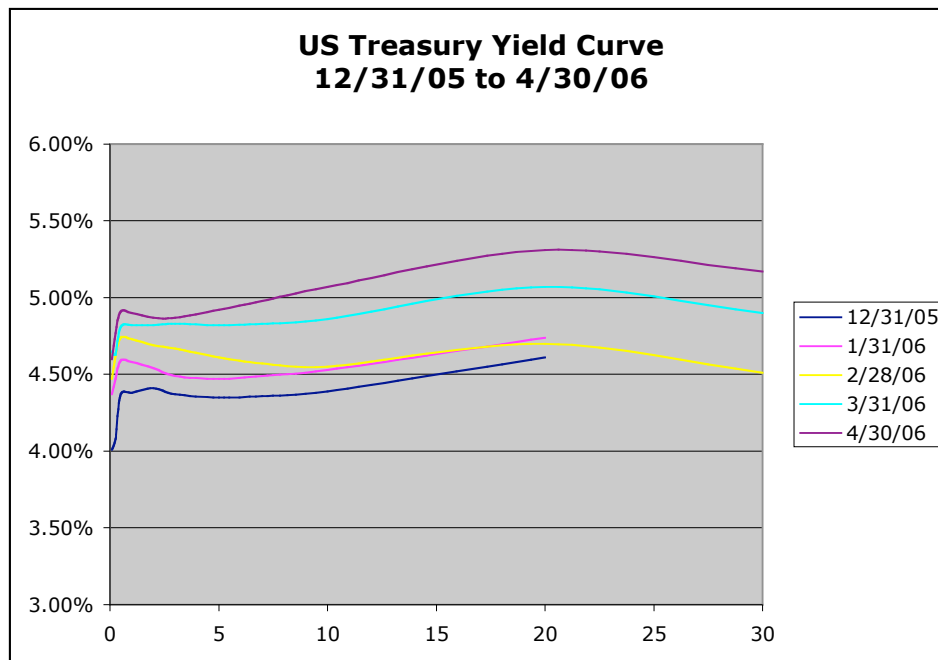
The current level of spread on the yield has happened several times in the past 40 years and we have not had a recession follow. So why should we pay attention today? Because it is going to get worse. ... It is all but a foregone conclusion that the Fed will raise rates at its March meeting. If the ten year stays where it is, we will see a negative 27 basis point spread in the middle of March, which within 90 days would suggest a mid-30% chance of recession. If the Fed raises again in May to 5%, without the ten year moving up, we would see a 40% chance of recession as the 90 day average would soon be a negative 50 basis points.⁵

Remarks like Mr. Mauldin's may have left those that bailed out in February feeling they had “beaten the gun.” But, contrary to the predictions, the ten-year yield did begin to move up. By March 31, in spite of two additional Fed tightenings (adding 0.50% to the Fed Funds rate), the yield curve again had a positive slope, and the S&P 500 returned +4.21% for the first quarter. The figure below shows the US Treasury yield

⁴ Tom Saler, “Inverted yield curve spurs recession concern,” Milwaukee *Journal-Sentinel*, January 15, 2006. <http://www.jsonline.com/story/index.aspx?id=385014>

⁵ John Mauldin, “Probabilities of Recession,” February 24, 2006 at <http://www.2000wave.com/article.asp?id=mwo022406>

curve at the end of each month from December 2005 through April 2006. It shows both the general increase in rates since the end of last year, and a slight steepening of the yield curve. But mostly, it shows the problem with all the short-term excitement about the predictive power of the inverted yield curve, even coupled with other factors. Look at the curves, without worrying too much about the numbers. They are all virtually flat — the difference between short-term and long-term yields is rather small, and the big differentials have not materialized.



The yield curve may in fact have predictive value, though not so much over the market as over the economy as a whole. Estrella and Mishkin's paper, cited above, concludes that this predictive power is greatest when the inversion of the curve is most dramatic, and persists for a while. By that time, other signs of trouble — including weakness in the stock market — are often in evidence as well. A sharp, sudden reaction when the difference between ten-year and two-year yields changes sign, from +0.01% to -0.01%, has no economic basis. Trading on it could have been a costly mistake. The S&P 500 returned +5.61% for the first four months of 2006, and has returned +15.4% for the 12 months to April 30, 2006 (calculated from data from Standard & Poors).

SO HOW SHOULD WE REACT?

It is worthwhile to pay attention when investment analysts or the financial press take up a subject like the yield curve, because they draw our notice to changes in the economic landscape that may ultimately find their way into the valuation of investments. But that doesn't mean we should make sudden, sharp changes in our portfolio strategies. If you had sold into the sharp drop at the first slight inversion of the yield curve in the last week of December, and only re-entered the market at the end of March after the yield curve righted itself, you could have missed the market's +4.2% move in the first quarter. While successful investing requires ongoing mindfulness, it also requires discipline. If we are constantly over-anxious to "beat the gun," we'll often simply jump the gun.

-Jonathan Tiemann
Menlo Park
May 8, 2006

Sources: US Treasury Yield Curve data: US Treasury, Bureau of the Public Debt, "Daily Treasury Yield Curve," available on line at <http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/yield.html>. Stock market returns: Standard & Poors.

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