Linear Models in a Non-Linear World:
Regime Change and the Markets

As this article is being written, it is the weekend before the UN inspector's report on Iraqi weapons. The President is priming for the State of the Union address, and the Federal Reserve is planning to meet to discuss interest rates for the first time in 2003. I have no way of divining whether either of the two former events will precipitate a regime change, but I would suggest that the latter meeting will serve as the first in a dramatically changed financial world. With the reduction of the Federal Funds rate in November to 1.25%, the Federal Reserve announced (and subsequently confirmed with official speeches) that the battle against inflation had been won and the new enemy was deflation.

Economists are notoriously bad forecasters when it comes to predicting the consequences of a true change in direction. They tend to continue to project a continuation of the current state of affairs into the future. I am reminded of the story of a prominent economist who was heading to London to receive an award. A few hours before the award ceremony, he was to have a meeting with the Queen. Being like most economists, he decided to be as efficient as possible in booking a flight that would bring him to London with only three hours to spare.

The flight took off and was about an hour along the way when a large boom sounded. The captain came on the intercom and announced, "We just lost our starboard engine, but not to worry, we still have our port engine and the big one in the tail section. Unfortunately, this will delay our arrival by about an hour." Upon hearing the announcement, the economist commented to his seatmate that it was lucky he still had two hours to spare for his meeting with the Queen.

The plane continued along and was about halfway to London when another large boom was heard. The captain calmed the passengers by indicating that they had lost the port engine but that the large tail engine would still safely get them to London. However, another hour delay needed to be factored in. As you might imagine, it was not long before another large boom sounded. This time: silence from the captain. Then the economist blurted out, "Darn, now we're going to be three hours late, and I'll miss my meeting with the Queen!"

Fortunately, the story is apocryphal, but the key point is that economic models, and indeed most models and projections we use, assume that the recent past is a good proxy for the near future. I would contend this is no longer the case.

<u>Baby Boomers and the Federal Funds Rate</u>

Except for a few months in 1958, the Federal Funds rate has not been this low since 1954. This means most Baby Boomers were not alive to experience interest rates at these levels. It is hard for me to see how we can look at today's economic environment and conclude that it is just a few basis points away from the normal situation we have witnessed in the post-war period. The fact that the Federal Reserve has had to lower rates as they have speaks to a change in the normal transmission mechanism between interest rates and the economy. It is obvious that after twelve cuts in the rate, reducing it by 80%, great efforts have been made to stimulate growth. Even so, annual growth in the money supply as measured by M-2 was no higher at the end of 2002 than it was at the beginning of the easing period in early 2001. GDP growth during 2002 was less than potential. This is almost unheard of in a "recovery" year.

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Clearly, we are not in Kansas anymore, and yet, forecasters are presently predicting the same thing that they have for the past two years — economic growth and hence interest rates will pick up six months in the future. When rates begin to rise they will increase by a measured pace of 25 or 50 basis points per quarter. I believe that this is a dangerous assumption.

I believe that it is dangerous for three reasons. First, in assuming that the only thing that has happened as a result of the unwinding of the stock market bubble is that the recovery will be delayed, forecasters are paying no heed to the fact that confidence is still falling and the delay in a recovery has been as long as it has.

Second, the Federal Reserve has been quite clear in suggesting that they have lowered interest rates aggressively to help the economy through its "soft patch." The record from the last time we had a sluggish recovery in the early 1990's shows that the Fed kept rates down until they were sure that the economy was in a self-sustaining growth mode and then they raised rates dramatically. At first, they were behind the expectations of the market, but in relatively short order they got ahead of expectations. The Federal Funds rate doubled from 3% to 6% within twelve months beginning in early 1994.

Third, interest rates themselves are unsustainably low for an economy that is growing at potential. The average Federal Funds rate adjusted for inflation (real rate) has been roughly 2% since my data series began in the early 1950's. The rate today is approximately negative 1% because inflation is running at 2.4% while the rate itself is 1.25%.

Averages Can Be Deceiving

These three facts are well known by the market. So, why are the forecasts projecting a modest rise in rates once things get going? It turns out that they may not be. It has to do with timing. On the assumption that the American economy will ultimately recover (an assumption that is hard to argue with), interest rates will move to a more normal range. Since this range is at least 3% higher than present levels, we can get to the present average forecast a different way. Assume half the forecasters (early risers) expect rates to hold for six months and rise by 3% over the ensuing twelve months and the other half (late risers) expect stability for 12 months with a 3% rise over the following twelve months. Even though both sets of forecasters believe rates will jump by 3% when they begin to rise, the averages suggest a more gradual move.

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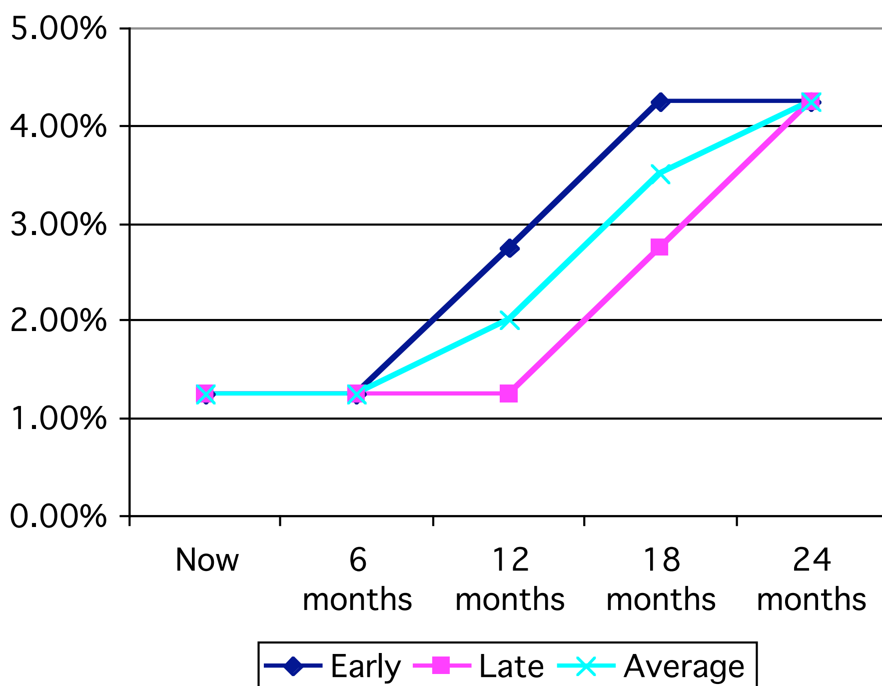

The present environment is not normal. It can be dangerous to assume that it is. Furthermore, when models which assume or are based on gradual changes are used to capture the risk of the present situation, bad things can happen. At the present juncture, I would carefully evaluate the risks of a snap back to a more normal interest rate over a short period of time once the economy does recover. In the meantime, you have to deal with the current yield curve and invest funds to get decent returns until more normal times occur. It would be irrational to keep all your funds short in anticipation of a rapid rise in rates. It may not occur for quite a while. Remember, Lord Keynes said that "markets can remain irrational longer than you can remain solvent."

But the real point of my analysis is that we are not in normal times and it is a poor choice to assume we are. Don't get lulled into a sense of complacency that may place you halfway across the ocean bemoaning a late arrival rather than focusing on the real risk of a mid-ocean landing.

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