

## Discretion Is The Better Part Of Policy

If Karl Marx could deride religion as the opiate of the masses, we can deride Fed-watching as the opiate of the financial commentariat. To paraphrase Churchill, never before have so many done so little for so much. If you want to know where monetary policy is headed, you do not need a corps of overpriced and vainglorious economists; no, a simple quote screen or even the financial pages of a newspaper – and one day you might to explain to your grandchildren what a newspaper was – will suffice.

How can we be so harsh? The answer is quite simple. Any process can change in one of two ways, discrete or continuous. The Federal Reserve changes its target federal funds rate and other variables such as the discount rate or even Regulation T stock margin requirements in a discrete fashion. These changes are made all at once and at a single point in time; when the FOMC announces a policy change of 25 basis points, it does not phase the new rate in one basis point at a time over the next twenty-five business days; it makes the change all at once.

### Discrete Rate Changes

The federal funds futures contract acts like a binary bet on what the Federal Reserve will do. This is something of a simplification; more on that later. Let's take a simple example of how this contract operates. At the time of this writing, the target federal funds rate is 5.25% and the April 2007 federal funds future is trading at 94.765, for an implied rate of  $(100-94.765)/100$  or 5.235%. The FOMC is meeting on March 21, 2007. What is the implied probability of a rate cut to 5.00%?

As April has 30 days, and no FOMC meeting is scheduled during the month of April, we can calculate the probability,  $\pi$ , in a very straightforward manner:

$$1. \quad 5.235\% = \pi * 5\% + (1 - \pi) * 5.25\%$$

Rearranging algebraically:

$$2. \quad 5\% * \pi + 5.25\% - 5.25\% * \pi = 5.235\%$$

$$3. \quad -.25\% * \pi = -.015$$

$$4. \quad \pi = .06$$

In a binary world, the probability of a rate cut to 5.00% is 6%; restated the odds of a rate cut are .06/(1-.06), or .06383:1. But this is an incomplete analysis. The FOMC could take any number of actions, including cuts of more than 25 basis points or even rate hikes.

But under the policy of transparency prevailing since 2003, the Federal Reserve has taken great care to signal the market as to its intentions so as to avoid a policy surprise. And we know from the minutes of the FOMC they pay a great deal of attention to how their communications are affecting the market. As a result, the federal funds futures have evolved into a near-perfect predictor of FOMC actions.

As an aside, the theory of rational expectations states that only unexpected policy actions affect output, employment and inflation. If the market expects an action, it builds those expectations into the yield curve, the exchange value of the dollar, the price of risky assets such as stocks and corporate bonds, etc. A regime of monetary policy transparency can be a regime of monetary policy ineffectiveness, but that is a much lengthier topic for another day.

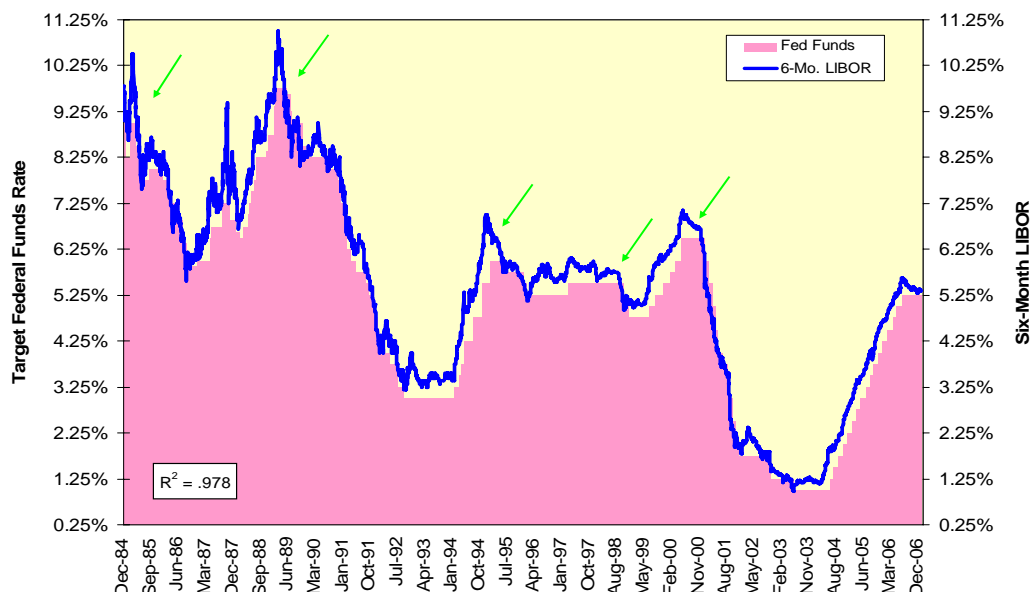
### Continuous Markets

Unlike the Federal Reserve, markets operate in a continuous or near-continuous manner. Each and every day trading occurs new price information is generated, disseminated and evaluated by participants in a forward-looking manner. While federal funds futures are useful for evaluating a single imposed decision, they are of no utility whatsoever in evaluating daily decisions trading in intervals of less than the 25 basis points used almost exclusively by the Federal Reserve in its policy decisions.

The key rate to follow is not the overnight federal funds – a rate at which only Federal Reserve member banks can borrow and lend – but the London Interbank Offer Rate or LIBOR. This rate is the basis for nearly all interest rate swap and interbank currency trading activity. Over the past two decades, six-month LIBOR has led the course of target federal funds extraordinarily well. Critically, when six-month LIBOR is trading over federal funds and starts

to decline, federal funds inevitably fall, as marked by the arrows in Chart 1. This is our first piece of evidence we should focus on the continuous market.

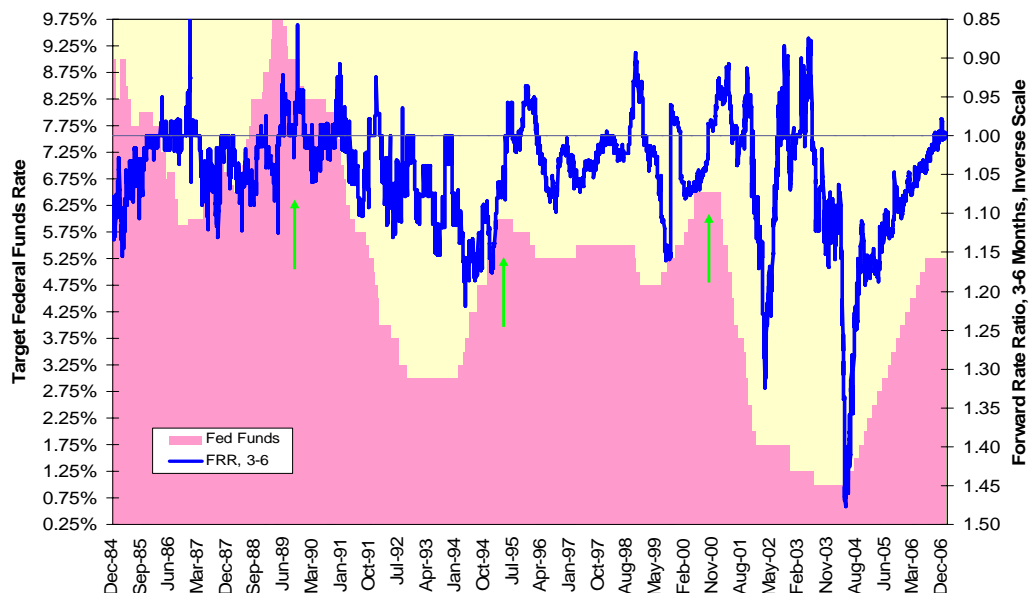
**Chart 1: Six-Month LIBOR And Target Federal Funds**



**Define Your Terms**

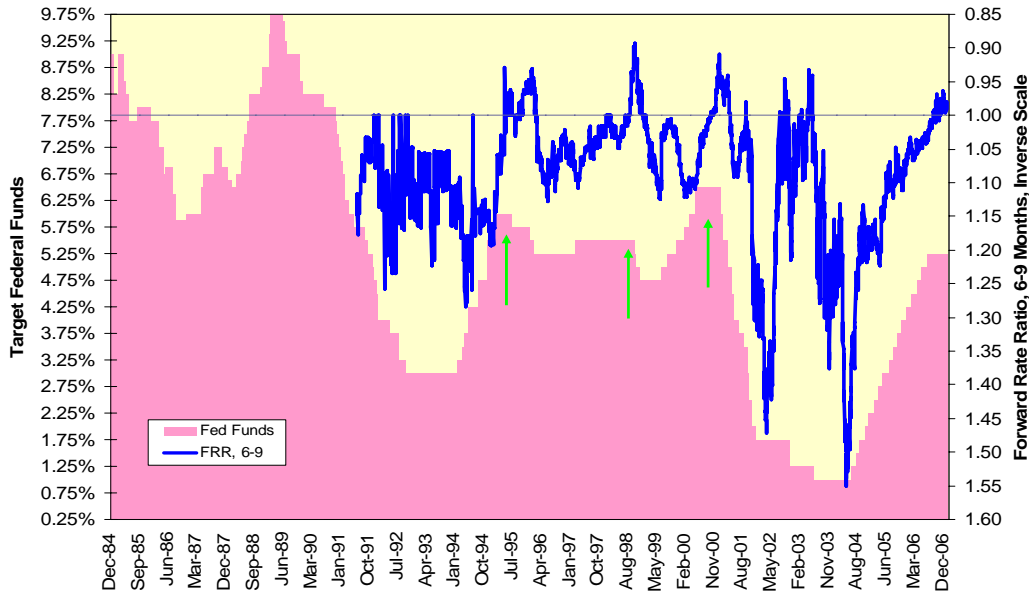
The observation above that six-month LIBOR has to trade below the target federal funds rate to induce a rate cut hints at the importance of the term structure of the money market curve. We can measure the term structure by the forward rate ratio (FRR) between two maturities on the yield curve. The FRR between three and six months is the rate at which we can lock in borrowing for three months starting three months from now, divided by the six-month rate itself. If the FRR is greater than 1.00, the curve is positively sloped; if the FRR is less than 1.00, the curve is inverted. We can see three separate instances, marked with arrows in Chart 2 below, during the Greenspan era when an inverted LIBOR curve between three and six months preceded a rate cut cycle.

**Chart 2: Target Federal Funds And LIBOR Curve: 3-6 Months**



The FRR between six and nine months, the segment of the LIBOR curve most important for currency markets, displays a similar relationship. An inversion of the money market curve precedes rate cuts. This segment of the curve was inverted in late 2006.

**Chart 3: Target Federal Funds And LIBOR Curve: 6-9 Months**

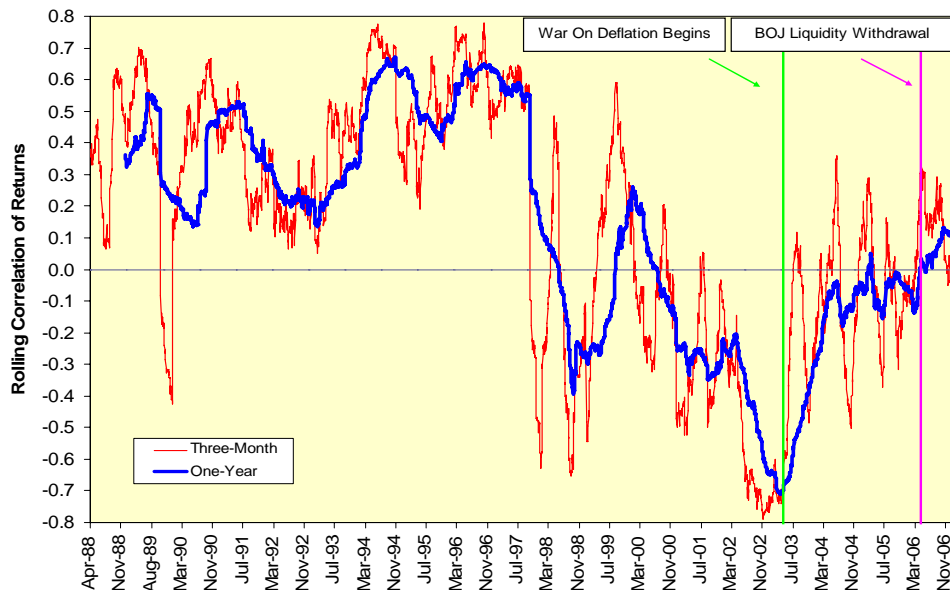


**Implications For Equities**

Monetary policy, like presidents, gets both more credit and more blame than it deserves for its influence over the economy. The knee-jerk reaction to higher federal funds always is to call it bearish for both the economy and stocks, with the opposite true for a lower federal funds rate. All we need to do to disabuse ourselves of this notion is look at how stocks sank in 2001-2002 and then rose after the Federal Reserve began raising rates in 2004.

What is far more important for the performance of financial markets than the price of overnight money is the quantity of liquidity provided. This appears to influence the relative performance of stocks and bonds more than any other variable. As seen in Chart 4, the correlation of returns between the S&P 500 and ten-year notes was positive from the start of the Greenspan era through the onset of the Asian crisis in late 1997. At that point, both the three-month and one-year rolling correlation of returns became higher unstable and increasingly negative well into 2003. For more than five years, stocks rose as bonds fell and vice-versa as if the growth component of equities always could outweigh the drag of higher interest rates.

**Chart 4: Stock/Bond Relationship Unstable Over Time**



The Federal Reserve, in a move it itself questioned by late 2006, began to fear deflation in 2003 and justified a cut in the federal funds rate target to 1.00% in May 2003 on this basis. The correlation of stock and bond returns

immediately turned positive. This trend was shocked in May 2006 when the Bank of Japan suddenly withdrew a massive quantity of surplus liquidity, more than ¥21 trillion, from its banking system. The three-month correlation of stock and bond returns in the U.S. immediately turned lower.

If the economy begins to weaken in 2007, as some fear given the imbalances created by housing and the U.S. current account deficit, a mere cut in the federal funds rate will be insufficient to jump-start the economy or to forestall the deflation feared in 2003. The interest rate-sensitive sectors, such as housing and automobiles, are suffering from buyer satiation and are unlikely to see demand accelerate by virtue of lower short-term interest rates. It will require an infusion of liquidity, on the order of the Bank of Japan's quantitative easing of 2001-2006, to forestall deflationary pressures this time.

How will you know this course of action is unfolding? Turn off the television and start tracking the LIBOR yield curve. The market, not some overpaid pundit who has not been right for years, will tell you when the Federal Reserve will start cutting rates, and the LIBOR yield curve will tell you when the system is liquid.