Fannie Mae, But For What Duration?

With apologies to Rod Stewart....

Wake up Fannie, I think I got something to say to you
It's late September, and lower rates made you a fool
Housing kept you amused, but I feel I'm being used
Oh Fannie I couldn't have tried any more
You mortgaged all those homes, just to make a few more loans
You stole my heart and that's what really hurt

I always have said nothing is more annoying than proclaiming, "I told you so!" But, that the next great financial accident might involve Fannie Mae, with or without Freddie Mac, has been increasingly obvious since the Fed's rate cut cycle began in January 2001.

History Began With Nixon
Congress created both corporations in 1970 to assure the flow of funds into the home mortgage market; the problem then was a combination of rising short-term interest rates and an inverting yield curve. Fannie's mission was to buy and hold mortgages, while Freddie's mission was to finance the mortgage lenders. Both issue mortgage-backed securities. While the full faith and credit of Uncle Sam back the related Ginnie Mae, neither Fannie nor Freddie are so protected... but no one really believes this.

Savings and loans generated most mortgage lending at the time, (see Frank Capra's "It's A Wonderful Life" for a cultural history of housing monetary policy. No one yet has made a movie about, say, inverse floaters or collateralized debt obligations) and borrowers generally had their choice of a 30-year fixed rate loan. The rate savings and loans could pay for a deposit was capped by Federal Reserve Regulation Q, which rendered the industry unable to compete for funds. In addition, the industry borrowed at short maturities to lend at 30 years, and this made them highly vulnerable to any yield curve inversion.

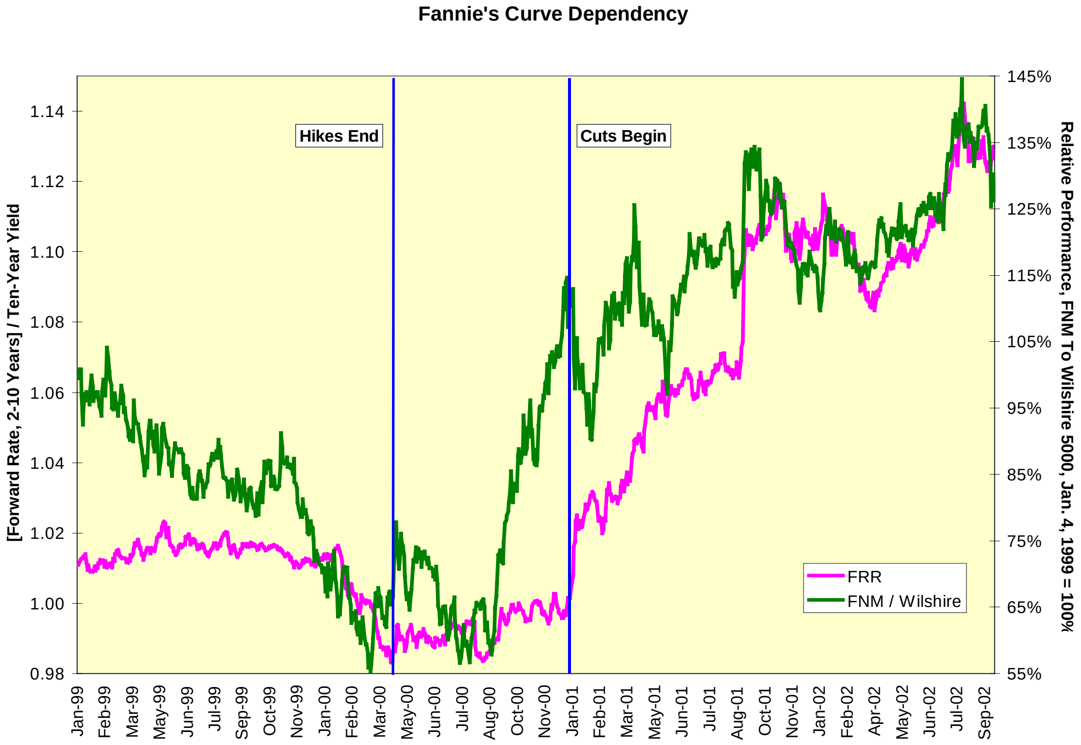
Doctor! My Option's Embedded!
A mortgage that can be prepaid gives the mortgagor (borrower, this means you) a call option on bonds: As rates fall, you are more likely to refinance and "call" the bond away from the mortgagee, including Fannie Mae. This action reduces the mortgagee's income stream as higher rate mortgages are replaced.

The shape of the yield curve comes into play as well. One of the Fed's frustrations throughout 2001 was that long-term rates, including mortgage rates, remained relatively high even as short-term rates plunged. Now the yield curve is flattening somewhat as investors flee the burning wreck of the stock market and push bond yields lower.

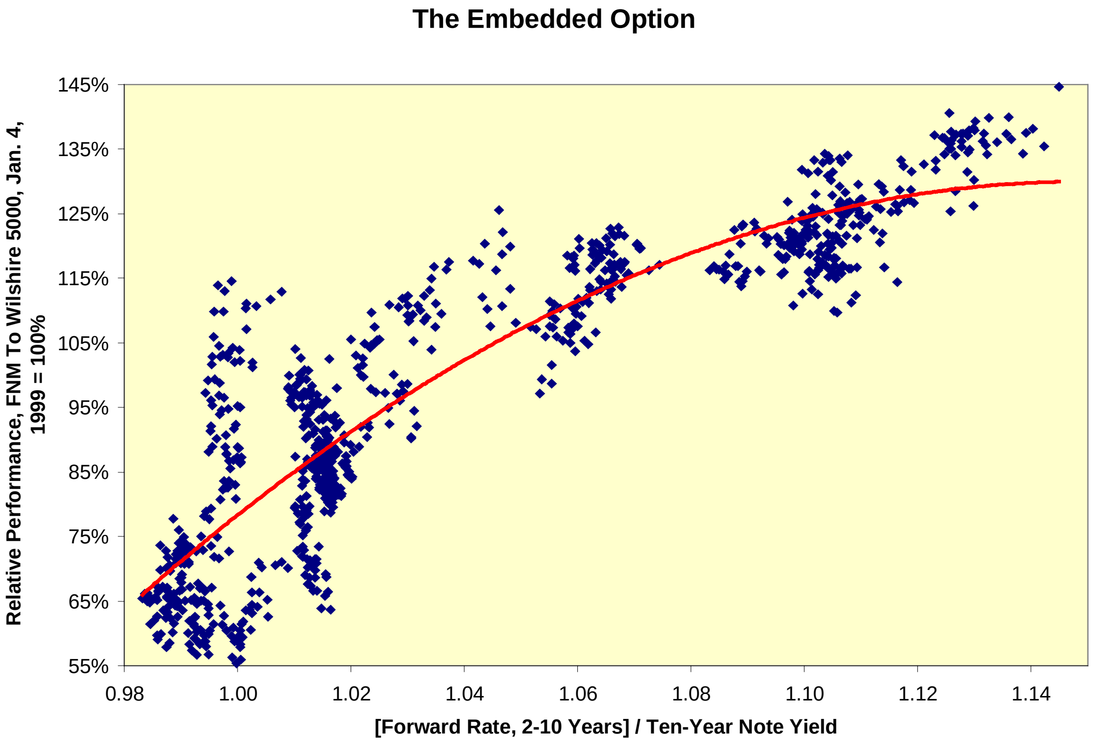
Add these two together, and what do you have? Fannie Mae is nothing more than a gigantic short call option on bonds and a bet on a stable and positively sloped yield curve. They, of course, have one of the largest and most sophisticated interest rate derivative books, but after the experiences of Enron, Bankers Trust, Long Term Capital Management, etc., I'm less impressed by all this razzle-dazzle than they would like me to be. The more complex any derivative position is, the more likely its operator is engaged in smug self-delusion.

The Shape Of Things To Come
The dependence of Fannie Mae on the yield curve can be illustrated simply. We can measure the steepness of the yield curve by taking the ratio of the forward rate between two and ten years, the rate at which we can lock in borrowing for eight years starting two years from now, to the ten-year note yield itself. The greater the ratio over 1.00, the steeper the yield curve. You may download a spreadsheet for calculating this ratio.

The relative performance of Fannie Mae to the Wilshire 5000 serves as an excellent leading indicator of the Fed's next move. Fannie Mae began to outperform the Wilshire both before the Fed's last rate hike in May 2000 and then even more strongly before Sir Alan and his Knights of The Mahogany Table began their series of cuts.



Rearranging the data in the above chart highlights the embedded option. As the yield curve gets flatter, FNM underperforms the broad market. It outperforms the broad market, but at a decelerating pace, as the yield curve steepens. Options traders will recognize the trend curve as a short put option, which is exactly what we should expect when we add the short call on bonds to Fannie Mae's profit profile.



Too Big To Trade

That giant global banks such as Citigroup or JP Morgan Chase are considered "too big to fail" is recognized widely. We need to add another category, that of "too big to hedge." This was one of Long Term Capital Management's problems; its positions were so large it couldn't exit them without trading against itself. Many of Enron's trading problems had this origin: Just as you are not bigger than the market, Enron was not bigger than California. Fannie Mae is not bigger than the entire base of mortgages that can be refinanced.

If the yield curve flattens by virtue of note yields falling - and the betting here is they will - Fannie's duration gap will continue to grow. At some point a danger arises that they won't be able to exit their massive positions and that may necessitate a public bailout of a private corporation. What mortgagors will save in monthly payments, they'll lose in increased taxes and the risk of future inflation.

Sounds like a do-it-yourself Brazil, doesn't it?