

# **Hedging Broken Bubbles**

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The news is widespread that the housing market is a virtual bubble machine. Many are watching for signs that these bubbles will begin to burst. Some feel that what actually exists is a credit bubble. As rates rise the universe of homes a given potential buyer can afford will shrink. With this the ability and desire to reach for existing homes purchased at lower rate levels would shrink as well. What are the implications for risk managers of such a post-bubble mortgage market.

## **Volume and Volatility**

Borrowers typically take out loans for one of three purposes. They wish to purchase a home, extract equity or reduce their monthly mortgage payment. The general trend and level of mortgage rates has reduced the volume of refinancing. As rates rise and the yield curve flattens, the common wisdom is that this will also serve to make homes less affordable, no matter whether the financing vehicle is an amortizing fixed rate or interest-only variable rate mortgage. With two of the rivers damned, production volumes decline.

For producers, that have historically and are currently retaining a portion of the interest payment (servicing and/or excess yield), the refinancing volume is a trade-off. When refinance volumes are high, so is the servicing run-off (prepayment) rate. When refinance volumes are low, so is the servicing run-off rate. Of the two, production tends to be easier to hedge than servicing.

For those who don't retain servicing and have a high fixed cost structure lower volumes can bring extremely challenging times. The conforming mortgage market has long been a commodity class market recognizable by the lower margins provided to traders and the well developed securities market. The Alternative-A and Sub-prime markets have attracted mortgage firms due to the combination of strong volume and larger margins. The trend of margins has been declining as more originators enter the marketplace.

Tighter margins mean less room for error. Higher rates tend to increase the price sensitivity of conforming prime class mortgages. Why? The expectation for prepayments tends to decrease. On the refinance side, the pool of loans that are favorably disposed to refinance is smaller. On the purchase side, unless the rise in rates is driven by an economic expansion that is producing higher wages, the number of transactions dwindles. The effective life of the conventional mortgage is extended. If the expected life for a 30 year amortizing mortgage was currently 48 months and this was extended to be 60 months, the price sensitivity of that mortgage to a change in interest rates could increase by 20%. A mortgage that had a price sensitivity of 4.000 price points per 100 basis point change in rates might now have a price sensitivity of 4.800 price points per 100 basis point change in rates.

Given the same interest rate volatility, price volatility risk increases. This increased volatility can lead to higher costs of hedging per dollar of loan delivered. Why? For those organizations that deal with fallout, the cost of each fallout event increases. This higher cost is realized from the higher cost of pairing off hedges that were placed against loan applications that were terminated or renegotiated. Second, for those using options to manage fallout risk the premium outlay for these options will increase since the option premium is based upon the expected (implied) price volatility of the market underlying the option.

One opportunity to reduce hedging costs that results from dealing with relatively lower volumes is to reduce the time to close and deliver statistics for the pipeline. In so doing, both fallout experience and the cost of purchasing option-style coverage could be reduced.

Historically, another possible development that might occur as volumes shrink is the increase in the presentation of non-viable and low quality loan applications as a percentage of the total application population. To draw from oil patch speak, drilling more dry holes would mean that the marginal yield from the production process would be reduced because of the costs buried in fruitless applications. Structural methods to encourage quality, accommodate a lower quality credit application and discourage dumping will yield a lower cost of hedging.

Sub-prime loans are less susceptible to extension risk as the opportunity to refinance by moving up the credit grade curve can occur due to the borrower building a better credit profile over time. The dynamic here could be more centered on what happens to default rates. The default experience will influence investor appetites for this market. The ensuing volatility of the credit cost component can make for surprises, both good and bad, for the seller of sub-prime pools.

The potential to differentiate oneself from the competition is always available if one has the desire and resources to seek out those differences and implement them.