Hedging with Options – Offsetting Fallout Risk

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In many ways your mortgage pipeline is just a very large option position. Thus, what serves as the best way to evaluate an option tends to be the best way to evaluate a mortgage pipeline.

Both, option contracts and mortgage pipelines have values that are sensitive to market interest rate volatility, the shape of the yield curve, the amount of time remaining, and the passage of time.

In the last segment we discussed trapping fallout and building closing ratio grids. One of the predominant reasons options are used is to offset the volume and resulting value volatility that fallout can introduce. When you multiply the volume fluctuations and resulting per dollar profit of the "at risk to fallout" pipeline get a data series that very closely resembles an option position. Typically, a pipeline most closely resembles a position that is a combination of a purchasing an investment in mortgages and a lesser position in selling call options on those mortgages.

A well-equipped risk management software tool can allow you to model the pipeline against a backdrop of interest rate shifts while viewing how different hedging solution sets that include an option coverage component would offset that profile.

This modeling capability allows you to select among hedging alternatives and eliminate those that provide undesirable offsets to market shifts you deem to be relevant.

Example: You have modeled that when the mortgage rate rise 50 basis points (one-half of one percent in interest rate) 90% of the mortgages will close at the terms agreed to at the time the interest rate lock commitment was granted. The risk system indicates that a 50 basis point rise in interest rates will drop the value of the mortgages by 2.500 price (discount) points. If the underlying amount of mortgages that fit this category are $100,000,000 ($100 million) then the value of the mortgages would be expected to decline by $2.25 million. Thus, we would need a hedge that would gain $2.25 million in value to offset this exposure.

At the same time the risk software would provide an indication of what value appreciation the loans might realize if mortgage rates drop by 50 basis points. The model indicates that only 50% of the mortgages will close at the terms agreed to at the time the interest rate lock commitment was granted. The risk system further indicates that the price appreciation in these mortgages corresponding to a 50 basis point drop in rates is 2.000 price points. The extended increase in value would then be forecasted as $1.00 million.

The dilemma has now been framed. We need a hedge that will throw off $2.25 million in profits should mortgage rates rise 50 bps, while losing $1.00 million (or less) should rates drop by 50 bps.

Shorting the mandatory mortgage position in this instance indicates that to gain $2.25 million in profits, the lower rate loss for the hedge would be $2.00 million. Thus, not a good match to our loan pipeline "P n L profile". This is where the user can model in an optional component into the hedging mix to work toward a result that provides an acceptable match to the mortgage loan positions market exposure.

The scenario we did not include in our simple example is the cost of hedging (premium decay, etc) should the market remain quiet during the period and remain at the status quo. A good risk management tool would provide this metric as well.

The hedger in preparation of this exercise should be armed with a knowledge of the profit targets, profit thresholds, premium limits that are acceptable to the organization. As they say there is no free lunch, but knowing which hedge provides an acceptable alternative in all the scenarios with which you are concerned is the best way to achieve a long term track record of consistent strong performance.