

## Prepayment Model Tuning & Home Price Forecast Adjustments

By Dan Szakallas

As we enter 2008, many questions still remain in the mortgage industry. From a credit perspective, many wonder how severe the losses on sub-prime loans will ultimately be. Much of this depends on how both the private and public led modification plans play out. Mortgage market participants are also wondering the impact the current housing slowdown and tighter lending standards will have on the prepayment speeds of agency and non-agency prime loans. Andrew Davidson & Co has been monitoring these developments very closely, and we'll spend some time sharing our insight as to how to properly use our models in these uncertain times.

In August, we issued a tuning recommendation for our fixed rate agency prepayment model to tune the turnover parameter to a value of 0.85 for all Fixed Rate 30 yr FNMA, FHLMC and Jumbo Prime loan types. This was based on our observations from April to July 2007 when there was a consistent decline in prepay speeds, especially in the discount area. This information, combined with existing home sale statistics, told us that prepayments would be slower than our model forecasts for the foreseeable future. We have had more time to analyze prepayment trends over the past 2-3 months and have concluded that 0.85 may not be a low enough value, depending on the type of analysis the client is performing using the prepayment model. For example, existing home sales fell below an annualized rate of 5 million units for the first time in over 10 years in October, which illustrates the impact the market turmoil is having on homeowners, especially in the short term. We are also expecting some long term effects from the flat to declining home price scenario that we are currently experiencing. How does this impact those invested in the MBS arena? We can summarize it as an issue of long term value versus short term cashflows.

When analyzing MBS over the long term, a value of 0.85 for turnover seems appropriate. Measures like duration, OAS, and weighted-average life represent expected prepayments over the life of a pool or loan. There will most likely be effects of the market turbulence of this year for a few years to come, so we feel that keeping the turnover tuning parameter less than 1.0 will help account for this.

However, if the purpose of using the prepayment model is to forecast short term cashflows on a portfolio, or to benchmark the model to actual speeds, we feel that using a turnover parameter value of 0.65 for all Fixed-Rate agency and non-agency models in v5.1 and later and in all agency and non-agency ARM models in v5.2 is appropriate for the next 3-4 months. We are headed for what might be record lows in prepayments, given the home price declines in much of the country and the fact that December through February are the slowest months seasonally for prepays. This recommendation is not based on empirical data, but based on our outlook of the market for the next 3-4 months.

It will certainly take time to recover from what transpired in 2007. We are no longer in times of rapid home price appreciation spurring on significant refinance activity. The OFHEO National Home Price Index showed its first quarterly decline in 13 years during the second to third quarter in 2007. The yearly change stood at 1.8% from the third quarter in 2006, and we feel that by the third quarter in 2008, there will be about a 1% decline in value.

Therefore, we are modifying our home price forecast within our suite of prepayment models to reflect this outlook. Effective with the December 31, 2007 datafile release, our forecast will reflect a first year decline of 1%, a 0% change in the second year, a 1% growth in the third year, and a return to the long-term historical average of 4.5% per year in year four and forward. This forecast can be modified by the user to fit any alternative view. Please Note: this applies to v5.2c of the prepayment model only.

Andrew Davidson & Co realizes that there are many clients who need guidance in model use and reliability given the current market, and we are available to discuss the information presented above, or any other related questions that might arise. Please do not hesitate to contact us at 212-274-9075.



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