the Pipeline

Prepayment Update – June 08

Tuning Recommendations for Agency ARM Prepayment Models

By Dan Szakallas

Last month we discussed a variety of tuning recommendation for the AD&Co suite of prepayment models. We focused on fixed-rate Agency collateral, and both ARMs and fixed-rate Non-Agency collateral. We have conducted further analysis so that we may share some insight into tunings for the Agency ARM models, specifically for hybrid collateral. We'll look at prepayment model versions 5.2 and 5.1.

Looking at the 3/1, 5/1, 7/1 and 10/1 FNMA and FHLMC models, we can see that model speeds are too fast over the last 9 months. One-month speeds for these pools have fallen into the low twenties and mid-teens, and have stayed there for quite awhile. Our goal is to improve model fit over the last 9 months using our Dynamic Performance Reports (http://dynamic.ad-co.com/performance/), while also looking at lifetime CPR forecasts, durations, and OAS values. The challenge that arises is that since the models do not have a time factor built in to the tunings, any tunings applied affect the entire vector of prepayments forecasted for the life of the pool. This can cause OAS values and durations to rise noticeably, since any attempt to slow down the model to fit today's market will slow down forecasts for the life of the pool. This dynamic is reason that we discussed short-term vs long term tuning back in December's Pipeline (http://www.ad-co.com/newsletter/issues2007/dec07special.htm).

For those who are doing analyses that are heavily weighted towards the next 6 months, these tunings should do well in bringing model speeds in line with actual prepayments. For those who run mostly valuation analyses, the graphs at the end of this article display how OAS and duration values from AD&Co's valuation system change when the new tunings are applied.

In version 5.1 and prior, the hybrid ARM models are not as flexible when it comes to tuning. For these versions we have recommended changing only the scale tuning. This will simply scale the forecasted vector of prepayments for each month by the value given, functioning as a direct multiplier onto the outputted SMM or CPR. These recommended tunings are listed below

V5.1 *and prior*

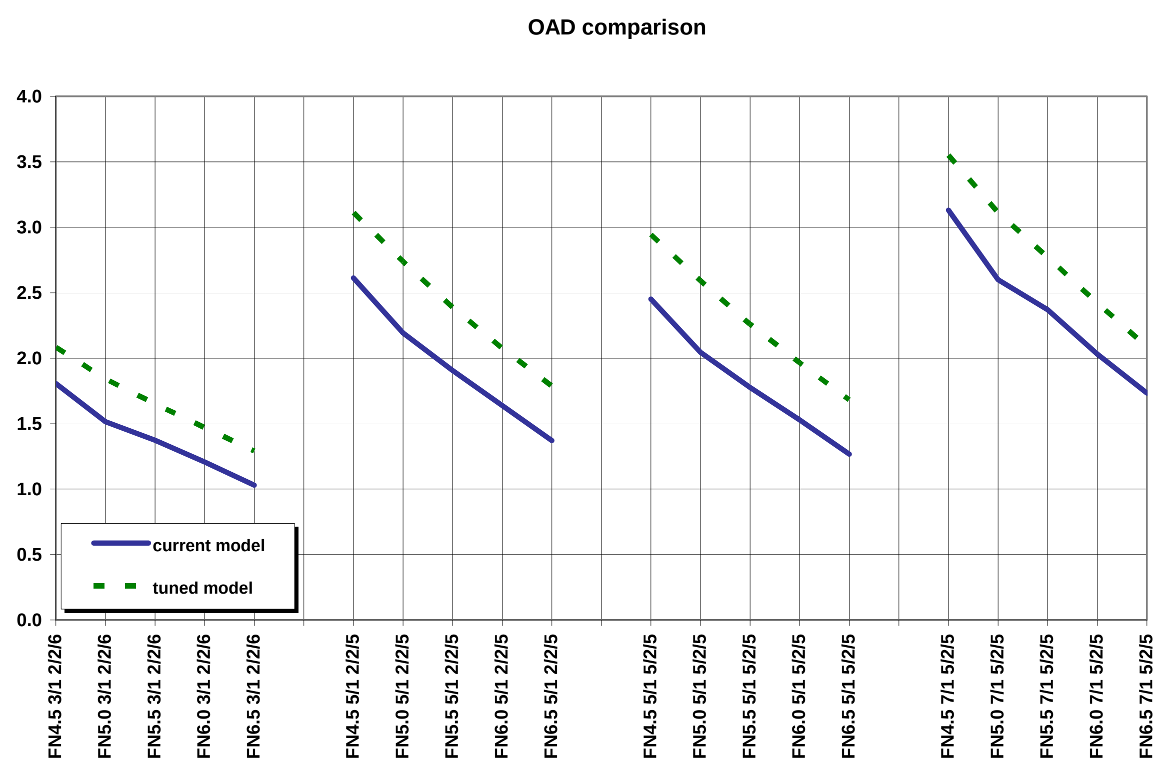
Loan Type	Scale
FNMA, FHLMC 3/1	0.8
FNMA, FHLMC 5/1	0.7
FNMA, FHLMC 7/1	0.65
FNMA, FHLMC 10/1	0.8

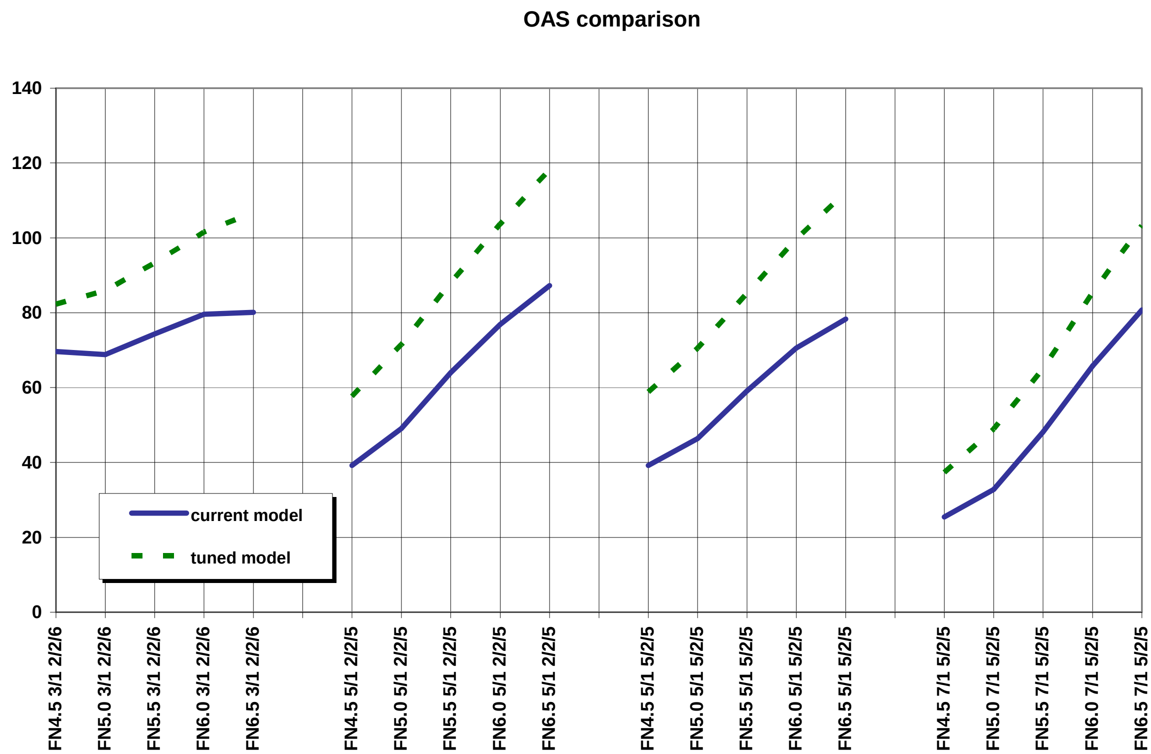
In version 5.2, we utilize slide tuning because it allows us to account for the difficulty of refinancing in the current environment.

5.2c *and later*

Loan Type	Slide
FNMA, FHLMC 3/1	100bps
FNMA, FHLMC 5/1	100bps
FNMA, FHLMC 7/1	75bps
FNMA, FHLMC 10/1	50bps

If these values are entered into the Dynamic Performance Reports (http://dynamic.ad-co.com/performance/), the results will show how these recommendations improve model fit over the last 6-8 months. We have also provided a graph below that illustrates the effect on OAS and duration for version 5.2d.





As always, we plan to monitor these recommendations over the coming months, and make any adjustments as necessary. Additionally, these results are posted on our web site:

http://www.ad-co.com/support/user/TPR52.htm
http://www.ad-co.com/support/user/TPR51.htm
http://www.ad-co.com/support/user/TPR502b.htm

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