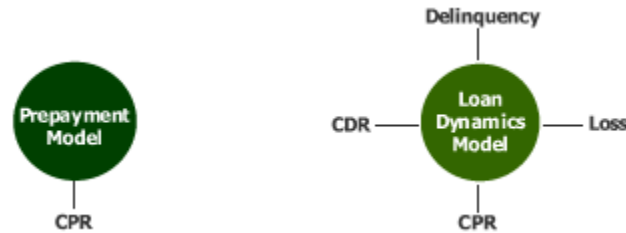


Loan Dynamics Model™ by Kyle Lundstedt, Ph.D.

The risks inherent in credit-sensitive mortgages and related securities require market participants to gain a solid understanding of prepayment, delinquency, default and loss severity on mortgage loans. In response to this challenge, we have extended our current prepayment model subroutines to address the needs of those who are exposed to these risks by producing probability outputs of these exact required performance metrics, given loan characteristics and a scenario for interest rate and house price indices. Meet the Loan Dynamics Model™.



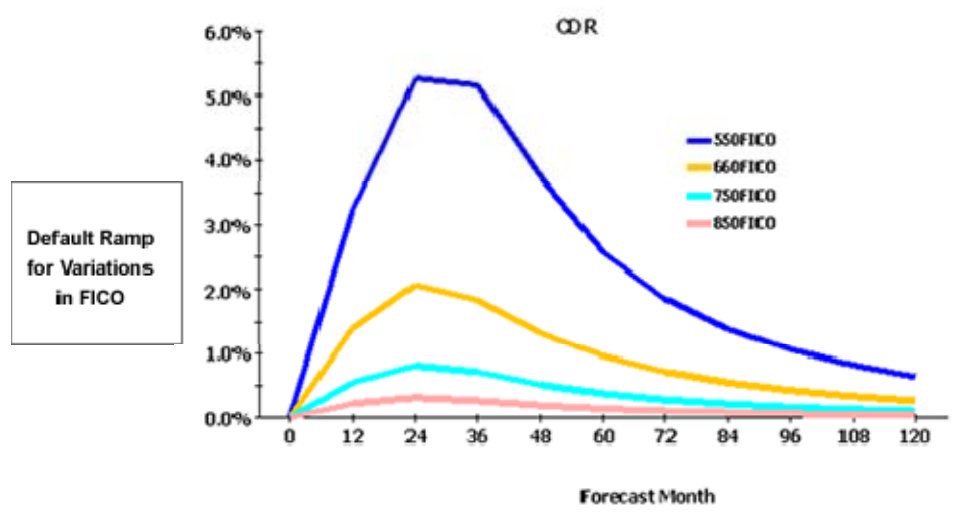
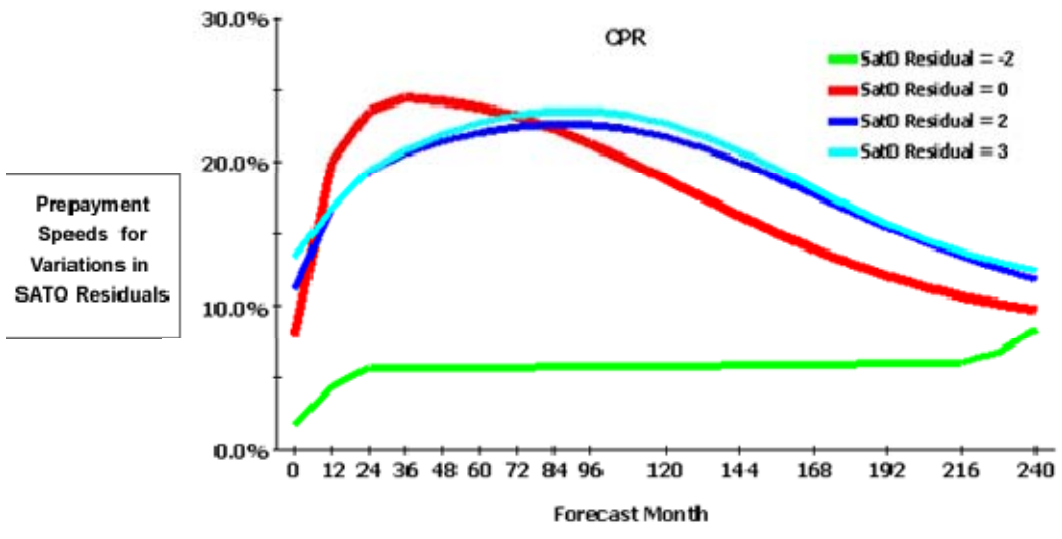
The Loan Dynamics Model™ is the culmination of a 2-year company-wide development effort. As a starting point, we examined historical data, including roughly 8 million loans from 144 issuers from 1990 to 2005. Over the course of our analysis, we found that borrower behavior can be described realistically yet parsimoniously using 4 categories of payment status:

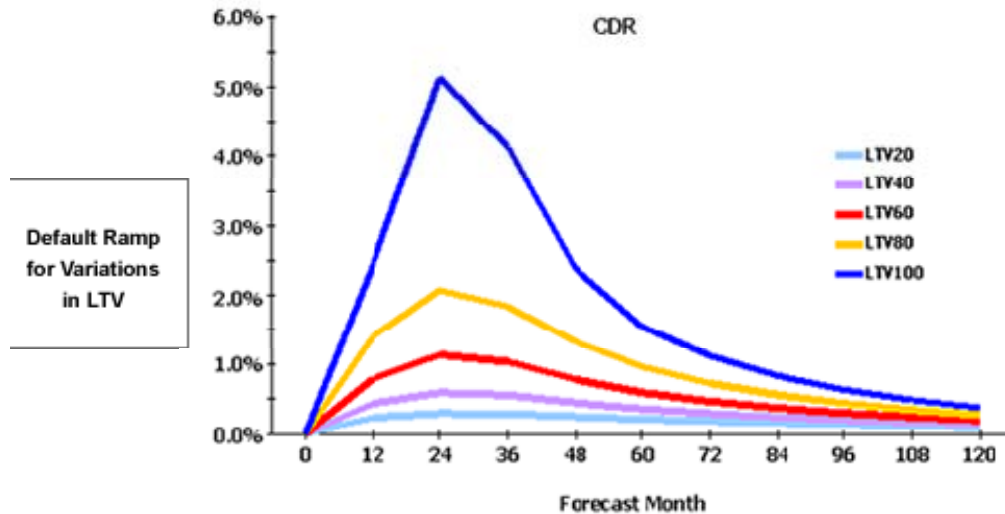
- **Current** (0-59 days past due)
- **Delinquent** (60-179 days past due)
- **Seriously Delinquent** (180+ days past due)
- **Terminated** (default or prepay)

Our team built a set of economic models to explain the motivation for borrowers to transition from one payment status to the others given a wide variety of economic scenarios and loan characteristics. The model is estimated using observed historical data to provide a probabilistic assessment of how a loan will behave in the future.

The Loan Dynamics Model™ goes beyond a traditional “2-state” competing risk model (which includes just prepayments and defaults), and can be used to model the effects of 60+ delinquency on bond triggers. Our model also builds upon traditional transition models with 7 or 8 payment status categories by focusing only on those that have the greatest impact on investment performance. This simplification allows for greater emphasis on the dynamic aspects of the loan transitions.

The model is unified across credit sector and product type, and it relies on observed loan characteristics (i.e., data available in the typical servicing system file) to make its projections. As a result, users are not required to make potentially arbitrary judgments about whether a loan falls into jumbo, Alt-A, High LTV, or Subprime credit sectors, and users can apply the model to pools of loans containing a wide mix of underlying collateral.





The Loan Dynamics Model™ is a C++ subroutine, which can be delivered either as a Windows dynamic link library (DLL), a Unix shared object or through an Excel interface. The subroutine is ready for integration into customers' internal systems, and we are working with our vendor partners to make it available within their analytical tools. We are happy to help with any client's integration process, and offer high-quality, ongoing customer support to enable users to take full advantage of these cutting-edge behavioral models.

The Loan Dynamics Model™ is an important initial step in our march toward building a sophisticated, universally accepted Credit Product Line, which will enable investors and issuers to gain a full understanding of how the credit and prepayment profile of a mortgage will impact loan and security performance. The Credit Product Line also includes the following tools:

- HPI Generator - produces a Monte Carlo path of projected HPI at both a national and state level. While it is consistent with the AD&Co Interest Rate Model, the HPI generator can accommodate other firms' interest rate models as well.
- Implied Default Model - draws on AD&Co's advanced OAS technology to compute the value of ABS tranches under a range of prepayment and default scenarios, relating bond prices to a distribution of defaults and losses. In the near future, the implied model will be integrated with the Loan Dynamics Model™.

We are committed to further development and enhancement of the Loan Dynamics Model™ and other credit valuation tools. Please contact Rob Landauer at rob@ad-co.com or 212-274-9075 for more information.

