

## Identifying and Addressing Loan Portfolio Risks

By Dennis Child, Marketing Director, TCT Risk Solutions, LLC (TCT)

It can be seductive for a loan officer, a loan manager, or even a CEO to think that once a loan has been approved and funded the work is done. Simply set up a payment process with a quality collection department and the job is well in hand. This, of course, is far from the truth. In reality, loan portfolios require constant monitoring and oversight.

In most cases, the changes that create the most significant losses begin to present themselves long before a loan shows up on traditional delinquency reports or a bankruptcy notice is received from a borrower. Those initial changes can be identified by a statistically valid, stochastic credit migration model. Stochastic methodology magnifies the directionality of credit migration and expands its value with statistical analysis that identifies variables which predict the risk factors of loans. A variety of vendors have developed and offer these models in the marketplace.

Studies show that 60 percent to 80 percent of total delinquencies and charge-offs are attributable to loans that have experienced a drop of two or more credit grades from the original score. Statistical tests (e.g., regression analysis and multivariate analysis of variance or "MANOVA" can identify and quantify actual factors that predict a loan is indeed likely to have significant impairment. A financial institution needs to perform studies and run stochastic analyses to determine how drops in loan credit scores affects their delinquency and charge-off rates. The outcome of stochastic analysis should:

- identify the amount of credit score decline that constitutes a significant increase in risk;
- define the amount of movement in individual loan credit scores whereby a loan should be considered to have begun the impairment process;
- identify the characteristics of impaired loans that trigger special oversight and/or warrant changes in terms or freezing/reducing lines-of-credit, etc.; and
- identify those loans that are truly problematic and require action.

Effectively managing loan risk requires using valid methodologies to analyze impaired loans and provide pertinent reports. The steps in this process include:

- collection and maintenance of original credit scores on existing loans;
- acquisition and maintenance of recent credit scores on existing loans;
- measurement and identification of impaired loans;
- measurement and identification of improved loans; and
- calculation of net credit score change in loan pools and total loan portfolio.

An effective credit migration model partitions common groups or pools by loan type or collateral code. It then further divides all loans within each group or pool into risk grades using the recent credit score. A statistically valid loss rate is calculated for each grade within each pool. Within each loan pool the

existing balances of loans in each risk grade are then multiplied by the corresponding loss factor for each grade to identify the amount of required Allowance for Loan and Lease Loss provision for each risk grade. At regular intervals a financial institution needs to acquire updated credit scores for all loans with outstanding balances. The updated credit score is used to determine the risk-migration of individual loans, loan pools, and the overall loan portfolio.

Employing statistical analysis elevates the credit migration report from a simple directional analysis (is the credit score increasing or decreasing) to a stochastic application with the predictive qualities that provide the early warning signal needed to prevent or at least reduce impending losses.

The output of such a model can alert managers of the need for action that will reduce delinquencies and losses. For example, a listing of loans with impaired FICO scores at one credit union showed a borrower who had an 824 credit score when the loan was originally funded. Loan policy allowed for an unsecured credit limit of \$10,000 with that score. Now, 22 months later, the borrower's credit score has declined to 652. The indicated maximum unsecured loan limit for the new credit score is \$4,000. When the impaired FICO report was run, the borrower had an outstanding balance of \$1,256. The credit union adjusted the limit to match the current credit score and reduced the exposure on the line by \$6,000.

A robust credit migration model can inform management of necessary policy changes, such as the need to review and adjust credit lines (as noted above) or the need to change a financial institution's risk-based loan pricing practices. It can also show where action is called for such as the impending repossession of an individual delinquent car loan with a declining credit score, or the need to set aside more money in the Allowance for Loan/Lease Losses as the result of a significant number of loans showing declining credit scores. Also, declining or improving credit scores in individual loan pools could well indicate a need to modify a financial institution's concentration risk policy.

An effective credit migration report exposes marketing opportunities as well. Many borrowers are working to improve their credit worthiness and are being successful. These members offer the best marketing opportunity a bank or credit union can find. A credit migration model will highlight those borrowers with improving credit scores and indicate where financial-service opportunities might abound. For example, several credit unions use the improved loan list to identify members who have improved their credit scores and, as a result, present less risk to the credit union. An effective credit migration report will show the aging of the loan and the amount of repayment that has occurred. One credit union contacts members in this list and congratulates them on their success and offers to increase lines and reduce rates consistent with their individual score improvement. They have enjoyed loan growth as a result of marketing to members with improving credit scores.

A well designed and well utilized credit migration model will significantly improve a financial institution's profitability not only as a result of reduced loan losses but also as a result of increased loan revenues.

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