Module: Assets
Section: Scorecard Lending
EM-312

Date Published: 08/99

Introduction

Scorecard lending is a loan underwriting tool that attempts to statistically quantify a borrower's probability of repayment. This probability is based upon a number of factors statistically substantiated to be predictors of a borrower's willingness and ability to repay his debt. Scorecards vary by institution and by district, but in almost every scorecard developed, credit bureau information is a key component. As with conventional underwriting methods, a borrower's repayment history is an important consideration in determining a borrower's willingness to repay future debt obligations. The assignment of a score to this and other credit factors results in an overall credit score that determines the probable creditworthiness of the borrower.

Factors comprising the scorecard vary by underwriter, as does the level of inherent risk. For example, a term loan scorecard might consider such factors as the percentage financed, time at present address, repayment history with FCS, number of years in farming, as well as credit bureau information. An operating scorecard might also consider time at present address, repayment history with the Farm Credit System (FCS), number of years in farming, and credit bureau information. However, instead of considering percentage financed, the operating scorecard might consider ownership equity and net income.

The factors used in developing the scorecard have been determined to be most predictive in separating good and bad repayment prospects. The term "goods" and "bads" are often used in credit scoring circles to distinguish credit prospects. Definitions for "goods" and "bads" vary by user, but generally "goods" are defined as those accounts you would like to have in your portfolio, whereas "bads" are accounts you would decline if you knew how they would perform, i.e., excessive delinquencies, high servicing costs, credit losses, etc.

The acceptance score determined by the underwriter impacts the ratio of "goods" to "bads". Also known as the "cutoff" score, this score is key to determining the level of risk the underwriter is willing to assume. The higher the required score, the lower the underwriting risk and vice versa. Establishment of a cutoff score that is reflective of the risk bearing ability of the institution is one of many keys to successful use of this tool.

Examination Objectives

The fundamental examination objective in the scorecard lending area is to determine if risk in the scorecard portfolio is appropriately managed and is within the association's risk-bearing ability. This is accomplished through the following principal objectives:

- Assess the statistical validity of the credit scoring model either through the outside vendor or through monitoring actual credit history of borrowers in relation to the model.
- Assess the risk associated with override decisions.
- Assess the adequacy of risk controls over the credit scoring process.
- Evaluate management of the scored portfolio.

Examination Considerations and Guidance

The primary factor that increases risk to institutions using scorecard lending is the failure to thoroughly analyze the borrower's financial condition and repayment capacity and obtain a complete balance sheet and income statement at the time a scorecard loan is made. The absence of this information makes it impossible to fully analyze the borrower's financial condition and credit worthiness and, ultimately, the risk to the institution. Examiners must be cognizant that even if complete financial information is obtained, it may not be used in the scorecard process.

The various areas that must be considered when evaluating scorecard lending programs and the risks associated with each area are discussed below. These include scorecard validation, override decisions, risk controls, portfolio management, and reporting. In evaluating scorecard lending programs, consideration must be given to the overall condition of the institution, the levels of activity and volume in the institution's scorecard portfolio, and the capacity of the institution to handle the risk permitted by the board's policy on scorecard lending.

Scorecard Validation

Achievement of statistical validation is a key objective of the credit scoring process. The primary objective of the validation process is to determine whether the scorecard effectively "rank-orders" risk. Rank ordering of risk is simply the process of proving statistically that loans with higher credit scores result in fewer delinquencies than those with lower scores. The process of validation will require an analysis of loan performance by each of several 10-point scoring bands. For example, loans scoring 190-199 will be compared against those scoring 200-209. Theoretically, delinquencies will be greater with the lower scoring loans than the higher scoring loans. If this can be proven statistically across a broad range of scoring bands, the scorecard will have passed the first step toward achieving statistical validation.

Once this process is complete, the underwriter should be in position to predict an expected loss rate by scoring band. Odds tables for each scoring band should be developed and used to predict future losses. Such information is useful in a number of ways. First, it assists management in establishing a risk tolerance level. This is especially useful when establishing the appropriate cutoff score for that institution. Second, such information is instrumental in risk-based pricing. Lastly, establishing loss rates is critical to the analysis of allowance for loan loss adequacy.

From an examination standpoint, examiners must determine whether the association's scorecard has been statistically validated to rank-order risk and whether odds tables have been established. Examiners also need to be cognizant of whether the odds tables were established during favorable economic conditions. If the odds tables were established only during favorable economic conditions, loss rates during an economic downturn would be higher than what the tables indicate. Until the scorecard has been validated and odds tables established, management must exercise caution and ensure the level of activity permitted in the program does not exceed the association's risk-bearing ability.

Overrides

Overrides are loan decisions made outside the confines of the scoring model. Such decisions consist of both high and low side overrides. Low side overrides are typically the most common, and result in making the loan despite the failure of the borrower to achieve the minimum cutoff score. High side overrides are loans that are denied despite the borrower achieving a score at or higher than the established cutoff score.

Override decisions are usually confined to three basic types: policy, informational, and intuitive. Probably the most common of these is the policy override, whereby management established special rules for certain types of applicants. For example, the policy override is common for current FCS customers in good standing with the institution despite the fact that the borrower may not score above the cutoff. Informational overrides are those made because the credit analyst has information on the applicant that is not part of the scoring model. For example, an analyst may override the approval of an applicant who achieved the cutoff score but recently filed for bankruptcy. The third and most dangerous override

decision is the intuitive override. This is an override based on judgment or "gut feeling."

An association's override strategy should include the following:

- The objective of the override strategy must be made explicit.
- A list of specific override reasons should be identified. The reasons must be rational, rather than intuitive, and based on reasoning that can be stated and validated.
- The strategy must be able to be implemented consistently by lending officials.
- All overrides should be tracked, and their performance by individual group should be evaluated. The minimum information needed is score and override code. The name of the credit analyst making the override decision should also be recorded if the institution is tracking analysts' performance.

In addition to the above, institutions must set an override rate. Override frequency should be limited. When management sets the override rate, consideration should be given to the types of overrides. For example, overrides to existing customers may be less risky than those to new customers for whom no financial information is obtained other than that gathered as part of the scoring process. The entire override process must be viewed within the framework of the institution's risk-bearing capacity.

Risk Controls

The adequacy of risk controls is a key management component of the scorecard portfolio. These risk controls can be many, but the four critical ones are outlined below. They include the adequacy of policies and procedures, risk parameters, allowance for loan losses, and loan pricing.

- Policies and Procedures -- The critical component to the success of risk control is the institution's policies and procedures. The policy should clearly prescribe the extent of exposure the board is willing to commit to scorecard lending (e.g., as a percentage of total capital). As discussed earlier, another key aspect that should be included in any such policy is the issue of overrides. Once the comfort level on the cutoff score is set, the override policy becomes the key aspect of risk control in this program. For this reason, examiners must make evaluation of policies and procedures on the override process a top priority.

  A number of other areas warrant inclusion into a scorecard policy. Many of these are the same types of controls common to managing the non-scorecard portion of the portfolio. These include limits to individual customers (to limit risk by size or to control multiple transactions to a single customer), types of eligible loans (by size or other criteria), required reporting, lending authorities, etc.

- Risk Parameters -- The board needs to set parameters for the scorecard portfolio that are commensurate with the association's risk-bearing ability. Some of the factors that need to be considered when setting these parameters include scorecard validation, number of part-time farmers using the scorecard, cutoff score, override rates, and collateral requirements. It is conceivable that the association might establish more than one parameter. For example, the board might set a parameter for the scorecard loans that are secured and set another parameter for those that are unsecured. The parameters should not result in excessive risk. The percentage of scorecard loans in relation to total capital is a critical measure of the safety and soundness of the program and the extent to which the board is willing to expose shareholder equity to the risk in scorecard lending programs.

- Allowance for Loan Losses (ALL) -- The ALL is the primary method for quantifying risk in the scorecard portfolio. The odds tables and loss rates make it simple to establish the appropriate ALL to accommodate the unique risks in this portfolio segment.

- Loan Pricing -- The scorecard portfolio probably lends itself to more accurate loan pricing than any other portfolio segment, assuming the appropriate odds tables and loss rates have been developed, as previously discussed. Since these factors are usually determined by scoring band, loss rates should be objectively derived by risk level and incorporated into the pricing policy.

Portfolio Management

Portfolio management of scorecard lending can be a challenge because financial information is not always obtained as part of the scoring process. Complete balance sheet and income statement information is usually not obtained at the time most scorecard loans are made. Nevertheless, a scorecard program must be managed on an ongoing basis just as any other loan program is managed.

Some institutions have begun the process of assigning a risk rating to the scorecard portfolio on a loan by loan basis. The risk rating is based on the loan type and the credit score. Risk rating the scorecard portfolio allows association management to perform sensitivity analysis and migration analysis on that segment of the portfolio. This type of analysis is critical to adequately manage the portfolio on a macro basis.

Economic assumptions impacting credit quality are just as applicable to the scorecard portfolio as the traditional portfolio. However, there are some potentially unique characteristics of the scorecard portfolio that may impact the types of economic data considered. In many cases, the scored portfolio has a much higher likelihood of being "agriconsumer" than the traditional portfolio. These borrowers are generally much more likely to be dependent on off-farm income to make payments. Therefore, investigating the need for broadening the base of economic assumptions may be warranted for the scorecard portfolio. Management should consider such things as the adequacy of the cutoff score and the override policy when economic conditions change. In the case of a downturn in the economy, it may be prudent to consider raising the cutoff score. In addition, management may institute new restrictions on overrides to better control risk if defaults occur.

Reporting

The types and quality of reports used by management to monitor the scorecard portfolio must be evaluated. Loans made under scorecard programs are typically very dependent on delinquency information, which drives risk and accounting classification changes. Therefore, delinquency reporting is a key consideration. Reports monitoring overrides, including those to new versus existing customers, are also important. At a minimum, reports must inform the board of management's compliance with procedures and board-established parameters.

Examination Procedures

The following provides model examination procedures for conducting an evaluation of an institution's scorecard lending program. Consistent with risk-based examination practices, examiners should add, delete, or modify procedures as needed based on the particular circumstances of the institution.

1. Determine whether the scorecard has been statistically validated to rank-order risk and determine the extent to which this has been accomplished by scoring band.

2. Determine whether odds tables and/or loss rates have been formulated and the extent to which they will be re-evaluated over time given differing business cycles.

3. Evaluate the institution's override policy to ensure it includes, at a minimum, the following:

    - The objective of the override policy,

    - A reasonable override rate that considers characteristics of the scorecard portfolio,

    - A list of acceptable specific reasons for overriding,

- Actions to ensure consistency of application of override rules among credit analysts, and
- Monitoring and reporting requirements.

4. Perform an analysis of the volume and type of overrides to ensure they are commensurate with the association's risk-bearing ability.

5. Select a sample of overrides and determine whether the reasons for overrides are objective and comply with institution policy.

6. Determine whether the cutoff score is reasonable and based on the risk-bearing ability of the institution.

7. Evaluate the thoroughness of the scorecard lending policy to ensure it includes program objectives and appropriate risk parameters, types of loans eligible, reporting considerations, lending authorities, etc.

8. Query and analyze the scorecard portfolio database to evaluate compliance with lending limits to individual borrowers, restrictions on transactions to single customers, etc.

9. Evaluate the policy for risk/accounting classifications and charge-offs for reasonableness.

10. Assess whether the institution has analyzed and determined the causes of losses on its scorecard lending program.

11. Evaluate the ALL policy to determine the use of loss rates and probability tables and the extent to which the ALL level for scorecard lending programs is adequate.

12. Assess the loan pricing policy to determine whether the portfolio is differentially priced based on risk and whether odds tables and loss rates are used in the pricing model.

13. Determine what techniques the institution uses to assess portfolio risk on a macro basis.

14. Determine the extent to which economic data is utilized to assess risk in the portfolio, alter the cutoff score, and/or change override policies.

15. Determine the types of reporting used to monitor the scorecard portfolio and whether they are sufficient to identify risk.