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## **CREDIT EVALUATION PROCEDURES AT AGRICULTURAL BANKS**

**Paul Ellinger, Nate Splett, Peter Barry, Eddy LaDue, Cole Gustafson, Gregory Hanson, Steven Hanson, David Kohl, David Leatham, Warren Lee, Ken Obrecht and Glenn Pederson**

Over the past decade, significant changes in the credit evaluation of agricultural borrowers have occurred. A major reason is a consequence of the financial stress and high loan losses in agriculture during the 1980s. To reduce the probability of future losses, many lenders became more precise in their credit evaluation procedures. In addition, deregulation of interest rates and increased lender competition have reduced profit margins at commercial banks. To remain viable in this competitive environment, lenders have sought more cost effective procedures to evaluate borrowers. Included in more formal procedures are the use of credit scoring models, risk assessment systems and risk rating worksheets.

These changes in credit evaluation are attributable to concerns about loan quality, improved borrower information and greater lending competition. The benefits to banks in regard to these developments are considered to include improved support for loan acceptance decisions, more equitable loan pricing, monitoring of existing loans and quality appraisals of loan portfolios.

The basic framework of credit scoring models or risk assessment systems involves:

- 1) Identifying key variables representing a borrower's credit risk;
- 2) Selecting appropriate measures for each variable;
- 3) Weighing the measurements according to their relative importance;
- 4) Scoring the credit risk based on the weighted average of the measurements;
- 5) Assigning the credit score to the appropriate credit class for loan acceptance, pricing, monitoring and so on.

This study evaluates formal credit evaluation systems currently being used by agricultural lenders. Little information is available about the methods by which credit evaluation analyses actually occur -- that is, the extent to which loan documentation, variables, measures, and weights are similar or may differ across lenders. An analogy can be made to the agricultural finance profession's interest in developing more uniform financial standards for evaluating farm businesses. Greater uniformity in credit analysis by lenders is preferred as well, and is closely related to the financial standards idea. A starting point involves identifying the range of methods currently employed and the degrees of similarity between them. There is a need to consolidate the experiences and achievements of existing systems to provide a basis for further development of more refined credit evaluation procedures. The basic objective of this study is to assimilate and summarize existing credit evaluation systems in use by agricultural lending institutions.

## SURVEY

A mail survey of banks in 19 states provides the data base for accomplishing the objectives of this study. All agricultural banks in the region are selected using the following criteria to define the population: 1) banks that have *Loans to finance agricultural production and other loans to farmers plus Real estate loans secured by farmland* equal to or greater than \$5 million, or 2) banks in which total farm loans comprise at least 50 percent of the bank's net loans. The dollar stipulation is used so that large banks with a substantial volume of agricultural loans, but small relative to their entire loan portfolio are included in the sample.

The survey is focused on 3 main areas: 1) identification of credit evaluation procedures; 2) extent of use of the credit evaluation procedures; and 3) implementation of the credit evaluation procedures.

### Identification of credit evaluation procedures

This section of the survey focuses on the use of formal credit evaluation procedures. Lenders are asked to identify whether they use formal credit evaluation procedures. Lenders that do not utilize formal credit evaluation procedures are asked to describe their credit evaluation procedures. In addition, they are asked their interest in developing a more formal credit evaluation system. No further information is requested from lenders that do not use formal credit evaluation procedures.

Lenders that indicate use of a formal credit evaluation procedure are asked to identify the specific procedure, a description of the financial statements required, and any details regarding the use of a credit evaluation system for farm borrowers (ie. worksheets, rating forms, etc.). In addition, the lenders are asked about the length of use of the current system, computerization of the system, distinctions between real estate and non-real estate evaluation systems, and present satisfaction with the credit evaluation system.

### Extent of use of the credit evaluation procedures

The survey contains questions regarding the extent of use of the credit evaluation system with potential and current borrowers and the bank's rationale that all borrowers are not evaluated. In addition, information is requested regarding the sharing of credit evaluation procedures and results with the borrower and types of information needed from the borrower that would enhance the usage of the credit evaluation system.

### Implementation of the credit evaluation procedures

This section of the survey contains questions regarding the degree that the credit evaluation system is used in determining loan approval and loan pricing. In addition, frequency and purpose of credit evaluation are described. The lenders are also asked to rate the main purposes for evaluating outstanding real estate and non-real estate agricultural loans.

## RESULTS

Of the 1,417 banks in the study area, 734 responded to the survey. The results are briefly discussed in 3 sections<sup>1</sup>: 1) characteristics of responding banks; 2) survey question responses; and 3) credit scoring models. The survey responses will be evaluated according to the banks' agricultural dependence, size, and bank ownership structure under the premise that larger, more-specialized banks with more complex legal structures may have more extensive credit analysis procedures. The results reported in tables 3 through 9 categorize responding banks by banking organization size. When the bank is affiliated with a bank holding company, the bank is categorized by the consolidated bank holding company size, otherwise size is determined by the size of the individual bank. Results are reported by bank holding company size under the premise that many of the loan policies and procedures are determined at the holding company level and not necessarily at the individual bank level. Results will also be tabulated by individual bank size, agricultural volume and agricultural loan concentration. These significant results will be reported in the regional publication.

### Characteristics of responding banks

The geographical distribution of the responses are shown in Table 1. Over 72% of the responding banks are located in Iowa, Illinois or Minnesota. The wide geographical cross-section of responding banks provide information across different ownership and management structures. The banks are located in states that range from unlimited branching to unit banking. Regulations regarding bank holding company acquisitions also differ among states. These differences in management and ownership structure provide a basis to compare the credit evaluation procedures.

The descriptive statistics for the respondents are shown in Table 2. Approximately 29% of the responding banks are affiliated with a multi-bank holding company (MBHC) and 19% are located within a metropolitan statistical area (MSA). One-half of the responding banks have assets between \$25 and \$100 million. About 22% of the responding banks have assets greater than \$100 million while the remaining 28% of responding banks have assets less than \$25 million. When categorizing banks by bank organization size, 44% of the banks or consolidated holding companies have assets between \$25 and \$100 million (MED), 31% of banks or holding companies have assets over \$100 million (LARGE) and 25% have bank or holding company assets less than \$25 million (SMALL). The average total assets for responding banks is \$320 million and banking organization size is \$2.0 billion. The average agricultural loan volume for responding banks is \$10 million with an average agricultural loan to total loan ratio of 41%.

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<sup>1</sup>A more thorough discussion of the results and implications will be available in a forthcoming regional publication by the same authors.

### Survey question responses

Of the 734 responses, 281 banks indicated they do not have a formal credit evaluation procedure while the remaining 453 indicated they do have a formal credit evaluation procedure. Of the 281 lenders not using a formal credit evaluation procedure, over 65% expressed interest in developing a more formal credit evaluation system. Thus, of the 734 banks responding to the survey, over 85% either use a formal credit evaluation system or are interested in developing one.

The remaining survey results are reported in tables 3 through 11. The results in these tables are based on the 453 banks that indicate use of a formal credit evaluation system. A few highlights will be discussed from each table. More detailed analysis and implications are discussed in the regional publication.

Table 3. Description of credit evaluation systems of commercial banks.

Over 78% of banks have been using the present credit evaluation system 5 years or less. Larger banks have used the system slightly longer than smaller banks. About 26% of MED and 38% of LARGE banks have computerized the credit evaluation system while only 19% of SMALL banks have a credit evaluation system that is computerized. Less than one-third of the responding banks use a separate credit evaluation system for farm real estate and non-real estate loans.

Table 4. Relationships between banks and borrowers in the usage of credit evaluation systems.

Seventy percent of banks use a credit evaluation system to evaluate all potential borrowers while only 40% of banks use the credit evaluation system to evaluate all existing borrowers. The banks' rationale that all borrowers are not evaluated is reported in Table 5. Only 53% of the banks share the procedures and results of the credit evaluation system with the borrower.

Table 5. Rationale that all potential and existing borrowers are not evaluated.

The banks are asked to rank the major reasons that all borrowers are not evaluated. The five primary reasons are reported in Table 5. The proportion of banks that rank each reason either the most important or second most important are indicated in the table. Over 58% of banks either ranked *Knowledge of the borrower's financial position* the most important or second most important reason for not evaluating all potential borrowers. The other two reasons that banks frequently indicated are *Previous repayment ability of farm borrower* and *Size of loan*. Over 61% of SMALL banks indicate *Previous repayment ability of the farm borrower* as the primary or secondary reason for not evaluating the farm borrower with the credit evaluation system. As bank organization size increased the importance of this reason declined. Moreover, the *Size of loan* is more important as bank organization size increases.

Only 39% of SMALL banks indicated that the *Size of loan* is the first or second most important factor, while 58% of LARGE banks indicated that *Size of loan* is a major factor in determining the use of credit evaluation system.

Lenders gave similar reasons for not evaluating existing borrowers. The most common reason is *Knowledge of the borrower's financial position* with the *Size of loan* and *Previous repayment ability of the farm borrower* as the second and third most frequent reasons selected by banks. Similar to results reported for potential borrowers, the importance of *Size of loan* increased as bank organization size increased, while the importance of *Previous repayment ability of the farm borrower* decreased as bank organization size increased.

Table 6. Weights given to the credit evaluation system in determining loan pricing and approval.

On a scale of 1 to 10 banks are asked to estimate the weight given to the credit evaluation results in determining loan approval and loan pricing.<sup>2</sup> Less than 36% of the responding banks that use a formal system indicate a weight of 8 or above for loan approval or loan pricing. Additional factors outside of the formal credit evaluation system must be major determinants of loan approval and loan price. Over 53% of the banks responded with weights of 4 to 7 in determination of loan approval, but only 39% indicate a weight of 4 to 7 in determination of loan price.

Some of the other reasons listed by banks that determine loan approval are:

- character of borrower
- collateral pledges
- community involvement
- past performance
- co-signor
- guarantor
- type of loan
- friend of previous loan officer

Some of the other reasons listed by banks that determine loan pricing are:

- competition
- personal relationship with borrower
- family background
- size of loan
- compensating balances

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<sup>2</sup>A weight of 10 indicates loan approval (loan price) is entirely determined by the credit evaluation, a weight of 1 indicates negligible weight is given to the credit evaluation system.



- bank profit factor
- FmHA guarantee
- length of loan
- personal guarantee

Table 7. Significant factors for using a credit evaluation system to evaluate outstanding agricultural real estate and non-real estate loans.

On a scale of 1 to 10 the lenders are asked to weight the importance of various purposes in evaluation of outstanding farm real estate and non-real estate agricultural loans.<sup>3</sup> The factor receiving the highest weight for both real estate and non-real estate loans is to *Monitor the progress and evaluate the credit risk of farm borrowers*. The second highest factor for using a credit evaluation system to evaluate outstanding agricultural loans is to *Assess the riskiness of the bank's agricultural loan portfolio*. MED and LARGE banks exhibited a tendency to weight this factor higher than SMALL banks. The third highest factor indicated by responding banks is the *Determination of farm borrower credit limits*.

Table 8. Frequency in evaluating outstanding loans.

Over 91% of the responding banks indicated at least one annual evaluation of non-real estate borrowers. Only 47% of banks indicated at least one annual review of real estate borrowers. Over 31% of the responding banks indicated that real estate borrowers are only reviewed at loan origination.

Table 9. The impacts of more detailed borrower information on the credit evaluation system.

The banks are asked how "more precise and accurate borrower information" would impact their credit evaluation system. Over 57% of the responding banks indicate that a more precise system would be implemented, while 28% indicate that more borrowers would be evaluated. Only 33% indicate more information would have no effect on the current credit evaluation system. Banks prefer more detailed information on farm and non-farm income and withdrawals along with cash flow and income projection information. The category receiving the lowest response is more detailed borrower balance sheet information. This could be an indication of banks' movement away from equity lending to cash flow lending or simply an indication that the balance sheet information is currently adequate while the other types of information are deficient.

The banks are also asked to rank factors that limit the usage or availability of more precise and accurate borrower information. Inadequate borrower records is the predominant factor

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<sup>3</sup>A weight of 10 indicates a primary purpose for evaluation, a weight of 1 indicates not a significant reason in the evaluation process.

limiting the usage or availability of borrower information. The proportion of banks indicating inadequate records as the most limiting factor increased as bank organization size increased. About 14% of the banks indicated that time limitations of bank personnel was the most limiting factor while 10% of the responding banks indicated the most limiting factor was the desire to foster a business relationship with the borrower by not overburdening the borrower with detailed information requests. This factor is substantially higher for smaller banks. Over 11% of SMALL banks and 14% of MED banks indicated this as the most limiting factor. Only 5% of LARGE banks ranked this factor the highest.

### CREDIT SCORING MODELS<sup>4</sup>

All of the banks indicating formal credit evaluation procedures are asked to supply more detailed information regarding their specific credit evaluation procedure. From the responses received, 106 of the banks supplied specific information on their credit scoring models. A summary of the variables used and the frequency of use is presented in Table 10.

The categorization of the variables and measures used in the credit scoring models are based on three primary sources: 1) recommendations of the Farm and Financial Standards Task Force; 2) *Coordinated Financial Statements* and various agricultural finance text-books; 3) Credit Scoring Models definitions, formulas, descriptions, etc. found in the survey responses. The goal is to consolidate the various measures of the variables into as few common measures as possible. Several variations are used by different banks for some measures reported. The 7 variable categories are: 1) profitability, 2) liquidity, 3) solvency, 4) repayment capacity, 5) financial efficiency, 6) collateral, 7) management and 8) other.

As shown in Table 10, a profitability measure is included in 71% of the credit scoring models while 88% of the models included some measure of liquidity. All of the models include a solvency measure, but only 12% include a financial efficiency measure. Slightly over one-half of the models indicate a repayment capacity measure while 88% include collateral. About one-third of the models include a management variable.

The most common measures observed are a collateral ratio, current ratio, earnings trend, leverage ratio, debt coverage, intermediate ratio and a management factor. The determination of repayment capacity of borrowers exhibited the widest range of measures. Thirteen different measures are used. Moreover, banks calculated the same measures differently. This is especially true with the repayment capacity measures. The debt coverage and debt exposure ratios are calculated in at least 5 distinct ways. In addition, specific customized work sheets estimating the repayment capacity often accompany the credit scoring models. These work sheets are often unique to an individual bank.

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<sup>4</sup>Does not include Texas or Minnesota Banks

Table 11 provides a summary of the weights given to the variables in the credit scoring models. Considerable diversity exists among the models. Liquidity is not included in 12% of the models, but has a weight of 30% or higher in 22% of the credit scoring models. Furthermore, repayment capacity is not included in 46% of the models, but 13% of the models have weights greater than 30%. Although management is not included in 63% of the models, 29% of the models have weights for management between 10% and 30%.

## CONCLUSION

These preliminary survey results document the growing use of more formal procedures by banks in evaluating the creditworthiness of agricultural borrowers. About 62 percent of banks responding to the survey indicated the use of a formal system, with the proportion increasing with bank size. Furthermore, almost two-thirds of banks not using formal credit systems are interested in developing more formal systems for assessing agricultural loans. A significant limitation in the development of more sophisticated credit evaluation systems is the lack of quality borrower information. The results also indicate a large dispersion in the use, implementation and design of credit evaluation procedures. Many lenders use the credit evaluation system as a primary determinant for approval and/or price while others consider additional financial and subjective factors.

The results emphasize the lack of a uniform model or procedure for lenders to use in evaluating the creditworthiness of agricultural loans. Perhaps results from the Farm Financial Standards Task Force will provide a more consistent basis for credit evaluation and more standardization among financial measures.

Table 1. Geographical Distribution of Responding Banks.

State	Number of Responding Banks	Percent of All Responding Banks
Iowa	208	28
Illinois	165	22
Minnesota	159	22
North Dakota	60	8
Texas	42	6
Ohio	36	5
New York	16	2
Pennsylvania	16	2
Michigan	16	2
Virginia	5	1
Maryland	4	1
Delaware	4	1
Vermont	1	0
Maine	1	0
West Virginia	1	0
Total	734	100

Table 2. Descriptive Characteristics of Banks Responding to Credit Evaluation Survey.

Characteristic	All Banks
Number of Banks	734
Response Rate (%)	53
Affiliation with a MBHC (%)	29
Urban Banks (MSA) (%)	19
Mean Values	
Bank Size (\$ million assets)	320
Bank Organization Size (\$ million assets)	1,976
Agricultural Loans (\$ million)	10
Agricultural Loan Ratio (%)	41
Distribution of Responding Banks	
Bank Size (assets)	
Less than \$25M	28
\$25 to \$100M	50
greater than \$100M	22
Bank Organization Size (assets)	
Less than \$25M	25
\$25 to \$100M	44
greater than \$100M	31

Table 3. Description of Credit Evaluation Systems of Commercial Banks.

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of Responding Banks (%)				
Use of a formal credit evaluation system	58	61	65	62
Length of time using present system				
less than 1 year	13	10	6	10
1 to 2 years	21	23	16	20
3 to 5 years	46	52	45	48
6 to 10 years	13	11	26	16
more than 10 years	7	4	7	6
Use a separate system for farm real estate and nonreal estate loans.	33	28	28	29
Use a computerized system	19	26	38	28

Table 4. Relationships Between Banks and Borrowers in the Usage of Credit Evaluation Systems.

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of Banks (%)				
Use a credit evaluation system to evaluate ALL potential borrowers.	71	69	70	70
Use a credit evaluation system to evaluate ALL existing borrowers.*	46	33	45	40
Share the results of the credit evaluation system with the borrower.	46	59	49	53

<sup>a</sup> Does not include Minnesota banks.

Table 5. Reasons That All Potential and Existing Borrowers Are Not Evaluated.

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of banks that ranked each choice as the highest or second highest (%)				
ALL POTENTIAL BORROWERS				
Previous repayment ability of farm borrower	61	44	44	47
Current customer (depositor) at the bank	17	23	13	18
Knowledge of the borrower's financial position	61	60	53	58
Lack of complete information for borrower	25	14	19	18
Size of loan	39	39	58	45
ALL EXISTING BORROWERS				
Previous repayment ability of farm borrower	65	49	37	50
Current customer (depositor) at the bank	13	19	17	17
Knowledge of the borrower's financial position	68	70	68	69
Lack of complete information for borrower	11	10	18	13
Size of loan	48	45	55	48



**Table 6. Weights Given to the Credit Evaluation System in Determining Loan Pricing and Approval.**

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Weight given to the credit evaluation results in determining loan approval (10 = loan approval decision exclusively determined by the credit evaluation system).				
8 to 10	40	44	38	41
4 to 7	54	52	52	53
1 to 3	5	3	10	6
Weight given to the credit evaluation results in determining loan pricing (10 = loan pricing decision exclusively determined by the credit evaluation system).				
8 to 10	35	39	34	36
4 to 7	40	31	47	39
1 to 3	25	27	17	23

Table 7. Significant Factors for Using a Credit Evaluation System to Evaluate Outstanding Nonreal Estate and Real Estate Loans.

	Bank Organization Size (\$ assets) <sup>a</sup>			All Banks <sup>d</sup>
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of banks responding with weight of at least 8 (10 highest)				
NONREAL ESTATE FARM LOANS				
Monitors the progress and evaluates the credit risk of borrowers.	81	80	82	81
Determination of borrower credit limits.	44	35	41	39
Determination of borrower interest rates.	28	33	28	30
Assess the riskiness of the bank's agricultural loan portfolio.	44	58	59	55
REAL ESTATE FARM LOANS				
Monitors the progress and evaluates the credit risk of borrowers.	69	74	76	74
Determination of borrower credit limits.	47	34	42	39
Determination of borrower interest rates.	26	26	24	25
Assess the riskiness of the bank's agricultural loan portfolio.	39	52	54	50

<sup>a</sup> Does not include North Dakota banks

Table 8. Frequency in Evaluating Outstanding Loans.

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of Banks (%)				
NONREAL ESTATE FARM LOANS				
Only at origination	6	5	6	6
semiannually, or more frequently	14	7	5	8
annually	76	86	87	84
beyond annually, but within 5 years	5	3	2	3
beyond 5 years	0	0	0	0
REAL ESTATE FARM LOANS				
Only at origination	29	33	31	31
semiannually, or more frequently	7	3	1	3
annually	40	38	54	44
beyond annually, but within 5 years	23	26	14	21
beyond 5 years	0	0	1	0

Table 9. The Impacts of More Detailed Borrower Information on the Credit Evaluation Systems.

	Bank Organization Size (\$ assets)			All Banks
	Less than \$25M	\$25 to \$100M	Greater than \$100M	
Proportion of Banks (%)				
The effects of more precise and accurate borrower information on the credit evaluation system				
No effect	40	32	28	33
More borrowers would be evaluated	29	27	29	28
A more precise system would be implemented	56	58	56	57
Types of farm borrower information desired by banks				
Farm income information	68	67	71	69
Non-farm income and family withdrawal information	75	70	69	71
Balance sheet information	53	38	57	48
Cash flow and income projection information	81	68	71	72
Reasons for limited usage or availability of farm borrower information (% highest rank)				
Inadequate records	69	71	76	72
Time limitation by bank personnel in obtaining and validating information	16	13	14	14
Desire to foster a business relationship with borrower by not overburdening them with detailed information requests	11	14	5	10

Table 10. Frequency That Measures are Used in 106 Credit Scoring Models.<sup>a</sup>

Variable	Measure	Percent of All Credit Scoring Models
<b>Profitability</b>		<b>71<sup>b</sup></b>
	1. Rate of Return on Assets	8
	2. Rate of Return on Equity	2
	3. Capital Turnover Ratio	1
	4. Profit Margin Ratio	1
	5. Gross Profit on Revenue	1
	6. Profit/Asset Ratio	1
	7. Earnings Trend	62
	8. Off-farm Income	3
<b>Liquidity</b>		<b>88</b>
	1. Current Ratio	71
	2. Working Capital	2
	3. Adjusted Current Ratio	13
	4. Intermediate Ratio	27
	5. Long term ratio	2
	6. (CA less CL)/Operating Line	1
	7. Working Margin	1
	8. Cash Equivalents	1
	9. Value of Cash Equivalents	1
<b>Solvency</b>		<b>100</b>
	1. Debt to Asset Ratio	25
	2. Equity to Asset Ratio	24
	3. Leverage Ratio	58
	4. Net Capital Ratio	2
	5. Net Worth	10
	6. RE/Net Worth Ratio	1
	7. Debt/Cow	2
	6. Loan/Net Worth	1
<b>Financial Efficiency</b>		<b>12</b>
	1. Interest Expense Ratio	6
	2. Operating Expense Ratio	5
	3. NFI/VFP	2
	4. Operating Loan Ratio	1
	5. Asset Turnover	2
	6. VFP/Employee Ratio	1

<sup>a</sup> Does not include Minnesota or Texas banks.<sup>b</sup> Proportion of banks that include at least 1 measure of profitability; and similarly for other variables

Table 10. (Continued)

Variable	Measure	Percent of All Credit Scoring Models
<b>Repayment Capacity</b>		<b>54</b>
	1. Debt Servicing Ratio	6
	2. Repayment Capacity	6
	3. Debt Exposure	8
	4. Current Debt Ratio	1
	5. Debt Coverage Ratio	32
	6. Operating Debt/Cash Flow	1
	7. Capacity and Reserves	3
	8. Cash Flow Ability	19
	9. Repayment History	11
	10. Debt payments/milk income	2
	11. Earnings/principal payments	1
	12. Cash flow growth	1
	13. Cash available/gross income	1
<b>Collateral</b>		<b>88</b>
	1. Collateral (Coverage) Ratio	76
	2. Collateral Margin	7
	3. Collateral Adequacy	5
	4. Collateral Protection	2
	5. Guarantee	5
	6. Collateral Liquidity	1
<b>Management</b>		<b>37</b>
	1. General Management	31
	2. Credit Management	9
	3. Production Management	5
	4. Individual, Character, Cooperation	9
	5. Pounds of Milk/Cow	2

Table 10. (Continued)

Variable	Measure	Percent of All Credit Scoring Models
Other		33
	1. Accounting status	4
	2. Financial Statements; Current	3
	3. Collateral Inspection	2
	4. Compensating Balance	8
	5. Documentation	5
	6. Economic Conditions	8
	7. Enterprise Trends	2
	8. Credit Quality	5
	9. Loan Size	4
	10. Financial Statements; Values	5
	11. Feed costs/milk income	2
	12. Young stock/cows	2
	13. Years in business	1
	14. Purpose and structure of loan	1
	15. Degree of Bank Affiliation	1
	16. Other credit factors	8

Table 11. Weights Given the Different Variables and Number of Measures for Each Variable.

Variable	Weight Class			
	0%	1% to 10%	11% to 30%	greater than 30%
Proportion of Credit Scoring Models with Variable Weights in Each Class				
Profitability	29	5	63	3
Liquidity	12	7	59	22
Solvency	0	4	76	20
Repayment Capacity	46	4	37	13
Financial Efficiency	88	2	7	3
Collateral	12	15	65	9
Management	63	7	29	2
Other	67	12	21	0
Total				