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Evaluation of the Farm Credit Quick Loan Analysis as a Valid or Invalid Scorecard for Small Business Loans between $100,000 and $250,000.

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ABSTRACT

In the financial world there is a need for effectiveness and efficiency. The Farm Credit Quick loan analysis is a process created by Fair-Isaac. This analysis is referred to as scorecard lending. It uses a combination of financial data to determine the risk of the customer or candidate. Farm Credit fully adopted this process in 1997, for loans under $100,000.00. Efficiency and effectiveness is the very reason why such a process has become so popular in the financial world. This study examined if the Farm Credit Quick loan analysis for small business loans between $100,000 and $250,000 is accurate. The study revealed that the process is nine to twelve percent more conservative in denial and acceptance rate compared to the entire Association in 1999. The Farm Credit Quick loan analysis appears to be invalid because of its conservative nature.

Keywords: *scorecard lending*

INTRODUCTION

Farm Credit is a nationwide agricultural lending organization with Government Sponsored Enterprise status. Originally, in 1917 the Federal Land Bank (FLBA) was created for those that were buying land. Over time, another bank called the Federal Intermediary Credit Bank, more commonly known as Production Credit Association (PCA) was created for anything that was related to the production of agricultural products. Both of these organizations have merged to create Farm Credit, as we know it today. Much like in the past Farm Credit is constantly changing; however, the concentration of lending to agricultural needs is still trying to be met.

Even though Farm Credit is just one organization it is still split into two different entities: Production Credit Association (PCA) and Federal Land Credit Association (FLCA). Even this structure has changed in the past several months. Agricultural Credit Associations (ACA) are being created as holding companies to manage the two entities. PCA loans are made for anything that is directly related to the production of agricultural products. There are definite regulations, dictated by the Farm Credit Administration (FCA), which must be met in Farm Credit's "Scope of Lending".

Farm Credit uses two different types of loan analysis methods depending on the total attributed liability of the customer. If a customer has an attributed liability of more than $100,000 the loan officer must make a Farm Credit Pro Loan, which is a traditional analysis approach. However, if the customer has $100,000 or less, then the loan officer can make a Farm Credit Quick Loan. Much like the name suggests this is a quicker form. Farm Credit Quick Loans are also known as scorecard lending. This process was developed by a company called Fair Isaac. It has been used for years by such agencies as GM and Ford. It is a simplified form and process of determining the risk of the customer and the loan. The Farm Credit Quick process has been used since it was adopted in 1997. This allows loan officers to spend less time on loans that are of smaller amounts and of less risk to the Association.

The purpose of this study was to determine if the Farm Credit Quick Loan analysis method could be used for loans over $100,000 and at what amount it becomes necessary to use the Farm Credit Pro Loan style. The results of this analysis will be used to validate (or invalidate) the scorecard for those loans between $100,000 and $250,000.

MATERIALS AND METHODS

The study sampled just two branches of the Association. These customers were pulled from Farm Credit of Southern Colorado at Colorado Springs, CO and Limon, CO.

At both of these branches a sample of around thirty customers was pulled. These customers were as similar in nature and stature as possible. The attributed liability ranged from $100,000 to $250,000. These loans were PCA loans because current financial information was readily available. Each was then run as a Farm Credit Quick Loan since they had already been run as a Farm Credit Pro Loans before. They were then scored and compared to the underwriting standards set by Farm Credit policies. As a result the range at which the loans began to fail the standards of the Farm Credit Quick process was revealed. The two methods of analysis were then compared side by side to better understand if the scorecard lending picks up on the factors that increase the risk of the loan. Ultimately, once the research was completed it was possible to confirm a level at which scorecard lending becomes inefficient and ineffective. If it were proven that the attributed liability of a customer could be up to $250,000 instead of $100,000 and remain at the same risk level it would be to Farm Credit's benefit to reexamine the policies and analysis methods used.

Once the two branches were selected, an Excel database extract and custom filter was used for selection of the desired loans. These loans were between $100,000 and $250,000. They were current PCA loans that were readily available with current information. The entire population was pulled at both branches. The total number at that point was twenty-eight. Through examination three loans were invalid due to lack of information or customer pay-off. Nevertheless, twenty-five loans still were available. Two previously rejected loans were combined with these loans to give a total of twenty-seven loans. The two rejected loans were used as a control and as reassurance that the Farm Credit Quick loan analysis is valid.

The Farm Credit Quick loan analysis is a specially designed program available at any Farm Credit office. Due to the nature of this process these particular loans were run from the Colorado Springs office. This program requires a license to install and use with the Farm Credit Bank of Wichita. This requirement was met and approved thanks to the Colorado Springs office. This allowed the twenty-seven loans to be sent to the Credit Bureau and to be analyzed through the scorecard system. This program had to be installed on a computer that was separate from the network to insure the safety of the customer's current loans and stature. Once the program was installed on the stand-alone computer the twenty-seven loans were sent for analysis.

The actual program and Farm Credit Quick loan analysis uses several different aspects to analyze a loan. The applicant's social security number is first sent to the Credit Bureau for a review of their credit history. Their history is then pulled, reviewed, and scored. The score that is applied to that member is then combined with the score of the financial information. The financial information is analyzed, reviewed, and scored. This process analyzes such numbers as the current assets, current liabilities, owners equity, gross and net agricultural income, non-farm income, collateral, current portion of term debt, accounts receivable, interest expense, total assets, total liabilities, and amount requested. For this study an amount requested of $100,000 is mandatory due to the computer program. All of these numbers are combined in ratios, figures, and other forms of analysis to determine an application score. The application score and credit bureau score are then added together to give a total score. This total score is then used to determine if the loan is accepted or rejected. If the score is 205 or above the loan can automatically be accepted without prior approval. However, if the score is between 185 and 205 it is in a gray area. These loans can be accepted if the applicant is of good character, credit, or good previous history. However, it requires the approval of the Senior Vice President of Credit. The loans below 185 are declined. Thanks to the program and its design it automatically reveals the reasons for decline. This information is available to the loan officer and to the customer.

Table 1. Score Decision Summary.

Score Decision Summary

Total Score Interval	----- Accepts ----- Count	%	----- Rejects ----- Count	%	------ Total ------ Count	%	Approval Rate %
Below 120	0	0.0	1	3.7	1	3.7	100.0
120 - 129	0	0.0	0	0.0	0	0.0	96.3
130 - 139	0	0.0	0	0.0	0	0.0	96.3
140 - 149	0	0.0	1	3.7	1	3.7	96.3
150 - 159	0	0.0	0	0.0	0	0.0	92.6
160 - 169	0	0.0	1	3.7	1	3.7	92.6
170 - 179	0	0.0	2	7.4	2	7.4	88.9
180 - 189	0	0.0	3	11.1	3	11.1	81.5
190 - 199	0	0.0	1	3.7	1	3.7	70.4
200 - 209	1	3.7	1	3.7	2	7.4	66.7
210 - 219	6	22.2	0	0.0	6	22.2	59.3
220 - 229	3	11.1	0	0.0	3	11.1	37.0
230 - 239	0	0.0	0	0.0	0	0.0	25.9
240 - 249	2	7.4	0	0.0	2	7.4	25.9
250 - 259	2	7.4	0	0.0	2	7.4	18.5
260 - 269	1	3.7	0	0.0	1	3.7	11.1
270 - 279	0	0.0	0	0.0	0	0.0	7.4
280 - 289	0	0.0	0	0.0	0	0.0	7.4
290 - 299	2	7.4	0	0.0	2	7.4	7.4
300 - 309	0	0.0	0	0.0	0	0.0	0.0
310 - 319	0	0.0	0	0.0	0	0.0	0.0
320 +	0	0.0	0	0.0	0	0.0	0.0
Totals:	17	63.0	10	37.0	27	100.0	

63% of all requests were approved.

If the Approve/Decline decision were based on a score cutoff of 200, the approval rate would have been 66.7%.

Once this process had occurred the selected twenty-seven loans were scored and accepted or denied. The loans were analyzed and compared to the Farm Credit Pro loan analysis. This confirmed or denied the nature of the current loans. Ideally, all twenty-five loans should have returned with a score of 205 or above. The remaining two loans that were used as controls should return with scores well under the 205 range. If this had occurred it would have been obvious that the Farm Credit Quick loan analysis was equally as effective for small business loans between the range of $100,000 and $250,000 as the Farm Credit Pro Loan analysis.

RESULTS

All twenty-seven loans were analyzed successfully using the Farm Credit Quick loan analysis. The results revealed that the scorecard is erroring in a conservative nature with small business loans between $100,000 and $250,000. This was consistent throughout all of the selected loans. The two loans that were run as controls validated the study, as they were rejected. Seven of the remaining twenty-five loans also scored below 205. The other eighteen loans scored above 205 and were accepted. The study shows that the Farm Credit Quick loan analysis is between nine and twelve percent more conservative in denial and acceptance compared to the entire Association in 1999. The entire population that was selected are current customers that currently have loans with Farm Credit under the Farm Credit Pro loan analysis. It is apparent that this difference in acceptance and denial rate is not consistent with the Associations rates. Therefore, since seven of the twenty-five loans returned under 205 it proves the conservative nature of the scorecard. Ideally all twenty-five loans should have been between the ranges of 185 and higher. However, the study showed a range of 146 to 295. (Table 1.) This raises concern that the Farm Credit Quick loan analysis is too conservative to the point of being invalid for small business loans between $100,000 to $250,000. This study; however, cannot be statistically valid because of the small number of loans.

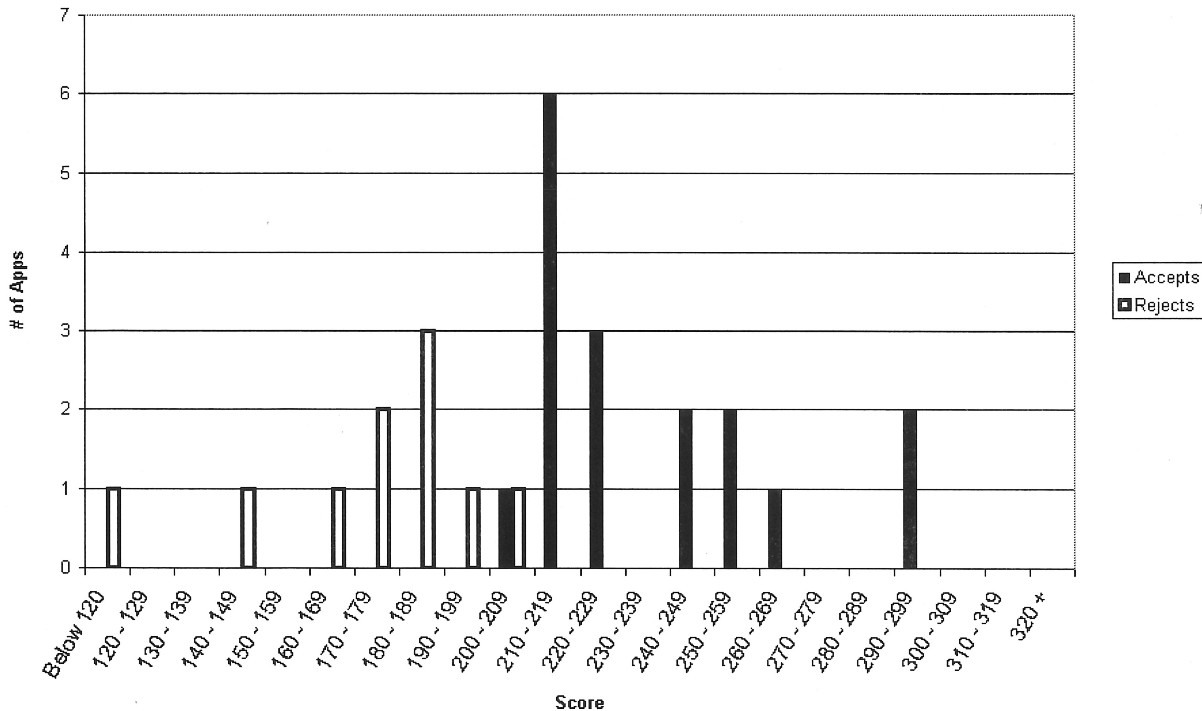

Figure 1. Score Decision Summary

DISCUSSION

Of the twenty-seven loans the two controls were rejected along with seven other loans. The remaining eighteen loans were accepted. Of the seven loans that were rejected or scored under 205, three of the loans ranged between 185-205. These three loans could become accepted with prior

approval from Senior Vice President of Credit. Taking this into consideration the study remains nine percent more conservative than the Association. This is assuming that these loans had been random instead of existing loans with Farm Credit.

Of the seven loans rejected through the Farm Credit Quick loan analysis three currently exist as substandard loans with Farm Credit. The remaining four loans; however, are currently classed acceptable. This proves that the four loans should easily have scored above the 185 range. The denial rate for loans between the range of 180 and 205 was 16%. As for Farm Credit of Colorado Springs in 1999, the denial rate for loans between 180-205 was 5.92% with a difference of about 10% between the two. The denial rate for loans below 205 in the study and the Association was 28% and 16.7%, respectively. The graph shows the conservative nature of the study compared to the Association's results in 1999. (Figure 1.)

A concern lies in that one of the loans was approved through the Farm Credit Quick analysis. It is currently classed substandard. It is justifiable to assume that since Farm Credit granted the loan through the Farm Credit Pro Loan analysis that the computer also would accept it. However, it scored a 224, which is well over the 205 limit making it seem as to be a very healthy loan. This loan causes questions as to why the computer has not scored it lower. However, Fair Isaac has confirmed that out of every thirty loans one will go bad. This loan is that one in thirty. When using the Farm Credit Pro Loan style it becomes obvious that the loan is substandard.

The study scores ranged from 95 to 295 while the Association's range was 104 to 331. This seems legitimate since we ran several loans that were already rejected. However, the average score for the study was 203.7 while the Association's was 234.9. These figures show that on the average there is a difference of about 31 points. This signals that the scorecard that is being used is in essence scoring these loans much harder than the Farm Credit Pro Loan analysis.

When comparing the loans of the Association over $35,000 with that of this study, the differences remained 5.5% to 9% more conservative. In nearly every aspect of the study the Farm Credit Quick analysis was more conservative than the Farm Credit Pro loan analysis. This proves that since Farm Credit Quick analysis does not take character, financial development, financial management, or customer integrity into account that the need for the Farm Credit Pro Loan analysis is evident. These factors are essential to most loans; however, it has become more evident through this study. No computer or program can take character or customer integrity and score it.

In the future maybe with the cooperation of Faire-Isaac an actual rating for management ability, customer integrity, and financial management could be integrated to lessen or raise the nature of the scorecard. This would of course take more statistical analysis and studies to even be a possibility. If such a characteristic could be added to the Farm Credit Quick process it would allow for the loan officer to make the determination as to the customers before mentioned qualities. Nevertheless, the Farm Credit Quick process as it is today is unable to take those characteristics into consideration.

In conclusion the study has proven that the Farm Credit Quick loan analysis is erroring in a conservative nature. It is for this reason that the Farm Credit Quick loan analysis is not valid for small business loans between the $100,000 to $250,000 range. The study was performed on 100% of the population for the two branches; however, the results could vary depending on the Association or branches selected.

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