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A Survey Based Assessment of Financial Institution Use of Credit Scoring for Small Business Lending

Charles D. Cowan, Analytic Focus, LLC, Birmingham, AL 35203;
Adrian M. Cowan, St. Mary's University, San Antonio, TX 78228;
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Whereas the use of credit scoring for consumer loans has been commonplace in banks for quite some time, the use of credit scoring for small business loans is a more recent phenomenon. The study attempts to answer several questions related to the use of credit scoring in small business lending as follows:

- How have banks incorporated credit scoring in their small business lending operations?
- How does credit scoring influence the availability of credit to small businesses?
- What factors predict the likelihood of the use of small business credit scoring by banks?

Three basic investigations were conducted for this research. The study investigated the use of credit scoring within banks. The study estimated how small business lending and micro business lending was impacted by the adoption of credit scoring by banks. Finally, the study investigated the factors that affected the likelihood that a bank would use credit scoring for small business loans.

Overall Findings

While credit scoring has yet to become a primary instrument in loan underwriting for a majority of banks in the United States, there are indications that credit scoring may be providing more borrowing opportunities to small businesses. Although it does not appear that there is geographic expansion resulting from credit scoring, it does appear that there are significant increases in the importance of small business and micro business loans in the total lending portfolio subsequent to the adoption of credit scoring.

Highlights

The survey confirms that banks implement the use of credit scoring for small business loans in a number of different ways—while a majority of banks depend on the credit score of the owner as the key credit metric, other banks utilize the business score, and still others use both.

- Relationships continue to be the dominant factor in the lending decision to small businesses. When credit scoring was compared with relationships and loan purpose for the credit decision, relationships and loan purpose were considered more important than credit scoring regardless of whether a bank used credit scoring or not.
- The principal alternative use of credit scores after loan underwriting is for the periodic reevaluation of existing loans. Loan monitoring is the next most cited use of small business credit scores. Banks generally perceive an improvement in the credit decision subsequent to the incorporation of credit scoring for small business loans.
- Geographic expansion does not appear to result from the adoption of credit scoring by banks.
- The adoption of credit scoring for small business lending by banks appears to be based on the operational thrust of the bank. Those banks with the larger proportion of total loans relative to total assets tend to be more likely to adopt credit scoring.
- Banks increase their investment in small business loans relative to total loans over time subsequent to the adoption of small business credit scoring.
- Banks with lower ratios of small business loans to total loans tend to adopt credit scoring for small business loans. Similarly, banks with lower ratios

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of microbusiness loans to total loans tend to adopt credit scoring for small business loans.

- A bank's investment in small business loans under $100,000 relative to total loans tends to increase with the age of the bank.
- Rural banks are less likely to use credit scoring for small business loans as compared with their urban counterparts.
- Credit scoring appears to be part of a bank's competitive strategy, with those banks with larger investments in lending overall having a greater tendency to adopt credit scoring.

Scope and Methodology

Survey methods were used to investigate small business credit scoring in banks. A detailed questionnaire was prepared and approved for use by the Small Business Administration. The Office of Management and Budget approved the questionnaire and general survey design (OMB control no. 32450354). Using the June 2004 Call Reports, a sample was drawn from all banks reporting lending to small businesses. A stratified sample of 1,500 banks was drawn that was specifically designed for projectability to the population of banks. The sample included a diverse cross section of large corporate banks to small community banks throughout the nation. The senior credit officer in each bank was asked to complete a survey and return the survey either over fax or e-mail. Each bank was contacted a minimum of two times with telephone calls to encourage a response to the survey. A total of 327 banks responded to the survey. The responses were then analyzed to ascertain the degree to which credit scores are currently being used in banks when making credit decisions for small business loans.

The determinants of small business lending were next analyzed to understand what characteristics of banks lead to investments in small business loans. The data included the survey responses and the June 2005 call report data for each bank in the survey. Two separate ordinary least squares (OLS) regressions were run that differed primarily by their dependent variable. The dependent variable in the first was the ratio of micro small business loans (loans under $100,000) relative to total loans. The second dependent variable was the ratio of all small business loans regardless of size to total loans. Two independent variables were used in each regression to capture the impact of credit scoring on small business lending. The first was a dummy indicator variable that indicated whether the bank used credit scoring. The second independent variable designed to capture the impact of credit scoring was time since adoption. This variable measured the number of years the bank had been using credit scoring for small business lending. Other independent variables were primarily selected based on use in the previous literature. These variables included the natural log of assets, the ratio of total loans to total assets, the ratio of property, plant, and equipment to total assets, the ratio of chargeoffs to total industrial and commercial loans, and the age of the bank in years. The independent variables were consistent across the two OLS regressions, with the exception of a final independent variable, the ratio of micro business loans to total small business loans. This independent variable was only included in the second regression that used the ratio of small business loans to total loans as the dependent variable.

The likelihood of banks adopting credit scoring was investigated using a logistic regression. The dependent variable was the dummy variable indicating whether a bank used credit scoring in small business lending. The independent variables used in the OLS regressions were also used in the logistic regression. In addition, a variable was added for the ratio of farm loans to total loans. This variable was designed to capture any differences between rural lenders and urban lenders.

This report was peer reviewed consistent with the Office of Advocacy's data quality guidelines. More information on this process can be obtained by contacting the director of economic research at *advocacy@sba.gov* or (202) 205-6533.

Ordering Information

The full text of this report and summaries of other studies performed under contract with the U.S. Small Business Administration's Office of Advocacy are available on the Internet at ***www.sba.gov/advo/research***. Copies are available for purchase from:

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