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Small Business Research Summary

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A Two-step Analysis of Standardized Versus Relationship Bank Lending to Small Firms

By Polly Hardee, Ph.D., 2007. 36 pages. Houston, TX 77024,
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Purpose

Since small firms have very limited access to the publicly traded capital markets, these firms are very dependent upon commercial banks for financing. This, coupled with small firms being a strong engine for growth in the U.S. economy, warrants an environment of efficient capital allocation to these firms promoted by adequate bank credit.

In the past, lending to small businesses has been the province of small banks, as these banks possessed a comparative advantage in the small business loan market. That is, the structure of the smaller, simpler banking organization was more amenable to overcome the greater information asymmetries inherent in small firm financing. The information asymmetries were mitigated by the small bank's proprietary relationship with the small business borrower, through a process termed in the literature as relationship lending. However, technological advancements have narrowed that information gap, thus allowing large banking organizations to become more prominent in this market through standardized lending practices such as credit scoring. As consolidation in the financial service industry continues, banks have become larger, with the number of small banks shrinking. With this structural change in the financial sector, the question of adequate credit to small firms continues to be an important economic policy issue, as large and small banks supply funds under different lending techniques.

This analysis addresses that issue through a unique examination of evidence of standardized versus relationship lending methods in both total bank credit as well as credit emanating from the firm's most important source of financial services, its primary bank. It contributes to the literature by using proprietary data associated with the 1998 Survey of Small Business Finances Survey combined with banking data to produce a bank-firm match, thus allowing for a study of the banking structure at both the local market and credit provider level. Furthermore it analyzes total bank debt, whereas established studies focus on firm level debt of a particular credit instrument. Using a Heckman methodology, the adequacy of credit availability under the two diverse lending methods is explored.

Overall Findings

The study reveals that relationship lending is inherent within the primary bank provider, whereas competing bank sources tend to employ standardized lending techniques such as credit scoring. Relating to credit availability, however, no clear dominance of one method over the other prevails.

Highlights

- Bank structure in the local market affects the likelihood of small firms having debt more so than the amount of debt provided by the source bank.
- Large banking organizations reduce the likelihood of firm debt within the local market, but have insignificant effects as the source supplier of credit levels to firms.
- Unit banks reduce both the likelihood of firm debt within the local bank market, and the levels of credit as the source banks. However, unit banks within large bank holding companies manifest apparent credit scoring, by higher credit levels from multiple bank sources.

This report was developed under a contract with the Small Business Administration, Office of Advocacy, and contains information and analysis that was reviewed and edited by officials of the Office of Advocacy. However, the final conclusions of the report do not necessarily reflect the views of the Office of Advocacy.

• Primary bank credit levels are little affected by source bank structure, a result attributed to the relationship lending inherent in these institutions.

• Years with the source primary bank indicate the credit levels improve with a shorter relationship of this measure.

• Results from the firm characteristic variables underscore the evidence from the banking variables that multiple bank sources appear to utilize standardized lending practices such as credit scoring, with the primary bank engaging in relationship lending. This is particularly so with the ostensibly more cash constrained firms.

Methodology

The analysis relies on data from two sources, the demander of credit by small firms and the supplier of credit by banks. The latter is taken from the FDIC Summary of Deposits profiling bank data throughout the U.S. The firm data is extracted from the 1998 Survey of Small Business Finances (Survey), a nationally representative, weighted sample of small firms designed to reflect the target population of small, non-financial firms operating for profit within the United States. Besides firm demographics and broad financial statement variables, the Survey reflects the financial products and institutional sources used by each firm.

In the public data of the Survey, the identity of the financial institution is not revealed, only its type. They are commercial banks and thrifts, credit unions, mortgage companies, finance and leasing companies, brokerage houses, and insurance companies. The financial products are varied services offered by these institutions, but this analysis focuses only on bank debt. This is debt from commercial banks, savings banks as well as savings and loans, since these are the main providers of credit to small businesses. The credit instruments in the Survey are classified into six categories: Lines of Credit, Mortgages, Equipment Loans, Motor Vehicle Loans, Capital Leases and Other Loans—loans not of the preceding types (primarily unsecured term loans). The debt is determined by aggregating the individual credit instruments from all bank sources as well as those from just the firms' primary bank. This methodology coupled with the proprietary nature of the bank-firm match is part of the unique contribution of this study to the research community.

The model utilizes a two-step Heckman process at the firm level to control for sample selection estimation bias. The first step estimates the probability of a small firm obtaining credit, while the second step estimates normalized levels of credit for those firms having debt. A Heckman analysis is employed because there are reasons to consider that the decision whether to carry debt may have separate components than the decision concerning the level of debt. That is, the incentives to the financial institution provider in supplying credit may not be consistent with the demand preferences for debt by firms. Thus by explicitly modeling the decision process of the likelihood of debt in a Probit selection equation as a separate step from the decision of debt levels (conditional on firms' having debt) in a linear equation, the differences in lending/borrowing behavior at both stages of the funding process are captured

This report was peer-reviewed consistent with 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.

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