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Borrower–lender distance, credit scoring, and loan performance: Evidence from informational-opaque small business borrowers [☆]

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Abstract

Over the past decade, the distances between small businesses and their bank lenders have increased substantially, as increasing numbers of bank lenders have implemented credit-scoring models to evaluate the creditworthiness of small businesses. These developments are antithetical to the traditional small business lending process, which emphasizes local proximity, bank–borrower relationships, and qualitative information. We theoretically model and empirically test whether and how these changes have affected the probability that small business loans default, using 1984–2001 data from the SBA's flagship lending program. On average, both distance and credit scoring are associated with higher default probabilities—the former suggests that distance interferes with information collection, while the latter suggests that production efficiencies encourage credit-scoring lenders to expand output by making riskier loans at the margin. The default-increasing effects of distance are substantially dampened at credit scoring banks, however, suggesting that hard-information lending approaches may outperform soft-information, relationship-based lending approaches in long-distance situations.

JEL classification: D81; G21; G28

☆ The views expressed here are those of the authors and do not necessarily reflect the views of the Office of the Comptroller of the Currency or the US Treasury Department.

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1. Introduction

Small business finance has traditionally been a local and close-knit affair. Small firms, whose informational opacity precludes them access to public capital markets, seek out local bank lenders whose geographic proximity allows them to observe and accumulate the "soft," non-quantitative information necessary to assess these firms' creditworthiness (Meyer, 1998; Stein, 2002; Scott, 2004). This relationship-based approach remains the method used by many, if not most, community banks to underwrite their small business loans today. But some exceptions to these tight location-based credit relationships began to emerge during the 1990s, when the geographic distance between small business borrowers and their commercial bank lenders began to increase (Cyrnak and Hannan, 2000; Degryse and Ongena, 2002; Petersen and Rajan, 2002; Wolken and Rohde, 2002; Brevoort and Hannan, 2004). At the same time, an increasing number of large banks began to evaluate small business loan applications using credit scoring models, which rely on "hard," quantitative information rather than soft, relationship-based information (Mester, 1997; Akhavein et al., 2005).

This apparent decline in the importance of borrower–lender proximity and relationships has potential implications for the supply and quality of small business credits; for the optimal trade-offs among information quality, customer service, loan production costs, and bank scale; and for the strategies banks use to offer small business credit.[1] All else equal, greater geographic distances between informationally opaque firms and their bank lenders should increase both the cost of traditional bank lending and the credit supply-reducing consequences of adverse selection—e.g., bankers will make fewer in-person visits because of high travel expenses, resulting in less accurate information, poorer credit assessments, higher default rates, and higher loan losses. Theoretically, the application of small business credit scoring models could either dampen or exacerbate these outcomes: On the one hand, credit scoring may improve the quality of banks' information about borrower creditworthiness; on the other hand, the automated nature of credit-scored lending processes may generate scale economies or other ancillary benefits that encourage banks to ramp-up loan output by lending to marginally less creditworthy borrowers.

At the same time, public policy in the US encourages banks to make loans to marginally less creditworthy small business borrowers. Chief among these policies is the Small Business Administration (SBA), which provides credit enhancements for small businesses unable to qualify for loans in regular credit markets. SBA-endorsed lenders (usually commercial banks) select the firms to receive loans, initiate the involvement of the SBA, and then underwrite the loans within SBA program guidelines. The SBA extends a partial guarantee in which the SBA shares a large portion of the loss on a *pro rata* basis with the lender. As a result, lenders have (perhaps reduced) incentives to screen applicants for creditworthiness, monitor borrowers on an ongoing basis, and set appropriate loan interest rates and contract terms. The data suggest that these partial government guarantees are instrumental in providing credit to small business borrowers. In 2001 the SBA reported a combined managed guaranteed loan portfolio of over $50 billion; in comparison,

[1] On the latter point, Boot and Thakor (2000) and DeYoung et al. (2004) offer analyses suggesting that advances in financial markets, instruments, and banking technology are driving the degree to which banks specialize in and or combine relationship lending with transactional lending.