Explorations in Economic History 45 (2008) 477–488

Contents lists available at ScienceDirect

Explorations in Economic History

journal homepage: www.elsevier.com/locate/eeh

Paying back to borrow more: Reputation and bank credit access in early America ☆

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ARTICLE INFO

Article history:
Received 12 December 2007
Available online 24 June 2008

Keywords:
Banking
Collateral
Reputation
Lending

ABSTRACT

The birth of commercial banking in New England after the American Revolution provides an important case to examine banking development under asymmetric information. Similar to credit markets in developing countries today, bank borrowers of early America usually had little or no collateral. This paper uses a unique data set based on loans between 1803 and 1833 for Plymouth Bank to examine bank lending policies in the absence of collateral. Empirical evidence suggests that borrowers with little collateral established their credit-worthiness through repeated interaction with banks.

1. Introduction

Early bankers, like all other lenders, were faced with imperfect information in assessing loan risks. Lamoreaux (1994) argues that early banks in New England used kinship and personal ties to overcome this difficulty. Banks did not just lend to friends and family members because of their personal ties, they were willing to do so because they had more complete information on these individuals. A lender would not knowingly lend to a family whose members he knew to be untrustworthy. On the other hand, banks still lent to individuals outside of their personal networks. We know relatively little about how borrowers unrelated to bank officials were able to acquire and maintain access to credit.

The lack of collateral in modern small businesses echoes the situation in early American credit markets. Recent theoretical works, such as Diamond (1989), Boot and Thakor (1994), Petersen and Rajan (1995), and Martinelli (1997), evaluate the importance of relationships between banks and their borrowers. A particularly interesting question is how small businesses and startups acquire credit. Small businesses, with few assets as collateral, are particularly dependent on banking relationships. As specific banks and borrowers interact repeatedly, the borrowers gradually reveal valuable information to banks to build up a reputation, thereby securing future access to credit.

Specific conditions in early America further accentuated the role of reputation. First, no agency specialized in centralized credit history reporting; thus, banks had to collect information on borrowers themselves. Second, many banks remained local monopolies for extended periods. Therefore, from the banks' perspective, their monopoly status allowed them to internalize the benefit of collecting information. From the borrower's perspective, a good reputation with local banks secured

☆ I would like to thank Gavin Wright for all his direction and endless patience. Ran Abramitzky, Farley Grubb, Stephen Haber, Michael Haupert, Jonathan Kaplan, Ron McKinnon, Benjamin Myers, Stephen Perez and Mark Siegler also provided helpful comments. This paper also benefited from comments from participants in the 2007 Social Science History Association Meeting and the 2008 Business History Conference. I would also like to thank the editor of this journal and two anonymous referees for their helpful comments. This research is supported by B.F. Haley and E.S. Shaw Fellowship and Stanford Graduate Research Opportunity Fund. All errors are mine.

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doi:10.1016/j.eeh.2008.06.001

funding for future opportunities. Once the reputation was built, it would be costly to switch to another bank without such private information.

This reputation mechanism is especially crucial in explaining a bank's loans to "outsiders." Although a large portion of lending was to bank directors, a fair share of loans went to individuals outside this inner circle. A bank's need for background information before extending loans to such individuals was particularly acute.[1] After the first loan took effect, it was in the bank's interest to monitor borrowers' behavior and keep track of interest and principal payments. When the borrowers applied for subsequent loans, the information accumulated from the previous loans became crucial for the bank's lending decision.

This paper uses the records of the Plymouth Bank, in Plymouth, Massachusetts, between 1803 and 1833 to investigate the role of reputation in early bank lending. Specifically, I aim to answer the following questions. Did reputation matter in securing access to bank credit? If so, in what way did it affect borrowers? Was reputation crucial in the presence of collateral? Empirical evidence shows that, like today, borrowers first acquired small loans. They gradually built up their reputation by repaying the previous loans. Other things equal, each loan repaid would increase the amount of credit extended in the future. While borrowers' good reputation secured better credit access, reputation only mattered for loans without collateral. Therefore in the absence of collateral, reputation acted as a substitute. Over time, the gradual building of a cohort of reputable borrowers also changed the composition of the bank's clientele, the bank relied less on the existing network of insiders and more on the acquired information from repeated interaction with borrowers. This study not only helps us understand how the early American financial system functioned, but also to draw broader implications for the development of the early American economy. Indeed, access to bank credit enabled borrowers to invest in new ventures, thereby creating opportunities for growth and prosperity.

2. Reputation in credit markets: theory and evidence

The empirical question regarding the relationship between reputation, collateral, and loan terms corresponds to the general theory of reputation in market transactions. MacLeod (2007) discusses the role of reputation as a form of capital in a game-theoretical framework. Reputation is often used to enforce mutually beneficial contracts. Individuals build their reputation with others through repeated interactions. To prevent the breach of contract, denial of future trade opportunities is often imposed as a form of punishment. In other words, the breach of contract destroys the reputation capital previously accumulated. It is through this dynamic incentive that lenders deter borrowers from defaulting.

More specifically, the literature on credit markets focuses on the impact of information asymmetry on the interest rate, loan size, and collateral requirements. Stiglitz and Weiss (1981) demonstrate that because of adverse selection, credit rationing can exist even without a usury law. More recent literature, such as Diamond (1989), indicates that borrowers could start building their reputation by accepting less attractive loan contracts with higher interest rates. After individuals have established their reputations as good borrowers, they gain access to loans at better terms. Reputation in Diamond's model mitigates the incentive problem of moral hazard. Martinelli (1997) focuses on the role of limited loan size along with interest rate to mitigate such problems. On the other hand, Petersen and Rajan (1995) emphasize the rent-extraction aspect of monopolist banks. In their model, monopolist banks could offer relatively low interest rates for startups, only to charge higher interest when the borrower is locked in. In other words, the lender has the ability to allocate the rent across time. Boot and Thakor (1994) find that before borrowers can show success in their investment projects and pay off their bank loan, they have to borrow with collateral at higher interest rates. Once an investment succeeds, borrowers can receive loans at a lower rate and without collateral. It is the higher payoff of cheaper future loans that keeps the borrowers from moral hazard. In all of above analyses, variation in interest rate is a crucial element.

A similar focus also appears in literature on American banking history. Works by Adams (1972), Bodenhorn (1997), and Wright (1998) all collect data on individual banks and analyze their practices in the nineteenth century. More recent works, such as White (2001) and Bodenhorn (2003, 2007), use detailed loan records to study the effect of relationship and reputation on bank loans. White (2001) investigates the effect of reputation on loan rates using data from a private California bank in the late nineteenth century. He finds that the lending rate was affected by the previous credit history with the lender. As there was virtually no regulation on private banks in late nineteenth century California, the bank could charge interest as high as 40 percent. Thus, the bank was able to lend at high interest rates to high-risk or unknown borrowers. Bodenhorn (2003) uses data from a New York bank in the 1850s to analyze the effect of reputation on loan rates, collateral requirement and renegotiation of loans during the Crisis of 1857. The empirical results confirm that borrowers with long relationships with the bank enjoyed lower interest rate and lower collateral requirements. Also, they were more likely to receive loan renewals during financial crises. In addition, Bodenhorn (2007) also finds that banks would violate usury laws when the credit market tightened. However, borrowers would not jeopardize the valuable long-term relationships with the bank by filing usury suits.

Despite a growing literature on the relationship between lending rates, loan sizes and reputation, little empirical work examines the differential impact of repayment history for loans with and without collateral. To be sure, the use of reputation

[1] For example, Wright (2002b) explains how borrower's application letters were crucial in providing banks with detailed information on their property holdings. See Wright (2002b), pp. 154–156.