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Collateral Requirements and Relationship Banking: Empirical Evidence from Unique Finnish Credit-files

This paper explores the characteristics of the role and use of collateral in bank loans in small business financing. The role of collateral is extremely important in corporate loan contracts between a bank and a firm (Berger & Udell 2003). Despite a rather large body of research on this topic, the essence of collateral in credit contracts is still unclear. Many studies in this field, both theoretical and empirical, analyze the relationship between borrower risk and the collateral requirements of the bank. Two opposite paradigms are valid. Conventional banking wisdom and some academic research suggest that borrower risk and collateral requirements should be positively related (potential moral hazard problem), while other academic research supports a negative association (potential adverse selection problem). In a moral hazard situation, the borrower may undertake a riskier project than was agreed to in the contract without carrying the additional risk. Adverse selection prevents the lender from granting credit to borrowers who would be more preferable recipients under a situation of symmetric information. The review of recent literature suggests that the contrasting research results may be due to whether moral hazard or adverse selection is a dominant factor. Both factors are problems caused by asymmetric information between the lender and the borrower. When moral hazard and adverse selection are assumed simultaneously, borrower risk and collateral requirements can be either positively or negatively associated. Thus, the research problem seems to be empirical rather than theoretical.

This study contributes to the literature by testing borrower risk and collateral requirements with a continuous measurement of the level of collateralization. Previous studies have mainly used dichotomous measurement for the collateralization. Thus, it is possible to test how much of the loan is collateralized in the cases of both over- and under-collateralization. The analyses of the collateral characteristics include an original sample of 936 Finnish small businesses. Three groups of variables are formed including firm-, relationship-, and loan-specific characteristics. First, we test whether moral hazard might be the primary concern. This should occur if the borrower risk and collateral requirements are positively related. If the relation is negative, then the primary concern is expected to be closer to adverse selection than moral hazard, which is our second hypothesis.

According to the results, higher borrower quality (low-risk borrower) is associated with higher collateral requirements. Thus, the evidence supports our second hypothesis that the primary concern might be adverse selection. Our findings imply that there exists a signaling effect such that low-risk firms are willing to indicate their quality to the subject bank. The interpretation is that the signaling effect occurs because high-risk borrowers are not willing to pledge more collateral. For low-risk firms, signaling is a valuable way to reveal their good quality. The indication of the result is that high collateral requirements may be too costly for high-risk firms and can increase the probability of default. The result is robust after separately examining two sub-samples of (i) secured and partially secured loans and (ii) two separate legal types of firms.

In addition, the study examines whether relationship characteristics and collateral are related. Findings show that firms with stronger relationships with the bank receive loans with lower collateral requirements. Also, when examining the effect of the strength of relationship on collateral terms in differently secured loans, the result remains consistent. The strength of the relationship is measured by using duration and scope of relationship-based variables. The proxy for the scope of the relationship is the number of financial services that a firm has in the bank. Previous studies have documented that the scope measurement is an important factor concerning the strength of the relationship between a bank and a firm.

For future research, more factors for collateral analysis may need to be controlled, including the structure of the financial system. Fortunately, it seems that the availability and accuracy of databases are continuously increasing with more computerization and ways of producing and processing private information in the banking industry. With this improvement, enriched databases will provide more empirical evidence about the specific sources of the role of collateral. These challenges are left for future research. ■