# Availability of Credit to Family Businesses

*Cavery Bopaiah*

ABSTRACT. The paper provides evidence that family ownership is associated with greater availability of credit. This may be because family-owned businesses are seen by lenders as having fewer moral hazard problems than non-family-owned businesses. One reason for this could be that family owned businesses, by definition, have a controlling share in the equity of the firm. Other factors considered important by lenders may be the managerial characteristics, and the relatively conservative investment choices of family-owned businesses. In spite of these advantages, family ownership is not associated with a reduction in premiums on the loans. The research also highlights differences between outside equity holders and debt-holders in their decision to invest in a firm. Equity holders are known to prefer separation of ownership and control, and the possibility of takeovers, as this could increase the value of the firm. Debt-holders, on the other hand, prefer arrangements that ensure continuity and stability.
Family Business, Small Business, Credit Rationing.

## 1. Introduction

Some firms have easier access to credit than others even if they are similarly situated with respect to their financial position, and have similar investment projects. This imperfection in the market for credit is often attributed to informational asymmetries between lenders and borrowers, which lead to moral hazard problems for the lender (Stiglitz and Weiss, 1981). The higher monitoring cost that this necessitates may cause some banks to ration credit. Hence firms that are either able to provide better information to the banks or some form of insurance against loan losses may have better access to credit.

In this paper I examine the effects of family ownership of a business in determining its access to credit. To do this, I identify the characteristics typical of family-owned businesses[1] (fobs) and evaluate the relative advantages, or possibly, disadvantages of family ownership in managing the financing and liquidity aspects of an enterprise. Relatively easily observable characteristics would include owner-management, levels of insider ownership of equity, and the use of personal collateral to secure loans. Less easily observable characteristics may be differences in managerial skills and styles. Access to financing will be examined both in terms of the amount of bank credit available to fobs, and the price (interest rate) at which the firm borrows.[2]

There has been a fair amount of research on the availability of credit to large corporations, small firms, and rural firms, but very little on the financing of family owned businesses, even though they comprise over 95 percent of the firms in the United States (Aronoff, 1991). This research makes a contribution to the literature on informational asymmetries in credit markets by providing evidence that family ownership may indeed reduce moral hazard problems for lenders. It also fills a gap in the current literature on fobs which largely focuses on the operational, organizational, tax, and transitional issues peculiar to these firms, by looking at the financing issues that may be unique to family ownership of a firm. In doing this it draws upon the literature on family businesses, small businesses, and informational asymmetries that may result in agency costs and rationing of some firms.

The following Section presents the relevant issues in this area. Next, the data are examined briefly in Section 3. This is followed by Section 4, which describes the tests and discusses the empirical results. Conclusions are drawn, and a summary provided, in Section 5.

Final version accepted on July 3, 1997

*School of Policy Studies*
*Georgia State University*
*Atlanta, GA 30303-3083*
*U.S.A.*

*Small Business Economics* **11**: 75–86, 1998.

## 2. Literature review

Because of informational asymmetries in the market for credit, it is possible that banks may refuse loans to some groups of borrowers or give them smaller loan amounts than they request (Stiglitz and Weiss, 1981). This is known as credit rationing. Lenders use proxies such as ownership and organizational features, balance sheet and financial information, characteristics of the industry, and trends in the economy, to estimate risks involved in lending. Firms that provide more positive signals of performance may have better access to credit. Thus fobs may have a better prospect of avoiding credit rationing because characteristics associated with them lead banks to expect fewer moral hazard problems. This may also cause banks to reduce risk premiums on loans to fobs.

Family ownerships, by definition, would imply that family members own higher levels of equity in their firms. This may cause them to prefer more conservative investment strategies because they are the residual claimants and bear the greatest risk (Fama and Jensen, 1983). It is also possible that firms with a larger share of insider ownership are not often threatened by a hostile takeover (Weston,[3] 1979). This may be why Leland and Pyle (1977) found that the level of debt carried by a firm is directly related to the entrepreneur's equity position, provided his stake in the company is sufficiently large.

Owner-management of businesses can affect perceptions of the lenders depending on whether banks view this as resulting in higher agency costs to the firm, or in entrenchment[4] by the owner-managers (Shailer, 1991). Owner-managed fobs may have an additional advantage in monitoring decision agents because family members have many levels of interaction amongst themselves (Fama and Jensen, 1983). Because of their greater stake in the survival of the firm, owner-managers of fobs may want to be more certain to meet their fixed obligations and avoid bankruptcy (Jaffee and Stiglitz, 1990), thus reducing the lenders risk.

Additionally, fobs may be seen to have differences in managerial styles and perspectives, that may influence bank lending. For example, in many cases, fobs may have a more cohesive managerial structure, with leadership positions carrying more authority. In other cases there may be deep dissensions among family owners, and sibling rivalries may be played out through management decisions. Similarly, there may be problems of succession, and battles for control within the family, that could affect the operations of the firm during transitions. On the other hand, where there are no inheritance conflicts, the smooth transition from one manager to another may actually help to maintain existing relationships with the lenders and the community at large. Each of these situations can affect the firm's ability to repay a debt. McConaughy et al. (1994) found that management by founders and their descendants improves efficiency of the firm. This suggests that even though belonging to the owner's family may influence hiring for some positions, this does not necessarily reduce efficiency of the firm.

Possibly because of the carry-over of relationships from the workplace to the home, family business could be more rooted to their locations and hence more concerned about maintaining a reputation. Firms that are interested in maintaining a reputation are less likely to invest in risky projects (Diamond, 1989). Additionally, due to the quasi-rents available to family members, owners may have a greater stake in the survival of the firm and hence a greater tendency towards self-regulation and risk avoidance.

It is possible that banks make their decisions on the loan offer based on a perception of risk (Murphy, 1984). This is probably why, when evaluating loan requests, customer relationships may be more important to banks than the merits of a loan request (Hester, 1979). Interactions between the lender and borrower, such as a firm's use of checking and savings accounts, can also provide the lender with information on the firm. Moreover, bank profitability can increase from user fees and lower monitoring costs which may not be passed on to the customer (Petersen and Rajan, 1994).

Banks may use the nonprice terms of the loan contract (such as size of the loan, collateral, commitment status, demand status, maturity premiums, compensating balances, and other restrictive covenants) to provide insurance against default, or to avoid adverse incentives for borrowers. There are two views on why collateral[5] may affect a firm's access to credit. First, that collateral acts as a signal from the borrowers concerning the

safety of their investments (Besanko and Thakor, 1983), and second, that collateral is the insurance that a bank requires from riskier borrowers to give it some recourse in case of default (Stiglitz and Weiss, 1981). However, not all firms that seek a loan have enough business assets to pledge as collateral. Moreover, banks may not wish to accept accounts receivable and inventory as collateral because of the higher monitoring costs required (Berger and Udell, 1995). In such cases, personal assets of owners or managers are sometimes offered as collateral. Because they are assumed to have more control over their firms, it is possible that owners and managers of fobs may be more willing, if able, to offer personal collateral to ensure approval of a loan request.[6] Even in the case of incorporated firms, an offer of personal guarantees may be especially attractive to the banks because it would partially overcome the limited liability issue for the debt holder (Shailer, 1991).

## 3. The data

The data for this project comes from the National Survey of Small Business Finance (NSSBF),[7] conducted in 1988–89, for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration. They contain a nationally representative sample of 3404 observations of which 2896 are family businesses,[8] both incorporated and unincorporated, of varying asset sizes and ages, and representing all the major sectors of the economy. These data seem suited to the purposes of this study as it is generally acknowledged that family ownership is more evident among smaller businesses.

### 3.1. *Observable patterns*

Over 85 percent of the observations in the sample are fobs;[9] of these about 90 percent are owner-managed. These are more or less uniformly distributed over the industry sectors except for a 62 percent representation in the mining sector and 78 percent in the manufacturing sector. Forty-three percent of the family businesses are proprietorships, 6 percent partnerships, 13 percent S-Corporations and 38 percent Corporations, while among nonfobs (non-family owned businesses) about 22 percent are partnerships, 17 percent S-Corporations and 61 percent corporations. The larger percent of unincorporated firms among fobs suggests that they may, on average, have a lower access to the capital markets than nonfobs.

While profit ratios for fobs are higher than for other firms, the debt ratios, measured in terms of their use of institutional debt, are not significantly different (See Table II). The latter, in spite of their presumed preference for debt financing. This could either be because their managerial perspective makes them more conservative in their dividend payments and allows them to finance growth through retained earnings, or because they issue bonds for their financing needs.

On average, fobs are smaller than nonfobs, are older, and have better liquidity ratios than the nonfobs. The last two factors should give them an advantage in terms of lending from banks. About 73 percent of the fobs are able to take over 95 percent of the discounts offered with trade credit, while only 60 percent of the nonfobs are able to do so. Fobs are more likely to get smaller loans. This is not surprising as fobs are, on average smaller than nonfobs. Contrary to expectations, only about 4 percent of fobs use personal collateral, while 5 percent of the nonfobs do so. Fobs also, seem to be using fixed rates on a larger proportion of their loans. It is possible that fobs choose fixed rate loans because they are relatively conservative in their financial practices.

## 4. The tests

Two questions address the main issue of whether family ownership of a firm influences its access to credit. They are, one, whether family ownership affects the availability of credit to a firm, and two, whether family businesses have a pricing advantage.

### 4.1. *Test for the effect of family ownership on availability*

I now test the hypothesis that family ownership of a firm has a significant effect on the availability of credit. The methodology used here is adapted from Petersen and Rajan (1994),[10] who showed that the availability of credit increases when the firm has a relationship with the lender. They

examined firms that use trade credit to finance some of their purchases and looked at how measures of relationships may have affected the late payments or the discounts taken by the firm.[11] A firm that uses trade credit for its purchases but does not avail of the discounts incurs a higher implicit cost of borrowing. Hence, it is possible that these firms that do not avail of the discounts are constrained in their access to less expensive sources of credit such as bank credit. *Thus a firm's propensity to take discounts measures the availability of credit to the firm*. It follows that any factor that causes an increase (reduction) in the firm's ability to take discounts can be said to have a positive (negative) impact on its access to credit.[12] While it is true that the percentage of discounts taken does not provide information on the importance of debt in the firm's loan portfolio, it provides a measure of the constraints a firm is facing. This is a better measure than the debt ratio because there is considerable ambiguity with regard to the reasons for a firm's level of debt. A lower debt ratio can be due to either supply side constraints, or firm preferences regarding its sources of financing. When a firm uses trade credit, a decision to forego the discounts could mainly have been made because of some kind of liquidity constraint, though it is possible that the lower transactions costs of using trade credit may influence firms to sometimes use it even if they are not in a position to avail of the discounts.

One drawback in using discounts as a measure of credit constraints facing a firm is that the observations used in the tests exclude firms that do not use trade credit. On the other hand, an advantage here is that firms that may have been denied bank credit, and hence do not have any bank loans, are included.[13]

The null hypothesis is that family ownership makes no difference to the discounts taken by the firm. Discounts taken were regressed against factors indicating the firm's ownership, financial and legal characteristics, and its relationship with the lender. This makes it possible to capture the net effect of family ownership while controlling for the firm's governance characteristics, its accounting and financial characteristics, measures of its relationship with its lenders, and industry characteristics. (See Table I for definitions of the variables.) The equation takes the general form

$$\begin{aligned}\text{DISCTK} = f(&\text{OWNMG, FAMOWN,}\\ &\text{PROFRAT, DEBTRAT,}\\ &\text{QUICKRAT, SAVINAC,}\\ &\text{CHECAC, FIRMAGE, MAXREL,}\\ &\text{NUMINST, SHERF, LNASSETS,}\\ &\text{CORPTN, PCOLL, SIC2–SIC8).}\end{aligned}$$

Family ownership, FAMOWN, is expected to be positively related to a firm's access to credit. In addition to representing firms that have over 50 percent of ownership control in one family, it may also represent characteristics associated with family ownership such as concern for the reputation of the firm, a desire to meet the fixed obligations of a firm to avoid bankruptcy, a stake in the survival of the firm, and other managerial considerations that may not be separately identifiable. Owner-management, OWNMG, and use of personal collateral, PCOLL, characteristics often associated with fobs, could both help and hurt a firm's access to credit. These variables are used here to identify, and control for, two of the directly measurable characteristics of family ownership.

Profitability of a firm, PROFRAT, can be expected to improve a firm's ability to take discounts, while the debt ratio, DEBTRAT, would reduce it. Greater liquidity as measured by the quick ratio, QUICKRAT, or the existence of a savings account, SAVING, would also allow the firms to better avail themselves of the discounts. Having a checking account, CHECAC, should improve a firm's access to credit as it allows a bank to monitor its cash flow.

As Flannery[14] (1983) showed, banks may want to preserve a relationship to capitalize on informational advantages. Hence, they may make credit more easily available to older firms. This together with survivor bias may cause the age of the firm, FIRMAGE, to have a positive coefficient.

Berger and Udell (1995) use the length of the association between the current lender and the borrower as a measure of the strength of the relationship and find that relationships can reduce the price of a loan. Similarly for the length of the longest relationship with the lender, MAXREL. As in Petersen and Rajan, these variables were measured as the natural logarithm of one plus the number (age or length of the longest relationship) to account for the nonlinearities in their relationship to the dependent variable. Because the long-

TABLE I
List of variables used in the regressions

| Variable | Description | Mean | Std. Dev. |
|---|---|---|---|
| DISCTK | Percentage of discounts offered that were taken by the firm. (#taken/# offered) | 66.547 | 41.181 |
| OWNMG | Whether firm is owner-managed; Yes = 1. | 0.896 | 0.305 |
| FAMOWN | Whether family owned; Yes = 1. | 0.851 | 0.356 |
| PROFRAT | Profit Ratio, given by the ratio of operating profits to the total assets. | 0.72 | 3.353 |
| DEBTRAT | Debt Ratio, given by the ratio of total non-family loans to the total assets. | 0.361 | 0.443 |
| QUICKRAT | Quick Ratio = Current Assets (excluding inventory)/Current Liabilities. | 3.807 | 19.897 |
| SAVING | Has a deposit or investment account besides checking account. Yes = 1. | 0.283 | 0.451 |
| CHECAC | Has a Checking Account. Yes = 1. | 0.977 | 0.149 |
| FIRMAGE | Log (1 + firm age in years). Reported in levels. | 13.946 | 12.453 |
| MAXREL | Log (1 + length of longest relationship with lender in years). Reported in levels. | 13.969 | 13.081 |
| NUMINST | Number of institutions from which firm has borrowed. | 0.84 | 0.842 |
| SHERF | Commercial Bank and Savings and Loan Herfindahl Index of MSA or County where firm's headquarters office is located. 3 = most, 1 = least concentrated. | 1.917 | 0.814 |
| LNASSETS | Natural Log of total assets of the firm. | 11.933 | 1.962 |
| CORPTN | Whether Incorporated; Yes = 1. | 0.551 | 0.497 |
| PCOLL | Whether Personal Collateral was required for most recent bank loan; Yes = 1. | 0.044 | 0.205 |
| YIELDSP | The Yieldspread on a loan, measured by the difference between the loan rate and the Treasury rate for a bill or bond of similar maturity, (%). | 4.181 | 2.953 |
| FIXED | Whether loan has fixed or variable rates; Fixed = 1. | 0.31 | 0.463 |
| LNLOAN | Logarithm of amount of the loan. (# in brackets represents value in levels) | 10.803 (603,662) | 1.8541 (8,538,966) |
| MATURTY | Maturity of the loan (in months). | 51.9 | 65.1 |
| TRATE | Treasury rate for loan of similar maturity (%). | 6.653 | 1.532 |

term profitability of customers is one of their primary concerns, footloose customers may not be favored by banks, and the number of institutions from which the firm borrows, NUMINST, may be considered an inverse measure of the strength of the banking relationship (Petersen and Rajan, 1994). Banks in more concentrated markets are better able to capture the income stream from a customer and may be more accommodating towards them (Petersen and Rajan, 1995a). Hence, the coefficient on the Herfindahl Index of the MSA or County where the firm's headquarters in located, SHERF, is expected to have a negative coefficient.

It is possible that banks may view requests for loans from small businesses less favorably than those from larger firms because of informational problems. This is because smaller firms are less likely to be professionally audited, and are both difficult and costly for a bank to monitor. Also, larger loans involve lower average monitoring costs. When the size of a firm increases it improves its access to the capital markets as the average fixed costs of going public decrease. Hence, smaller firms that are more dependent on banks for their credit needs have a lower bargaining power in the market for credit. It is possible that, with a discriminating bank, larger firms are required to pay a lower interest rate on their loans because they have a higher elasticity of demand. The natural logarithm of the asset size of the firm, LNASSETS, should have a positive coefficient. The logarithmic transformation was used to adjust for the possibility that, as the asset

TABLE II
Comparison of means of variables

| Variable | Description | Fobs | Nonfobs. |
|---|---|---|---|
| DISCTK | Percentage of discounts offered that were taken by the firm. (#taken/# offered) | 68.2 | 58.3 |
| OWNMG | Whether firm is owner-managed. | 0.904 | 0.854 |
| FAMOWN | Whether family owned. | 1.0 | 0.0 |
| PROFRAT | Profit Ration, given by the ratio of operating profits to the total assets. | 0.763 | 0.478 |
| DEBTRAT | Debt Ratio, given by the ratio of total non-family loans to the total assets. | 0.366 | 0.337 |
| QUICKRAT | Quick Ratio | 3.898 | 3.291 |
| SAVING | Has a deposit or investment account, besides checking account. | 0.261 | 0.409 |
| CHECAC | Has Checking Account | 0.974 | 0.996 |
| FIRMAGE | Number of years since firm was founded or acquired. (In years.) | 14.19 | 12.55 |
| MAXREL | Length of the longest relationship with the lender. (In years.) | 14.2 | 12.7 |
| NUMINST | Number of institutions from which firm has borrowed. | 0.822 | 0.894 |
| SHERF | Commercial Bank and Savings and Loan Herfindahl Index of MSA or County where firm's headquarters office is located; 3 = most concentrated, 1 = least concentrated. | 1.934 | 1.817 |
| LNASSETS | Natural Logarithm of total assets of the firm. | 11.782 | 12.792 |
| CORPTN | Whether Incorporated. | 0.51 | 0.781 |
| PCOLL | Whether Personal Collateral was required for most recent bank loan. | 0.043 | 0.051 |
| YIELDSP | The Yieldspread on a loan, measured by the difference between the loan rate and the Treasury rate for a bill or bond of similar maturity, (%). | 4.146 | 4.375 |
| FIXED | Whether loan had fixed or variable rates. | 0.319 | 0.256 |
| LNLOAN | Logarithm of amount of the loan. (Number in brackets represents value in levels) | 10.643 (580,490) | 11.622 (722,309) |
| MATURTY | Maturity of the loan (in months). | 51.9 | 52.1 |
| TRATE | Treasury rate for a loan of similar maturity (%). | 6.7 | 6.4 |

size of the firm increases, unit increments to the size of a firm may have a diminishing impact on the discounts taken.

Banks may also prefer to lend to incorporated firms because the more rigorous accounting requirements would overcome some of the informational deficiencies that they face. However, since owner-managers of incorporated firms are not personally liable for the losses of the firm, it is possible that they would make riskier investment choices and banks would require some protection against loan losses. Incorporated firms, CORPTIN,[15] are expected to have a greater propensity to take discounts.

The firms were identified by their two-digit industrial sector codes to control for sectoral variations in the use of trade credit. Seven dummy variables were used to represent the construction, manufacturing, transportation communications and public utilities, wholesale trade, retail trade, insurance and real estate, and the services sectors. The mining sector was used as the reference sector.[16]

4.1.1. *Empirical results and findings*

Evidence from this regression (see Table III) allows us to reject the null that family ownership, FAMOWN, has no effect on the discounts taken by the firm. Family ownership has a statistically significant effect in improving the ability of a firm to avail itself of the discounts offered. The regression suggests that family ownership of a business has the marginal effect, other factors constant, of increasing the discounts taken by 16.95 percent. Owner-management, OWNMG, does not seem to

TABLE III
Effect of family ownership on the percentage of discounts taken by the firm

| Variables | Coefficients | *p*-value |
|---|---|---|
| Management characteristics | | |
| OWNMG | –1.516 | 0.8422 |
| FAMOWN | 16.951* | 0.0077 |
| Performance and risk | Measures | |
| PROFRAT | 7.759* | 0.0012 |
| DEBTRAT | –12.587** | 0.0748 |
| QUICKRAT | 1.036* | 0.0124 |
| SAVING | 10.967* | 0.0401 |
| Relationship characteristics | | |
| CHECAC | –83.294 | 0.1205 |
| FIRMAGE | 5.977** | 0.0835 |
| MAXREL | 16.398* | 0.0001 |
| NUMINST | –8.995* | 0.0042 |
| SHERF | 13.691* | 0.0001 |
| Other firm characteristics | | |
| LNASSETS | 8.148* | 0.0001 |
| CORPTN | –12.433* | 0.0150 |
| PCOLL | –17.107** | 0.0766 |
| Number of observations | 1500 | |
| Log likelihood ratio | –4225 | |

* Denotes significance at the 5% level.
** Denotes significance at the 5% level for a one-sided test.

improve a firm's ability to avail itself of the discounts even though it is said to affect the valuation of the firm. This may be because banks are concerned with the weaker boundaries of asset ownership within an owner-managed firm, as this could influence the priority given to their claims (Shailer, 1993).[17]

The negative and significant coefficient on PCOLL indicates that personal collateral may indeed be considered, as Besanko and Thakor (1983) have suggested, a signal of the safety of a firm's investment projects, and may be required of borrowers who seem riskier.[18] This is not particularly relevant to fobs because, as these data show only 4 percent of the fobs use personal collateral as security for their loans, while 5 percent of nonfobs do so.

The control variables for measuring the performance and risk characteristics of the firm had the expected coefficients. Profitability, PROFRAT, of a firm is associated with a greater propensity to take discounts. This should help fobs in their access to credit since these data indicate that they have a higher profit ratio than nonfobs. A higher debt ratio, DEBTRAT, may reduce a firm's ability to take discounts. Liquidity of the firm, QUICKRAT, and savings, SAVING, are positively associated with the propensity to take discounts.

The relationship variables were found to significantly improve a firm's access to credit. FIRMAGE, must benefit fobs as they are, on average, older than the nonfobs. MAXREL, also has a positive and significant coefficient. The negative coefficient on NUMINST shows that a firm that distributes its borrowing among many banks is not favored in its access to credit. An alternative interpretation would be that a firm that is constrained in its access to credit tends to use more loan institutions. The positive coefficient on SHERF duplicates the Petersen and Rajan (1994) result, indicating that a firm in a more concentrated market may have more credit available to it, probably due to the bank's expectation of future business from the customer. Having a checking account, CHECAC, is not related to a firm's ability to take discounts. The informational advantage to banks is probably tempered by the kind of information that is provided.

Firm size, LNASSETS, is associated with a firm's ability to take discounts. An unexpected finding was that the incorporation status, CORPTN, of a firm reduces its propensity to take discounts[19] in spite of the additional information this provides. This may be due to the fact that the incorporated firms in this sample are not very large, with an average size of about 1.7 million dollars, and their access to equity capital may be somewhat limited. Besides, the fact that the owners of these smaller firms are protected by the limited liability clause may persuade bankers that they are likely to make riskier investment choices.

### 4.2. *Test for pricing advantage*

In this section I test the hypothesis that family ownership will have the effect of reducing premiums on loan rates, other factors constant. To do this, I estimate the influence of family ownership on loan premiums (the amount of the loan interest rate above the rate on a riskless security of similar duration) while controlling for characteristics of the business, the loan contract, and the

economy.[20] The observations used in this regression include only loans from banks. This was done to exclude loans that are clearly transaction-driven[21] and hence not subject to the same information problems and lending criteria.

The null hypothesis is that fobs pay premiums that are lower than those paid by other firms. The yield spread on each bank loan, YIELDSP, is regressed on the ownership characteristics of the firm, while controlling for its performance and risk characteristics, its relationship with the lender, other firm characteristics, the loan contract characteristics, industry characteristics and the Treasury rate. (See Table I for a description of the variables.) This equation is of the form:

$$\text{YIELDSP} = f(\text{OWNMG, FAMOWN, PROFRAT, DEBTRAT, FIRMAGE, MAXREL, NUMINST, SHERF, LNASSETS, CORPTN, PCOLL, FIXED, LNLOAN, MATURTY, TRATE, SIC2–SIC8.})$$

The yield spread, YIELDSP, represents the premium the bank charges over the riskless rate of interest, for a loan of similar duration. Since the Treasury rate represents the riskless interest rate, it controls for any price changes that all borrowers may face when monetary conditions change. Treasury rates, TRATE, also provide information on the overall supply of credit in the economy. Hence, if the coefficient on the Treasury rate is negative, it would suggest that as the cost of funds increases, banks would reduce their premiums.

It is possible that banks regard fobs as less likely to default on their loans because the owners are perceived as being more vested in the survival of the firm. Additionally, the reduced risk of takeovers ensures greater stability. Hence, loan premiums are likely to be lower and FAMOWN is expected to have a negative coefficient. As for owner-managed firms, OWNMG, because the returns to banks are fixed, neither the benefits of lower agency costs, nor the costs of entrenchment may accrue to them. Hence, banks may be indifferent to the issue of owner management of firms.

Higher profitability, PROFRAT, could signal a lower probability of default, while a higher debt ratio, DEBTRAT, would indicate greater risk. Information is also accumulated by banks through repeated interactions (Petersen and Rajan, 1994) and the cost of evaluating a new loan request is reduced. Similarly, administrative costs are lower for renewal of lines of credit than for extending new ones. Therefore, older firms pay lower interest rates on their loans (Diamond, 1989; Petersen and Rajan, 1994). Hence, FIRMAGE and MAXREL are expected to have negative coefficients. It is not possible to predict the sign on the number of loan institutions, NUMINST, used by a borrower, as a larger number of lenders can indicate both weaker relationships or a better bargaining position for the firm. Given the conflicting theoretical predictions, it is not possible to foresee the sign of the coefficient on the banks' market concentration, SHERF. The coefficient on CORPTN is expected to be negative because most incorporated firms have better access to the capital markets, and hence a greater elasticity of demand.

A negative coefficient on PCOLL would indicate that the bank views personal collateral as insurance against default and is willing to reduce its risk premiums on the loan. Fixed rate loans, FIXED, can be expected to carry a higher interest rate than a variable interest rate loan because, with a fixed rate, banks require compensation for interest rate risk. This may also be the case for a loan with a greater maturity, MATURTY. Due to economies of scale, average costs for administering smaller loans are considerably higher than average costs to banks for larger loans. If, in competitive markets, these costs are passed on to the borrower then smaller loans would be offered at a higher price than the larger ones. Hence the coefficient on the size of the loan, LNLOAN, is expected to be negative.

#### 4.2.1. *Empirical results and findings*

The estimated coefficients of the price equation (see Table IV) allow us to reject the null hypothesis that fobs pay premiums that are lower than those paid by other firms. They provide evidence that family ownership, FAMOWN, has no statistically significant effect in reducing the price of the loan. Hence, fobs cannot be said to have a pricing advantage.

The Treasury rate, TRATE, seems to have a significant effect on premiums. A one percent change in the Treasury rate is associated with a decrease in the loan premium of about 90 basis

TABLE IV
Effects of family ownership on the loan rate premiums (YIELDSP)

| Variable Name | Coefficient value | *t*-value |
|---|---|---|
| Management characteristics | | |
| OWNMG | –0.006 | –0.022 |
| FAMOWN | –0.240 | –1.127 |
| Performance and risk measures | | |
| PROFRAT | 0.090 | 1.353 |
| DEBTRAT | 0.036 | 0.161 |
| Relationship characteristics | | |
| FIRMAGE | –0.155 | –1.388 |
| MAXREL | –0.079 | –0.663 |
| NUMINST | 0.022 | 0.188 |
| SHERF | 0.121 | 1.285 |
| Firm characteristics | | |
| LNASSETS | –0.180* | –2.381 |
| CORPTN | –0.282** | –1.757 |
| Loan characteristics | | |
| PCOLL | 0.261 | 0.872 |
| FIXED | –0.107 | –0.538 |
| LNLOAN | –0.133* | –1.872 |
| MATURTY | –0.002 | –1.560 |
| Macroeconomic factors | | |
| TRATE | –0.896* | –15.311 |
| Number of observations | 1110 | |
| F-value | 19.423 | |
| Adjusted $R^2$ | 0.2849 | |

* Denotes significance at the 5 percent level.
** Denotes significance at the 5 percent level for a one-sided regression.

points. The Treasury rate was found to be one of the most important determinants of the yield spread of the loan.[22] Incorporation of the firm, CORPTN, reduces the premiums on loans. This may be either because of lower moral hazard problems due to increased information available to banks, or due to the fact that incorporated firms may have a relatively elastic demand and are able to negotiate a lower interest rate. A higher elasticity of demand is possibly also why the coefficient on the size of the firm, LNASSETS, was found to be negative and significant. Larger firms may also be less likely to be constrained by the need for proximity to a bank, and may have a greater choice of potential lenders.

None of the relationship variables seem to affect the price of the loan. Even SHERF seems to have no effect on the price, suggesting that the banks may be taking a long term view of their client relationships, and hence, not exercising their market power for short-term gains.[24] This insignificant coefficient on FIRMAGE does not support the Diamond (1989) prediction that older firms pay lower interest rates on their loans. The size of the loan, LNLOAN, has a negative coefficient indicating that if the loan were to increase by one percent, premiums would fall by about 13 basis points. The influence of the size of the loan suggests that banks may be concerned about administrative costs when pricing a loan, though they may reduce interest rates to remain competitive, as they do for incorporated firms.

## 5. Concluding remarks

The major finding of this study is that fobs are associated with an easier availability of credit than nonfobs, in spite of controlling for their age, higher profitability, greater liquidity and other factors that can affect the availability of credit. This suggests that lenders may see family ownership as providing incentives for behavior that reduce the moral hazard problems of lenders. An additional finding was that family ownership of a business is not significantly related to a reduction in the premiums on loans.

Based on the literature, one might have presumed that the three factors that give fobs a distinct advantage in their access to credit would be the reduction in agency costs because they are largely owner-managed, are likely to have a relatively higher share of insider equity in their capital structure, and are able and willing to offer personal collateral. The results show however that, while fobs do have an easier access to credit, owner-managed firms do not. This may be because the lower agency costs, if any, in owner-managed firms are offset by the increased costs due to entrenchment of some owner-managers. Moreover, banks could be concerned about the weaker boundaries of asset ownership in owner-managed firms and fear the possibility of less scrupulous owner-managers manipulating their assets to increase the risk of debt-holders. A mitigating factor for fobs may be the high share of insider equity in a firm. This would indicate support for

the Leland and Pyle (1977) argument that a higher ownership stake may signal the value of a firm's investments and improve its access to debt financing. One other reason a lender may prefer firms with a high share of insider equity is that these firms are relatively conservative in their investment choices and less likely to be threatened by the possibility of a hostile takeover.

Besides the entrepreneur's equity position, it is possible that there are other less easily observable characteristics that bankers perceive in fobs. That is, family ownership may be seen as a proxy for firm characteristics that bankers favor such as, the firm's long-term perspective, the cohesiveness of its management structure, its concern for its reputation, its propensity to self-regulate, and possibly the personal contacts between the owners of the firm, the lenders, and the community at large. These factors may be part of what the textbooks refer to as "character" influencing a loan decision. While it is not possible to gauge the relative influence of each of these characteristics, it seems likely that together they represent a more conservative approach to investments, a factor that could reduce moral hazard problems for the banks. This translates to a greater availability of loans to fobs. In relative terms, the negative characteristics associated with fobs do not seem to discourage lenders.

Additionally, these data suggest that the evaluations of stockholders may not correspond to those of debt-holders. For example, the fact that fobs generally avoid the agency costs of separation of ownership and management is said to improve their value but I do not find evidence that it increases a firm's access to credit. This provides support for Shailer's (1991) finding that owner-managers may be in a better position to manipulate their accounts to the detriment of the debt-holders' interests, and this could discourage bank lending. Another example of this divergence of preferences of shareholders and debt-holders, is the possibility that banks may prefer firms that have a high share of insider equity because they are less likely to be threatened by the possibility of a hostile takeover as this could result in a loss of information to them. Equity holders, on the other hand, may welcome this possibility as it is said to make the firm more efficient.

Since the relationship variables do not seem to affect the price of the loan, while the size of the firm, its incorporation status, the size of the loan, and the Treasury rate do, it seems reasonable to surmise that less objective criteria have a greater impact on the decision to lend, while the decision on the pricing of the loan may depend on more objective criteria and possibly follow guidelines provided by the head office.

The evidence provided here, concerning the advantages of family ownership on the availability of credit to firms, may have implications for the choices they make with regard to their ownership and control structures. These results indicate a less comfortable liquidity position for incorporated firms. The financial constraints of incorporated firms may be due to the compulsions of growth rather than any rationing. This requires further research as it is generally understood that going public would provide long-term equity which can be used for short and medium-term expenditures.

## Acknowledgements

My thanks to Leslie W. Rue, Carl R. Zwerner Chair of Family Owned Enterprises for funding this research, and to the Department of Economics at the Georgia State University for providing the data. My grateful thanks to Stephen D. Smith, for his guidance and support with this project. Thanks also to Mitchell A. Petersen and Raghuram G. Rajan for sharing their work and their comments. My thanks to the anonymous referees for their careful and detailed comments on the paper. Also, I wish to thank William Rushing, David Audretsch, Daniel McConaughy, Mary Graham, and Chris Bollinger for their helpful comments. The usual disclaimer applies.

## Notes

[1] Family-owned-businesses are defined in this paper as proprietorships or firms with more than 50 percent of the firm owned by a single family. This is the definition used by the National Survey of Small Business Finance (NSSBF) questionnaire. The main implication of this is that a family or individual would have a controlling interest in the firm.

[2] While it is true that many firms in this sample are constrained in their access to equity financing and possibly other sources of financing as well, the premise here is that banks are the least expensive, and hence preferred source of short-term financing for many small businesses. Banks are defined

here as commercial banks, savings and loan associations, saving banks, and credit unions, as in Petersen and Rajan (1994).

[3] Discussion on this paper comes from Morck et al. (1988).

[4] This entrenchment could manifest itself in high levels of compensation and perquisites that managers allow themselves. Entrenched managers may also tend to make decisions that are not optimal, but just good enough to keep shareholders quiet. If managers are not entrenched but active in the labor market, then these problems would not occur because future managerial compensation would depend on their current performance (Fama, 1980).

[5] Collateral here may be either outside collateral not belonging to the firm, such as the personal assets of the owners, or inside collateral such as accounts receivable and inventory equipment or real estate belonging to the firm.

[6] Presumably, because family ownership is associated with over 50 percent of the ownership in one family, they have more control over the operations of the firm and are hence willing to offer personal collateral.

[7] The survey can be obtained from the National Technical Information Service, U.S. Dept. of Commerce, Springfield, VA 22151.

[8] Family businesses are defined as proprietorships, and firms with 50% or more of the firm owned by a single family.

[9] Family owned firms are defined in these data as proprietorships or firms where 50 percent of the ownership is with one family.

[10] Petersen and Rajan (1994) use a two-sided tobit regression because the dependent variable had a percentage value. Tobit models are used when a sample may be censored.

[11] Firms seeking outside funds would choose the least expensive source available to them. Since capital markets are closed to many small firms the next best alternative is often bank credit. When this is not available, a firm may need to use financing from more expensive sources. One such source of short-term credit available to most firms is trade credit, which is generally offered for 30 to 60 days, though some borrowers stretch the payment period. Very often, a cash discount of 1 or 2 percent is offered for repayment of the credit within, perhaps, 10 days after billing. If a firm cannot repay the credit within 10 days, it will forfeit the discount and end up paying an implicit rate of about 37 percent on the amount of the purchase. Therefore, firms may use credit from banks to avail themselves of the discounts. These firms use trade credit as a substitute for bank credit because they need the financing. This view is supported by the finding that firms that have larger unused amounts in their lines of credit demand less trade credit (Petersen and Rajan, 1995b).

[12] As Petersen and Rajan (1994) argue, firms will exhaust their least expensive source of funds, first, before moving on to the more expensive sources. This suggests a hierarchy of choices with the more expensive sources being used as a last resort.

[13] This would not be the case for tests that use bank credit to gauge a firm's access to bank loans, since the firms that may have been denied loans will not be included in the observation set.

[14] Discussion of this topic comes from Devinney (1986).

[15] CORPTN does not include firms that are S-Corporations. Excluding S-Corporations made it possible to measure the financial constraints on firms that have no access to equity markets.

[16] Coefficients not reported.

[17] Even though an overwhelming percentage of fobs are owner-managed, when a separate regression was run without the owner-managed variable, it was found to have no significant effect on the coefficient of the fob variable.

[18] In a separate regression I found that both personal and business collateral when grouped together, had no effect on the ability of a firm to take discounts. This implies that while personal collateral may be a guarantee required of firms that are considered credit risks, business collateral may, relative to personal collateral, marginally improve a firm's access to credit. It is possible that extremely credit constrained firms are forced to offer personal collateral to acquire some financing, while the moderately constrained firms offer business collateral.

[19] When the regressions were run with the S-Corporations included among the incorporated firms, the coefficients were insignificant. This indicates that S-Corporations have a greater propensity to avail themselves of the discounts offered than ordinary corporations. This is not what one expects because, ordinarily, S-Corporations cannot issue debt in the bond markets or go to the public for equity. They generally have to depend for financing on shareholders' equity or on bank credit.

[20] This has several features of the Berger and Udell (1992) test for credit rationing.

[21] Transaction-driven loans, such as equipment and vehicle loans, are from sources where the underlying transaction, such as a purchase, is the motivation for a seller to provide financing for the purchase (vendor financing).

[22] The negative coefficient on Treasury rates support the possibility of stickiness of loan rates, and is consistent with the Stiglitz and Weiss (1981) credit rationing theory that, when the credit situation gets difficult, banks prefer to ration credit rather than increase the loan rates.

[23] Petersen and Rajan (1995a) find that lenders in concentrated markets may actually reduce rates to younger firms and increase rates to older firms.

## References

Aronoff, Craig E. and John L. Ward, 1991, 'Introduction', in C. E. Aronoff and J. L. Ward (eds.), *Family Business Sourcebook*, Detroit: Omnigraphics Incorporated, pp. ix–xi.

Berger, Allen N. and Gregory F. Udell, 1992, 'Some Evidence on the Empirical Significance of Credit Rationing', *Journal of Political Economy* **100**(5), 1047–1077.

Berger, Allen N. and Gregory F. Udell, 1995, 'Relationship Lending and Lines of Credit in Small Firm Finance', *Journal of Business* **68**(3), 351–381.

Besanko, David and Anjan Thakor, 1987, 'Collateral and Rationing: Sorting Equilibria in Monopolistic and Competitive Credit Markets', *International Economic Review* **28**(3), 671–689.

Devinney, Timothy, M., 1986, *Rationing in a Theory of a Banking Firm*, Berlin: Springer Verlag.

Diamond, Douglas W., 1989, 'Reputation Acquisition in Debt Markets', *Journal of Political Economy* **97**(4), 828–862.

Fama, Eugene F., 1980, 'Agency Problems and the Theory of the Firm', *Journal of Political Economy* **88**(21), 288–307.

Fama, Eugene F. and Michael C. Jensen, 1983, 'Separation of Ownership and Control', *Journal of Law and Economics* **26**, 301–325.

Flannery, Mark, 1983, 'Enforcing Implicit Contracts: An Application to the Theory of Banking', *Working Paper*, The Wharton School, University of Pennsylvania.

Hester, Donald, 1979, 'Customer Relationships and Terms of Loans: Evidence from a Pilot Survey', *Journal of Money Credit and Banking* **11**(3), 349–357.

Jaffee, Dwight and Joseph Stiglitz, 1990, 'Credit Rationing', in Benjamin M. Friedman and Frank H. Hahn (eds.), *Handbook of Monetary Economics* Vol. **II**, The Netherlands: North Holland, pp. 838–885.

Leland, Hayne E. and David H. Pyle, 1977, 'Informational Asymmetries, Financial Structure, and Financial Intermediation' *Journal of Finance* **32**(2), 371–387.

McConaughy, Daniel L., Michael C. Walker and Glenn V. Hendersen, 1994. 'The Impact of Founding Family Control upon Corporate Value and Efficiency', Presented at the *Eastern Finance Association*, Boston, MA.

Morck, Randall, Andrei Shleifer and Robert W. Vishny, 1988, 'Management Ownership and Market Valuation', *Journal of Financial Economics* **20**, 293–315.

Murphy, Neil B., 1984, 'Loan Rates, Operating Costs and Size of Loan: The Evidence from Cross-sectional Data', in Paul M. Horvitz and R. Richardson Pettit (eds.), *Small Business Finance: Problems in the Financing of Small Businesses*, Connecticut: Jai Press Inc., pp. 51–62.

Petersen, Mitchell A. and Raghuram G. Rajan, 1994, 'The Benefits of Lending Relationships: Evidence from Small Business Data', *Journal of Finance* **49** Vol. XLIX(1), 3–37.

Petersen, Mitchell A. and Raghuram G. Rajan, 1995a, 'The Effect of Credit Market Competition on Lending Relationships', *Quarterly Journal of Economics* **441** Vol. CX(2), 407–443.

Petersen, Mitchell A. and Raghuram G. Rajan, 1995b, 'Trade Credit: Theories and Evidence', Unpublished.

Shailer, Gregory E. P., 1993, 'The Irrelevance of Organizational Boundaries of Owner-Managed Firms', *Small Business Economics* **5**, 229–237.

Stiglitz, Joseph and Andrew Weiss, 1981, 'Credit Rationing in Markets with Imperfect Information', *American Economic Review* **71** (June), 393–410.

Weston, J. F., 1979, *The Tender Takeover, Mergers and Acquisitions*, pp. 74–82.