# ORGANIZATIONAL STRUCTURE, OWNERSHIP STRUCTURE AND CREDIT RATINGS: EVIDENCE FROM SMES

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**Abstract**

This paper documents that credit ratings of closed corporations depend on their organizational structure and ownership structure (family management and family control). Using the data from the Survey of Small Business Finance (SSBF), we show that S-Corporations have higher credit ratings than C-Corporations. We argue that lower information asymmetries inherent in S-Corporations lead to better credit ratings. We also show that ownership structure – as explained by family control and family management – is also associated with higher credit ratings. We argue that increased monetary stake of a single entity – family – translates into his altruistic commitment and increased effort, thereby improving credit ratings.

**Keywords:** S-Corporations; C-Corporations; SMEs; Ownership Structure; Default Rating

**JEL Classification***:* G30, G32, G33

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## 1. Introduction

What determines the credit rating of a firm? What is the effect of non-financial characteristics on the credit rating of a firm? Do two firms with similar financial characteristics differ in their credit ratings? Given that credit rating is a matter of concern for most of the stakeholders (creditors as well as shareholders), identification of factors that determine credit ratings has attracted significant attention in prior literature. Most of this literature, however, revolves around understanding how financial measures of performance affect credit rating of firms. Estrella (1999), for instance, examines the predictive power of financial ratios on bank failures and show that most of these simple ratios predict failure. In another related study, Blume et al. (1998) show that accounting ratios are more informative in the rating of larger firms than in the rating of smaller firms. This paper is an attempt to complement prior literature by documenting the impact of non-financial characteristics, such as organizational structure and ownership structure, on the credit rating of firms.

This paper argues that organizational structure and ownership structure can significantly affect the credit rating of a firm due to their impact on information environment of a firm. We posit, for instance, that decision of a firm to be organized as an S-Corporation or as a C-Corporation can have significant impact of information environment. S-Corporations, usually, have lower agency problems and thus are more transparent than C-Corporations. Better information environment of S-Corporations should lead to higher credit ratings. Consistent with our arguments, our results show a significant difference between credit ratings of S-Corporations and C-Corporations. Our results indicate that S-Corporations have significantly higher credit ratings than C-Corporations. Furthermore, we also show that family control and family management is a significant determinant of credit ratings. Our results show significantly higher ratings for firms with either a family control or a family management. We argue that significant stake of a family in a firm translates into family's altruistic commitment and increased effort. As a result, rating agencies rate these firms higher than other firms. Lastly, we show that added value of ownership structure (family control or family management) for credit ratings is higher in C-Corporations than S-Corporations. We argue that when a firm is organized as S-Corporation, its information environment is of high quality. Therefore, it does not matter whether a control or a management is with family or with someone else. Better information environment ensures that whoever is responsible for the functioning of a corporation is not able to expropriate. Consequently, conflict of interest between management and owners are low. Given low conflict of interest, ownership concentration has lesser added value in these firms. In contrast to S-Corporations, C-Corporations have high information asymmetries. In these firms,

increased ownership stake can be used to reduce conflict of interest between management and owners.

The remainder of the paper is structured as follows: Section 2 briefly discusses the motivation and background for this study. Section 3 summarizes the data and Section 4 presents assessment of our hypothesis. Section 5 presents robustness checks and the paper concludes with Section 6.

## 2. Hypothesis development

Small business firms are defined as those firms that have with fewer than 500 employees. These firms are not listed in stock markets and are organized as sole-proprietorships, partnerships, and closed corporations. Most important of small business firms are, however, the closed corporations. They represent about 90% of all firms in the United States. In this paper, we aim to study closed corporations and identify different non-financial channels that can affect credit worthiness of these corporations. More specifically, we document the effect of organizational structure and ownership structure on the credit ratings of closed corporations.

### *2.1 Organizational structure and credit ratings*

Closed corporations are either organized as S-Corporations or C-Corporations. This paper argues that both of these organizational structures possess certain characteristics that can significantly affect the extent of agency problems in them. Some of the reasons are explained below:

- C-Corporations are subject to double taxation in the United States. In order to avoid double taxation, there are higher incentives for owners to expropriate resources out of firms in the form of excessive salaries and perquisites. Anecdotal evidence suggests that the largest shareholders, usually, occupy the managerial role in these corporations. As a result, bulk of compensations will be enjoyed by these shareholders. Minority shareholders will not get enough allocation of these benefits. Consequently, controlling shareholders have higher incentives to expropriate in C-Corporations. This is in contrast with S-Corporations that are not subject to double taxation. Therefore, there are lower incentives to extract benefits in the form of salaries and perquisites in these S-Corporations. We argue that lower incentives to expropriate lead to lower agency problems in S-Corporations.
- Another reason behind lower agency problems of S-Corporations is the legal restriction on its number of shareholders. Currently, S-Corporations can have a maximum of 100 shareholders. An important consequence of restricting the maximum number of shareholders is that ownership gets concentrated among the Board of Directors and the management. Jensen and Meckling (1976) argue that such a concentration of ownership in the hands on insiders mitigates the negative consequences of separation between ownership and control. Davis (1983) and Chami (2001) note that significant stake of a controlling shareholder in a firm translates into his altruistic commitment and increased effort. Consequently, we should expect lower agency problems in S-Corporations relative to C-Corporations. Our arguments are consistent with prior literature that document lower agency problems in firms where fewer shareholders have controlling stake in firms (Shleifer and Vishny, 1986).

This paper argues that higher agency problems in C-Corporations should manifest themselves in higher information asymmetries in these firms. Anecdotal evidence suggests that two firms with similar financial performance will have different ratings if their information environment is not the same. Firms with higher information asymmetries will have lower ratings than firms with lower information asymmetries. Shen et al. (2012) argue that it is more likely for financial information to be not reflected in intrinsic values of firms that have higher information asymmetries. Therefore, rating agencies tend to issue lower ratings for these firms. Consistent with Shen et al. (2012), we hypothesize that higher agency problems associated with C-Corporations lead to lower ratings of these firms relative to S-Corporations. Furthermore, we also argue that the differences in taxation regimes between C-Corporations and S-Corporations lead to lower operating income for C-Corporations. Conventional arguments suggest that, ceteris paribus, firms with lower operating income should have higher probability of default and therefore lower credit ratings. It is for this reason that interest coverage ratio is widely used as a proxy for credit ratings (Damodaran, 2006).

*H1: C-Corporations have lower credit ratings than S-Corporations.*

### *2.2 Ownership structure and credit ratings*

This paper also argues that ownership structure has significant impact on the credit ratings of close corporations. We posit that ownership structure exerts its impact on credit ratings via its effect on agency problems. We argue that close corporations are characterized by relatively small number of shareholders. In these corporations, major agency problem is due to the squeeze out of minority shareholders by majority shareholders – horizontal agency problem (O'Neal and Thompson, 1985). The horizontal agency problem arises when

majority shareholder uses his power to take those actions that benefit him at the expense of minority shareholders. We argue that horizontal agency problems are more pronounced when corporation is under family control or management (Roe, 2005; Laeven and Levine, 2008). Anderson and Reeb (2003) document that, in family firms, families are not only among the largest shareholders, but also are active managers of the firms. In these firms, controlling shareholder can expropriate minority shareholders either directly through salaries and perquisite or indirectly through transfer pricing arrangements with related firms that favor the controlling shareholder. Nagar et al. (2011) and Gogineni et al. (2009) suggest that the horizontal agency problem implies an increase in agency cost. Holderness (2007) argues that horizontal agency problems are exacerbated by the fact that none of the minority shareholders have enough incentive to monitor the controlling shareholder. We argue that corporate inefficiencies that result from such actions manifest themselves in lower credit ratings of those close corporations that have family control or family management.

*H2a: Close corporations with family control have lower credit ratings than other close corporations.*

*H3a: Close corporations with family management have lower credit ratings than other close corporations.*

However, there are plentiful of arguments that predict higher credit ratings for firms with family control and management. Family control and management refers to a situation in which a single entity – the family – has an increased stake in a corporation. Gogineni et al. (2009) suggest that agency cost is reduced when the firm is owned and managed by one family. They investigate the agency cost for UK private and public companies and find that agency costs decreases in private firms whenever owner is the manager. They also find that ownership concentration in the hands of one owner or one family does reduce agency costs. Their findings are consistent with the theoretical foundations presented by Jensen and Meckling (1976). We argue that decrease in agency problems improve firm performance and result in higher credit ratings for firms with family control and management.

*H2b: Close corporations with family control have higher credit ratings than other close corporations.*

*H3b: Close corporations with family management have higher credit ratings than other close corporations.*

### *2.3 Organizational structure, ownership structure and credit ratings*

We also argue that added value (positive or negative) of ownership structure will be less pronounced in S-Corporations relative to C-Corporations. Given that S-Corporations are characterized by better information environment, any impact (positive or negative) that ownership structure may have on agency problems will be less pronounced in these firms. Our assertion is consistent with prior literature that considers value relevance of ownership structure as a function of information environment (Dharwadkar et al., 2000; La Porta et al., 1999). As information environment improves, the ability of ownership structure to affect firm also goes down. In a related study, Farooq and Zarouali (2014) document that ownership structure is value relevant only for those firms that have higher information asymmetries. For firms with low information asymmetries, they document no relationship between ownership structure and valuation of firms.

*H4: Impact of family control on credit ratings is more pronounced in C-Corporations than in S-corporations.*

*H5: Impact of family management on credit ratings is more pronounced in C-Corporations than in S-corporations.*

## 3. Data

This paper uses survey data from the Survey of Small Business Finance (SSBF) to document the effect of organizational structure and ownership structure on credit ratings of closed corporations. The data is collected in 2003 and is issued by the Federal Reserve Bank. The survey has five implicates for imputed (missing) variables. Each implicate differs only for the imputed variable. All other non-missing observations have the same values across all implicates. We use the first implicate for this study. Following sub-sections will explain the data in detail.

### *3.1 Credit ratings*

We use the credit ratings (RATINGS) provided by the Dunn and Brad Street (D&B). The D&B rates firms on the categorical scale ranging from 1 to 6. Firms rated as 1 are the most risky and firms rated as 6 are the least risky. Table 1 documents the descriptive statistics for credit ratings in our sample. Our results show that most firms ratings on the higher side. Table 1 reports that almost 30% of the firms have ratings less than or equal to 3, while the remaining 70% are rated as 4 or above.

**Table 1.** Descriptive statistics for ratings

Following table documents the number and the proportion of firms in each category of ratings. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank.

| Rating | Number of Firms | Proportion of Firms (%) |
|---|---|---|
| 1 (Lowest) | 215 | 8.66 |
| 2 | 213 | 8.58 |
| 3 | 343 | 13.82 |
| 4 | 718 | 28.93 |
| 5 | 541 | 21.80 |
| 6 (Highest) | 452 | 18.21 |

### *3.2 Organizational structure*

Closed corporations organize themselves as either C-Corporations or S-Corporations. Our variable representing the organizational structure (SCORP) takes the value of 1 if the firm is incorporated as S-Corporation and 0 if it is incorporated as C-Corporation. Our sample consist of 1548 S-Corporations and 946 C-Corporations.

### *3.3 Ownership structure*

This paper uses two variables to define the ownership structure. The first variable FAMILY_CONTROL takes the value of 1 if the firm is controlled by the family and 0 otherwise. The second variable FAMILY_MANAGE takes the value of 1 if the firm is managed by the family and 0 otherwise. We would like to argue that ownership structure does not suffer form endogeneity problem in private firms. Smith and Watts (1992) document exogeneity of ownership structure in private firms. In another related study, Nagar et al. (2011) argue that high cost of trading in private firms lead to exogeneity of ownership structure in private firms. Table 2 documents the descriptive statistics for ownership structure in our sample. Our results show that vast majority of firms are family controlled or family managed in our sample. We report 81.14% of S-Corporations to be family controlled and 84.73% as family managed firms. Table 2 also shows that 73.68% of C-Corporations are family controlled and 80.16% of them are family managed firms.

**Table 2.** Descriptive statistics for ownership variables

Following table documents the number and the proportion of firms that are family controlled or family managed within S-Corporation and C-Corporation category. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank.

| | S-Corporation | C-Corporation |
|---|---|---|
| Family Controlled | 1256 (81.14%) | 697 (73.68%) |
| Family Managed | 1304 (84.73%) | 719 (80.16%) |

### *3.3 Control variables*

This paper uses the following variables as control variables.

- **GROWTH:** We define GROWTH as a dummy variable that takes the value of 1 if the firm experienced positive sales growth in the current year and 0 otherwise. Firms with positive growth should have more resources to meet contractual obligation, thereby improving credit ratings.
- **SALES:** This paper defines SALES as the log of total sales. It is also the measure of performance of a firm. We argue that better performance increases the ability of firms to meet their contractual obligations, thereby improving their credit ratings.
- **COMP:** We define COMP as the ratio of account receivables and inventories to total assets. Prior literature considers accruals (receivables) and inventory as the two largest sources of transactional complexity (Abdel-Khalik, 1993). Ge and McVay (2005) observe that transactional complexity results in weaknesses of internal governance mechanisms. They argue that an increasing amount of transactional complexity gives rise to agency conflicts between the controlling shareholders and minority shareholders. Higher agency problems lead to a higher level of information asymmetry, which should decrease the credit ratings.
- **LEVERAGE:** We define LEVERAGE as total debt to total asset ratio. Higher leverage

exposes firms to higher bankruptcy risks, thereby decreasing credit ratings.

- **AGE:** This paper defines AGE as the age of firm in years. We argue that older firms have higher reputation due to their ability to survive over a long period of time. It should, therefore, improve their credit ratings.

Table 3, Panel A, documents the descriptive statistics (average/mean) for our control variables, while Table 3, Panel B, reports the correlation between different control variables. An interesting observation from Table 3, Panel A, is that most firms did not generate positive growth in our sample. Our data reports only 39.57% of firms with positive sales growth. Furthermore, our results in Table 3, Panel B, show no severe multicollinearity between our control variables. Therefore, we can include all of the control variables together in our regression equations.

**Table 3.** Summary statistics for control variables

Following table documents summary statistics for control variables. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank. Panel A documents descriptive statistics for control variables, while Panel B documents correlation between control variables.

**Panel A.** Descriptive statistics

| | Mean | Median | Standard Deviation | No. of Observations |
|---|---|---|---|---|
| GROWTH | 39.57% of sample firms generated growth | | | |
| SALES | 14.2264 | 14.2295 | 1.9232 | 2473 |
| COMP | 0.3681 | 0.3333 | 0.3143 | 2474 |
| LEVERAGE | 0.5293 | 0.2547 | 0.9575 | 2475 |
| AGE | 53.7383 | 53.0000 | 10.5415 | 2454 |

**Panel B.** Correlation matrix

| | PROFIT | SALES | COMP | LEVERAGE | AGE |
|---|---|---|---|---|---|
| GROWTH | 1.0000 | | | | |
| SALES | 0.0927 | 1.0000 | | | |
| COMP | -0.0155 | 0.3112 | 1.0000 | | |
| LEVERAGE | 0.0167 | -0.0673 | -0.0111 | 1.0000 | |
| AGE | -0.0794 | 0.1758 | 0.0284 | -0.0311 | 1.0000 |

## 4. Methodology

### *4.1 Organizational structure, family control, and credit ratings*

We hypothesized in Section (2) that family control and organizational structure can lower agency problems in firms, thereby significantly effecting credit ratings of the firm. In order to test our hypothesis, we estimate the following ordered probit regression with credit ratings (RATING) as a dependent variable and FAMILY_CONTROL, SCORP, and FAMILY_CONTROL*SCORP as independent variables. As was mentioned above, we also add various firm-specific characteristics (GROWTH, SALES, COMP, LEVERAGE, and AGE) as control variables in regression equation. All variables are defined as above. Our basic regression equation takes the following form:

$$\begin{aligned} RATING = {} & \alpha + \beta_1(FAMILY\_CONTROL) \\ & + \beta_2(SCORP) + \beta_3(FAMILY\_CONTROL * SCORP) \\ & + \beta_4(GROWTH) + \beta_5(SALES) + \beta_6(COMP) + \beta_7(LEVERAGE) + \beta_8(AGE) + \varepsilon \end{aligned} \quad (1)$$

The results of our analysis are reported in Table 4. Our results show that family control leads to higher credit ratings. We report significantly positive coefficient of FAMILY_CONTROL. We argue that family control is an outcome of increased monetary stake of a single entity – family – in a firm. Significant stake of a controlling shareholder in a firm translates into his altruistic commitment and increased effort (Davis, 1983; Chami, 2001). Consequently, it improves the credit ratings. Our results also show that S-Corporations have higher credit ratings than C-Corporations. We report significantly positive coefficient of SCORP. We argue that lower agency problems associated with S-Corporations lead to better credit ratings. Interestingly, our results also show that family control negatively affects credit ratings in S-Corporations. We report significantly negative

coefficient of FAMILY_CONTROL*SCORP. We argue that S-Corporations are characterized by better information environment. Therefore, added value of family control is less in these firms relative to C-Corporations, thereby resulting in a negative effect on credit ratings.

**Table 4.** Organizational structure, family control, and credit ratings

Following table uses Equation (1) to document the effect of organizational structure and family control on credit ratings. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank. The coefficient that are significant at 10% are followed by *, those at 5% and 1% by ** and *** respectively.

| | **Equation (1)** |
|---|---|
| FAMILY_CONTROL | 0.2051** |
| SCORP | 0.2363** |
| FAMILY_CONTROL*SCORP | -0.2705** |
| GROWTH | -0.0330 |
| SALES | 0.0438*** |
| COMP | -0.2046*** |
| LEVERAGE | -0.0020** |
| AGE | 0.0174*** |
| No. of Observations | 2368 |
| Wald $Chi^2$ | 116.14 |
| R-Square | 0.0132 |

### *4.2 Organizational structure, family management, and credit ratings*

Section (2) hypothesizes that family management and organizational structure can affect credit ratings of the firm. In order to test this hypothesis, we estimate the following ordered probit regression with credit ratings (RATING) as a dependent variable and FAMILY_MANAGE, SCORP, and FAMILY_MANAGE*SCORP as independent variables. As was mentioned above, we also add various firm-specific characteristics (GROWTH, SALES, COMP, LEVERAGE, and AGE) as control variables in regression equation. Our basic regression equation takes the following form:

$$\begin{aligned} RATING &= \alpha + \beta_1(FAMILY\_MANAGE) \\ &+ \beta_2(SCORP) + \beta_3(FAMILY\_MANAGE*SCORP) \\ &+ \beta_4(GROWTH) + \beta_5(SALES) + \beta_6(COMP) + \beta_7(LEVERAGE) + \beta_8(AGE) + \varepsilon \end{aligned} \quad (2)$$

The results of our analysis are reported in Table 5. Our results show that family management leads to higher credit ratings. We report significantly positive coefficient of FAMILY_MANAGE. As was argued earlier, we believe that family management translates into more altruistic commitment of controlling shareholder, thereby positively effecting credit ratings (Davis, 1983; Chami, 2001). Our results also report negative effect of family management on credit ratings in S-Corporations. We show significantly negative coefficient of FAMILY_MANAGE*SCORP. We believe that better information environment in S-Corporations lowers the added value of family management in these firms relative to C-Corporations, thereby resulting in a negative effect on credit ratings. Furthermore, our results in Table 5 confirm our previous finding of a positive impact of S-Corporations on credit ratings.

## 5. Robustness checks

### *5.1 Does the effect of organizational structure and ownership structure (family control and family management) on credit ratings differ for firms with small and large sales?*

There can be concerns that the results reported above are confined to certain stocks. For instance, it is possible that ratings agencies value organizational structure and ownership structure more for firms that have lower ability to honor their contractual obligations. In order to address these concerns, we divide our sample into two groups – first with above average sales and second with

below average sales – and re-estimate Equation (1) for both groups. We believe that firms with above average sales can honor their contractual obligations better than other firms. Our results are reported in Table 6. We show that organizational structure is a significant determinant of credit ratings only for firms with above average sales. For this group, we report significantly positive coefficient of SCORP for both equations. In case of firms with below average sales, we show insignificant difference between credit ratings of S-Corporations and C-Corporations. Similar to organizational structure, we report that family management significantly affects credit ratings only for those firms that have above average sales. In case of firms with below average sales, we show insignificant difference between credit ratings of firms with family management and firms without family management. However, in case of family control, we show that it is significant determinant of credit ratings only firms with below average sales. We report significantly positive coefficient of FAMILY_CONTROL for this group. For a group of firms with above average sales, we report insignificant relationship between the two.

**Table 5.** Organizational structure, family management, and credit ratings

Following table uses Equation (2) to document the effect of organizational structure and family management on credit ratings. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank. The coefficient that are significant at 10% are followed by *, those at 5% and 1% by ** and *** respectively.

| | **Equation (2)** |
|---|---|
| FAMILY_MANAGE | 0.2361*** |
| SCORP | 0.2533** |
| FAMILY_MANAGE*SCORP | -0.2861** |
| GROWTH | -0.0314 |
| SALES | 0.0438*** |
| COMP | -0.2033** |
| LEVERAGE | -0.0019** |
| AGE | 0.0185*** |
| No. of Observations | 2350 |
| Wald $Chi^2$ | 122.01 |
| R-Square | 0.0137 |

**Table 6.** Organizational structure, family control, and credit ratings for different sub-samples

Following table uses Equation (1) and Equation (2) to document the effect of organizational structure and ownership structure (family control or family management) on credit ratings in sub-samples of firms generating above average sales and firms generating below average sales. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank. The coefficient that are significant at 10% are followed by *, those at 5% and 1% by ** and *** respectively.

| | **Firms with Below Average Sales** | | **Firms with Above Average Sales** | |
|---|---|---|---|---|
| | **Equation (1)** | **Equation (2)** | **Equation (1)** | **Equation (2)** |
| FAMILY_CONTROL | 0.3221* | | 0.1351 | |
| FAMILY_MANAGE | | 0.1907 | | 0.1837* |
| SCORP | 0.2220 | 0.0444 | 0.2419** | 0.3090** |
| FAMILY_CONTROL*SCORP | -0.3455* | | -0.1816 | |
| FAMILY_MANAGE*SCORP | | -0.1330 | | -0.2748** |
| GROWTH | -0.0187 | -0.0133 | -0.0442 | -0.0483 |
| SALES | 0.0491* | 0.0493* | 0.0292 | 0.0303 |
| COMP | -0.1172 | -0.1200 | -0.3051*** | -0.3080*** |
| LEVERAGE | -0.0017** | -0.0016** | -0.0048 | -0.0048 |
| AGE | 0.0214*** | 0.0221*** | 0.0129*** | 0.0140*** |
| No. of Observations | 1161 | 1159 | 1207 | 1191 |
| Wald $Chi^2$ | 74.78 | 72.60 | 35.29 | 39.97 |
| R-Square | 0.0172 | 0.0167 | 0.0086 | 0.0096 |

### *5.2 Does the effect of family control (family management) on credit rating depend on whether the management (control) rests with family or not?*

There may be concerns that results obtained in Table 4 and Table 5 are driven only by those firms in which control and management rests with single entity. Therefore, agency conflicts become minimal and help improve credit rating of a firm. In order to address these concerns, we re-estimate Equation (1) and Equation (2) for sub-sample where management and control rests with single entity and for sub-sample where management and control rests with different entities. Our results are reported in Table 7. We show that the results obtained in Table 4 and Table 5 hold true for those firms where management and control rests with single entity. We argue that agency problems are the lowest for firms where management and control are with single entity. Consequently, rating agencies rate such firms higher than other firms. In case where there is divergence between management and control, we report insignificant impact of family control and family management.

**Table 7.** Effect of family control (family management) on the relationship between family management (family control) and credit rating

Following table uses Equation (1) and Equation (2) to document the effect of family control (family management) on the relationship between family management (family control) and credit rating. The sample comprises of closed corporations included in the Survey of Small Business Finance (SSBF). The data is collected in 2003 and is issued by the Federal Reserve Bank. The coefficient that are significant at 10% are followed by *, those at 5% and 1% by ** and *** respectively.

| | Control and Management Unification | | Control and Management Divergence | |
|---|---|---|---|---|
| | Equation (1) | Equation (2) | Equation (1) | Equation (2) |
| FAMILY_CONTROL | 0.2447** | | 0.1556 | |
| FAMILY_MANAGE | | 0.1914* | | 0.1386 |
| SCORP | 0.2811** | 0.2300** | 0.1857 | 0.2066 |
| FAMILY_CONTROL*SCORP | -0.3780*** | | 0.0506 | |
| FAMILY_MANAGE*SCORP | | -0.3235*** | | 0.0725 |
| GROWTH | -0.0245 | -0.2813 | -0.0650 | -0.0284 |
| SALES | 0.0455*** | 0.0431*** | 0.0296 | 0.0414 |
| COMP | -0.2115*** | -0.2131*** | -0.2161 | -0.1710 |
| LEVERAGE | -0.0013** | -0.0017** | -0.0346*** | -0.1145** |
| AGE | 0.0187*** | 0.0199*** | 0.0159*** | 0.0116*** |
| No. of Observations | 1874 | 1950 | 476 | 400 |
| Wald Chi$^2$ | 117.92 | 110.00 | 45.92 | 25.33 |
| R-Square | 0.0162 | 0.0147 | 0.0131 | 0.0188 |

### *5.3 Which of the two – family management or family control – are more important for credit ratings?*

In order to see which of the two ownership characteristics (family management or family control) are more important for credit ratings, we estimate the following ordered probit regression. We would like to mention that FAMILY_CONTROL and FAMILY_MANAGE have high correlation. Therefore, we orthogonalize them before using them in Equation (3).

$$\begin{aligned} RATING = {} & \alpha + \beta_1(FAMILY\_CONTROL) + \beta_2(FAMILY\_MANAGE) \\ & + \beta_3(SCORP) + \beta_4(FAMILY\_CONTROL * SCORP) \\ & + \beta_5(FAMILY\_MANAGE * SCORP) \\ & + \beta_6(GROWTH) + \beta_7(SALES) + \beta_8(COMP) + \beta_9(LEVERAGE) + \beta_{10}(AGE) + \varepsilon \end{aligned} \quad (3)$$

The results of our analysis are reported in Table 8. Our results show that both characteristics – family management or family control – retain their significance. However, family management is more important than family control. We report higher coefficient of FAMILY_MANAGE than FAMILY_CONTROL.

## 6. Conclusion

This paper examines the impact of organizational structure and ownership structure (family management and family control) on credit ratings of closed corporations in the USA. Our results show that S-Corporations have higher credit ratings than C-Corporations. We argue that lower agency problems inherent in S-Corporations result in lower information asymmetries. Prior literature documents that financial information of firms with high information asymmetries are not reflected in intrinsic values, thereby causing lower credit ratings than otherwise similar but more transparent firms (Shen et al., 2012). We also show that ownership structure – as explained by family control and family management – is also associated with higher credit ratings. We argue that increased monetary stake of a single entity – family – translates into his altruistic commitment and increased effort, thereby improving credit ratings. Lastly, we show that our results hold only in those firms where management and control is with the family. Divergence between management and control leads to no impact of organizational structure and ownership structure on credit ratings. Our results highlight the importance of unification of ownership and control with single entity in small and medium enterprises.

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