The Journal of Entrepreneurial Finance

Volume 4
Issue 2 *Fall 1995*

Article 7

12-1995

Evidence on the Lack of Separation between Business and Personal Risks among Small Businesses

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Small business researchers conjecture that there is little separation between business and personal risks among small businesses. Personal assets and wealth can be subject to business risks in the form of an implicit or explicit claim depending on the organizational form and whether personal commitments are pledged by owners. The choice of organizational form can be considered a mechanism to increase the degree of separation; however, lenders' requirements for personal commitments mitigate the benefits of limited liability provisions. This paper examines the role of personal collateral and personal guarantees in augmenting implicit claims on business and personal assets with explicit claims on personal assets and personal wealth. We document the degree of non-separation of business and personal risks for 692 firms. Our results suggests that small business owners have a significant incidence of personal assets and wealth pledged for business loans, even for organizational forms such as S-corporations and *C*-corporations with limited legal liability. These results confirm the conjecture that there is a lack of separation between business and personal risks. The lack of separation of business and personal risks has important policy implications for the borrowing patterns and access to credit markets of small businesses.

I. INTRODUCTION

Small business researchers conjecture that there is little separation of the business and personal risks associated with small business ownership. Personal assets can be subject to business risks in the form of an implicit or explicit claim on personal assets depending on the organizational

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The Journal of Small Business Finance, 4(2/3): 197-210
ISSN: 1057-2287

form and whether a personal commitment has been pledged. For example, if a financial institution grants an unsecured loan to a business, the financial institution has an implicit claim on all assets of the business. By pledging business collateral to obtain the loan, the business owner augments the implicit claim on all business assets with an explicit claim on a business asset. Similarly, pledging personal assets as collateral (personal guarantees) commits the specific assets (personal wealth) of the owner. This paper examines the extent small business owners use personal collateral and personal guarantees to augment implicit claims on business and/or personal assets with explicit claims on personal assets and personal wealth. It empirically investigates the degree of non-separation of business and personal risks.

Personal collateral and personal guarantees have similar implications for the nature of bank claims. They are a means to enhance credit via other collateralization. Since there is a difference in the stated legal liability for organizational forms, the incidence of personal commitments (i.e., personal collateral and/or personal guarantees) is examined for each organizational form. Sole proprietorships and partnerships have unlimited business and personal liability. In the absence of personal commitments, owners are subject to an implicit claim on all business assets and personal wealth. Under non-corporate organizational forms, the pledging of personal collateral augments the implicit claim on all personal wealth with an explicit claim on a personal asset. Although it does not reduce the size of the implicit claim on personal wealth, pledging personal collateral adds an explicit claim on a personal asset. The pledging of a personal guarantee augments the implicit claim on all personal assets and wealth with an explicit claim on all personal wealth including future income. Personal collateral requirements for non-corporate organizational forms may appear redundant; however, the pledging of personal assets may provide the lender with greater ability to prevent asset disposition or a reduction in asset values.

Under corporate organizational forms, the pledging of personal commitments generates explicit claims on personal assets and/or wealth. The pledging of personal collateral reduces the effectiveness of limited liability protection under corporate organizational forms. Personal assets are no longer separated from business assets and lenders' claims fall explicitly on the owners, thus allowing lenders to pierce the corporate veil.

The analysis of the lack of separation between business and personal risks is a unique contribution for several reasons.

1. This analysis allows small business researchers to complete their understanding of the total risks faced by owners of small businesses.

These risks of small business ownership may extend beyond business failure and could result in personal ruin. Thus, theoretical models of corporate finance theory need to accommodate a more complicated limited liability condition.

2. It proposes a partial explanation of credit rationing by lenders. Bernanke and Lown (1992) argue that the decline in bank lending in the early 1990s (i.e., credit crunch of 1990s) may have been related to a deterioration in the quality of business collateral offered by firms seeking bank credit or an increase in the amount or quality of business collateral demanded by banks. Our result extends this explanation confirming that in the absence of available business collateral, a substantial proportion of small business owners are required to pledge personal commitments to obtain business loans. Personal commitments by lenders can be personal collateral and/or personal guarantees. A personal guarantee differs from personal collateral in that a personal guarantee provides an explicit claim on the personal wealth of the owner, rather than an explicit claim on a personal asset. A lender's ability to seek repayment from an owner is not limited to personal assets, but also includes the current wealth and future income of the owner. Our extension of Bernanke and Lown may help explain why some business owners, who lack the personal assets and wealth to provide personal commitments, are more likely to experience business credit rationing. Thus, models of loan markets should incorporate the equilibrium supply of personal commitments.

3. It may help explain the relationship between personal commitments and firm characteristics such as profitability and leverage. The purpose of this paper is to provide empirical evidence of the lack of separation between business and personal risks among small businesses, which may have important theoretical and policy implications on models of corporate finance and the audit market.

II. SCOPE

The purpose of this paper is to provide empirical support for the widely accepted conjecture that there is a lack of separation between business and personal risks among small businesses. We examine the extent personal real estate, other personal assets, and personal guarantees pledged for business loans, while increasing the amount of assets financed and the firm's leverage ratio. The pledging of personal commitments increases the personal risks of business ownership. Higher personal commitment requirements subject small business owners to the risks of simultaneous business and personal bankruptcies. This paper documents the personal risks among small businesses for different organizational forms.

Organizational form may affect the willingness or ability of business owners to make personal commitments, in addition to other factors such as tax planning, resolution of agency problems, etc. The choice of organizational form such as corporations can be considered a mechanism to increase the degree of separation between business and personal risks. Sole proprietorships and partnerships do not have legal protection from unlimited liability in the case of business failure. These organizational forms are normally expected to experience a lower degree of separation between business and personal risks than corporations. On the other hand, pledging personal collateral weakens the limited liability protection of the corporate form, thus increasing the personal risks of the business ownership. Personal guarantees further weaken the limited liability protection of corporate organizational forms since a personal guarantee pledges current wealth and future incomes to obtain a business loan.

Prior literature examined several factors related to the incidence of business collateral which may also be related to the incidence of personal commitments within organizational forms. Firm size, debt ratio, and firm profitability were used to investigate the relation between firm characteristics and personal commitments. The significance of each factor was examined for each organizational form to allow for more insightful analyses.

We also examine an agency explanation for the incidence of personal commitments across organizational forms. Partnerships are predicted to have a lower incidence of personal commitments by individual partners than the other organizational forms due to the higher potential agency problems between partners. The actions of an individual partner can place the personal assets and wealth of all other partners at risks. This potential agency problem leads to greater personal risks in the partnership form. Due to unequal risk sharing and free-riding among partners, each of the partners will be less inclined to pledge personal collateral or personal guarantees for business loans. Partners will want to reserve the option to mitigate the agency-related actions of other partners by retaining the right to withhold personal assets from the partnership via asset disposal or assignment. The pledging of personal assets on behalf of the partnership would eliminate this means of protection from other partners. Our paper is organized as follows. Section III outlines the relevant literature. Section IV discusses the

NSSBF data and our methodology. Section V presents the results. Section VI concludes.

III. LITERATURE

Many small businesses pledge business collateral for debt financing. Berger and Udell (1990) report that two-thirds of all commercial bank loans are extended on a secured basis. The National Federation of Independent Businesses (NFIB) reports that 60 percent of firms with commercial bank loans pledge business collateral as security for the loan agreement. The NFIB also reports that some form of collateral is pledged for 80 percent of the dollar volume of small business loans. Evidence suggests that several factors affect business collateralization. Leeth and Scott (1989) find seven factors influencing the use of business collateral: probability of default, firm size, asset specialization, loan maturity, loan size, real risk-free interest rate, and the legal environment. They find that the incidence of debt secured by business collateral among small businesses is directly related to their probability of default and inversely related to the loan size, loan maturity, and the marketability of assets.

Several theories have attempted to explain the use of business collateral among larger firms (see Scott, 1977; Smith & Warner, 1979; Stulz & Johnson, 1985, on limited liability theory). Chan and Kanatas (1985) suggest a theory that predicts collateral usage based on loan size, loan maturity, and company size. Leeth and Scott (1989) proposes an agency explanation that the business collateral provision lowers a firm's total cost of debt in three ways: 1) reduces incentives for asset substitution by managers; 2) reduces potential foreclosure costs; and 3) mitigates the underinvestment problem.

Business collateral usage varies across firm and owner characteristics. Firm size is inversely related to collateral usage. Altman, Haldeman, and Narayanan (1977) suggest that collateral may reduce debt expenses more for smaller firms because of their higher probability of bankruptcy. None of these studies examines personal collateral or personal guarantees pledged for business loans. A more detailed analysis of personal commitments can provide additional insight into small business lending.

The existing literature on small business collateral has left personal collateral usage largely unexplored. Our paper differs from the existing business collateral literature in several ways. First, we document the incidence of personal commitments by small business owners to investigate the lack of separation of business and personal risks. Previous measures of business risks in earlier studies have excluded the usage of personal collateral and personal guarantees, thus underestimating its true magnitude. Second, we examine whether some of the factors that are related to business collateral are also related to personal commitments.

Third, we examine an agency explanation of the incidence of personal risks across organizational forms. The agency explanation predicts that partnerships will have a lower incidence of personal commitments than other organizational forms due to higher potential agency problems between partners. First, partners have an unlimited personal liability for business risks including the activities of the other partners. In a partnership, business partners have a greater ability to dispose, pledge for personal use, or sell personal assets. If the personal assets remain unencumbered, partners can escape the onus of unlimited liability. Pledging these assets for business loans would remove ownership rights from the asset's owners. Another problem involves the unequal risk exposure and free-riding related to which partner should pledge personal assets among business partners. The pledging of personal commitments by one partner could lead to adverse incentives for other partners to take greater business risks at the expense of the partner(s) pledging personal assets. Thus, the participation in a partnership results in implicit claims on the business assets and the personal assets and wealth of all partners. By pledging personal collateral, partners augment the general claim on personal assets and wealth with a specific claim on personal assets. Likewise, partners who pledge a personal guarantee augment the general claim on all partners' personal assets and wealth with a specific claim on his or her personal wealth.

Sole proprietorships are not subject to the agency problems associated with the partnership form. Pledging of personal commitments is related to the risk perception and aversion of the lender and the owner's perception of the business opportunity. The pledging of personal assets by sole proprietorship may appear redundant, except where there is a need to make the lender's claim on personal wealth explicit. However, the personal commitment is a means of credit enhancement to the lender in some cases. We also provide evidence on the extent personal collateral and guarantees are committed by small business corporations whose owners are protected from business losses. Using the NSSBF data, we are able to examine this explanation in a meaningful way. Our paper fills these important gaps in the literature.

IV. METHOD

One reason for the paucity of empirical work on personal risks of business ownership is the lack of available data on personal commitments for business loans. Recently, a source of data has been collected which contains information on personal commitments pledged for business loans. The data is obtained from the National Survey of Small Business Finances conducted by the Research Triangle Institute jointly sponsored by the Board of Governors of the Federal Reserve System and the Small Business Administration. The survey was conducted from October 1988 March 1989. The survey focuses on non-financial, non-agriculture small businesses (less than 500 employees) that were operating as of December, 1987. Firms involved in the agriculture, forestry, and fishing industry; finance and insurance underwriting; or real estate investment trusts were excluded from the survey. Financial data was collected only for the last fiscal year. The survey consists of 3,404 firms—1,875 corporations, 1,529 partnerships and sole proprietorships. The survey contains several measures of business collateral and personal commitments.

The business collateral pledged are inventory and accounts receivable, equipment, and business real estate. Personal real estate, other personal assets, and personal guarantees are the three observed forms of personal commitments. The sample contains 692 firms with usable responses, regarding the relevant items of interest. It is note worthy that the data on personal commitments are reported as dichotomous variables, which are recorded as personal commitments pledged if any of the three measures of personal commitments are pledged. The organizational form breakdown for the usable sample is as follows: 118 sole proprietorships, 51 partnerships, 121 *S*-corporations and 402 *C*-corporations.

To conduct our analyses, we examine the incidence of personal commitments by organizational form and one of the following variables: firm size, profitability, and leverage ratio. The sample partitioning allows us to examine the incidence of personal commitments within organizational forms.

V. RESULTS

Panel A of Table 1 depicts the relation between the incidence of personal commitments and organizational forms. Sixty-nine percent of the firms (478/692) pledged some form of personal commitment for a business loan. To further investigate these results, the sample is partitioned by organizational form. Sole proprietorships and partnerships have similar incidences of personal commitments, 54.6 percent and 54.1 percent respectively. This result is consistent with the lack of separation of business and personal risks. *S*-corporations have the highest incidence of personal commitments pledged at 72.9 percent, while 58.9 percent of *C*-corporations pledge some form of personal commitment. The lower level of personal commitments for partnerships relative to corporations is consistent with our agency explanation. The higher proportion of personal commitment for corporations is evidence of a weakening of limited liability provisions for small businesses, which suggests that not all corporations can claim protection from the limited liability provision.

Panel B reports the incidence of each form of personal commitment for different organizational forms. Personal guarantees are the most

Table 1
Incidence of Personal Commitments Pledged for Business Loans and Small Business Organizational Forms
Panel A

Personal Collateral	*Sole Proprietorships*	*Partnerships*	*S-Corporations*	*C-Corporations*
Business Loans with personal commitment	54.6% (74)	54.1% (34)	72.9% (98)	58.9% (272)
Business Loans w/o personal commitment	45.4% (44)	45.9% (17)	27.1% (23)	41.1% (130)
Sample Size	100% (118)	100% (51)	100% (121)	100% (402)

Notes: The personal commitment variables are personal real estate, other personal assets, and personal guarantees.

Table 1
Breakdown of Personal Commitments for Business Loans
Panel B

	Sole proprietorships	*Partnerships*	*S-corporations*	*C-corporations*
Personal real estate	81.4% (35/43)	75% (3/4)	100% (15/15)	82.9% (34/41)
Other personal assets	16.3% (15/92)	10.8% (4/37)	18.8% (18/85)	14.2% (44/309)
Personal guarantee	83% (39/47)	97% (32/33)	100% (81/81)	97.1% (235/242)

Notes: The number of firms used to calculate the percentages are reported in parentheses. The numerator is the number of firms which pledged some form of personal commitment. The denominator is the total number of firms in each cell with usable, non-missing responses.

common form of personal commitment for all organizational forms, followed by personal real estate. The larger number of firms pledging personal real estate than 'other personal assets' may be explained by lenders' preferences for real estate as personal collateral. If a loan default occurs, lenders are more likely to take possession of personal real estate than many other personal assets which could be dissipated or hidden more quickly. The general lack of liquidity of personal real estate makes it easier to monitor compared to other personal assets such as furniture or jewelry.

Partnerships have a lower incidence of personal real estate and other personal assets than the other organizational forms, except for personal guarantees. These results are consistent with our agency explanation. Individual partners are less likely to pledge personal commitments to secure business loans.

Large differences in personal commitments between organizational forms are mostly limited to the personal real estate category among corporations. The difference between the corporate forms may have an agency explanation. One could argue that *S*-corporations are more likely to have a smaller number of shareholders consisting of family and friends, while *C*-corporations may have larger numbers of shareholders who are linked by business ties only. The nature of these ties may infer that owners, who are family members, may be more likely to pledge personal commitments. Overall, these results support our claim that limited liability protection is severely reduced for corporations. This evidence strongly suggests that personal risks of small business ownership extend beyond business risks and the risks of losing specific personal assets to the current and future wealth of small business owners.

Table 2 shows the relation between firm size and the incidence of personal commitments for different organizational forms. The sample is partitioned into the following size categories based upon total assets: less than $100,000, $100,000-$500,000, and $500,000 or greater. With the exception of partnerships, the demand for personal commitments by lenders decreases as firm size increases. There is nearly a 20 percentage point difference in the incidence of personal commitments between the smallest and largest size categories of sole proprietorships. The inverse relation between the incidence of personal commitments and firm size confirms results found in previous studies of business collateral and firm size.

These results for firm size could be consistent with several explanations.

Table 2
Incidence of Personal Commitments Pledged for Business Loans and Firm Size

Firm Size (Asset Size)	*Sole Proprietorships*	*Partnerships*	*S-Corporations*	*C-Corporations*
Smallest	69.6%	56.3%	100%	82.8%
(< $100,000)	(39/56)	(9/16)	(11/11)	(24/29)
Medium	58.3%	62.5%	80.6%	67.2%
($100,000-500,000)	(28/48)	(10/16)	(29/36)	(80/119)
Largest	50%	78.9%	78.4%	66.1%
(> $500,000)	(7/14)	(15/19)	(58/74)	(168/254)

Notes: The percentages reflect the incidence of personal commitments for each cell. The numerator is the number of firms in each cell which pledged some form of personal commitment. The denominator is the total number of firms in each cell with usable, non-missing responses.

1. It may be increasingly difficult for some owners to willingly pledge personal assets as the number of investors increases.

2. Size could be a reflection of prior success and thus, there may be lower requirements for personal commitments by lenders to obtain a business loan.

3. The type of small business may be related to size. Manufacturing and mining firms are larger and have more tangible assets, while service firms are smaller and have fewer fixed assets available for collateral.

4. Larger firms may have more fixed business assets which can be pledged as business collateral, while smaller firms may have less business collateral. Lenders would require similar levels of personal commitments from smaller businesses. The significant difference in the incidence of personal commitments based upon firm size provides evidence of the lack of separation of total risks that is most acute in the smallest of small businesses. Large non-financial firms tend to be corporations and are assumed to possess a greater degree of separation of business and personal risks. Yet, a non-negligible amount of personal risks still exists among small business corporations, thus reducing the benefits of limited liability protection. Thus, many small business owners are either required to or voluntarily pledge personal assets and wealth to supplement business collateral in order to obtain credit financing.

Table 3 depicts the relation between leverage ratio and the incidence of personal commitments for different organizational forms. Leverage ratio is measured as total liabilities divided by total assets. The sample is partitioned based upon three leverage categories: less than 15 percent, 15-40 percent, and greater than 40 percent. Firms with lower leverage

Table 3
Incidence of Personal Commitments Pledged for Business Loans and Leverage

Leverage	*Sole Proprietorships*	*Partnerships*	*S-Corporations*	*C-Corporations*
Low	50%	75%	80%	50%
(LR < 15%)	(9/18)	(3/4)	(4/5)	(5/10)
Medium	67.9%	100%	72.2%	76.3%
(15 % < LR < 40%)	(19/28)	(6/6)	(13/18)	(45/59)
High	64.7%	57.9%	83.3%	68.1%
(LR > 40%)	(44/68)	(22/38)	(75/90)	(213/313)

Notes: The number of firms used to calculate the percentages are reported in parentheses. The numerator is the number of firms in each cell which pledge some form of personal commitment. The denominator is the total number of firms in each cell with usable, non-missing responses.

Table 4
Incidence of Personal Commitments Pledged for Business Loans and Profitability

Profitability	*Sole Proprietorships*	*Partnerships*	*S-Corporations*	*C-Corporations*
Profitable	63.3%	63.2%	76.6%	67.2%
	(50/79)	(24/38)	(59/77)	(178/265)
Unprofitable	65%	80%	89.2%	69.1%
	(13/20)	(4/5)	(33/37)	(67/97)

Notes: The number of firms used to calculate the percentages are reported in parentheses. The numerator is the number of firms which provided some form of personal commitment. The denominator is the total number of firms with usable, non-missing responses.

ratios have lower incidences of personal commitments, except for partnerships. One explanation is that leverage is constrained by the ability or willingness of owners to make personal commitments. Smaller businesses do not have the supply of unencumbered personal assets or sufficient personal wealth to secure higher levels of leverage. Owners of proprietorships (corporations) with smaller (larger) personal assets may also have fewer (more) other sources of funds and thus desiring more credit financing.

Table 4 reports the relation between profitability and the incidence of personal commitments for different organizational forms. The sample is partitioned into two profitability categories: non-negative profits and negative profits. Profits are measured as earnings before taxes. Sole proprietorships and *C*-corporations reflect little disparity in the differences in personal commitments, while partnerships and *S*-corporations have greater disparity. There is an inverse relationship between profitability and personal commitments. The results for partnerships and corporations suggest that: 1) profitable firms are able to refuse a lender's demand for more personal commitments when the firm is doing well or can use internal funds generated from profitability to obtain financing or 2) owners of unprofitable firms, who possess favorable asymmetric information or are more optimistic, are willing to pledge personal assets or wealth. Thus, increasing the simultaneous occurrence of business ruin and personal ruin when the firms are not doing well. Our results find evidence that the total risk of small business ownership is greater than previously presumed for noncorporate as well as corporate organizational forms.

VI. SUMMARY AND DISCUSSION

The results suggests that personal commitments are an important component of small business lending. The incidence of personal commitments is related to organizational form, firm size, profitability, and leverage ratios. Firm size is inversely related to the incidence of personal commitments for sole proprietorships and corporations. Larger firms have a greater degree of separation of business and personal risks and thus lower personal commitments. The results for profitability and leverage are consistent with this explanation. We find empirical support for an agency explanation of personal commitments among organizational forms. Partnerships have the lowest incidence of personal commitments among organizational forms. In sum, we find empirical evidence supporting the conjecture that there is a lack of separation of business and personal risks among most small businesses.

Small businesses depend primarily on banks for debt financing. Popast (1986) finds that the small firms' bank financing accounts for 20-30 percent of their total debt and a larger proportion of secured debt. Personal collateralization may allow financial institutions to finance more riskier projects on the margin than they would in its absence. Given this dependence on credit financing, corporations are faced with a difficult dilemma with respect to minimizing the personal risks of business ownership and obtaining credit financing. Owners of corporations are required to pledge personal commitments, which forfeits the limited liability protection of their organization structure. Prior to this paper, there was no empirical evidence of the personal risks of small business ownership. The personal risks are substantial for all organizational forms and should be included when examining business risks.

There are important policy implications for the finding of a lack of separation of personal and business risks in small businesses.

1. An underinvestment problem could exists if risk averse small business owners become less willing to borrow funds to be supported by personal assets and wealth to undertake positive net present value projects. Economic development and growth in smaller communities where owners may have undiversified personal portfolios may be restrained since these projects must be forgone. A high incidence of lenders requiring personal collateral and guarantees may severely reduce personal diversification of small business owners.
2. It may help explain differences in the availability of credit financing among seemingly similar small businesses. The fact that some owners are more willing and/or able to pledge personal collateral and personal guarantees implies that business owners without the ability to provide them may be rationed credit by financial institutions. Institutions are requiring small business owners to pledge personal assets and wealth. Thus, in modeling the loan function of small businesses, personal commitments must be included.
3. The availability of personal commitments could enable small businesses to obtain debt financing even in the presence of asymmetric information between owners and lenders. Thus, one could argue that the ability and willingness of owners to pledge personal commitments as a signal can circumvent the effects of asymmetric information in credit markets.
4. Our findings also have important implications for finance theory including capital structure, agency costs, and risk aversion/bankruptcy. Leverage levels for small businesses are overstated since the relevant total asset base should include business and personal assets. Theories of leverage should encompass personal risks to accurately reflect the total risks of leverage for small business. Empirical attempts to explain small business leverage are mis-specified if personal risks are not incorporated. Agency-related issues such as asset substitution and claim dilution must be expanded to incorporate personal assets. The threat of bankruptcy becomes more ominous since not only the business assets are vulnerable, but so are personal assets.

REFERENCES

Altman, E. I. Haldeman, R. G., & Narayanan, P. (1977). Zeta analysis: A new model to identify bankruptcy risk of corporations. *Journal of Banking and Finance* (June), 29-54.

Bates, T., & Osborne, A. (1979). The perverse effects of SBA loans to minority wholesalers. *Urban Affairs Quarterly, 15*(1), 87-98.

Berger, A. N., & Udell, G. F. (1990). *Collateral, loan quality, and bank risk. Journal of Monetary Economics* (January), 21-42.

Bernanke, B. S., & Lown, C. S. (1991). The credit crunch. *Brookings Papers on Economic Activity, 2*, 205-248.

Chan, Y. S., & Kanatas, G. (1985). Asymmetric valuations and the role of collateral in loan agreements. *Journal of Money, Credit, and Banking, 17* (February), 84-85.

Leeth, J. D., & Scott, J. A. (1989). The incidence of secured debt: Evidence from the small business community. *Journal of Financial and Quantitative Analysis, 24*(3), 379-394.

Riding, A. L., & Swift, C. S. (1990). Women business owners and terms of credit: Some empirical findings of the Canadian experience. *Journal of Business Venturing*, 327-339.

Schwartz, A. (1981). Security interests and bankruptcy priorities: A review of current theories. *Journal of Legal Studies, 10*(January), 1-37.

Scott, J. H.,Jr. (1977). Bankruptcy, secured debt, and optimal capital structure. *Journal of Finance, 32* (March), 1-19.

Scott, J. A., & Smith, T. C. (1986). The effect of the bankruptcy reform act of 1978 on small business loan pricing. *Journal of Financial Economics, 16*, 119-140.