

Uses of Equity Capital by Small Firms—Findings from the Surveys of Small Business Finances (for 1993 & 1998)

A working paper by

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Presented at the 14th, Annual Conference on Entrepreneurial
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The statements, findings, conclusions, and recommendations found in this study are those of the authors and do not necessarily reflect the views of the Office of Advocacy, the United States Small Business Administration, or the United States Government.

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Abstract
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While the importance of venture capital to the growth of small firms has been widely discussed during the past decade, little is known about the uses of equity capital, especially internal equity capital, by majority of small firms in the United States. Information from the Federal Reserve Board's Survey of Small Business Finances provides a rare opportunity to examine this important issue.

This paper utilizes the information collected in the 1993 and 1998 Small Business Finance surveys to investigate the uses of equity capital by small firms. We found that while the importance of public issue markets (IPOs) and the role of venture capital investment in promoting the growth of small dynamic firms cannot be denied, the importance of external equity capital in promoting the formation and the growth of small firms seems to be overstated. Only a very small number of small firms used external equity. In fact, the information on the uses of venture capital (equity capital from external sources) from the national surveys is too limited to permit a statistical analysis of the factors determining their uses by small firms. It is the internal equity capital, not external equity, that is one of the major financing sources for most of small firms in these surveys. A majority of small firms relied on internal sources of capital (owner's capital, owner's loans, and retained earnings) and external borrowing from financial institutions to finance their business operation and growth. There appeared to be a "pecking order" of borrowing from financial sources from internal sources to financial institutions to non-financial lenders. In addition, internal equity and commercial bank loans appeared to be complementary financial resources.

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Introduction

The phenomenal growth in the number of small business ventures over the past decade has increased the demand for debt and equity capital by small business owners. It is estimated that total assets of \$2.2 trillion were held by some 5 million small businesses in 1998 with about \$870 billion of equity capital, or net worth, used as the source of financing for these asset purchases.¹ It is, however, important to remember that the sources of the growth in the total value of a company's net worth come from the initial and subsequent equity investments by the owner(s), business savings or retained earnings, as well as gains from market valuation in the assets when assets were valued at the appreciated market prices. Therefore, it is difficult to estimate the importance of initial and subsequent equity investments in the total composition of total equity held by the small business sector.

While an extensive literature exists on the availability of equity capital to small business, almost all of this literature focuses on the supply of external equity capital from the public markets (the initial public offerings), organized private equity markets (venture capital) and, to a more limited extent, informal equity capital markets (angels). This study examines the demand for "additional" equity capital—both internal and external equity capital, by small business owners using the information collected in the Survey of Small Business Finances (for 1993 and 1998) by the Federal Reserve Board.

Literature Review

The private equity market used by small firms is especially interesting because it is often involves rather complex contracts that are informationally opaque and contrasts significantly from the more informationally transparent public stock and bond markets used by large firms. External equity raised by small firms originates in the informal angel capital market, where individuals invest directly in small companies through an equity contract; or the venture capital market, where financial intermediaries deploy funds to select small business ventures. Internal equity, primarily in the form of owner contributions and net worth, is used more widely by small business owners. The characteristics of small firms play an important role in their ability to raise internal and external equity capital. Those factors include growth stage (Fluck et al., 1997; Berger and Udell, 1998; industrial classification (Fenn and Liang, 1998; Timmons, 1997; Carpenter and Peterson, 2002); goals of the family and business (Barton and Mathews, 1989; Petty and Bygraves, 1993; and Kuratko, Hornsby and Nafizinger, 1997), risk

¹ Estimates from the 1998 Survey of Small Business Finances conducted by the Federal Reserve Board. See Charles Ou, "Financing Patterns of Small Firms: Findings from the 1998 Survey of Small Business Finances (SSBF)" an unpublished manuscript (1993). Table 1.6aa-1.

preference (Bolton and Freixas, 2000), and government policy (Papadimitroiu and Mourdoukoutas, 2002; Tucker and Lean);

Startup firms are typically informationally opaque firms (Schmid, 2001) where the lender knows a limited amount of information about the firm or their products, hence these firms are more dependent upon owner loans, internal equity, trade credit and angel financing. As study based on Wisconsin data, suggests that external finance, typically external debt financing, actually exceeds internal finance at startup (Fluck et al., 1997). Financial capital provided by the owners, either in the form of owners loans or internal equity, increase substantially as the firm approaches middle age from 25 to 40 percent of total financing (Berger and Udell, 1998). Modern information based theory of security design and the notion of a financial pecking order also help explain the financing of small firms over the growth cycle. Monitoring (Diamond, 1984), adverse selection (Myers and Majluf, 1984) and moral hazard imposed additional costs on suppliers of debt or equity capital. Costly monitoring and adverse selection challenges would favor external debt, while moral hazard challenges would favor external equity (Berger and Udell, 1998). Pecking order theory would suggest that external debt be employed before external equity, however this argument is dependent upon the information held by suppliers of debt or equity capital.

Some types of firms, especially high growth technology firms, have a substantially higher probability of acquiring external equity than other firms. On one hand, these firms offer the angel and venture capitalist the expectation of high returns, however these firms have highly variable profits, substantial information asymmetries and a lack of collateral which limits their access to debt (Carpenter and Peterson, 2002; Fenn and Liang, 1998; and Timmons, 1997). Angel and venture capitalist funding is interconnected as these firms grow and develop, where they play a complementary role (Freear and Wetzel, 1995). The upstart firm may solicit angel capital initially and replace this capital with venture capital as the firm grows beyond the funding capacity of the angel investor.

Some matching occurs between potential suppliers of financial capital and small business owners. The goals and objectives of the family and their business and their risk preference are critical in finding the right match. Life style preferences (Petty and Bygraves, 1993), personal financial security and autonomy (Kuratko, Hornsby and Nafizinger, 1997) and risk preferences (Bolton and Freixas, 2000; and Xiao, Alhabeeb, Hong and Haynes, 2001) will determine what type of financial capital the small business owner will pursue. Petty and Bygraves (1993) found that life style preferences were just as important as the goal of wealth maximization in choosing sources of financial capital. Kuratko, et al (1997) found that personal financial security and autonomy were as critical as business financial goals in pursuing financing alternatives. Bolton and Freixas (2000) examined the business risk profile and found that riskier firms prefer bank loans, somewhat safer firms prefer equity and bonds where they avoid intermediation costs. Xiao, et al. (2001) found that business owners are very risk tolerant and that education, age, race and personal net worth were important factors in determining their risk taking attitudes and behaviors. Other work suggests that graduate education significantly influenced the odds of using external equity financing by women entrepreneurs (Carter, Brush, Green, Gatewood and Hart, 2003).

While characteristics of those demanding financial capital are important determinants, public policy decisions can impact equity financing. Papadimitriou and Mourdoukoutas (2002) examine equity financing in the U.S., Israel and Ireland. They examine the impact of less direct methods employed in the U.S. to stimulate the venture capital industry to somewhat more direct methods, including public-private partnerships and public ownership of venture capital funds. Tucker and Lean (2003) examine the equity financing gap faced by small businesses and explore informal financing initiatives.

This study explores the determinants of internal and external equity capital use and discusses the important role of public policy in the demand for equity capital. The next section examines conceptual considerations in assessing the demand for internal and external equity capital.

The Demand for Internal and External Equity Capital by Small Firms—Some Conceptual Considerations

A firm's demand for capital arises when the expected cash inflow falls short of the expected cash outflow. The capital needs can be fulfilled by either debt capital or by equity capital. Using equity capital has usually been touted as a preferred form of financing for young promising firms with the prospect of experiencing a prolonged period of cash shortages. Equity capital provides long-term funding with minimal cash flow drains typically associated with a debt financing. Moreover, investments by equity investors also enhance the creditability of a new firm by indicating that the firm has the "winning approval of sophisticated financial professionals."

Two circumstances give rise to this cash shortage that requires financing from equity capital sources—one when a firm experiences financial distress and the financing from alternative sources were lacking; and, in the second case, when a growing business generates a rapidly rising cash outflow that outpaces the growth in cash inflow from regular financing sources. In the first case, the firm needs working capital/ cash to avoid defaults on loans and thus the risk of foreclosure or bankruptcy. In the latter case, the high growth young firms need to spend so much cash to create new products and services for the new market(s) they are faced with prolonged cash shortages. Uncertainty about the firm's expansion prospects discourages regular lenders from extending loans. Equity capital can be used to meet these distress or expansion needs. However, decisions involved in borrowing and lending equity capital for these two different needs are very different. Internal and external equity capital are supplied to meet different market conditions.

Demand for External Equity by Dynamic Ventures

Most of the existing discussions on the demand for equity capital concentrate on the uses of external equity capital—e.g. equity capital raised in the IPO market, venture capital from venture capital firms, and investment by private equity investors (the angels). This is a very special kind of demand for equity capital by a special group of small firms with high growth potential and high risk.

Many factors determine the demand and the supply of this type of equity capital. To the entrepreneurs, getting equity capital from investors should be looked upon as an effort to invite strategic partners to grow a joint venture. It involves sharing of the vision, the control and the management of the business as well as the profit potential of a business operation. High costs of borrowing, 30 to 50 percent return on investment (ROI) to the investors, plus the potential costs of losing control of the business need to be balanced with the prospects for a faster business growth and potential appreciation in the value of the business.² To these entrepreneurs, availability of alternative financing may not be that relevant. What is involved may not be choosing among debts, internal equity and external equity, but rather choosing a growth strategy that maximizes the wealth growth potential.

For investors (the supply side), the high risk of failures involved in launching a dynamic growing business, demand a high return on investment (ROI) as a compensation. High ROI is possible only in ventures with high growth potential in a relative short period, say five to seven years during the pre-boom period of late 1990s. The prospect of a rapidly expanding sales and profit is the only way to attract venture capital.³ Investing in such a business also involves more than just providing financing. It involves the development and collaboration of a business strategy with the entrepreneur(s) to grow the business venture to a certain size. The financial risk is high, therefore these investors demand a high potential return.

It is difficult to estimate how many small businesses have the characteristics that would make them attractive to equity investors in the United States. Fast growth is one major characteristic of firms utilizing venture capital. Of the 5.3 million small firms with employees in the U.S. some 100,000 to 200,000 of them may qualify to become the investment targets of equity investors.⁴

Use of Equity Capital by Most Small Firms

Most small firms are not dynamic ventures. They don't grow or grow only steadily to serve growing local market(s). For a non-growth or slow growth firms, the demand for equity arises as a part of overall financing decision of business operations. Here, equity capital is used not to develop new products, new markets, or to build emerging empires. Rather equity capital is used as an integral part of financing of a business operation—regular business operations such as buying new equipment and bridging the temporary cash flow gaps. In this respect, the use of equity capital use is the outcome of regular financing decisions about the relative availability and costs of different financing sources. The pecking order theory of the uses of financing sources

² As one venture capitalist put it, "Only 3-5 percent of America's business founders survive to become CEOs of the mature company."

³ Aside from high risk, other factors also contribute to the high costs of borrowing/lending venture capital. They include: information costs—costs involved in performing due diligence by the investors, and the transaction costs of negotiating the deals. An investor's knowledge of the firms/industry would affect the costs and risk incurred in investing, thus reducing the "required" rates of return on investment.

⁴ The estimates are derived from data from the Bureau of Census on high growth firms with at least 5 or more employees in mid 1990s.

ranks in order of preference internal sources; informal sources; higher cost or less available sources, such as financing sources from financial institutions; etc.⁵ However, since owner's equity is a very important component of a business's collateral (in addition to physical assets), the use of internal equity is complementary to the use of financing from financial institutions.

The uses of equity capital by this group of business owners is likely to be more supply constrained—affected by the availability of alternative sources of financing, including the availability of internal sources of funds and debt financing from outside sources to meet the urgent needs for cash flow management. Almost no external equity financing can be expected for this type of financing. It is impossible for an investor to expect high returns from earnings growth in an environment where the risk of bankruptcy is relatively high, except, of course, in the case of an leveraged buyout (LBO) financing packages used to salvage an “established” money losing business. Financing for this purpose will come from either debt capital with owner collateral and/or personal guarantees, and/or internal source of capital such as owner's equity or owner's loans. If external equity does occur in this case, it will be a financing of last resort and come about only from those sources with an arms-length transaction. Equity capital can be used to relieve the firm in distress from the liquidity pressure in making a loan payment. They also help improve the debt equity ratios that enhance the chance of obtaining debt financing. The “investors” in this situation is, therefore, not “investing” under the standard risk-return considerations. Many non-economic factors enter in determining the use of capital in this case, considerations, such as personal and business affinity.

In sum, different hypotheses need to be developed in discussing the uses of equity capital by these two different types of small firms. Several hypotheses emanate from these basic conceptual notions about the supply and demand for equity capital by small business. The discussions suggests that only younger and fast growing firms will use external equity capital to expand their business, especially for new market development. In addition, it appears that a firm's current financial conditions have little bearing on the investors' decision to invest. It is the potential of a huge market size and the ensuing earning potential that count. Earnings and financial conditions (as indicated by Altman Z) are not important factors either. Given the limited information on external equity in these data, this study will focus on the determinants of internal equity capital use.

For most small firms, it is the supply of internal savings and external debt that will be the most relevant in assessing their use of internal equity. These data are a much richer source of analysis of this internal equity decision. The following hypotheses on the uses of internal equity capital will be examined:

1. Younger firms are more likely to utilize internal equity financing than older firms;
2. Smaller firms are more likely to utilize internal equity than larger firms;
3. Lower quality (weaker financial condition) firms are more likely to utilize internal equity than higher quality (stronger financial condition) firms;

⁵ The high agency costs of business financing to small firms can be reduced by providing collaterals, owners' guarantees as well by establishing enduring banking relations. The costs of borrowing from financial institutions decline significantly as the banking relationship is established and grow.

4. Firms using other internal financing sources, such as owner loans, are more likely to utilize internal equity than other firms not using other internal financing sources;
5. Firms using internal equity to expand the business (by financing the purchase of equipment or to grow the business) utilize internal equity as a complementary financial resource with financing from other financial institutions; and
6. Firms using internal equity to finance cash flow problems caused by the firm's financial difficulties utilize internal equity as a complementary financial resource with financing from sources other than financial institutions (such as personal credit cards and financing from non-financial institutions).

Empirical Considerations

The 1998 SSBF (and the NSSBF for 1993) is the national survey conducted by the Federal Reserve's Board of Governors for information on small businesses on their uses of different financing sources.⁶ This study utilizes all of the observations from the 1993 and 1998 surveys and distinguishes small businesses by their use of internal and external equity capital.

This study utilized three questions from the survey to determine the use of internal and external equity capital. It also allows us to examine the firm's use of equity financing in conjunction with other debt capital used by the firm. Internal equity capital is obtained from existing owners, their relatives or from new and existing and partners over the past three years. External equity capital is obtained from sources other than existing shareholders or their relatives. The dependent variables (uses any equity, uses internal equity, uses external equity and uses both internal and external equity) in this analysis are dichotomous.

Although data collected on the uses of equity in 1998 differed slightly from the uses of equity in the 1993 survey, data collected in both surveys (the 1998 SSBF and the NSSBF for 1993) were combined to increase the number of observations for the statistical analysis. However, the database still permits only limited testing of hypotheses related to small firm uses of external equity. In fact, only one of the hypotheses related to the uses of external equity was tested. Only 80 firms in the total sample of 8,100 firms (for two surveys) were found to have used external equity capital in the two surveys.

This study uses logistic regression models to assess the key determinants of equity use for all firms, young firms (less than 4 years old) and older firms (4 years old or older). The statistical model employed for this study is specified as follows:

$$E = \alpha_0 + \alpha_1 FD + \alpha_2 CU + \alpha_3 YD + \varepsilon$$

where E = use of equity capital

⁶ See Wolken and Cole, "Financial Services Used by Small Businesses: Evidence from 1993 Survey" (FR Bulletin 1995) and Wolken, Bitler, and Robb, "Financial Services Used by Small Businesses: Evidence from the 1998 Survey of Small Business Finances", FR Bulletin, April 2001.

FD = firm demographic variables such as firm size, quality of the firm (Altman Z), age of the firm, growth, the legal organization, women owned, minority owned, growth and profitability. The variables for the census regions; urban versus rural locations, and industrial groups are used as proxy variables for the demand conditions.⁷

CU = capital use, such as use of credit cards, owner loans, loans from financial lender, and loans from non-financial lender. These variables are included to show the importance of alternative financing sources used.

YD = year dummy. Since two survey years were combined, a dummy variable for year 1998 was included.

The characteristics of the firm used in this study are firm size as measured by the number of employees or by sales (in table 2), the number of employees; quality of the firm as measured by the Altman Z statistic; age of the firm; a firm's growth as measured by the employment growth for firms with at least 5 employees; standard industrial classification (mining and construction, manufacturing, transportation, wholesale trade, retail trade, insurance agents and real estate and services); legal organization (sole proprietorship, partnership, and subchapter s and general corporation); woman-owned (yes/no); minority-owned (yes/no); profit margin of the firm; and census region (North East, North Central, South and West). Capital use is defined by the use of credit cards for business uses (yes/no); use of owner loans (yes/no); and the use of loans from financial and non-financial lenders (yes/no).

Results

This section utilizes descriptive tables to examine the use of internal and equity capital by several business characteristics and utilizes logistic regression models to assess the key determinants of internal and external equity capital use.

Table 1 provides a description of the various types of firms that use equity capital. Three groups of users are distinguished—the users of any equity capital, users of internal equity only, and the users of both internal and external equity. Certainly the most striking result is the insignificance of external equity capital by small firms, used with or without internal capital. Overall, 87% of firms surveyed had not used any additional equity during the previous one or three years of the two surveys. Among those 13% of small firms that did need and use equity capital, almost all of them used only internal equity sources. Only 5% of those that used equity capital used external equity alone or with internal equity. (In fact some 80 firms out of a total of 1,055 firms that used equity capital used external equity, out of a total sample of 8,198 firms from the two surveys.

Findings on the Users of External equity Capital

⁷ Legal form of organization is included because only corporation can take in new investors. Moreover, since sole proprietors do not use "owner's loans", internal equity is the only source of owner's financing.

Because of the small number of observations using external equity, only limited discussion will be made about small firm's uses of external equity in this paper.⁸ Table 1 indicates that firms with a greater tendency to use external equity capital were young and larger small firms, in wholesale trade industry, and had loans from non-financial lenders. However, the significance of firm size variable is not apparent. Even though the sample of firms using external capital is limited, this analysis suggests that small firms with a higher probability of using external equity are larger, younger, engaged in wholesale trade, and more likely to hold a loan from a non-financial lender (Table 2). Age variable is significant because the way the question was asked – “the use of new equity during the recent past.” Younger firms should be more likely to need additional equity capital from outside sources.

Findings on the Use of Internal Equity Capital

More satisfactory results were obtained for small firms' uses of internal equity capital. Table 1 provides the results of the univariate analysis. Several obvious differences in the uses of internal equity were found in firms characterized by the following: firm age; firm size, though not consistently observed; industry groups; poorer financial quality as indicated by the lack of profits and by a lower Altman Z ratio; and the corresponding uses of non-traditional loans such as owners' loans and credit cards. In order to examine how younger firms might use internal equity capital differently from older firms (4 years and older), it is interesting to observe that a significantly higher percentage of young equity capital users also used personal credit cards and also received a recent loan from a financial institution (Table 1a).

A multivariate analysis is performed to examine various factors that influence the firms' use of equity capital for all firms and for young compared to old firms (Table 2). Small firms with a higher probability of using of internal equity capital are younger (aged three and younger), poorer financial quality (as indicated by a lower Altman Z ratio), less profitable (lower profit margin), more likely to use non-traditional sources of financing (especially, the owners' loans and personal credit cards); more likely to use business credit cards; and more likely to use traditional financial institutions. The significance of such variables as urban location, southern region, retail trade and not a general corporation indicate the importance of external factors affecting the demand for internal equity capital.

Because of a seemingly stronger need for equity capital by young firms, separate analysis were made for old (four years and over) versus young firms (aged three or younger). The results are somewhat different and illuminating. (Tables 2a and 2b). These younger users of internal equity capital are engaged in transportation or retail trade; firms either not profitable (with zero or negative net profits) or very profitable (with net profits exceeding 30 percent); those using only personal credit cards but, maybe, yet to have business credit cards; more likely to be sub-chapter s than regular corporations; and with

⁸ However, the data problem does point to the need for changes in survey approach regarding the future collection of information on the uses of external equity capital by the Federal Reserve Board.

a recent loan from a financial lender, but not having any loans from them in the past. It seems that these firms were not as poor in financial quality (with an insignificant Altman Z) and some are making money rather than losing money. Moreover, most of them have yet to establish a relationship with financial lenders or obtained business credit cards. They are in need for equity capital from whatever sources for either or both working capital and expansion purposes. There is some indication that larger firms and firms using business credit cards in the young firm group were more likely to use external equity.

The results for older firms (4 years old or older) are similar to what was observed for all firms (Table 3b). Older firms using any equity (and mostly internal equity) are lower in financial quality; engaged in retail trade; more likely to use owner loans and business and personal credit cards, had no or low profit; and are more likely to have recent loans from financial and non-financial lenders; and more likely to have a loan from non-financial lenders. Firms not organized as general corporations, located in urban areas and those residing outside of the West census region are more likely to utilize any equity capital.

The significance of these variables in identifying the internal equity users exemplifies the importance of internal financing as an integral part of the overall financing decision by most small firms. In fact, excluding sole proprietors whose business finances are difficult to understand because the intermingling of business finances and personal finances, some 38% of small firms used internal financing as compared with some 50% for the users of financing from commercial banks.⁹ The combined sources internal equity and owner's loans is one of the two most important of sources of financing for most small firms, far surpassing all other sources of financing and even rivaling the financing provided by commercial banks.¹⁰

Internal financing had been used in conjunction with different external financing sources for two different financing situations. The uses of internal equity and owners' loans in combination with the uses of such non-traditional sources as personal credit cards and lending from non-financial institutions by companies in poor financial condition implies that internal equity is often a last resort to relieve financial stress confronting small firms. That is, many small firms, especially younger firms and firms in financial distress, had used internal equity to meet the emergency needs for cash. Internal financing is used in conjunction with the uses of other sources from non-traditional sources because of the unavailability of traditional sources from financial institutions..

Internal financing had also been used to meet the financing needs for working capital or asset purchase purposes. The corresponding uses of loans from financial institutions (the traditional lenders), as indicated by the uses of most recent loans as well as having a previous loan relationship and having used both business and private credit cards, seem to indicate a different phenomenon. In this case, internal equity is used in conjunction with lending from financial institutions for purchases and business expansion as well. Hence, there appears to be a complementary relationship between internal equity and loans from financial institutions. This seems to be confirmed by the questionnaire answers regarding the "purposes" for using the equity capital. However, an effort to

⁹ Combined with the uses of the third source of internal financing, the retained earnings, the importance of internal financing shall rival the use of financing from commercial banks.

¹⁰ This is especially true when the third important source of internal financing—retained earnings, is included. No data is available for this analysis.

differentiate these two use-purposes-- for working capital versus for purchase and expansion, failed to yield any meaningful results. This logistic regression analysis only suggests that retail firms and sole proprietors were less likely to use internal equity for working capital, while woman-owned businesses were more likely to use internal equity for working capital (Table 4).

Conclusions

Only a very small number of small firms used external equity. Information on the uses of venture capital (equity capital from external sources) from the national surveys are too limited to permit a statistical analysis of the factors determining their uses by small firms. This study focuses on internal equity use.

It is the internal equity capital, not external equity, which is one of the two major financing sources for most of small firms in the U.S. A majority of small firms relied on internal sources of capital (owner's capital and owner's loans) and external borrowing from financial institutions to finance their business operation and business growth. Younger firms were more likely to utilize internal equity than older firms; and lower quality firms were more likely to utilize internal equity than higher quality firms. There were indications of the pecking order uses of different financing sources—from internal sources, to borrowing from financial institutions and non-financial lenders. There is also indication of the complementary uses between internal sources and the borrowing from commercial lenders. However, there didn't appear to be any support for the hypotheses that firms expanding their business were more likely to utilize internal equity in conjunction with financing from other financial institutions; or that firms facing cash flow problems (financial distress) were more likely to utilize internal equity in conjunction with financing from personal credit cards and non-financial institutions.

The study provides more evidence of the importance of internal financing—internal equity, owners' loans, and business savings or retained earning, as the major source of financing of business operations for all small firms—large or small and young or old. An important policy implication of this study is that efforts to improve financing to promote growth of small businesses must include policies promoting owners' savings and business savings. While current policy for small business financing addresses debt financing primarily from commercial banks and other SBA approved lenders, other policy considerations must address such issues as improving business profitability and retained earning.

References

Barton, S. and Mathews, C. (1989). Small firm financing: Implications from a strategic management perspective, *Journal of Small Business Management*, 27, 1-7.

Berger, A.N. and Udell, G.F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance*, 22, 613-673.

Bolton, P. and Freixas, X. (2000). Equity, bonds and bank debt: Capital structure and financial market equilibrium under asymmetric information. *Journal of Political Economy*, 108(2), 324.

Carpenter, R.E. and Peterson, B.C. (2002). Capital market imperfections, high-tech investment and new equity financing, *The Economic Journal*, 112, 477.

Carter, N., Brush, C., Green P., Gatewood, E. and Hart, M. (2003). Women entrepreneurs who break through to equity financing: The influence of human, social and financial capital. *Venture Capital: An International Journal of Entrepreneurial Finance*, 5(1), 1-28.

Diamond, D.W. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies*, 51, 393-414.

Fenn, G.W. and Liange, N. (1998). New resources and new ideas: Private equity for small businesses, *Journal of Banking and Finance*, 22, 1077-1084.

Freear, J. and Wetzel, W. (1995). Who bankrolls software entrepreneurs? In: *Frontiers of Entrepreneurship Research*, (ed.) Bygrave, W.D., Birley, S. Churchill, N.C., Hay, M.G., Keeley, R.H. and Wetzel, W. Wellesley, Mass.: Babson Center for Entrepreneurial Studies, 394-407.

Fluck, Z., Holtz-Eakin, D. and Rosen, H.S. (1997). Where does the money come from? The Financing of Small Entrepreneurial Enterprises. Working paper. New York University.

Kuratko, D., Hornsby, J. and Nafizinger, D. (1997). An Examination of Owner's Goals in Sustaining Entrepreneurship. *Journal of Small Business Management*, 35, 24-33.

Myers, S.C. and Majluf, N.C. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-221.

Petty, J.W. and Bygraves, W. (1993). What does finance have to say to the entrepreneur? *The Journal of Small Business Finance*, 2, 125-137.

Schmid, F. (2001). Equity financing of the entrepreneurial firm, *Federal Reserve Bank of St. Louis Review*, 83(6), 15-28.

Papadimitriou, S. and Mourdoukoutas, P. (2002). Bridging the start-up equity financing gap: Three policy models. *European Business Review*, 14(2), 104-121.

Timmons, J. (1997). *New venture creation*, 4th edition. Chicago, Ill: Irwin Publishers.

Tucker, J. and Lean, J. (2003). Small firm finance and public policy. *Journal of Small Business and Enterprise Development*, 10(1), 50-62.

Xiao, J., Alhabeeb, M., Hong, S. and Haynes, G. (2001). Attitude toward risk and risk-taking behavior of business-owning families, *The Journal of Consumer Affairs*, 35(2), 307-325.

Table 1 Number (and Proportion) of All Firms and Firms Using Equity Capital

Characteristics	All Firms		Any Equity		Internal Equity	External Equity		
	Sample	n Population	N	Proportion of Population	Proportion	Number of Observations using Equity	Proportion	Proportion
All Firms	8,198	10,285,402	1,000	0.129	1,198	0.123	0.006	
<i>Number of Employees</i>								
0	1,194	2,076,522	0.202	0.100	123	0.100	0.000	
1-4	2,833	4,750,304	0.462	0.128	386	0.124	0.004	
5 - 9	1,173	1,764,011	0.172	0.151	200	0.141	0.011	
10 - 19	682	855,671	0.083	0.160	125	0.152	0.010	
20 - 99	1,615	726,373	0.071	0.122	244	0.111	0.013	
100 - 499	701	112,522	0.011	0.159	120	0.137	0.023	
<i>Total Sales</i>								
Less than 25,000	831	1,409,167	0.137	0.105	92	0.103	0.002	
25,000 - 49,999	566	920,114	0.089	0.126	81	0.120	0.006	
50,000 - 99,999	867	1,383,647	0.135	0.105	108	0.103	0.002	
100,000 - 249,999	1,426	2,391,385	0.233	0.138	211	0.131	0.007	
250,000 - 499,999	966	1,489,371	0.145	0.151	151	0.148	0.003	
500,000 - 999,999	820	1,128,923	0.110	0.120	119	0.115	0.006	
1,000,000 - 2,499,999	904	846,094	0.082	0.142	144	0.136	0.006	
2,500,000 - 4,999,999	594	352,464	0.034	0.141	96	0.127	0.022	
5,000,000 - 9,999,999	485	181,247	0.018	0.126	72	0.115	0.018	
10,000,000 or more	739	182,991	0.018	0.163	124	0.148	0.017	
<i>Standard Industrial Classification</i>								
Mining and construction	927	1,336,611	0.130	0.125	125	0.122	0.003	
Manufacturing	968	843,790	0.082	0.143	151	0.138	0.005	
Transportation	326	334,932	0.033	0.143	53	0.142	0.001	
Wholesale trade	684	800,841	0.078	0.160	114	0.138	0.023	
Retail trade	1,708	2,086,416	0.203	0.158	268	0.152	0.006	
Insurance agents and real estate	528	697,015	0.068	0.118	78	0.113	0.008	
Services	3,057	4,185,798	0.407	0.107	409	0.104	0.003	
<i>Legal Organization</i>								
Sole Proprietorship	2,921	4,769,546	0.464	0.095	308	0.095	0.000	
Partnership	563	767,789	0.075	0.154	104	0.154	0.000	
Sub-Chapter S Corporation	2,119	2,278,442	0.222	0.166	364	0.155	0.013	
Corporation, General	2,595	2,469,625	0.240	0.151	422	0.140	0.012	
<i>Firm Quality</i>								
Lowest 25 %	1,592	1,607,426	0.156	0.228	384	0.219	0.009	
Middle (25 % - 75 %)	3,871	4,618,501	0.449	0.138	563	0.130	0.008	
Highest 25 %	2,735	4,059,475	0.395	0.079	251	0.078	0.002	
<i>Uses Business Credit Cards, yes/no</i>								
No	5,289	7,042,887	0.685	0.119	720	0.115	0.004	
Yes	2,909	3,242,516	0.315	0.150	478	0.142	0.009	
<i>Uses Personal Credit Cards, yes/no</i>								
No	4,949	5,817,881	0.566	0.106	618	0.102	0.005	
Yes	3,249	4,467,521	0.434	0.159	580	0.152	0.007	
<i>Owner loans, yes/no</i>								
No	6,552	8,655,428	0.842	0.102	768	0.098	0.004	
Yes	1,646	1,629,975	0.158	0.268	430	0.256	0.016	
<i>Profit margin</i>								
0 % or less	2,004	2,452,083	0.238	0.194	428	0.183	0.011	

Table 1 Number (and Proportion) of All Firms and Firms Using Equity Capital

Characteristics	All Firms		Any Equity		Internal Equity	External Equity	
	Sample n	Population N	Proportion of Population	Proportion	Number of Observations using Equity	Proportion	Proportion
0 % - 10 %	2,313	2,263,767	0.220	0.137	331	0.131	0.006
10 % - 30 %	1,686	2,242,694	0.218	0.114	217	0.111	0.005
30 % - 50 %	1,083	1,577,216	0.153	0.110	143	0.108	0.002
Greater than 50 %	1,112	1,749,642	0.170	0.062	79	0.060	0.003
Approved by a financial institution for recent loan							
No	5,803	8,008,278	0.779	0.111	727	0.107	0.005
Yes	2,395	2,277,124	0.221	0.190	471	0.182	0.008
Approved by a non-financial institution for recent loan							
No	8,102	10,177,658	0.990	0.127	1,171	0.122	0.006
Yes	96	107,744	0.010	0.267	27	0.260	0.007
Has a financial institution loan							
No	3,086	4,683,043	0.455	0.108	368	0.104	0.005
Yes	5,112	5,602,360	0.545	0.146	830	0.140	0.007
Has a non-financial institution loan							
No	7,436	9,517,227	0.925	0.117	988	0.113	0.005
Yes	762	768,176	0.075	0.275	210	0.257	0.018
Women-Owned business							
No	6,415	7,775,222	0.756	0.130	956	0.125	0.006
Yes	1,783	2,510,180	0.244	0.123	242	0.117	0.006
Minority-Owned business							
No	6,902	9,408,316	0.915	0.130	979	0.124	0.006
Yes	1,296	877,086	0.085	0.118	219	0.116	0.004
Age of the Business							
Less than 4 years	921	1,310,011	0.127	0.167	182	0.155	0.014
4 to less than 10 years	2,452	3,238,941	0.315	0.158	435	0.154	0.005
10 to less than 20 years	2,687	3,369,394	0.328	0.108	330	0.104	0.004
20 years or more	2,138	2,367,057	0.230	0.096	251	0.092	0.005
Census Region							
Northeast	1,999	2,777,839	0.270	0.116	256	0.114	0.003
Northcentral	1,506	1,831,943	0.178	0.157	253	0.148	0.009
South	3,111	3,800,345	0.369	0.124	439	0.118	0.007
West	1,582	1,875,275	0.182	0.128	250	0.124	0.004
Location							
Rural	1,714	2,119,237	0.206	0.111	197	0.109	0.002
Urban	6,484	8,166,165	0.794	0.133	1,001	0.127	0.007

Table 1a Proportion of All Firms and Firms Using Equity Capital by Age of Firm

Characteristics	Any Equity		Internal Equity		External Equity	
	Less than 4 years old	4 or more years old	Less than 4 years old	4 or more years old	Less than 4 years old	4 or more years old
All Firms	0.167	0.123	0.155	0.119	0.014	0.005
<i>Number of Employees</i>						
0	0.111	0.098	0.111	0.098	0.000	0.000
1-4	0.179	0.119	0.179	0.115	0.000	0.005
5 - 9	0.187	0.147	0.130	0.143	0.057	0.006
10 - 19	0.200	0.156	0.181	0.149	0.038	0.007
20 - 99	0.228	0.114	0.165	0.107	0.063	0.009
100 - 499	0.180	0.158	0.115	0.138	0.065	0.021
<i>Total Sales</i>						
Less than 25,000	0.187	0.077	0.178	0.077	0.008	0.000
25,000 - 49,999	0.165	0.118	0.128	0.118	0.037	0.000
50,000 - 99,999	0.185	0.092	0.185	0.090	0.000	0.002
100,000 - 249,999	0.185	0.132	0.170	0.126	0.015	0.006
250,000 - 499,999	0.128	0.153	0.126	0.149	0.002	0.004
500,000 - 999,999	0.095	0.123	0.095	0.118	0.016	0.005
1,000,000 - 2,499,999	0.090	0.146	0.078	0.140	0.012	0.006
2,500,000 - 4,999,999	0.166	0.139	0.094	0.129	0.072	0.018
5,000,000 - 9,999,999	0.222	0.120	0.117	0.115	0.105	0.013
10,000,000 or more	0.293	0.153	0.277	0.138	0.016	0.017
<i>Standard Industrial Classification</i>						
Mining and construction	0.113	0.126	0.105	0.123	0.008	0.003
Manufacturing	0.179	0.138	0.178	0.133	0.001	0.005
Transportation	0.256	0.113	0.256	0.112	0.000	0.001
Wholesale trade	0.144	0.162	0.126	0.141	0.031	0.022
Retail trade	0.216	0.148	0.200	0.144	0.016	0.004
Insurance agents and real estate	0.199	0.108	0.199	0.103	0.000	0.009
Services	0.138	0.103	0.122	0.101	0.016	0.002
<i>Legal Organization</i>						
Sole Proprietorship	0.108	0.093	0.108	0.093	0.000	0.000
Partnership	0.191	0.146	0.191	0.146	0.000	0.000
Sub-Chapter S Corporation	0.256	0.152	0.233	0.142	0.023	0.011
Corporation, General	0.187	0.148	0.150	0.139	0.044	0.009
<i>Firm Quality</i>						
Lowest 25 %	0.237	0.226	0.217	0.220	0.020	0.006
Middle (25 % - 75 %)	0.193	0.130	0.176	0.124	0.021	0.006
Highest 25 %	0.094	0.077	0.092	0.076	0.002	0.003
<i>Uses Business Credit Cards, yes/no</i>						
No	0.159	0.112	0.155	0.108	0.006	0.004
Yes	0.190	0.146	0.153	0.141	0.037	0.006

Table 1a Proportion of All Firms and Firms Using Equity Capital by Age of Firm

Characteristics	Any Equity		Internal Equity		External Equity	
	Less than 4 years old	4 or more years old	Less than 4 years old	4 or more years old	Less than 4 years old	4 or more years old
Uses Personal Credit Cards, yes/no						
No	0.136	0.101	0.127	0.098	0.009	0.004
Yes	0.207	0.151	0.190	0.146	0.020	0.005
Owner loans, yes/no						
No	0.147	0.096	0.137	0.093	0.010	0.003
Yes	0.263	0.269	0.236	0.259	0.034	0.013
Profit margin						
0 % or less	0.230	0.185	0.204	0.178	0.026	0.007
0 % - 10 %	0.127	0.138	0.122	0.132	0.005	0.006
10 % - 30 %	0.154	0.109	0.143	0.107	0.011	0.004
30 % - 50 %	0.181	0.101	0.181	0.099	0.000	0.002
Greater than 50 %	0.065	0.062	0.065	0.059	0.008	0.002
Approved by a financial institution for recent loan						
No	0.144	0.106	0.130	0.103	0.015	0.004
Yes	0.272	0.180	0.264	0.173	0.008	0.008
Approved by a non-financial institution for recent loan						
No	0.166	0.122	0.154	0.117	0.014	0.005
Yes	0.230	0.276	0.220	0.269	0.010	0.007
Women-Owned business						
No	0.172	0.125	0.160	0.121	0.013	0.005
Yes	0.157	0.117	0.141	0.113	0.015	0.004
Minority-Owned business						
No	0.168	0.124	0.154	0.120	0.015	0.005
Yes	0.162	0.108	0.158	0.106	0.004	0.004
Census Region						
Northeast	0.141	0.112	0.136	0.110	0.010	0.002
Northcentral	0.153	0.158	0.145	0.149	0.008	0.009
South	0.174	0.117	0.151	0.113	0.023	0.005
West	0.208	0.117	0.202	0.113	0.006	0.003
Location						
Rural	0.175	0.103	0.175	0.100	0.000	0.003
Urban	0.165	0.128	0.150	0.124	0.017	0.005
Number of observations	921	7,277	921	7,277	921	7,277

Table 2 Logistic Regression Summary, All Firms

Dependent Variable	Any Equity		Internal Equity Only		Any External Equity	
Variable	Parameter		Parameter		Parameter	
	Estimate	p-value	Estimate	p-value	Estimate	p-value
Intercept	-2.8299	0.0001	-2.8810	0.0001	-6.9300	0.0001
Number of employees	-0.0005	0.7473	-0.0015	0.3515	0.0070	0.0122
Quality of firm (Altman Z)	-0.0441	0.0205	-0.0449	0.0200	0.0442	0.6121
Young firm (0/1)	0.4563	0.0001	0.3984	0.0001	1.0687	0.0020
Mining and construction	0.1067	0.3386	0.0984	0.3822	0.1263	0.8308
Manufacturing	0.0711	0.5866	0.0775	0.5578	0.0366	0.9541
Transportation	0.2181	0.2538	0.2721	0.1552	-1.8510	0.3555
Wholesale trade	0.1720	0.1764	0.0365	0.7833	1.5472	0.0002
Retail trade	0.3486	0.0001	0.3309	0.0004	0.5757	0.2050
Insurance agents and real estate	0.0310	0.8322	0.0147	0.9212	0.7643	0.1929
Sole proprietor	0.1473	0.1407	0.2502	0.0144	-10.5372	0.7627
Partnership	0.4187	0.0020	0.5188	0.0001	-10.4566	0.8850
Sub-chapter s corporation	0.2224	0.0167	0.2227	0.0195	0.1804	0.5483
Uses business credit cards	0.2100	0.0045	0.1923	0.0106	0.3850	0.1999
Uses personal credit cards	0.4545	0.0001	0.4407	0.0001	0.4800	0.1139
Uses owner loans	0.9182	0.0001	0.9577	0.0001	0.2680	0.3886
Net profit %, 0 or less	0.5524	0.0002	0.5519	0.0002	0.3383	0.6009
Net profit %, 0 - 10	0.2372	0.0997	0.2673	0.0677	-0.2500	0.6881
Net profit %, 10 - 30	0.2806	0.0411	0.3084	0.0267	-0.1282	0.8381
Net profit %, 30 - 50	0.2969	0.0388	0.3198	0.0277	-0.5739	0.4713
Recent loan from financial lender	0.3381	0.0001	0.3566	0.0001	0.0014	0.9969
Recent loan from non-financial lender	0.6761	0.0112	0.7086	0.0084	-0.1108	0.9291
Loan from financial lender	0.0327	0.6786	0.0417	0.6021	-0.1677	0.6222
Loan from non-financial lender	0.3405	0.0008	0.2905	0.0051	0.9090	0.0167
Woman-owend business	0.0371	0.6505	0.0100	0.9045	0.3871	0.2478
Minority-owned business	-0.0180	0.8874	0.0114	0.9292	-0.3287	0.5995
North east region	0.1678	0.1132	0.1917	0.0725	-0.5131	0.3721
North central region	0.2461	0.0215	0.2101	0.0530	0.7927	0.1080
Southern region	0.2805	0.0044	0.2579	0.0097	0.6569	0.1581
Urban location	0.2675	0.0029	0.2511	0.0056	0.6644	0.1995
Data from 1998 NSSBF	-1.2216	0.0001	-1.2314	0.0001	-0.2615	0.4604
-2 log likelihood		5,835		5,713		463
Number of Observations		8,198		8,198		8,198

Table 2a Logistic Regression Summary, Young Firms Only

Dependent Variable	Any Equity		Internal Equity Only		Any External Equity	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Intercept	-1.7390	0.0135	-1.7554	0.0146	-17.6306	0.8754
Number of employees	0.0011	0.8285	-0.0045	0.5128	0.0301	0.0094
Quality of firm (Altman Z)	-0.0180	0.7296	-0.0130	0.8081	0.1105	0.6792
Mining and construction	-0.2569	0.4957	-0.1831	0.6365	-0.2457	0.8714
Manufacturing	0.1093	0.7660	0.3082	0.4064	-4.0998	0.2643
Transportation	0.4963	0.1970	0.8103	0.0380	-11.7035	0.9711
Wholesale trade	-0.3180	0.3595	-0.2754	0.4508	0.1758	0.8551
Retail trade	0.5873	0.0132	0.6183	0.0116	-0.3193	0.7455
Insurance agents and real estate	0.2186	0.5835	0.4125	0.3030	-14.1102	0.9505
Sole proprietor	-0.6026	0.0351	-0.3551	0.2360	-12.7603	0.9074
Partnership	-0.0116	0.9722	0.2511	0.4647	-13.0136	0.9484
Sub-chapter s corporation	0.3918	0.1245	0.5417	0.0455	-1.3325	0.1112
Uses business credit cards	0.1810	0.3963	-0.0489	0.8279	1.8953	0.0229
Uses personal credit cards	0.5138	0.0053	0.4762	0.0121	1.3569	0.1310
Uses owner loans	0.2418	0.3048	0.2561	0.2946	0.5221	0.5574
Net profit %, 0 or less	0.9910	0.0156	0.8224	0.0477	1.0641	0.5220
Net profit %, 0 - 10	0.2411	0.5831	0.2499	0.5735	-1.5476	0.4082
Net profit %, 10 - 30	0.6585	0.1060	0.5869	0.1562	-1.1241	0.4181
Net profit %, 30 - 50	1.0924	0.0083	1.0678	0.0104	-10.6263	0.9594
Recent loan from financial lender	0.7916	0.0005	0.9519	0.0001	-1.2955	0.2481
Recent loan from non-financial lender	0.5386	0.4045	0.7187	0.2743	-1.9087	0.5737
Loan from financial lender	-0.3458	0.0943	-0.3845	0.0710	0.2657	0.7808
Loan from non-financial lender	0.2821	0.3134	0.0989	0.7313	2.1116	0.0873
Woman-owend business	-0.0323	0.8757	-0.1132	0.5955	1.0966	0.1984
Minority-owned business	0.0270	0.9219	0.0950	0.7331	-2.0459	0.2082
North east region	-0.4044	0.1400	-0.3299	0.2340	-0.6017	0.6522
North central region	-0.7528	0.0115	-0.7925	0.0092	-0.2826	0.8483
Southern region	0.0025	0.9919	-0.0829	0.7458	1.2522	0.2815
Urban location	-0.1652	0.4993	-0.2513	0.3081	10.3063	0.9269
Data from 1998 NSSBF	-0.9046	0.0001	-1.0197	<.0001	1.6901	0.1027
-2 log likelihood		806		774		72
Number of Observations		921		921		921

Table 2b Logistic Regression Summary, Older Firms

Dependent Variable	Any Equity		Internal Equity Only		Any External Equity	
	Parameter		Parameter		Parameter	
Variable	Estimate	p-value	Estimate	p-value	Estimate	p-value
Intercept	-2.9297	0.0001	-2.9950	0.0001	-7.2011	0.0001
Number of employees	-0.0005	0.7692	-0.0012	0.4832	0.0057	0.0927
Quality of firm (Altman Z)	-0.0527	0.0109	-0.0544	0.0094	0.0630	0.5371
Mining and construction	0.1227	0.2991	0.1015	0.3939	0.5446	0.4585
Manufacturing	0.0558	0.6934	0.0324	0.8211	0.7848	0.2850
Transportation	0.0736	0.7464	0.0865	0.7048	-0.5600	0.7829
Wholesale trade	0.2606	0.0591	0.0968	0.5009	2.2782	0.0001
Retail trade	0.3047	0.0025	0.2802	0.0058	0.9162	0.1408
Insurance agents and real estate	-0.0178	0.9110	-0.0635	0.6949	1.7120	0.0129
Sole proprietor	0.2672	0.0141	0.3527	0.0015	-10.3293	0.7965
Partnership	0.5100	0.0007	0.5912	0.0001	-10.2590	0.9078
Sub-chapter s corporation	0.2036	0.0449	0.1850	0.0750	0.5557	0.1156
Uses business credit cards	0.2049	0.0101	0.2151	0.0076	-0.0139	0.9692
Uses personal credit cards	0.4425	0.0001	0.4285	0.0001	0.5521	0.1222
Uses owner loans	1.0447	0.0001	1.0860	0.0001	0.1944	0.5986
Net profit %, 0 or less	0.4877	0.0020	0.5100	0.0014	0.0802	0.9163
Net profit %, 0 - 10	0.2206	0.1522	0.2523	0.1071	-0.1904	0.7900
Net profit %, 10 - 30	0.2227	0.1292	0.2674	0.0721	-0.2338	0.7521
Net profit %, 30 - 50	0.2024	0.1901	0.2323	0.1376	-0.5094	0.5531
Recent loan from financial lender	0.2479	0.0054	0.2466	0.0062	0.2160	0.6028
Recent loan from non-financial lender	0.6870	0.0210	0.6978	0.0199	0.4456	0.7523
Loan from financial lender	0.1091	0.2066	0.1289	0.1404	-0.1979	0.6309
Loan from non-financial lender	0.3299	0.0030	0.2886	0.0105	0.9454	0.0316
Woman-owend business	0.0608	0.4994	0.0429	0.6385	0.3103	0.4520
Minority-owned business	-0.0264	0.8550	-0.0152	0.9170	0.0354	0.9601
North east region	0.2755	0.0175	0.2943	0.0118	-0.6379	0.3517
North central region	0.3956	0.0007	0.3607	0.0022	0.9139	0.0944
Southern region	0.3578	0.0010	0.3540	0.0013	0.4191	0.4335
Urban location	0.3303	0.0007	0.3246	0.0010	0.4838	0.3623
Data from 1998 NSSBF	-1.3246	0.0001	-1.3195	0.0001	-0.6404	0.1625
-2 log likelihood		4,969		4,877		348
Number of Observations		7,277		7,277		7,277

Table 3 Logistic Regression Summary, Determinants of Internal Equity Use by Use of Internal Equity

Dependent Variable	Use Equity for Working Capital		Use Equity for Expansion	
	Parameter		Parameter	
Variable	Estimate	p-value	Estimate	p-value
Intercept	0.4066	0.4123	-0.5103	0.3022
Number of employees	0.0038	0.2812	-0.0027	0.4096
Firm quality	-0.0457	0.2168	0.0475	0.1973
Young, yes/no	-0.2151	0.2563	0.2488	0.1877
Mining and construction	0.2398	0.2983	-0.2225	0.3328
Manufacturing	-0.1160	0.6552	0.1869	0.4672
Transportation	-0.1631	0.6703	0.1931	0.6109
Wholesale trade	-0.4772	0.0503	0.5383	0.0265
Retail trade	-0.4348	0.0174	0.4828	0.0081
Insurance agents and real estate	-0.1785	0.5390	0.2127	0.4637
Sole proprietor	-0.6493	0.0014	0.5878	0.0035
Partnership	-0.4213	0.1034	0.3693	0.1526
Sub-chapter s corporation	-0.1264	0.4928	0.0935	0.6082
Uses business credit cards	0.0646	0.6547	-0.0244	0.8653
Uses personal credit cards	0.0217	0.8736	0.0347	0.7983
Uses owner loans	0.0621	0.7250	-0.0739	0.6729
Net profit %, 0 or less	0.5380	0.0587	-0.5231	0.0658
Net profit %, 0 - 10	0.3993	0.1532	-0.3782	0.1756
Net profit %, 10 - 30	0.3606	0.1861	-0.3059	0.2614
Net profit %, 30 - 50	0.0124	0.9645	0.0057	0.9837
Recent loan from financial lender	0.1793	0.2573	-0.2190	0.1650
Recent loan from non-financial lender	-0.2590	0.5788	0.2426	0.6018
Loan from financial lender	0.2378	0.1156	-0.2659	0.0770
Loan from non-financial lender	-0.1811	0.3315	0.2835	0.1244
Woman-owned business	0.5774	0.0006	-0.5783	0.0006
Minority-owned business	0.0806	0.7483	0.0246	0.9210
North east region	0.1189	0.5693	-0.0458	0.8258
North central region	0.1552	0.4615	-0.0932	0.6573
Southern region	-0.0472	0.8054	0.0936	0.6245
Urban location	0.1488	0.3954	-0.1265	0.4697
Data from 1998 NSSBF	0.7853	0.0001	-0.8292	0.0001
- 2 log likelihood		1,361		1,370
Number of observations		1,198		

Note: The left-out variables in the following: service industry, regular corporation, net profit margin greater than 50 percent, western census region and rural location.