Bank Financing of Start-ups – Findings from a survey*

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Abstract:

In the paper we look at the bank lending routines of Swedish banks and their consequences for external financing of start-ups. Results from a questionnaire sent out to start-ups listed in the files of the Swedish interest organization "NyföretagarCentrum" were used. We looked at firms founded during the period 2010-2011, which can be considered family firms in terms of the ownership structure. The survey indicated that bank loans had to be backed up with personal assets used as collaterals and personal guarantees of repayment. Essentially, the entrepreneur personally takes all risk. The corporate form does not work. Risk-adverse persons with innovative business ideas will hesitate to realize their ideas. The consequences for economic growth and employment will be negative. Research questions posed in this study are:

- How do start-up firms finance their business?
- How much personal financial risk must an entrepreneur with a start-up business shoulder?
- How do they try to mitigate the financial risk through financial bootstrapping?
- What are the alternatives to bank loans?

Law and economics theories about how collaterals and safeguards can overcome the double trust problem between entrepreneurs and financiers will be used. Bank regulations play a decisive role in these cases.

The contribution of the paper is that it gives both a theoretical and empirical explanation to why start- ups have to be financed by the entrepreneur. There is a shortage of empirical studies that show this.

Keywords: Start-ups, Bank loans, Asymmetric information, External financing
JEL Codes: G21, G32, L26, M13

1. Introduction

In a recently published article Robb and Robinson (2014) argue that start-ups rely more on debt financing than commonly thought. In their study all kinds of business legal status are lumped together, sole proprietorship, partnership and corporation. We argue that business status matters. A corporation is a legal person while a sole proprietorship is not. The partnership form means, in contrast to the corporate form, that there is no limited liability for the owners (the partners). This matters when looking at the capital structure of a new firm. If the owner as a physical person enters into debt in order to obtain financing for a new firm of corporate form it is not the same thing as saying that the firm relies on debt financing. The physical person owner is not the same person as the firm. Making this distinction we will discuss the financing of new firms based upon results from a questionnaire sent solely to new Swedish firms of corporate form. The reason for just looking at startup corporations is that the choice of the corporate form can be regarded as a signal of commitment. Sole proprietorship which is the most numerous business form is often used for part-time entrepreneurship and is not a business form chosen for firms that have an ambition to grow.

The findings are that a majority of the start-ups in our sample do not use bank loans. This finding contrasts to earlier research. According to our study the banks do not want to take the risk of lending to start-ups. The information asymmetry gap between bank and entrepreneur is not bridged. Banks are extremely risk adverse in their lending decisions.

The study is divided into nine different sections. In the next section, we will discuss the theoretical framework that we will use. In the third section, we will summarize the findings of previous studies about the challenges of applying for bank loans. Sections 4-7 show the results of our study. Section 8 descries financing of startups from the bank´s viewpoint, and finally section 9 concludes the study.

2. Theoretical framework

A key economic challenge is how to combine new ideas and capital such that successful innovations and growth are promoted. Sustained growth primarily emanates from innovative business ventures. Entrepreneurs with innovative ideas need to be connected with financiers.

To combine them, people need law, especially the law of property rights, contract enforcement, and business regulations.

Schumpeter (1947) identified innovations as a factor that eases the constraints to production and consumption and labeled the persons initiating the changes in constraints as entrepreneurs. The innovators were new firms with new innovative ideas. As also noticed by Schumpeter, entrepreneurs need capital to pursue innovations, therefore financing of innovations becomes critical for economic growth.

However, the financing of innovations has to overcome what Cooter and Schäfer (2012) in a recent book has called, "the problem of double trust". The financier wants some assurance that the investment is sound and the entrepreneur wants to make sure that business ideas are not stolen. This is a problem due to asymmetric information about the qualities of the entrepreneur and the business ideas as well as the qualities of the financier. Both parties have to convey trustworthy information about quality to each other. An effective legal framework in form of property protection, contract law and business law helps the parties to overcome this double trust problem.

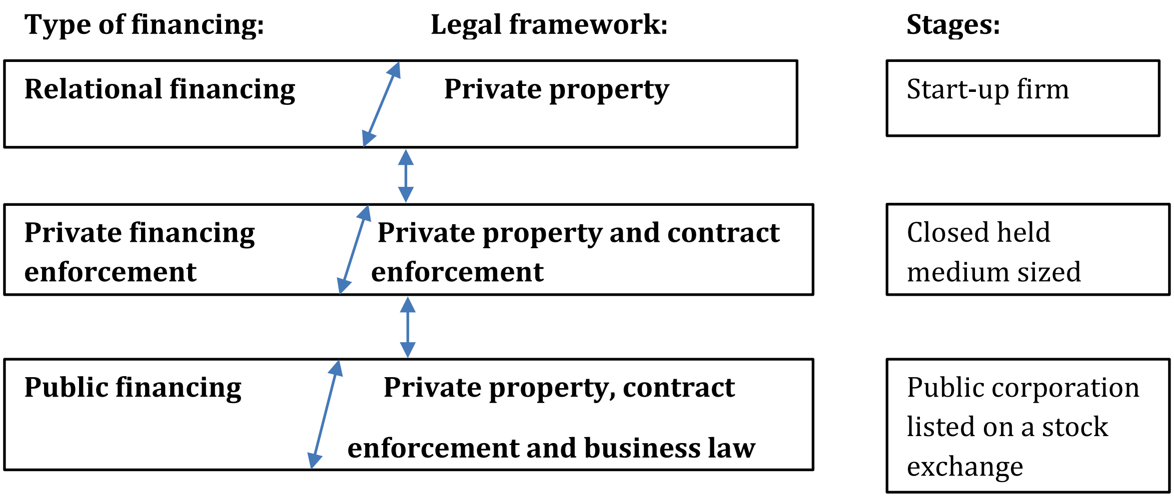
When trust is not backed up by a supporting legal framework a firm has to rely on relational financing from perhaps only friends and relatives. If just relational financing is what is at hand, the opportunities for financing and growth will be limited. Well-functioning private property rights and contract laws open up new opportunities for obtaining financing. Business laws can enlarge the group of financiers to investors who do not need to have intimate knowledge of the businesses of a company.

A common issue for all firms is how to overcome the double trust problem between financiers and entrepreneurs/firms. This is a double moral hazard problem (trust problem) where financiers are concerned about getting invested money back and entrepreneurs about protection of business ideas.

For both parties, there is a fear that the other party will behave opportunistically and just take the money or steal the business idea. How to handle this double trust problem in a manner that fosters economic growth can be analyzed with the tools developed within the field of law and economics. The geographical area investigated is Sweden.

The financing solutions vary as firms grow large. Figure 1 illustrates how the type of financing and supporting legal framework develops at different development stages of the life of a firm. We will concentrate on the first stage.

Figure 1



For a start-up business with a new business idea the financing problem is severe. There is no historical record to fall back on when establishing contact with a financier. To safely inform about the value of new ideas is difficult. The only way to obtain financing is in many instances to turn to family and friends. This is called relational financing.

Private property rights are important for debt financing. However a prerequisite is the existence of collaterals and personal guarantees as safeguards for bank loans. Often, a start-up of corporate form does not have the required collaterals as a backup for a bank loan. Instead personal assets have to be used as safeguards for bank loans.

The firm as a separate legal person is important in our paper. The strongest type of separate legal person is the corporate form of business. A corporation is a separate legal person that can own property and sign binding contracts (see e.g. Kraakman et al 2009). An implication of this is that it is the firm (the judicial person) that owns assets and not any physical persons. This strong form of legal personality is a prerequisite for the limited liability and perpetual life and profit maximization features (at least in the Anglo-American legal tradition) that characterize the corporation as a legal form of business.

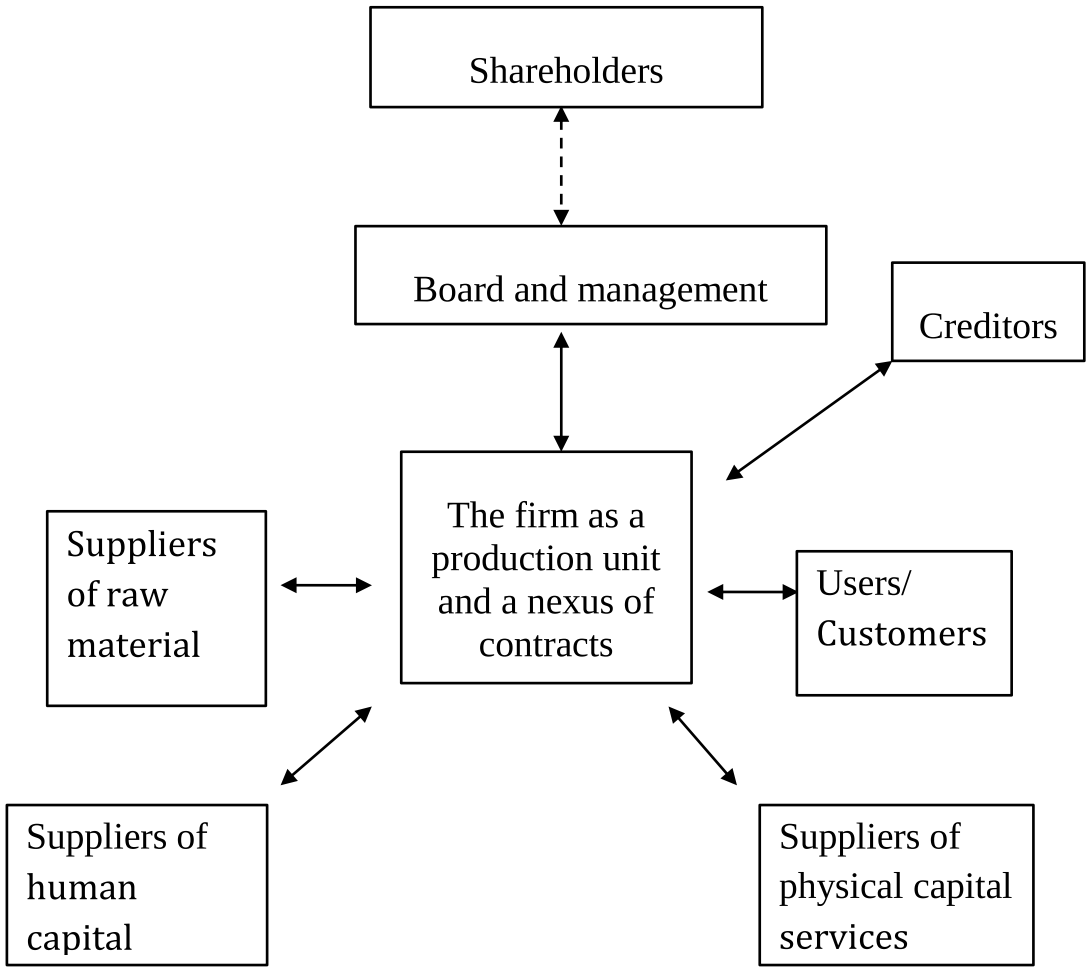
Partnership is much weaker and sole proprietorship is the weakest one with identity with the physical person. Partnership is a legal person but it is not a separate legal person in the same sense as for a corporation. The responsibility for contractual claims on the firm ultimately rests with the owners in a partnership. The third legal form, sole proprietorship, is not a legal person at all. The firm is from a contractual point of view identical with the owner.

That the firm is a legal person is one of three important aspects of the corporate form of business. The other two are limited liability of shareholders and transferability of ownership of shares (Hansmann et al 2004 and Kraakman et al 2009). That the firm is a legal person implies that the assets of the firm are shielded from the owners´ personal creditors, while limited liability, in turn, shields the assets of the owner from the firm´s creditors. The third aspect, transferability of ownership of shares, depends on the first two by making the personal wealth of a new owner irrelevant as long as the share price is paid. In this way ownership can be made impersonal and thereby a large amount of risk capital be accumulated. However this third aspect, transferability of ownership of shares, is not as important for start-ups as for firms at later stages of their development in need of capital. The entrepreneur who just started a company is likely too anxious to maintain control in order to realise her/his business idea (see e.g. Melin & Nordqvist, 2007).

A firm can be viewed as a web of contractual relations. It is a legal entity and it can, just like a physical person, enter into binding agreements (contracts) with other physical and legal persons. From this perspective, the firm can be seen as a "nexus of contracts" that coordinates financial investors, suppliers of intermediate goods, services and labor as well as customers in the production of goods and services. Figure 2 shows the firm from such a contractual perspective. (Contracts refer here to both formal as well as informal agreements.) It is a simplified stylized depiction of the firm as a legal person, production unit and nexus of contracts. Outside the figure are the authorities (national and communal) that supply a necessary supporting infrastructure of public goods character as among other things a legal system and transportation network.

The long term financing of the assets of the firm is provided through equity and loans. The contractual nature of this long-term financing has governance implications. Shareholders are considered to be the owners of the firm. Their contractual relations with the firm are characterized by a claim on the residual that remains when all the other contractual obligations of the firm have been met. (They are residual claimants.) The size of the residual is dependent on the management of the firm´s resources. As a consequence, shareholders have an interest and a legally recognized right to control how the firm is managed. Sometimes there is a separation of ownership and control in the sense that owners and managers are different persons. In these cases, the board has an important role to play as an agent who controls the management on behalf of shareholders. In other cases owners and managers are the same persons. The board is mostly not that important for start-ups because there is usually no separation of ownership and control. The founder started the firm and he/she remains the sole owner or shares ownership with a few partners.

Figure 2: The firm as a nexus of contracts[3]



[3] The figure is inspired by Ståhl (1976) and Bjuggren and Palmberg (2009)

= Guaranteed contracts = Residual

On the financial side of the firm, there are also lenders (investors) with fixed claims contracts (as e.g. banks). In contrast to shareholders, they have specified claims on the firm in terms of mortgage plans, maturity and interest claims. If the firm cannot meet these fixed claims, it can be forced into liquidation/bankruptcy. The remuneration that lenders (and also suppliers of inputs) can get is then dependent on the value of assets for others than the bankrupted (liquidating) corporation. Fungible assets with a well-functioning second-hand market are valuable to others and can therefore serve as collaterals for loans. Consequently, firms that own such assets to a larger extent than other firms can use these loans as a source of finance (Williamson, 1988).

A start-up firm´s contractual relation with suppliers of goods and services as well as with employees in figure 2 is also of interest from a financial perspective. Handling cash-flows are besides financing of assets important for the survival and development of a start-up. In order to avoid situations of financial distress that can result in liquidation the cash-flows have to be synchronized so that bills can be timely paid (see Wruck 1990). If the result of a financial distress situation is that the value of the assets of the firm are not considered large enough to cover creditors´ claims the firm can be forced into liquidation (see e.g. Bjuggren 1995).

The nexus of contracts that constitutes the firm is sensitive to disturbances of different kinds. An obvious example of such a disturbance is bankruptcy. Both a bankruptcy of the firm itself due to solvency problems and bankruptcies amongst suppliers and customers can have as consequence that valuable asset specificities are destroyed. These problems have been described by among others Williamson (1988) and Bjuggren (1995).

The financial needs of a start-up can to some extent be met by adjusting the relationships with suppliers, employees and customers and taking a closer look at the composition of assets. These types of strategies are called financial bootstrapping and is by Winborg and Landström (2000, p. 238) defined as “the use of methods to meet the need for resources, without relying on long-term external finance”. Following Winborg and Landström (2000) the need for financing assets can be reduced by having used equipment instead of new, borrowing equipment from other firms as well as lending equipment to other firms, leasing equipment, running the business at home, share premises and equipment with other businesses and minimizing the capital invested in stock.

In relation to suppliers and customers the need for external financing can be alleviated by practicing barter, co-ordinate purchases with other businesses, offer discount for cash payment, advance payment from customers, use of factoring, charge interest on overdue payment from customers, choose customer who pay quickly and buy on credit. The cost for labor can be reduced by hire personnel for shorter periods, sharing employees with other businesses. The owner can personally also contribute by temporarily withholding own salary and sometimes use own credit cards. In figure 2, the use of financial bootstrapping hence boils down to reconsidering the contractual relations with shareholders (owners), employees, suppliers as well as customers.

3. Previous studies about the challenges of applying for bank loans

There are few empirical studies about the financing of startups. The problem faced is to get access to data. Of the few existing studies most concern the financing situation in the USA. One such an early study is Berger and Udell (1998). Similar to this study they use a distinction of firms in different stages of their development from startups to public listed firms. In contrast to the perceived wisdom they find that startups to a large extent are externally financed. The dominant form of external finance is bank loans. These bank loans are to a large extent backed up by safeguards form of personal assets used as collaterals and personal guarantees. All the data in Berger and Udell is from as survey, the National Survey of Small Business Finances. Book values are used dating from 1993. No special distinction is made between legal statuses of the firm (i.e. between sole proprietorship, partnership and corporations) in the data.

A recently published similar study using US data is Robb and Robinson (2014). They use data from a survey, the Kauffman Firm Survey, which tracks nearly 5000 firms founded in 2004. They follow these firms during the period 2004 to 2011. No distinction between legal statuses is made in the data. They also find an important role for banks in providing capital to startups.

A British study, which also finds that bank financing is important for startups, is Cosh, Cumming and Hughes (2009). They use data from 1996-7. The median startup year of the firms in the data is 1983. The firms are in other words rather old compared to the earlier referred studies. There is no special study of incorporated firms.

Dennis (2012) presents a study of how conditions for how business loan conditions has changed lately for US small business. Data from a representative survey of 850 firms conducted in late 2011 is used. He found that the number of small-business owners possessing a business loan fell from 44 percent to 29 percent between 2008 and 2011. He also found that attempts to obtain credit to a large extent resulted in rejections. The difficulties to obtain a loan have according to him increased during last years.

For Sweden the Swedish Federation of Business Owners (2014) conducted a survey in February 2014 among 4000 of its member companies about the challenges of financing for small businesses. 80% of the small firms in their survey report that they want to expand their businesses and grow but that the banks' high interest rates and the requirements for collateral make it difficult to obtain financing. 26.6 % of the respondents thought that the banks' terms and conditions have become harder during the last six months.

The main reason for why the terms and conditions have become harder is that the banks have larger requirements for collateral. Following the financial crisis of 2008 the banks have increased the capital adequacy requirements and require the loan applicants to have a larger share of personal savings to be eligible for bank loans. Also, the interest rates on bank loans for company loans have increased. The smaller the firm is, the higher the overdraft interest rate which is 6.5 % on average for firms with 1-9 employees but 3.7 % for firms with over 50 employees. The Swedish Federation of Business Owners (2014) writes that overdraft is a common type of financing and that it gives the best indication of a firm's ability to obtain working capital. In other words this is a completely different picture than the one provided above for US and UK.

4. The survey

The time period investigated is 2009 to 2012. During this period there were 272 376 startups in Sweden (see Table 1). The majority of these startups were sole proprietorship. The number of firms with the corporate form of business was 82 809 i.e. 30 per cent of all startups. The number startups of the corporate form increased from 2010. The increase can be explained by decrease of the legally required minimum equity from SEK 100 000 to 50 000 that was introduced (came into play) 2010.

Table 1. Startups 2009-2012 (all Swedish firms)

Year	Legal Status	Number of startups	Percentage of total startups
	Sole proprietorship	41 730	70%
2009	Corporation	12 709	21%
	Partnership	5 158	9%
	Sole proprietorship	44 770	64%
2010	Corporation	20 067	29%
	Partnership	5017	7%
	Sole proprietorship	43 660	59%
2011	Corporation	25 874	35%
	Partnership	4 175	6%
	Sole proprietorship	41 015	59%
2012	Corporation	24 159	35%
	Partnership	4 042	6%

Source: SCB Swedish statistics

An organization with the purpose of giving free advice to these startups is NyföretagarCentrum. In 2012 there were 9400 startups listed with NyföretagarCentrum, i.e. about 13 percent of all startups that were founded in Sweden in that year. Of these 9400 startups 3000 were corporations. NyföretagarCentrum helped us with e-mail addresses to corporation startups listed with them. A survey was sent to 2500 corporations introduced between 2009 to 2013 out of which 244 answered the questions in the survey, i.e. a about 10 per cent (see Table 2). The majority of the answers were from corporations introduced in 2011. In the survey a majority of the firms belongs to the service sector. Manufacturing and construction firms were less than 19 percent of the sample. The largest sector was health care. The dominance of the service sector in the survey is in accordance with the statistics for all of Sweden (Statistics Sweden and Tillväxtverket 2014)

Table 2 Startup year for the surveyed corporations during 2009 – 2013 and business characteristics

Startup year	2009	2010	2011	2012	2013
Number of startups	10	72	102	17	12
Percentage	4.7 %	33.8%	47.9%	8.0%	5.6%

Industry	Manufacturing	Construction and Real Estate	IT, Data and technology	Health care	Retailing	Other Service
Number of startups	22	19	18	25	18	119
percentage	10%	8.6%	8.1%	11.3%	8.1%	43%

The respondents (founders) had in most cases previous working experience. On average they had 21.5 years of experience and most of this experience was in the sectors Manufacturing and Construction (see Tables 3 and 4). Table 4 reveals further that 63 per cent of the respondents were male and 85 per cent born in Sweden. The mean age was 47 years with a spread between 23 and 69 years of age. A majority had studied at University level and had an academic degree. Slightly more than half of the entrepreneurs had no earlier experience of starting a business. Almost 28 per cent had experience from one earlier startup and 13 per cent from two earlier startups. Experience from more than two earlier startups was rare.

Table 3 Previous industry experience amongst the entrepreneurs

Industry	Manufacturing	Construction and Real Estate	IT, Data and Technology	Health care	Retailing	Other service
percentage	29.6 %	13.6%	25.9%	18.5%	16.9%	91.1%

Table 4 Business owner demographics

Characteristics:	Percentage:	Characteristics:	Percentage:
Male	62.9	Education:	
Female	37.1	Primary school	4.5
		Secondary school	25.3
Born in Sweden	85.2	Studied at University	11.4
Born abroad	14.8	Studied at university and university exam	53.9
	Age:	Doctor exam	4.9
Mean age	47		
Max age	69	Previous start ups:	
Minimum age	23	0	52.0
Years of previous working experience:	Number of years:	1	27.6
		2	13.0
Mean	21.5	3	2.4
Max	50	4	.4
Minimum	0	5 or more	4.4

Corporate ownership characteristics:

The questionnaire sent out was predominantly answered by the founder of the startup (Table 5). The respondent was often also CEO and Chairman (even though it is not necessary to have a board in a small startup). Furthermore the respondent was in the majority of the cases sole owner or a shared owner with another person. About 20 percent of the respondents characterized their startup firm as a family firm (see Table 6). Almost 100 percent of the firms were closely held firm according the so called 3:12 rules (78.9 percent and the 19.4 per cent that also stated that the firm was a family firm). The 3:12 rules mean that for firms in which four or fewer owners control more than 50 percent of the ultimate voting rights special tax conditions apply. Bjuggren et al 2012 has used this tax rule to estimate the prevalence of family firms in Sweden. With access to the number of owners and knowledge of if a firm uses 3:12 rules they can state if a private firm has a concentration of more than 50 percent or 20 percent to one owner. In the tax definition of an owner family members are included. Most commonly there was one owner in the startup (70 percent of the cases). The percentage of startups with two owners was a little more than 20 per cent. Using this criterion it is almost 100 percent of the firms that are family firms.

Table 5 Respondents and their ownership share

Characteristics of respondent		Respondent´s ownership	
Position:	Percentage:	Ownership share:	Percentage:
Founder	87.7	0%	1.7
CEO	68.9	1-29%	3.4
Chairman	41.7	30-50%	25.6
Other top management Position	15.3	51-70%	4.3
Other position	6.4	71-99%	4.3
		100%	60.7

Table 6 Ownership characteristics

Firm type		Number of owners	
Firm type:	Percentage of the firms:	Number of owners:	Percentage of the firms:
Family firm according to the respondent	0.9	1	69.9
Closely held corporation according to the 3:12 rules	78.9	2	22.0
Closely held corporation and family firm according to the respondent	19.4	3	3.3
Neither family firm nor closely held corporation	0.9	4	2.4
		5	1.4
		More than 5	1.4

5. Financing characteristics of the surveyed firms

Looking at financial sources it is founder equity that dominates as financial source (see Table 7). Equity from family and friends are rare and amount to a small percentage of financing when existing. Business angels and venture capital are none-existent at the startup time. There are a few instances where these actors appear afterwards according to Table 7. Government subsidies are rather rare. Turning to debt financing bank loans and founder loan dominates but are not as prevalent as founder equity. Loans from government and family and friends are rarer.

Table 7 Finance sources

The startup year		During the last two years (2012 and 2013)			
Funding source:	Percentage for all firms	1-5 % of total financing	6-20% of total financing	21-100% of total financing	Number of firms answering
Founder equity	93.4	9	23	162	194
Equity from family and friends	1.3	4	3	1	8
Business angels	0.4	3	0	1	4
Venture capital	0	4	3	0	7
Govt. subsidy	0.9	7	3	3	13
Founder loan	10.0	4	16	24	44
Loan from family and friends	5.2	8	9	7	24
Bank loan	14.4	9	9	33	51
Govt. loan	4.8	6	8	12	26
Other sources	3.8	6	2	6	14

This result of a dominating role for founder equity in the financing of startups is in stark contrast to what earlier US studies found (Berger and Udell, 1998 and Robb and Robinson, 2014). They stressed that access to bank loans was not a bottleneck in financing of startups. Instead they found that credit from financial institutions dominated as a source of finance. However, as also described in section 3, the access to bank loans has diminished during the last year in the USA (Dennis 2012). Our study with Swedish data shows that bank loan is really not an important source of finance. The founder loan is almost of equal magnitude.

A question of expansion plans (Table 8) and financing of these plans (Table 9) revealed that a majority of the firms had plans for expansion. Only 30 percent had no plans. As much as 27 percent of the firms had even plans of expansion abroad. The financing of these plans showed once again that Funder equity and Founder loans were most probable sources for these plans. Bank loan was also a probable source (but not of the same magnitude). When considering expansion, financing from business angels appear as alternatives to some firms as well as to a lesser degree venture capital. It seems like these alternative are more open to new firms that have been active for some time (Tables 7 and 9).

Table 8 Plans of expansion

Answers:	Percentage
Expansion in Sweden	31.7
Expansion abroad	4.4
Expansion both in Sweden and abroad	22.5
No	30
Do not know	11.5

Table 9 Choice of financial source in case of expansion (number of firms and percentage of firms within parentheses)

Funding source:	Not at all probable	Not probable	Probable	Very probable	Do not know	Number of firms answering
Founder equity	6 (4.2)	14 (9.7)	37 (25.7)	83(57.6)	4 (2.8)	144
Equity from family and friends	58 (51.8)	25 (27.3)	15 (14.6)	1 (1.0)	4 (3.9)	103
Business angels	34 (30.9)	16 (14.5)	26 (23.6)	21 (19.1)	13 (11.8)	110
Venture capital	40 (37.4)	19 (17.8)	20 (18.7)	15 (14.0)	13 (12.1)	107
Govt. subsidy	34 (30.4)	17 (15.2)	20 (17.9)	24 (21.4)	17 (15.2)	112
Founder loan	26 (23.0)	19 (16.8)	23 (20.4)	40 (35.4)	5 (4.4)	113
Loan from family and friends	57 (51.8)	30 (27.3)	12 (10.9)	7 (6.4)	4 (3.6)	110
Bank loan	25 (19.2)	20 (15.4)	51 (39.2)	28 (21.5)	6 (4.6)	130
Govt. loan	35 (31.0)	19 (16.8)	33 (29.2)	19 (16.8)	7 (6.2)	113
Other sources	32 (40.5)	5 (6.3)	7 (8.9)	7 (8.9	28 (35.4)	79

6. Prevalence of bootstrapping

There are alternatives to long-term financing to handle the financing the operations of a firm. These alternatives are called bootstrapping and can be used to mitigate the financial risk (see section 2). Table 10 shows the answers to questions to get access to assets and personnel in such alternative ways. It is obvious from the table that these alternatives were not commonly used. To some extent it can be explained that most of the surveyed firms did belong to the service sector. However it can be noticed that especially buying used equipment and borrowing was sometimes used.

Table 10 Bootstrapping (Five-point scale) expansion (number of firms and percentage of firms within parentheses)

Method:	No use	Very seldom used	Sometimes used	Often used	Very often used	Number of firms answering
By used equipment instead of new	78 (35.1)	29 (13.1)	59 (26.6)	35 15.8)	21 (9.5)	222
Borrow equipment from other businesses for a short period	119 (53.8)	25 (11.3)	51 (23.1)	17 (7.7)	9 (4.1)	221
Hire personnel for shorter periods instead of permanently employing personnel	126 (58.1)	16 (7.4)	33 (15.2)	20 (9.2)	22 (10.1)	217
Co-ordinate purchases with other businesses	157 (71.4)	24 (10.9)	28 (12.7)	7 (3.2)	4 (1.8)	220
Lease equipment instead of buying	137 (62.3)	25 (11.4)	29 (13.2)	24 (10.9)	5 (2.3)	220

In Table 11 a dichotomous scale was used to find out the prevalence of other bootstrapping methods. It turned out that saving on assets by running the business from home was commonly used. Fairly common was also to share premises with others. To handle cash flows by withholding own salary and use own private cards were also common. More than 30 percent of the respondents also used assignments (credits) as a way to handle cash flow and saved on assets by sharing equipment with other businesses.

Table 11 Bootstrapping (dichotomous scale) expansion (number of firms and percentage of firms within parentheses)

Method:	Not used	Used:	Number of firms answering
Practice barter instead of buying/selling goods	174 (80.2)	43 (19.8)	217
Offer customers discounts of paying cash	206 (94.9)	11 (5.1)	217
Buy on consignment (credit) from suppliers	143 (66.2)	73 (33.8)	216
Withhold own salary for some period	37 (17.0)	181 (83.0)	218
Use own private credit card for business expenses	80 (37.0)	136 (63.0)	216
Obtain capital via assignments in other businesses	138 (64.2)	77 (35.8)	215
Obtain payment in advance from customers	173 (79,7)	44 (20.3)	217
Raise capital from a factoring company	210 (96.8)	7 (3.2)	217
Use interest on overdue payment from customers	176 (81.1)	41 (18.9)	217
Deliberately choose customers who pay quickly	176 (81.5)	40 (18.5)	216
Use routines in order to minimize capital invested in stock	156 (72.6)	59 (27.4)	215
Run the business completely in the home during a period	76 (35.0)	141 (65.0)	217
Share premises with others	123 (56.7)	94 (43.3)	217
Share employees with other businesses	187 (86.6)	29 (13.4)	216
Share equipment with other businesses	137 (63.4)	79 (36.3)	216

7. Bank financing experiences

Table 7 in section 5 shows that bank loan is not so common in the financing of startups. This result deviates from earlier findings in the US and UK. In this section we will look closer at what experiences startups have had when applying for bank loans. It is worth noting that this was an open-ended question in the survey with no pre-determined alternatives. In response to a question about perceived difficulties in getting bank loans 84 startups answered that they had had difficulties (Table 13).

Table 13 Difficulties in getting bank loan

Question:	Number of firms:	Percentage of answers
Have you ever been denied bank loans or abstained because of perceived difficulties?	84	38.7

However, in total, 47 of 244 respondents got bank loans (19.3 % of the firms). Let us first look at the characteristics of these 47 firms and then compare with the characteristics of the firms in our sample that don't use bank loans. As many as 25 of these startups experienced initial difficulties with the bank but finally got a loan.

Our data indicates that 40 of the 47 firms that use bank loans also use personal savings to finance their firms (85 %), 9 also finance their firms through personal loans (19 %), 8 by state loans and regional loans e.g. Almi (17 %), 4 by loans from families and friends (8.5 %), 1 by equity from families and friends (2 %), and 1 by venture capital (2 %).

25 of the 47 firms (53 %) that are currently financing their firms through bank loans have been using bank loans since the firm was founded while 22 of the 47 firms didn't use bank loans when the firm was founded. 41 of the 47 firms used personal savings when the firm was founded (87%).

The most common types of industries that the firms who have been granted bank loans operate in are health care (19 %), retail business (10.5 %), manufacturing (8.5 %), and restaurants/café (6 %). Regarding person characteristics of the borrowers, 57 % are male and 43 % female while 83 % are born in Sweden and 17 %are born abroad. Interesting to note that percentage of females and born abroad is higher than for all surveyed companies. Further the average age is 46 years, and the average years of work experience is 21 years. 62 % have a university level degree. 57 % haven't started any firm before while 28 % have started at least one company before. 64 % of the businesses have expansion plans (29 out of 30 firms have expansion plans in Sweden and 11 firms internationally).

Table 14 shows the number and percentage of the 47 firms that use bank loans who have answered the questions about the difficulties in applying for bank loans. 53 % of these firms report that they have previously been denied bank loans or abstained from applying because of perceived difficulties while 43 % haven't been denied. 68 % have had to put up personal collateral and personal guarantees to obtain bank loans.

Table 14 Difficulties in applying for and obtaining bank loans.

	Number and percentage of firms answering Yes	Number and percentage of firms answering No	Number and percentage of firms that don't want to answer	Total number of firms answering the question (firms that use bank loans)
Have you ever been denied bank loans or abstained because of perceived difficulties?	25 (53 %)	21 (45 %)	1 (2%)	47
Have you had to put up personal collateral (e.g. your house) as a safeguard for bank loan to be used as funding source in your company?	32 (68 %)	14 (30 %)	1 (2 %)	47
Has it been necessary to put up a personal guarantee of repayment as a safeguard for bank loan to be used as funding source in your company?	32 (68 %)	13 (28 %)	2 (4 %)	47

Table 15 shows the most commonly mentioned challenges in applying for bank loans for the 47 firms that use bank loans. It is to be noted that this was an open-ended question in the survey with no pre-determined alternative. The requirements of collateral and personal guarantees were the problems most cited in applying for bank loans. In other words as pointed out in the introduction these are requirements that more or less makes the idea of the corporate form obsolete. The shielding and separation of owners´ and the firm´s wealth do not work. Furthermore it is noticeable that the interest rate was mentioned as a step stone. The investigation of Företagarna (see section 3) showed that the interest rate paid by small firms is considerably higher than the terms that large firms get.

Table 15 The largest challenges in applying for bank loans.

Answers:	Number and percentage
The requirements on collateral	12 (25.5 %)
The requirements on personal guarantees	6 (13 %)
The bank doesn't understand the business idea	4 (8.5 %)
The interest rates and terms of credit	3 (6.5 %)

8. Financing of startups from the bank´s viewpoint

Why do the startups encounter so many problems in obtaining a loan from a bank? In order to answer that question we took a look at the Swedish bank sector. We found that there are two different types of loans available. On the one hand is a micro loan of maximum SEK 100 000 (approximately max Euro 11 000). One of the 4 big Swedish banks, SEB, is offering this type of loan. This is a loan that is relatively easy to get. It is much more problematic to get a larger loan.

An in-depth interview with a credit decision maker from one of the leading banks in Sweden, Swedbank, shows that the processing of a larger loan involves several considerations (see appendix).First, the bank loan officer makes an assessment of the entrepreneur's ability to repay the loan based on an analysis of the budget and business idea. The business history and the financial data are important in order to prove the ability to repay the loan. Start-ups with no track-record and which are less than one year old and that don't have information from the financial statements have difficulties proving their repayment ability.

The factors that the bank loan officers primarily judge are: 1) the previous experience of the firm owner and management team, 2) the market potential and the risk of the business idea, and 3) that the budget seems reasonable and that the entrepreneur has good repayment ability.

Second, the bank wants to avoid taking risks in the entrepreneur's project and wants the business owner to take as large part of the risk as possible. The entrepreneur is more likely to obtain a loan the more personal savings he/she uses and if the entrepreneur has been approved a loan from any other external financiers. As a “rule of thumb” the bank prefers that the bank loan makes up less than 50 % of the total financing for the entrepreneur. Regarding the assessment of the repayment capacity, the cash flow and the value of the firm’s current assets are important.

Third, it is crucial that the entrepreneur has collateral and personal guarantees if the bank is going to be willing to grant loans. Personal guarantees have an important signaling value because it shows that the entrepreneur believes in his/her business idea and is willing to take a personal risk. The entrepreneur’s income and the value of the entrepreneur’s fortune have to be filled in.

There are three types of assets in the balance sheet that serves as a basis for chattel mortgages: 1) machinery/equipment, 2) inventory, and 3) accounts receivable. Through the financial statements, the bank makes an assessment of how liquid the assets are and how much value the bank can get out in case of insolvency.

In case of insolvency the bank first makes a seizure of the firm’s assets and then the entrepreneur’s assets. Chattel mortgage is a hygiene factor which is supplemented with the following real assets from the owner/s: 1) mortgages on real estate that the bank may confiscate, and 2) securities that the entrepreneur owns e.g. stocks and mutual funds. The bank has a detailed framework which they follow when calculating the collateral value.

Fourth, regarding lending conditions, the bank makes different assessments of individual loan applications rather than having general loan terms e.g. in terms of maturity of the loan. A crucial point is what credit rating and risk classification the entrepreneur gets. Some of the factors that affect the loan terms are the industry that the firm operates in, the previous experience of the owner and management team, financial ratios, the firm’s size and collateral.

Fifth, three different financial ratios are highlighted as especially important regarding risk classification: 1) interest coverage ratio, 2) solvency, and 3) turnover (sales/assets base).

There is a legal explanation to why banks are so restrictive in granting loans to startups. First there is the Swedish Banking and Finance Act (SFS no. 2004:297) which Chapter 8 Section 1 states about creditworthiness “ Before a credit institution decides to grant a loan it shall make an assessment of the risk for the undertakings ensuing from the loan agreement not being complied with. The institution may grant a loan only if there are good grounds for assuming that the undertakings will be complied with.”

By being strict on conditions of documentations and different types of safeguard as indicated above the bank can make sure that "there are good grounds" that the loan will be repaid. However knowledge of the loan applicant and access to information about the business plan could also serve as a "good ground" for granting a loan. The impact of access to this "soft" information on financing of startups has recently been studied of Backman (2013). She finds that access to a local bank in the close proximity of an entrepreneur contemplating starting a new firm matters. Her explanation is that knowledge of the personal characteristics of an entrepreneur and business idea is dependent on geographical closeness, especially in rural areas. Furthermore, she can show that the number of bank offices in more sparsely populated area has decreased. It is only in the most densely populated areas of Sweden where the number of bank offices have not decreased.

9. Concluding remarks

Innovations are the primary factor behind growth according to Solow (1957). To realize now innovative ideas entrepreneurs need financing. The entrepreneurs with the brightest new ideas are not necessarily persons with a wealth that allows self financing. There is also a risk factor to consider. To have to use own wealth for collaterals and guarantees to finance a startup built on innovative ideas means an increased personal financial risk. Hence, access to external finance and risk mitigation are important for the realization of a business idea.

With external financing a double trust problem has to be solved. The entrepreneur must be assured that the innovative ideas are not stolen. At the same time the financier must be confident that invested money are not wasted. For the entrepreneur the corporate form of business is attractive from the perspective of mitigating economic risk. The wealth of the entrepreneur can, at least in theory, be separated from the wealth of the firm. Bank loans are also attractive as stealing of ideas is less of a problem than with other forms of external financing. However, the drawback for a new firm is that the bank at the same time must be certain that money lent out is paid back. One way for the bank to be assured to get money back with interest rate is to demand safeguards in form personal collaterals and personal guarantees.

The present study contributes to the literature of financing of startups by concentrating on the startups of corporate form. It has not been done before. A new contribution is also the use Swedish data on startups. Earlier studies have primarily used US data and paid no special attention to the corporate form of business. In contrast to earlier studies we find that bank financing is not important for corporate startups. Bank loan is used by only 19.3 % of the firms.

Another important finding from our survey is that the corporate form does not really mean so much for startups. The shielding properties cannot be used. A relatively large proportion of the respondents that were granted bank loans had problems, either initially by being denied bank loans or that they had to use personal collaterals and personal guarantees to obtain a loan. Hence, the results suggest that bank financing does not seem to be a financing option for the majority of the Swedish startups. Personal wealth is a pre-requisite to obtain bank loans and is at least as important for the firms that do not use bank loans.

In response to the questions posed in the abstract we can summarize our findings that personal wealth is the most important financing source. Almost all financial risk is born by entrepreneur. Use of bootstrapping in mitigating risk take primarily the forms of withholding own salary, using private credit cards, and running the business at home. The alternative to bank loans is personal savings. Very few firms in our sample rely on relational financing from families and friends and on external financing from non-bank sources.

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Appendix: Interview with a bank loan officer in Stockholm at one of the four major bank branches in Sweden (Fall 2013)

Small business owners from all types of industries are applying for bank loans at the bank. Many business owners that are applying for loans have started firms in industries such as the retail industry or restaurant business. There are fewer firms that are seeking loans from e.g. newly established real estate companies.

As a first step of the loan application process, the entrepreneur must fill in a loan application document to become a corporate client at the bank. The entrepreneur answers questions about his/her background and previous experiences, about the firm's management team, the business idea, the market situation etc. The entrepreneur must also submit a business plan and a budget plan and fill in how much of the funding that is made up of personal savings, loans from other external financiers and how large bank loan the entrepreneur wants to apply for.

The application is sent to corporate advisors who make an initial assessment of the firm and the market potential for the business idea. In the next step, the corporate advisor contacts the entrepreneur by phone to ask additional questions and to make a decision if the bank is going to proceed with the loan application or not. The factors that are primarily judged are: 1) the owner and management team (background/experience/skills), 2) the business idea (the risk and the market potential of the business idea/product e.g. if the product is comparable with any similar product on the market. There is a higher risk if the product is completely new and if it isn't possible to compare with any other product), and 3) the budget (a "reasonable" budget and good repayment ability).

Below is an account of the various stages of the loan application process if the entrepreneur has been called to a bank meeting:

1) The owner is invited to a bank meeting with a corporate advisor.

   After the phone interview, the entrepreneur is booked to a meeting with a business advisor where the entrepreneur will give a more detailed account of the business idea and present himself/herself in more detail. The first meeting and impression plays a crucial role in whether the bank will proceed with the loan application. The meeting with the business owner is a hygiene factor where it is important that the entrepreneur inspires confidence.

2) Analysis of the entrepreneur's ability to repay the loan (analysis of the business plan, the budget, and financial statements).

   After the initial meeting, the business advisor makes an assessment of the entrepreneur's ability to repay the loan based on an analysis of the budget and business idea. The business history and the financial data are important in order to prove the ability to repay the loan. Start-ups with no track-record and which are less than one year old and that don't have information from the financial statements have a difficulty to prove their repayment ability. In some cases, the bank may proceed with the loan application if they still think that the business idea has potential and if they have got a good impression of the entrepreneur.

   The bank wants to avoid taking risks in the entrepreneur's project and business idea and wants the business owner to take as large part of the risk as possible. The entrepreneur is more likely to obtain a loan the more personal savings he/she uses and if the entrepreneur has been approved loan from other external financiers, e.g. Almi. For example, it is more likely that the firm obtains a loan if the entrepreneur uses 50 % of his/her personal savings, 20 % from Almi, and if he/she plans to use 30 % bank loan than if the entrepreneur wants to use 50 % from the bank without having taking a loan from another external financier. The higher personal risk the entrepreneur takes the higher probability that he/she will obtain a loan.

   As a "rule of thumb" the bank prefers that the bank loan makes up less than 50 % of the total financing for the entrepreneur with some exceptions, e.g. the real estate industry where the entrepreneur have more collateral and higher rents/net operating income. For example, the leverage for industrial property can amount to up to 60 % of the funding and 70 % for residential properties. Apart from these exceptions it is common that the entrepreneur is responsible for 50 %

of the financing of the firm because the bank is financing working capital and doesn't want to take a business risk. It is important that the firm has a solid cash flow and collateral.

3) Ensuring that the bank can receive collateral and personal guarantees

The bank must receive collateral and personal guarantees if the entrepreneur receives a loan regardless of the size of the loan. The bank is subject to rules e.g. the Banking Act. There are three types of assets in the balance sheet that serves as a basis for chattel mortgages: 1) Machinery/equipment, 2) Inventory, 3) Accounts receivable. The bank tries to assess whether there is any value in these assets and how liquid they are. This can differ between different industries. For example, in manufacturing companies the value of these assets is greater than in consultancy firms where the value is solely based on the owner's and staff's competence and skills.

The bank makes an assessment of how much value they can get out through the audited financial statements (e.g. 40 % of the value of assets). The bank also makes an assessment of what will happen in case of insolvency and what value of the firm the bank can expect to get out then. Upon bankruptcy, the value of inventory and accounts receivable quickly disappears while machinery/equipment can have a value of 10 % of the book value. When assessing what will happen in case of insolvency the bank is very restrictive in terms of chattel mortgages. First, the bank makes a seizure of the firm's assets and then the entrepreneur's assets.

Chattel mortgage is a hygiene factor (except for in the consulting industry) which is supplemented with the following real assets from the owner/s: 1) mortgages on real estate that the bank may confiscate, 2) securities that the entrepreneur owns (e.g. stocks and mutual funds). The bank has a detailed framework which they follow when calculating the collateral value.

Personal guarantees from the entrepreneur are important. The amount of money that the entrepreneur earns and the value of the entrepreneur's fortune have to be filled in. Personal guarantees are symbolically important because it shows that the entrepreneur believes in his/her business idea and is willing to take a risk. When the entrepreneur is unwilling to use personal guarantees the entrepreneur indirectly says that the bank should take all the risk. That the entrepreneur's personal guarantees have an important signaling value that the entrepreneur believes in the business idea and if the entrepreneur doesn't use personal guarantees it signals that the business idea is too risky.

The entrepreneur must be willing to take the risk and not the bank. Therefore, it is crucial that the entrepreneur has collateral and personal guarantees if the bank is going to be willing to grant loans. If the firm has a good track-record, good future prospects and adequacy of existing collateral, the bank may grant further loans without requiring additional collateral.

Regarding lending conditions, the bank makes different assessments of individual loan applications rather than having general loan terms (e.g. in terms of maturity of the loan). A crucial point is what credit rating the entrepreneur gets or which risk classification which is affected by many factors. The bank makes a risk classification where each corporate client is divided into a different risk class and in which the price of the loan is then added. Some of the factors that affect the loan terms are the industry that the firm operates in, the previous experience of the owner and management team, financial ratios, the firm's size and collateral. There is a high cost for the bank to lend money to firms in a high risk category.

Regarding the financial accounts three different financial ratios can be highlighted as especially important regarding risk classification (but there are many other indicators that are also important): 1) interest coverage ratio, solvency (equity ratio is also an important indicator. The higher the consolidation ratio, the more resistant the firm is against future losses. The equity ratio should be over 20 %, preferably over 25 %, 3) Turnover (sales/assets base).

Regarding the assessment of the repayment capacity, the cash flow is important (liquidity, free cash flow, and net cash flow). It is important which current assets the firm has.