Chapter 5
Factors Affecting Capital Structure of Indian Venture Capital-Backed Growth Firms

Swati Panda

5.1 Introduction

Entrepreneurship is considered as an engine for bringing about positive changes in the form of socioeconomic welfare (Kortum and Lerner 2000). However, it is a well-established fact that, one of the major constraints faced by entrepreneurs is access to finance. Self-financing is usually not sufficient and collateral-based debt funding is not always available. Information asymmetry prevailing between investors and entrepreneurs, uncertainty related to the future of the product and bleak exit prospects of the investor severely curtail a new venture's prospects of receiving finance (Chan 1983; Amit et al. 1990). In recent years, equity financing in terms of venture capital has emerged as one of the alternative sources of financing for new ventures. The most accepted form of definition for venture capital includes investment in young firms which are very risky but promise a great return. (Gompers et al. 1998).

Recent research in venture capital indicates a trend toward venture capitalists' preference toward late stage deals (e.g., Gompers and Lerner 2001). Since a large volume of venture capital is flowing into growth stage firms, it becomes essential to understand the various factors that venture capitalists consider before investing in a particular firm which is in its growth stage. Earlier research has focused mostly on analyzing the criteria used by venture capitalists to select a new venture based on human capital, attractiveness of markets, uniqueness of products etc.

However, this chapter seeks to identify the various financial indicators that venture capitalists consider before funding growth firms. One way to do this is to analyze the capital structure of firms which receive venture financing later. The basic objective of this chapter is to understand whether the determinants of capital structure of a firm have a major role to play in the access of venture capital later in

S. Panda (✉)
Economics and Strategy Department, Institute of Management Technology, Hyderabad, India
e-mail: swatiepanda@gmail.com; spanda@imthyderabad.edu.in

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its life cycle. The finance literature comprises of numerous studies that focus on the determinants of capital structure of firms. However, there do not exist many studies which talk about the determinants of capital structure of a firm which is financed by venture capital. This chapter is based on the Indian context. It uses the static trade-off theory, pecking order theory, and agency theory to explain the financial structure of firms which receive venture capital subsequently. This chapter draws from the capital structure literature to carve out the variables, i.e., tangible assets, profitability, size, volatility, growth opportunities etc. that affect the capital structure of firms which receive venture financing later. Propositions are drawn on the basis of this reasoning and a conceptual framework is put forth that tries to identify an optimal capital structure strategy for Indian growth firms that seek venture capital.

The chapter proceeds as follows: Sect. 5.2 describes the venture capital and private equity industry briefly. Section 5.3 lays the theoretical foundation of the paper. It draws from the finance literature and determines the need for screening out bad ventures from good ones. Section 5.4 includes a brief overview of the generic criteria that the venture capitalist looks at before investing. This is followed by the general financial theory that acts as the foundation for drawing out the financial factors that venture capitalists might attach importance to. After the theory has been adequately discussed, the hypotheses are developed. These hypotheses seek out the financial conditions that may attract venture capitalists to invest in a particular firm. Section 5.5 summarizes the entire discussion. It also provides a framework for entrepreneurs in their growth stage which shall act as a benchmark for them before they decide to raise venture capital. Section 5.6 concludes.

5.2 The Indian Venture Capital Scene

The Indian growth story is well documented. According to the IVCA Grand Thornton India Private Equity Report (2011), India's GDP has grown from $3.09 trillion in 2009 to $4.05 trillion in 2010. Real GDP rose to 8.3 % in 2010 from 7.4 % in 2009. The purchasing power of the Indian middle class has increased. There is a considerable increase in the disposable income among the Indian middle class, greater urbanization has seen a rise in demand for real estate, FMCG, retail etc. India managed to shield itself from the recessionary pressures that captured many economies in the recent past.

One of the major contributors to the India growth story are the private equity and venture capital players. They have played a considerable role in the development of various sectors in India (e.g., real estate, education, telecom, information technology, healthcare etc.). The investments by private equity players increased from $2 billion in 2005 to $19 billion in 2007. However, these investments dropped to $6.2 billion in 2010, primarily as after effects of the global recession. The private equity investments have accounted for a total of approximately $55 billion since 2005.

5.3 The "Lemons" Problem Revisited

This section lays the theoretical foundation of the paper. It draws out the need for screening out bad ventures from good ventures. The rationale behind the screening process is drawn from the finance literature dating back to early 1970s. The various means to resolve the screening problem have also been discussed in the subsequent subsections.

5.3.1 The Adverse Selection Problem

A venture capitalist has to face an adverse selection problem during selection of various ventures in which he eventually decides to invest. He invests in untested ideas which may or may not have a potential to earn the expected rate of return. There exists an information asymmetry between a venture capitalist and the entrepreneurs. The entrepreneurs usually have a better idea regarding the quality of the venture. The venture capitalist has to base his investment decisions on the information that the entrepreneurs provide. However, the entrepreneurs might have a vested interest in not representing the entire information about the venture. In order to separate the good entrepreneurs from the rest, the venture capitalist demands a high expected rate of return. Here, there emerges a "lemon" problem (Akerlof 1970). Those entrepreneurs, who believe that their venture is good, can achieve this high expected rate of return. However, they will not be willing to accept this high rate of return, because they will be exerting 100 % of their effort into it, with the receipt of only a fraction of the payment (Jensen and Meckling 1976). But, those entrepreneurs who know their ventures have low potential will accept this proposal. This is because they will get the money they need. Even if the venture fails, they will not be at a losing end because of their limited liability. As a result, the venture capitalist will receive proposals from "bad" entrepreneurs only. And since the venture capitalist will not find a good venture to back up, the market for venture capital will break down. This is the adverse selection problem facing the venture capitalist.

A classic example of screening is when the employer wants to hire employees for two kinds of jobs: the first one in which the employee can affect the output through his skills and the other one where the employee's skills have no effect on the project's output. The employer will obviously want to hire high skilled employees for the job in which the output can be affected by the employee's productivity. A possible way through which the employer can sort out high skilled workers from low skilled ones is by offering two types of compensation: a piece rate compensation and an hourly compensation. If these compensation types are properly implemented, then the highly skilled workers will take up the piece rate where he can improve the output through his skill sets and the unskilled ones will opt for the hourly wages where no matter what their skills utilized, they are assured

of a certain amount. This screening process is likely to curb the adverse selection process. This is because the piece rate or hourly rate in itself does not influence the worker's effort. The contract merely sorts out workers based on their private information. This sorting works in favor of the employer. If the contract terms are drawn in a manner that affects incentives as well, then moral hazard problems are also curbed (Smith and Smith 2004).

In case of screening, the actor is the investor (the party without the private information). He proposes alternatives to the entrepreneur, and arrives at a conclusion (the entrepreneur's expectations about the venture's success) based on the alternative that the entrepreneur opts for. For example, if the investor, is assured that the entrepreneur has other options to finance his venture (e.g., Personal savings), but still opts for venture financing, then the investor can draw a conclusion that the entrepreneur wishes to diversify his risk by bringing in outside financing, and is not very confident about the venture's outcome.

Screening occurs when the party without the private information (venture capitalist) offers alternatives to the other party (entrepreneur), so that the other party reveals the information by choosing (Smith and Smith 2004).

5.3.2 Signaling as a Solution to the Adverse Selection Problem

An investor is usually faced with a situation where he has to distinguish between a good venture and a "lemon." The problem here is that it is difficult and costly for the investor to verify the claims made by the entrepreneur.

One way through which an entrepreneur can convey positive private information to the investor is to simply bare all the information to the investors and let them draw their own conclusion. However, one of the problems of this option is that, there is a high probability that the idea (if good) may be appropriated by the investors without the knowledge of the entrepreneur.

Therefore, some vital questions that need to be answered include: How can an entrepreneur convey the true picture of his venture (his positive performance) without compromising on his idea? Conversely, how can a prospective investor convey the idea that he is not involved in any competitor's products and he has no mal intentions about the product?

The answer to these questions can be provided by the word "signals." Michael Spence (1973) first introduced the concept of signaling in a labor market context. In his example, each worker is aware of his own productivity, but this productivity is unobservable by prospective employers. Without this ability to distinguish between productive and unproductive workers, the employer will have to offer the same (low) wage to all. This results in an adverse selection problem. Spence shows that, under certain circumstances, workers can use educational qualification as a signal to communicate their productivity. Education attainment works as a signal because it

is observable and separates the workers according to productivity levels. Education, however, may not change the productivity of any worker. This signal is therefore used to address information problem and not incentive problem.

The idea of signaling can be extended to new venture financing as well. From an investor's point of view, the entrepreneur's claim of being motivated, honest, creative, hardworking etc. holds little value. The attributes that the investors seek from the entrepreneurs are, for most parts, unobservable. Investors would prefer entrepreneurs who realistically represent their true beliefs and provide accurate information regarding their financial projections and who have the (unobservable) managerial attributes that are needed for success.

In a startup, the entrepreneur must find a way to reveal the true value of the venture to the potential investor. Signaling theory suggests that ownership share retained by the entrepreneur helps the investors evaluate the information they receive. Leland and Pyle (1977), Prasad et al. (2000) reason that since many entrepreneurs have limited personal capital, a preferred signal of project quality is the proportion of investor's personal wealth invested in the venture. Such investments indicate both project value and the entrepreneur's commitment.

Another signal that acts as a deterrent to the selection of the business plan is the inclusion of nondisclosure agreements. Business plans accompanied by non-disclosure agreements are usually ignored by venture capitalists. This is mainly because the venture capitalists would prefer not be entangled in case of any legal proceedings due to use of proprietary information. Such potential litigations take away a lot of precious time, are costly, and damage the reputation of the venture capitalist.

The boundaries between these two methods, i.e., screening and signaling are blurred. Both of them occur in reciprocation with one another.

5.4 The Screening Process

The screening process includes separating the potentially good investments from the bad ones. The venture capitalists checks on the various indicators provided by the entrepreneur. Based on these indicators, the venture capitalist decides to invest in the venture or skip it.

The venture capital literature till date has focused on the various generic criteria that venture capitalists look at before investing in a venture. However, along with these nonfinancial aspects that venture capitalists take into consideration before proceeding to invest, there occur some financial considerations also which have not received much attention in the venture capital literature. Even though the literature talks about financial consideration as a single variable, however, they do not get into the intricacies of the financial consideration that dictate the investment decision of the venture capitalist.

The following subsection shall draw a brief overview of the generic criteria that the venture capitalist looks at before investing. This is followed by the general

financial theory that acts as the foundation for drawing out the financial factors that venture capitalists might attach importance to. After the theory has been adequately discussed, the hypotheses are developed. These hypotheses seek out the financial conditions that may attract venture capitalists to invest in a particular firm.

5.4.1 General Criteria Used by Venture Capitalists for Screening

Venture Capitalists receive multiple proposals seeking funding on a particular day. A typical venture capital firm receives more than 1,000 business plans per year, but a majority of them are not considered unless they are referred by the VC's network. The venture capitalists have a look at only about 50 of the thousands received and seriously consider only 25 of them. Out of these, the venture capitalists conduct due diligence (which involves costs in terms of finance and time) on 1 or 2 of the proposals (Sahlman 1990).

Ideally, they will have to sort out good proposals from bad. Good proposals imply proposals which have the potential to generate sustainable profits and satisfy the venture capitalists expected required rate of return. Venture capitalists usually have expertise in the sector and stage of investment. Since, most of the business proposals are by entrepreneurs who do not have a history of running a firm, VCs usually rely on other specifics such as the potential of the idea, the characteristics of the entrepreneur, the market demand etc. According to, VCs consider various internal factors and external factors during their due diligence process. Internal factors that influence the investment process mostly include the management quality, performance till date, influence of other investors, VC portfolio fit, monitoring cost and valuation. External factors include market size, growth opportunities, competition, and barriers to entry, probability of acceptance among customers, financial/economic conditions, and exit market conditions.

One of the major questions that has been well researched over in venture capital finance includes the various criteria that venture capitalists look for before selecting a particular investment (Poindexter 1976; Tyebjee and Bruno 1984; Macmillan et al. 1985, 1987; Timmons et al. 1987; Sandberg et al. 1987, 1988).

One of the earliest studies in the VC decision making process was by Tyebjee and Bruno (1981). He looked into various criteria that the venture capitalists looked into which mostly involved the investment size, the technology used in the venture, the expected growth rate of the market, the location of the entrepreneur among others.

Macmillan et al. (1985) included various criteria such as the entrepreneur's overall personality, his experience, the characteristics of the product or service, the characteristics of the market, and the expected rate of return. The entrepreneur's

characteristics and experience emerged as the prime criteria followed by the expected rate of return from the investment. The entrepreneur's prior experience in the target market, his leadership abilities, and reputation act as vital factors for evaluation. The product should be unique and the market should have a high growth rate. This criterion was cited as equally important to that of financial considerations. They identified six risk categories which include risk of losing entire investment, risk of being unable to be bailed out, risk of failure of implementation of idea, risk from competition, risk of management failure, and risk of leadership failure.

Macmillan et al. (1987) have tried to distinguish between a successful and unsuccessful venture. They have included five types of risk. Risk of failure due to incompetent team, inexperienced management, the risk of the business idea not working out, competitive risk which reduce profit margins, high lock in period of investment etc.

All the above studies have received criticism due to the methodologies that they have employed. Mostly interviews and questionnaires were used which comprised of responses that were ex-post. These studies suffered short comings in terms of rationalization of business decisions that the venture capitalist had already made. The studies mostly over emphasized on a particular criterion that was on the top of the memory of the venture capitalist. Or it was a particular criterion which the venture capitalist was biased at.

As a result of these criticisms, newer and more suitable methodologies were used to capture the decision making process. Sandberg and Hofer (1987) used a verbal protocol methodology to capture the evaluation criteria. The technique recorded the idea when the decision was actually being taken. Industry characteristics and management track record emerged as the most essential criteria for screening process.

Hall and Hofer (1993) also used a similar qualitative technique to capture the most important evaluation criteria. The most important criteria that emerged included the new venture's fit with the long-term growth and profitability prospects of the venture capital firm.

Zacharakis and Meyer (1998) used a method called social judgment theory (from the cognitive psychology stream) and used a tool called policy capturing to resolve the discrepancies between the actual criteria they use as compared to the criteria they "think" they use. They find that VCs themselves are not sure about the various criteria they employ during a particular decision making process. Amidst a lot if information and the bounded rationality constraint, the venture capitalist lose themselves. Instead of depending on hard facts to base their decisions, VCs rely on their past beliefs and experiences. Under different contexts, different criteria seem important. Sometimes the market is of importance, sometimes the entrepreneur, and sometimes the novelty of the product/service.

Other studies include Benoit (1975), Hoban (1976), Pointdexter (1976), Bruno and Tyebjee (1985), Goslin and Barge (1986), Knight (1986), Rah et al. (1994). These studies are mostly based on US VCs. Studies in Europe and Asia are quite few. Ray and Turpin (1993) look into the criteria utilized by the Japanese venture capitalists. The study compared the Japanese venture capitalists with that of

American VCs. They found that the selection criteria employed by US venture capitalists were more stringent. The Japanese venture capitalists were more flexible in their approach. The study also found that Japanese VCs were more market oriented in terms of selecting their ventures.

Chotigeat et al. (1997) looked into the criteria used by VCs in Taiwan, Thailand, and Sri Lanka. They found that financial consideration and team characteristics were given more importance by VCs in Taiwan and Sri Lanka. Thailand VCs emphasized more on the characteristics of the entrepreneur and the management team.

Pandey (1996) did a study on the criteria sought by Indian VCs before investing. It was one of the first. He identified 11 important criteria that VCs were interested in. Variables such as integrity, managerial skill, and the desire to grow were some of the important characteristics that VCs looked for in Indian entrepreneurs among others.

Other important international studies include Dixon Sweeting (1991) in UK, Ray (1991) in Singapore, Rah et al. (1994) in South Korea, Riquelme (1994) in Europe etc. All these studies found the personality of the entrepreneur and his team of prime importance.

5.4.2 Financial Criteria Used by Venture Capitalists for Screening

The costs involved in the due diligence process are quite high (cost of hiring external technical/legal/financial consultant, resources of the venture capitalists himself etc.). It is because of these costs involved, prior to the due diligence process, the venture capitalists prepare a term sheet. This term sheet outlines the general terms and conditions of the investment as anticipated by the venture capitalist based on the information that he has. Eventually, if it is discovered that certain critical aspects in the term sheet are missing due to omission of information by the entrepreneur, then the entrepreneurial firm has to bear part of the cost. This process ensures that the entrepreneur provides honest and relevant information.

5.4.2.1 Theoretical Foundation

Are there any financial indicators that the venture capitalists take into consideration before deciding to invest?

The answer to this question can be derived from the capital structure literature. The capital structure determinants may provide an indication as to what sort of firms the venture capitalists prefer to invest in. The main objective of this section is to find out about the various financial determinants of firms that aid it in receiving external financing from venture capitalists at a later stage.

The capital structure of a firm is the manner through which a firm finances its business activities. It is usually a combination of debt and equity. The decision to finance one's assets by either debt or equity depends on various factors, e.g., the firm's age, its asset characteristics, its profitability etc.

The origin of the capital structure literature can be attributed to Modigliani and Miller (1958, 1963). Many researchers have tried to solve the "capital structure puzzle" (Myers 1984) through various points of views. However, there is no universally accepted theory on capital structure (Harris and Raviv 1990).

There is the trade-off theory which is the oldest one and reasons out the existence of an optimal capital structure (Bradley et al. 1984). There is a tradeoff that occurs between the benefits of the corporate tax shield against the disadvantages of bankruptcy cost (Kraus and Litzenberger 1973) and agency cost (Jensen and Meckling 1976; Myers 1977). Another highly discussed theory is the pecking order theory which goes against the trade-off theory and states that there is no optimal capital structure (Myers 1984; Myers and Majluf 1984). There exists a hierarchy of financial instruments with increased information asymmetry via which a firm finances its business activities. Only when all the internal mode of financing are exhausted, the firm opts for external financing in terms of debt followed by equity. There are some other comparatively recent theories which have come up as an alternative/extension to the above literature. For example, the life cycle theory of firm financing and the market timing theory are the recent entrants into the capital structure literature.

A large number of empirical works has been concluded on the above theories. Some of them favor the trade-off theory (Marsh 1982; Bradley et al. 1984; Jalilvand and Harris 1984; Fischer et al. 1989; Flanery and Ragan 2006; Lopez-Gracia and Sogorb-Mira 2008 etc.). Many other empirical studies support the pecking order hypothesis (Shyam-Sunder and Myers 1999; Watson and Wilson 2002). Some studies are able to detect the applicability of both theories (Fama and French 2002; Frank and Goyal 2003 etc.).

However, most of these studies were conducted on large public firms. It is until recently that research on capital structure of small firms has emerged. This is mainly because of the importance that the entrepreneurial firms have in the economic development of nations (Kortum and Lerner 2000). Also, they make an interesting case study for the testing of these theories in an entirely different setting. For example, the new ventures typically suffer from heavy information asymmetry problems (Berger and Udell 1998). Also, there is no clear distinction between the shareholder and managers of the firm. In a majority of the case, the owner himself is the shareholder of the firm. As a result, new firms typically suffer from difficulties in accessing finance in comparison to their older counterparts. The mature public firms already have a track record and hence are able to draw finance more easily than the younger ones.

Before getting into the intricacies of the determinants of capital structure of pre-VC backed firms, there is an absolute necessity to understand about the theories that govern them.

5.4.2.2 Modigliani and Miller Irrelevance Proposition

Modigliani and Miller (1958) stated that under some key assumptions, the value of the firm is unaffected by the way it is financed. The main assumptions include that capital markets are perfect (insiders and outsiders have symmetric information), firms operate without any transaction cost, bankruptcy cost or taxes. Under these situations, it does not matter whether the firm decides to choose between debt and equity. Here, internal and external funds are perfectly substitutable.

These assumptions are, however, not practically applicable. A majority of the research in testing the trade-off theory have been devoted to circumstances where the above assumptions do not hold.

5.4.2.3 The Static Theory of Capital Structure

This theory states that, every firm has a target capital structure and it continually strives to achieve it. However a firm always has to choose between debt and equity. If it intends to finance its business activities through debt, it has to face the tradeoff between the benefit it gains through the tax deductibility on its interests against the risk of bankruptcy and agency cost of debt.

"Firms borrow up to the point where the tax benefits from an extra dollar in debt are exactly equal to the cost that comes from the increased probability of financial distress" (Ross et al. 2008).

Due to these risks, equity seems a better option. However, accessing financing via equity has its own demerits. For instance, the firm has to suffer from the agency cost of equity. Basically, the capital structure moves towards an optimal one which embodies the existing tax rates, the asset characteristics, the profitability of the firm and the cost incurred due to bankruptcy. Specifically, the firm tries to strike a balance between the costs and benefits of debt, holding its assets and investment plans constant (Myers 1984).

The optimal capital structure of various firms will differ with difference in the firm characteristics, institutional differences (e.g., different bankruptcy laws, different tax rates etc.). This theory predicts that, "less" risky firms (e.g., more tangible assets, more taxable income to shield etc.) should have a high debt ratio. Whereas, "more" risky firms (e.g., firms with more intangible assets which have negligible value in case of liquidation) will have difficulty in attracting debt (due to lack of collateral as assets are intangible) and will have to find respite through equity financing. As a result, these firms will show a low debt equity ratio. Also, the firms which are "more profitable" will have high taxable income to shield as well as more debt—payment capacity. Therefore in order to balance these two aspects, they will have to rely mostly in debt, i.e., they will have a high debt equity ratio. The opposite applies to not-so profitable ventures. As far as growth opportunities are concerned, the firms in a high growth path should ideally borrow less as otherwise the likelihood of financial distress increases.

5.4.2.4 Agency Theory

This theory states that the firm's capital structure is based on agency costs, i.e., the costs incurred due to the conflicting interest between the principal and the agent, The agency cost comprises of the agency cost of debt and equity. The agency cost of equity basically comprises of the monitoring expense incurred by the principal (investor or the venture capitalist in our case), the bonding expense incurred by the agent (the entrepreneur), and the reduced welfare due to the conflict of interest between the principal and agent (Jensen and Meckling 1976).

Borrowing implies payment of interests at continual intervals. In order to make these regular payments, the incentive of the owner manager to engage in excessively risky projects increases as these will pay a higher return. However, the risk also increases. And it is the debt holders (instead of the equity holders) who will have to bear the downside risk. Now, if the debtors anticipate this situation, they will charge a higher interest rate which in turn increases the cost of debt. Thus, the agency cost of debt includes the opportunity cost incurred due to the impact of debt on the investment decisions of the firm, the monitoring and bonding expenditures by both debtors and equity holders, and the bankruptcy and reorganization costs (Hunsaker 1999). Since both debt and equity have an agency cost associated with them, the optimal debt equity ratio shall involve a tradeoff between them.

Agency costs arise due to conflicting interest between various actors. Jensen and Meckling (1976) has offered a good description of these conflicts:

Shareholder Manager Conflicts

The origin of this conflict is the separation of ownership and control of the firm. If the firm is financed by equity, the managers do not own the entire firm. As a result, even though they exert full effort, they are not able to reap the whole benefits of their effort, as it is shared between the owners and the investors (who are part owners). These types of conflicts can emerge due to various reasons. The managers realize that they do not receive full benefits of their effort. As a result, they indulge in non-value maximization behavior which involves investing their effort in perquisites (e.g., lavish cars and office space). This sort of conflict can be mitigated by awarding managers with equity share of the firm. Another means is to increase the debt level of the firm (keeping the managers equity holding constant). This will reduce the amount of cash flow that is available with the firm as a majority of it will be invested in paying the interest. And little will be available for the manager to invest in perquisites (Jensen and Meckling 1976). Another reason of this conflict is that managers might prefer to invest in less-value maximizing short-term projects, which will result in short-term profits and immediate enhancement of reputation against investing in value maximizing long-term projects. Mangers would essentially prefer investing in less risky projects and taking up less leverage as the likelihood of bankruptcy will go down (Hunsaker 1999). Managers would generally prefer to protect their current positions. If the control of the firm changes, the probability of the manager being terminated

increases. As a result, managers generally resist takeovers or mergers (even if its value enhancing for the firm). Sometimes managers continue to run the project even when liquidation is preferable (Harris and Raviv 1990).

The overinvestment problem is another issue which occurs due to the conflict between the shareholders and managers (Jensen 1986). Managers prefer to increase the firm size (so that they can be in control) rather than working toward increasing the value of existing projects (as preferred by shareholders). During this process, the managers may accept negative NPV projects as well, thereby reducing the firm value. This situation can aggravate due to the presence of excess free cash flow and low growth opportunities. Increasing the debt would help mitigate these problems. This is because the excess free cash flows will mainly be used up in payment of regular interests and there would be little capital to invest in negative NPV project. Also, debt increases the risk of bankruptcy and prevents managers from investing in nonvalue maximizing projects (Hunsaker 1999).

Shareholder Bondholder Conflicts

In this situation, shareholders make certain decision which result in transferring the wealth from bondholders to shareholders. Since, the bondholders are aware of such a situation, they will charge a higher interest rate. In one condition, there is a direct transfer of wealth from shareholders to bondholders (Smith and Warner 1979). Shareholders increase their wealth in comparison to bondholders by increasing the dividend payment. Also, high priority debt requires payment prior to the servicing of bondholders. Another source of conflict is the asset substitution (Jensen and Meckling 1976; Smith and Warner 1979). When the debtors agree to issue debt, they charge an interest rate (risk premium) in accordance to the riskiness of the project. Shareholders would prefer to invest in risky projects because, if the project succeeds, the returns will be more. Therefore, they will get a share of all the profits and the bondholders will receive only their periodic interest payments. However, if the project fails, then it is the debtors who will have to suffer (limited liability of the shareholders). Once the debtors are aware of this, they will charge a higher interest rate, thereby increasing the cost of capital. This increased cost of debt is borne by the shareholders as they are the residual claimants. Another problem that occurs due to these conflicts is the underinvestment problem (Myers 1977). Debt overhang occurs when the earnings generated by a new project is used to pay off existing shareholders. This situation usually arises during times of financial distress. Shareholders would not want to invest in new positive NPV projects because the earnings from these projects will be used up to payback existing debtors.

Literature has suggested various ways to mitigate these problems. This theory proposes that firms which are in a high growth path should have lower short-term debt and higher long-term debt in comparison to mature firms. Adding an upper limit to dividend payment (Smith and Warner 1979), collateralization of tangible assets (Stulz and Johnson 1985), issue of convertible debts (Jensen and Meckling 1976) can lead to lower agency costs.

Information Asymmetry Problems

Usually, the firms' insiders (managers) are more aware of the status of the firm as compared to outsiders. The capital structure in this situation therefore reflects the firm's needs to mitigate the information asymmetry problems (Myers and Majluf 1984). This capital structure is sometimes even used as a signal to external investors about the insider information that mangers possess (Ross 1977).

Usually, when a new firm issues equity, the existing shareholders consider it as negative information about the firm. And they are willing to pay less than the value of the share. As a result, the equities are underpriced. If the existing shares are underpriced, then there is a high probability that the new shares which will be used in case of a new project will also be underpriced. These studies are done under the assumption that managers work on behalf of the interests of the existing shareholders. The managers may therefore forego a positive NPV project if it requires the issuing of debt as this will result in a transfer of wealth to new shareholders in comparison to existing shareholders (Myers and Majluf 1984). Use of debt usually results in mitigation of such problems.

Myers (1984) proposed a theory of pecking order which is based on this concept of asymmetric information. Firms, while financing their projects, prefer to use their internal funds first, before issuing debt and afterwards, equity. Internal financing (retained earnings) requires no public disclosure of information or incur no flotation cost, they are mostly preferred. Once these internal funds are exhausted, the firm would prefer the use of external financial resources in the order of debt, convertible securities, preferred stock, and common stock. This is because firms tend to finance their investments through less risky financial instruments, i.e., debt rather than equity. Issuing equity will always result in a tradeoff between issuing them at lower than the market price or passing up of positive NPV projects.

There are certain implications of the pecking order theory. Under this theory, there is no optimal capital structure. Instead, the capital structure is designed by the firm's need for external financing. This determines the amount of debt the firm will have. Another implication is that profitable firms will usually have less debt. This is mainly because, these firms will have high retained earnings to finance their future projects. For example, in mid-2006, Google had an asset of $14.4 billion out of which $10 billion were in cash or marketable securities. Due to the reasons discussed above, a firm will try to increase its retained earnings (financial slack). This is mainly done to save cash to invest in future projects immediately. This tactic also avoids resorting to external means of financing (Ross et al. 2008).

There is a continuous debate on whether the static trade-off theory or the pecking order theory is more correct. According to Ross et al. (2008), the trade-off theory's prescriptions is mostly about long-term financial decisions (tax shields, financial distress etc.) in comparison to pecking order theory, which is mostly concerned with tactical issues of raising external finance. Therefore, both these theories have merit. In the words of Ross et al. (2008).

"It is probably the case that firms have long run, target capital structures, but it is also probably true that they will deviate from those long run targets as needed to avoid issuing new equity."

5.4.3 Financial Indicators that Attract Venture Capitalists

Based on the above theories, Harris and Raviv (1990) find that the tangibility of assets, default probability of the firm, volatility of earnings, growth opportunities, tax effects, marketing expenditures, expenditures in research and development, product specificity, etc., decide the level of debt that a firm might issue. In their own words:

"Leverage increases with fixed assets, non-debt tax shields,[1] investment opportunities and firm size and decreases with volatility of earnings, advertising expenditures, the probability of bankruptcy, profitability and uniqueness of products."

However, the results vary in accordance to sectors, stages of firm, different institutional settings, and country settings. Taking a cue from the above information, some propositions are developed that will reason out the attraction of venture capitalists for some of the above mentioned financial indicators.

In this section, we are talking about firms that are in their growth stage, i.e., firms that have grown from being an idea to having a tangible product/service. They have started earning revenues and are probably within the age range of 2–5 years. Growth firms can be further subdivided into early and late stage growth firms. Those firms which have a running prototype and have managed one or two clients can be considered to be in the category of early stage growth firms. They may or may not be earning revenues at this stage. Those firms, which are having a product/service ready and have to some extent an established client base, can be considered to be in the late stage growth firms. They might have earned some revenue and would be on their way to break even or would have already shown some profits.

5.4.3.1 Asset Tangibility

Presence of tangible assets indicates the presence of more debt. This is mainly because these tangible assets can act as collateral. Hence, the cost of debt will be low. Presence of large amount of tangible assets reduces the agency cost of debt and deters the firm from indulging in asset substitution (Jensen and Meckling 1976; Stulz and Johnson 1985). Also, during the occasion of liquidation of the firm, the tangible assets have more liquidation value (Wald 1999). Therefore, if a firm has more tangible assets, then the level of debt would be more, i.e., there is a positive relationship between the tangibility of assets and the level of debt (Titman and Wessels 1988;

[1] E.g., depreciation and depletion.

Mackie-Mason 1990; Prowse 1990; Jensen et al. 1992; Smith and Watts 1992; Grier and Zychowicz 1994; Hovaikimian et al. 2001; Frank and Goyal 2003).

According to Pecking Order Theory, when a firm seeks external equity funding, all his internal sources of financing and debt capacity must have been over. It is only after the firm has exhausted all possibilities of internal financing (including loans from friends, family etc.) and loans from financial institutions, that the firm seeks external financing in terms of venture capital. This situation occurs in a later stage of the firm, when it is looking to expand. The access of debt by the firm sends the venture capitalist a positive signal that the firm is worth investing. This is because other financial institution like banks etc. have done their due diligence and checked their creditworthiness before sanctioning the debt. Also, at this expansion stage, the amount of investment required per deal will be relatively high as compared to early stage firms. Hence, venture capital firms with large ticket size that are focused in late stage and expansion funding will be able to harbor these investments.

If a firm has intangible assets (e.g., hi-tech ventures), then the likelihood that it receives debt financing is less. This is mainly because it does not have enough collateral to secure loans and its liquidation value is very less. However, if the entrepreneur has a brilliant idea, then the venture capitalist will not want to let go of it. But the idea in itself may not be sufficient in securing venture capital. The entrepreneur should have a prototype ready. Also, in case of services firm, it would be advantageous on the part of the entrepreneur to have a first customer. However, only those types of venture capitalists will invest which have an expertise in that particular area. The venture capital firm should also have experience in developing start up firms from scratch to market ready. This skill set on the side of the venture capitalist is a prerequisite as this will help to reduce the information asymmetry between the entrepreneurial firm and the venture capitalist. Also, venture capital firms which invest in early stage will generally have a small ticket size as compared to their counter parts which are investing in late stage firms. This is mainly because the capital requirement of startups is comparatively low.

Proposition 1 *The likelihood that a venture capitalist will finance a growth firm which has high tangible assets is more as compared to a growth firm with high intangible assets.*

Tangibility, in the financial literature has been measured by fixed assets (which includes plant, property, and equipment).

5.4.3.2 Firm Size

As the size of the firm increases, the probability of default decreases (Titman and Wessels 1988; Rajan and Zingales 1995; Fama and French 2002; Frank and Goyal 2003). This is mainly because they are in general, better diversified and have a less

volatile cash flow and profits. As a result they can benefit more from interest tax shields. Also, the larger firms can have access to cheaper debts because of their bargaining power. Therefore, the cost of capital is less (Michaelas et al. 1999). Also, large sized growth firms are considered to have low information asymmetry in comparison to their smaller counterparts. This is because they offer more information to the venture capitalist. This might be another reason why large firms can have access to cheaper debts (Rajan and Zingales 1995; Cassar 2004). On the basis of this discussion, it can be said that late stage growth firms (that are considerably larger) have a better likelihood of accessing venture capital as compared to early stage growth firms (that are considerably smaller).

However, there are contrary evidences as well. Firms which are in a high growth trajectory, in anticipation of their financing needs in the future, try to establish relationship with bankers etc. As a result, the information asymmetry between the investors and investees declines. And not so large firms might also be able to access debt at a reasonable rate (Cassar 2004).

Now, according to the pecking order theory, the late stage growth firm will seek equity financing only when it has exhausted both its internal finance and external sources of debt. Even if a firm has enough debt capacity, it will not use it entirely as it will also have to take into consideration the bankruptcy costs and agency cost of debt (according to Static Trade-off Theory). On the other hand, the early stage growth firm might also seek venture capital financing (because of its unique nature to invest in risky firms), because it will not receive debt (due to lack of collateral and high information asymmetry) and it has exhausted its own personal mode of financing.

Proposition 2 *A venture capitalist would prefer to finance a late stage growth firm which is larger in size as compared to an early stage growth firm which is smaller in size.*

This is mainly because, everything else remaining the same, the venture capitalist will prefer a less risky venture (late stage growth firm) to a more risky one (early stage growth firm). A late stage growth firm signals the venture capitalist about its potential through the debt that it was able to receive (a signal of creditworthiness). It is also able to resolve some of the information asymmetries by furnishing the venture capitalist with some prior track record and its financial statements. However, a relatively newer venture will have nothing much to show other than an idea and a future plan (which may not be enough sometimes). Size, in the financial literature has been mostly measured by natural logarithm of total sales.

5.4.3.3 Profitability of Firm

The relationship between the profitability of a firm and its capital structure is not very explicit. If a firm is more profitable, it has more cash flows. As a result, it can

gain tax advantages due to the interest tax shield (Modigliani and Miller 1963). This is in accordance to the trade-off theory. According to the agency theory framework, debt acts as a disciplining instrument. The money that managers would have squandered off in unnecessary empire building is utilized to pay off the debtors (Jensen 1986). Also, debt acts as a signal about the profitability of the firm. Therefore, a profitable firm should have more debt. Another steam of reasoning favors the pecking order theory. Now, a profitable firm has a good amount of free cash flow to sustain its future growth and expansion plans. As a result, it need not seek external financing. So, this statement establishes the fact that, a profitable firm should have low debt (Myers 1984; Myers and Majluf 1984). Many empirical studies also find evidence about the negative relationship between debt and size (Titman and Wessels 1988; Wald 1999; Rajan and Zingales 1995).

But, the story is different for growth firms. A profitable growth firm whether in the late stage or early stage, would need substantial amount of capital for expansion. Since these firms are in a high growth path, the profits may not be sufficient to finance its expansion plans. They will have to seek external finance. If debt is available, then it is good. However, there might emerge situations where the need for external equity finance is acute. High growth firms which have mostly human capital or intangibles to show will need equity financing. Also, sometimes the need for finance may be immediate. At this juncture, raising equity finance is a last resort. This profitability acts as a good signal for venture capitalists. A venture capitalist would be more than willing to finance a profitable growth firm. This venture capital would aid in the expansion of the venture and would lead to further capital gains which can be then shared between the entrepreneur and the venture capitalist.

Proposition 3 *Already profitable late stage and early* stage growth firms *have a better likelihood of receiving venture capital finance as compared to nonprofitable ones.*

In finance literature, profitability is usually measured by the ratio of earnings before interest and tax (EBIT) to total assets of the firm.

5.4.3.4 Earnings Volatility

Firms with high volatility in earnings generally raise less debt. If the earnings are volatile, the risk the firm will not be able to honor its debt commitments is high. As a result, the firm might be forced to borrow at a higher rate in order to serve its existing debts. In case, it is not able to do so, it might even have to file for bankruptcy. Sometimes, earning volatility is taken as a proxy for financial distress.

However, this situation does not arise if the firm is financed by equity. During periods of financial difficulties, the firm can stop paying dividends or it can defer it.

Generally, new, entrepreneurial firms face such situation. As a result its better for them to access equity finance instead of debt. However, these firms might not receive the external equity capital that they are seeking. A venture capitalist needs

to have some indication about the potential of a venture before deciding to invest in it. A high volatility in earnings sends a wrong signal to the venture capitalist. Volatility in earnings indicates that the firm is in financial distress and is seeking venture capital as a last resort to save its firm from going down. The venture capitalist might not be interested in acting as a savior for the turbulent firm.

Proposition 4 *The likelihood of a venture capitalist financing a growth firm with high volatility is low as compared to a growth firm with low volatility.*

In financial literature, volatility in earnings is measured by standard deviation in return on assets (ROA) (Booth et al. 2001).

5.4.3.5 Growth Opportunities

Growth opportunities are depicted by those assets which add value to the firm but cannot be used as collateral and do not generate profits for the firm (Titman and Wessels 1988). Due to this lack of collateral, the firm will have difficulty in accessing debt. Also, mere growth opportunities without any tangible assets (e.g., software startups) will not contribute to the profitability of the firm. This may be another deterrent in the firm's quest for external finance. As a result, most of the theoretical models have predicted that there is a negative relationship between leverage and growth opportunities.

In an underinvestment situation, firms which have good growth opportunities might give up positive NPV projects because the earnings from those projects will go into the servicing of existing debts (Myers 1977). In an overinvestment situation, where there is not much opportunity for growth, firms will go for debt as it will help reduce the agency problem of debt.

New ventures usually have difficulty in access of debt due to lack of collateral. However, they might have very good potential of growth in the future. Once they have exhausted all possibility of internal finance, and they cannot access debt, new ventures will seek venture capital finance. Due to their high growth opportunities, and specialized skills to resolve uncertainties, venture capitalists will invest in these ventures.

Proposition 5 *The likelihood of a venture capitalist financing a firm with high growth opportunities are more as compared to a firm with low growth opportunities.*

Financial literature measures growth opportunities through a ratio of market value to book value (Rajan and Zingales 1995). He cites two main reasons for this. The probability of financial distress is more for firms that have high market to book value. Also, firms would prefer to issue stock when they are overvalued.

5.5 Framework for Growth Firms Seeking Venture Capital

We have categorized growth firms into two sub categories, i.e., early stage growth firms and late stage growth firms. Those firms which have a running prototype and have managed one or two clients can be considered to be in the category of early stage growth firms. They may or may not be earning revenues at this stage. Those firms, which are having a product/service ready and have to some extent an established client base, can be considered to be in the late stage growth firms. They might have earned some revenue and would be on their way to break even or would have already shown some profits.

According to the discussion, high tangibility indicates a higher debt equity ratio. The asset heavy growth firms have a higher likelihood of securing venture capital. This is mainly because firms with some amount of tangible assets would have already secured some amount of debt because of their tangibles which acts as collateral. Also their liquidity price is high. This debt level of the growth firms would send a signal to the venture capitalist about the credibility of the firm. Growth firms which have low tangibility would not mange much debt because of their lack of collateral. As a result, they will have to send a signal about their abilities through things like a working prototype, some clients, their own personal investment etc. If they succeed, then their likelihood of securing venture capital might increase.

Bigger size implies a higher debt equity ratio. Growth firms in their late stage and in the early stage have equal likelihood of seeking venture capital. This is because the late stage growth firm might have exhausted its debt capacity and could seek venture capital. The early stage growth firm might not receive debt and seek venture capital financing as a last resort. Given this option of selecting between the late stage growth firm (larger size) and the early stage growth firm (smaller size), the venture capitalist would finance the late stage growth firm which is larger in size. This is mainly because the late stage growth firm would be able to provide more and better information about its ability (its prior track record, its established client base, its prior debt history etc.) than the early stage growth firm. This helps in reducing the information asymmetry between the entrepreneur and the venture capitalist to a great extent.

There are no clear-cut relationships between profitability and debt equity ratio. Profitable growth firms (whether in the late stage or early stage) have a greater likelihood of securing venture capital finance. Their profitability acts as a signal regarding the quality of the firm. The venture capitalist would invest in them. The capital gains that would be made in the future will then be subsequently shared between the entrepreneur and the venture capitalist.

A high volatility in earnings indicates a low debt equity ratio. Fluctuations in earnings may indicate that the firm is in financial distress. As a result the probability of the firm receiving debt capital is low. The probability of receiving equity capital also reduces because the venture capitalist would not like to bet on a sinking ship, because the probability of failure is high.

There is a negative relationship between firms with high growth opportunities and debt equity ratio. Growth firms which are either in their early stage or late stage with good growth opportunities will not be able to secure debt finance due to their lack of collateral. However, these growth opportunities indicate an increasing chance of success for these firms. The venture capitalist would like to capitalize on this opportunity by providing finance to these firms.

All the propositions that are drawn above are depicted here once again for a quick review:

Proposition 1 *The likelihood that a venture capitalist will finance a growth firm which has high tangible assets is more as compared to a growth firm with high intangible assets.*

Proposition 2 *A venture capitalist would prefer to finance a late stage growth firm which is larger in size as compared to an early stage growth firm which is smaller in size.*

Proposition 3 *Already profitable late stage and early stage growth firms have a better likelihood of receiving venture capital finance as compared to nonprofitable ones.*

Proposition 4 *The likelihood of a venture capitalist financing a growth firm with high volatility is low as compared to a growth firm with low volatility.*

Proposition 5 *The likelihood of a venture capitalist financing a firm with high growth opportunities is more as compared to a firm with low growth opportunities.*

The following table provides a complete framework of financial determinants for growth firms that can act as a benchmark, before they seek out venture capital financing (Table 5.1).

The framework indicates that late stage growth firms that are bigger in size, have tangible assets, are profitable and have high growth opportunities have a greater likelihood of receiving venture capital. Early stage growth firms that have high tangible assets, are highly profitable and more growth opportunities have a high likelihood of receiving venture capital. Therefore, a growth firm which intends to

Table 5.1 Framework of financial indicators for growth firms seeking venture capital

Criteria	Debt/equity ratio	P (accessing venture capital in late stage growth firm)	P (accessing venture capital in early stage growth firm)
High tangibility	High	High	High
Bigger size	High	High	Low
High profitability	Mixed	High	High
High volatility	Low	Low	Low
More growth opportunities	Low	High	High

seek venture capital in the near future must keep in mind these financial considerations. Other than the generic criteria such as the quality of the entrepreneur, the management team, the external competitive environment etc., these financial criteria would go a long way in securing venture capital. These financial criteria shall act as positive signal to the venture capitalists indicating the robustness of the firm. These signals, therefore, enhance the possibility of the growth firm in securing venture capital.

5.6 Conclusion

This chapter draws out various criteria that an entrepreneur running a firm in the growth stage should keep in mind before securing venture capital. Along with various generic criteria such as good management team, able entrepreneur, good economic and market conditions, and financial considerations such presence of tangible assets, prior profitability, high growth opportunities, and bigger size shall provide positive signals regarding the credibility of the firm. The probability of the growth firm securing venture capital funding will therefore increase.

However, one thing that emerges from this discussion is that venture capitalists are not exactly the risk takers that they are assumed to be in the academic literature. Their financial criteria for selection are not very different as compared to the criteria adopted by banks and other financial institutions. They too need some amount of risk mitigating methods to limit their downside risk. Once proven, this academic work shall be a breakthrough in deconstructing a major assumption of venture capitalist as risk takers. Their role then will be basically confined as another source of finance for entrepreneurial firms that are seeking finance rather than the change makers that they are touted in a majority of venture capital finance literature.

References

Akerlof G (1970) The market for lemons: quality uncertainty and the market mechanism. Quart J Econ 84:488–500

Amit R, Glosten L, Muller E (1990) Entrepreneurial ability, venture investments, and risk sharing. Management Economics 84(3):488–500

Benoit JL (1975) Venture capital investment behavior: the risk capital investor in new company formation and expansion in France. Unpublished doctoral dissertation, University of Texas, Austin, TX

Berger AN, Udell GF (1998) The economics of small business finance: the roles of private equity and debt markets in the financial growth cycle. J Bank Finance 22:613–674

Booth L, Aivazian V, Dermirguc-Kunt A, Maskimovic V (2001) Capital structure in developing countries. J Finan 56:87–130

Bradley M, Jarrell G, Kim EH (1984) On the existence of an optimal capital structure: theory and evidence. J Finan 39:857–878

Cassar G (2004) The financing of business start-ups. J Bus Ventur 19(2):261–283
Chan Y (1983) On the positive role of financial intermediation in allocations of venture capital in a market with imperfect information. J Finan 38:1543–1561
Chotigeat T, Pandey IM, David KJ (1997) Venture capital investment evaluation in emerging markets. Multinational Bus Rev 5(2):54–62
Fama E, French K (2002) Testing trade-off and pecking order predictions about dividends and debt. Rev Financ Stud 15(1):1–33
Fischer EO, Heinkel R, Zechner J (1989) Dynamic capital structure choice: theory and tests. J Finan 44:19–40
Flannery M, Rangan K (2006) Partial adjustment towards target capital structures. J Financ Econ 79(3):469–506
Frank M, Goyal VK (2003) Testing the pecking order theory of capital structure. J Financ Econ 67:217–248
Gompers PA, Lerner J (2001) The venture capital revolution. J Econ Perspect 15(2):145–168
Gompers PA, Lerner J, Blair MM, Hellman T (1998) What drives venture capital fund raising? Brookings Pap Econ Act Microeconomics 55:281–325
Goslin LN, Barge B (1986) Entrepreneurial qualities considered in venture capital. Frontiers of entrepreneurial research. Babson College, Wellesley, pp 366–379
Grier P, Zychowicz E (1994) Institutional investors, corporate discipline, and the role of debt. J Econ Bus 46(1):1–11
Hall J, Hofer CW (1993) Venture capitalists evaluation criteria and new venture evaluation. J Bus Ventur 8(1):25–42
Harris M, Raviv A (1990) The theory of capital structure. J Finan 46:297–355
Hoban JP (1976) Characteristics of venture capital investing. Doctoral dissertation, University of Utah, USA
Hovakimian A, Opler T, Titman S (2001) The debt equity choice. J Financ Quant Anal 36:1–24
Hunsaker J (1999) The role of debt and bankruptcy statutes in facilitating tacit collusion. Manag Decis Econ 20(1):9–24
IVCA Grand Thornton India Private Equity Report (2011). Accessed from http://www.indiavca.org/pdf/The-Fourth-Wheel-a-Grant-Thornton-Report-.pdf
Jalilvand A, Harris RS (1984) Corporate behavior in adjusting to capital structure and dividend targets: an econometric study. J Finan 39(1):127–145
Jensen MC (1986) Agency costs of free cash flow, corporate finance and take-overs. Am Econ Rev 76:323–339
Jensen M, Meckling W (1976) Theory of the firm: managerial behavior, agency costs, and ownership structure. J Financ Econ 3:305–360
Jensen G, Solberg D, Zorn T (1992) Simultaneous determinants of insider ownership, debt and dividend policies. J Financ Quant Anal 27(2):247–263
Kortum S, Lerner J (2000) Assessing the contribution of venture capital to innovation. RAND J Econ 31(4):674–692
Kraus A, Litzenberger RH (1973) A state preference model of optimal financial leverage. J Finan 28:911–922
Knight RM (1986) Criteria used by venture capitalists. In: ASAC conference, Vancouver
Leland HE, Pyle DH (1977) Informational asymmetries, financial structure and financial intermediation. J Finan 32:371–387
López-Gracia J, Sogorb-Mira F (2008) Testing trade-off and Pecking Order Theories for Financing SMEs. Small Bus Econ 31(2):117–136
MacKie-Mason J (1990) Do taxes affect corporate financing decisions? J Finan 45(5):1471–1493
MacMillan IC, Siegel IR, Subba Narsimha PN (1985) Criteria used by venture capitalists to evaluate new venture proposals. J Bus Ventur 1(1):119–128
Marsh P (1982) The choice between debt and equity. J Finan 37:121–144
Michaelas N, Chittenden F, Poutziouris P (1999) Financial policy and capital structure choice in U. K. SMEs: empirical evidence from company panel data. Small Bus Econ 12(2):113–130
Myers S (1977) Determinants of corporate borrowings. J Financ Econ 5:147–175

Myers S (1984) The capital structure puzzle. J Finan 39:575–592
Myers S, Majluf SC (1984) Corporate financing and investment decisions when firms have information that investors do not have. J Financ Econ 13:187–221
MacMillan IC, Zemann L, Subba Narsimha PN (1987) Criteria distinguishing successful from unsuccessful ventures in the venture screening process. J Bus Ventur 3:123–138
Modigliani F, Miller M (1958) The cost of capital, corporation finance and the theory of investment. Am Econ Rev 48(3):261–297
Modigliani F, Miller M (1963) Corporate income taxes and the cost of capital: a correction. Am Econ Rev 53(3):433–443
Pandey IM (1996) Venture capital: the indian experience. Prentice Hall of India, New Delhi, pp 62–69
Pointdexter EA (1976) The efficiency of financial markets: the venture capital case. Unpublished doctoral dissertation, New York University, New York
Prowse S (1990) Institutional investment patterns and corporate financial behavior in the US and Japan. J Financ Econ 27(1):43–66
Prasad D, Bruton G, Vozikis G (2000) Signaling value to business angels: the proportion of the entrepreneur's net worth invested in a new venture as a decision signal. Venture Capital 2:167–182
Rah J, Jung K, Lee J (1994) Validation of the venture evaluation model in Korea. J Bus Ventur 9:509–524
Rajan R, Zingales L (1995) What do we know about capital structure? Some evidence from international data. J Finance 50(5):1421–1460
Ray DM (1991) Venture capital and entrepreneurial development in Singapore. Int Small Bus J 10 (1):11–26
Ray DM, Turpin DV (1993) Venture capital in Japan. Int Small Bus J 11(4):39–56
Riquelme H (1994) Venture capitalists collective beliefs on new business venture investments. J Enterp Cult 2(2)
Ross S, Westerfield RW, Jordan BD (2008) Fundamentals of Corporate Finance. New Delhi, Tata Mcgraw Hill
Ross S (1977) The Determination of Financial Structures: An Incentive Signaling Approach. Bell Journal of Economics 8(1):23–40
Sahlman W (1990) The structure and governance of venture capital organizations. J Financ Econ 27:473–521
Sandberg WR, Schweiger D, Hofer CW (1987) Determining venture capitalists' decision criteria: the use of verbal protocols. In: Frontiers of entrepreneurship research. Babson College, Wellesley, pp 397–407
Sandberg WR, Schweiger DM, Hofer CW (1988) The use of verbal protocols in determining venture capitalist's decision process. Entrepreneurial Theory Pract 13(2):7–20
Shyam-Sunder L, Myers SC (1999) Testing static trade-off against pecking order models of capital structure. J Financ Econ 51:219–244
Smith C, Warner J (1979) On financing contracting: an analysis of bond covenants. J Financ Econ 7:117–161
Smith C, Watts R (1992) The investment opportunity set and corporate financing, dividend, and compensation policies. J Financ Econ 32(3):263–292
Stulz RM, Johnson H (1985) An analysis of secured debt. J Financ Econ 14:501–521
Smith JK, Smith RL (2004) Entrepreneurial finance. Wiley, New York
Spence AM (1973) Market signaling: information transfer in hiring and related process. Harvard University Press, Cambridge
Sweeting RC (1991) UK venture capital funds and the funding of new technology based business: process and relationships. J Manage Stud 28(6):601–622
Timmons JA, Bygrave WD (1986) Venture capital's role in financing innovation for economic growth. J Bus Ventur 1:161–176
Titman S, Wessels R (1988) The determinants of capital structure choice. J Finan 43(1):1–19

Tyebjee TT, Bruno AV (1981) Venture capital decision making: preliminary results from three empirical studies. In: Frontiers of entrepreneurship research. Babson College, Wellesley
Wald J (1999) How firm characteristics affect capital structure: an international comparison. J Financ Res 12(2):161–187
Watson R, Wilson N (2002) Small and medium size enterprise financing: a note on some of the empirical implications of a pecking order. J Bus Finan Acc 29:557–578
Zacharakis A, Meyer D (1998) A lack of insight: do venture capitalists really understand their own decision process? J Bus Ventur 13(1):57–76