

# **Studies on the venture capital process**

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# Abstracts

This thesis consists of an introductory part, including venture capital definitions, the history of venture capital in Sweden, and an overview of the venture capital process, and four self-contained papers on venture capital and the venture capital process.

**Paper 1** investigates the standardisation of the contractual strategies applied in the Swedish venture capital industry. The study was based on a questionnaire data regarding the use of contractual covenants. Our results indicate that the greatest differences occur among those with different investment preferences. There would appear to be two distinct venture capital cultures controlling contractual choices in these groups. Our findings generally conform to expectations as predicated by institutional theory.

**Paper 2** investigate venture capital firms' valuation practices in two different economic contexts, in the economic boom of 1999 and in the downturn market of 2002 by using an experimental case study design with a case based on a real firm. Contrary to our expectations, in times of heightened stringency and economic downturn, venture capital investors employ fewer valuation models than they do in boom times. The main contribution of our research is an increase in the knowledge of venture capitalists' valuation practices under different market conditions. It can also contribute to researchers developing more relevant theories of valuation, valuation models and valuation practice.

**Paper 3** empirically examines the linkage between governance, trust and performance based on a questionnaire sent to entrepreneurs in venture capital backed companies in Sweden. The results suggest that the level of trust between the venture capitalist and the entrepreneur affects the relationship between VCs governance and the portfolio company's performance.

**Paper 4** analyse exit strategies and exit-directed activities among entrepreneurs in venture capital relationships. The study focuses on the effect of the venture capital organization (independent, public sector and captive) on strategy and exit-directed activities. The results indicate that firms with a trade sale strategy tend to have a higher degree of exit activities compared to other exit strategies. Furthermore, the type of venture capital organization involved (especially when comparing private independent VCs to public sector VCs) also affects exit strategies and activities.



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<sup>1</sup> Hassel, 1992, p.1

<sup>2</sup> Yes, even thicker than Åke and Maggans dissertation!

the core of the lunch table crew: Gösta Söderström, Stellan Nilsson, Lars Lindbergh, Lennart Eriksson and all the members of Umeå Barack School and huligankollegiet. A big thank you goes to the administrative staff that fix things when I have messed up, thank you Katarina, Inger, Susanne, Elsa, Anna-Lisa and Widde.

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### Appended papers:

1. Institutional Theory and contracting in venture capital: the Swedish experience
2. How do venture capital firms value entrepreneurial ventures?
3. The effects of governance and trust on performance in a venture capital relationship
4. Exit strategy and the intensity of exit-directed activities among venture capital-backed entrepreneurs in Sweden



# 1. Introduction

The formation and growth of small and medium sized enterprises (SMEs) is recognized as one of the most important factors for economic growth (Storey 1994, Davidsson et. al 1996). Access to risk capital (equity capital) is often emphasised as a critical conditions for SMEs and new venture start-ups to be able to pursue growth opportunities (Ds 1994:52; SOU 1996:69; SOU 1993:70; European Commission, 1998).

Because of a limited life history and a lack of steady cash flows, young firms that are in the beginning of a growth phase often have problems accessing traditional debt capital. Financing the firm with the capital of the entrepreneur is generally not an alternative because these resources are usually either already used or too small (Bygrave and Timmons, 1992). Furthermore, fast developing new firms can seldom compound the capital needed for fast development themselves (Brophy 1996). Finally, equity financing is a more suitable way of financing growing young firms' investments and expansions than is debt, because the latter has the disadvantage of increasing a firms' financial risk (mainly due to amortizations and interest rates) (Cornell and Shapiro 1988). The difficulties of finding (or inadequate supply of) growth capital for entrepreneurial firms are often referred to as the equity gap (Wetzel, 1983).

Besides the equity gap, small firms with high growth potential also tend to suffer from a competence gap (Barth 1999). The development from idea to mature company increases the complexity of firm management and constantly raises new demands on the management of the firm (Barth 1999, Klofsten, 1992, Greiner 1972). It is by meeting the need for capital and competence that the venture capital market has found its niche. The ability to bridge these competence gaps is in fact a prerequisite for the existence of the venture capital market.

Venture capital firms are firms that are specialised in co-investing equity with the entrepreneur to fund an early stage (seed and start-up) or expansion venture (the term venture capital is more fully discussed in later sections). Doing that implies that they need not only to contribute with growth capital, but also with the necessary competence to help the entrepreneurial firm to grow.

The well-known successes of venture capital supported firms have given the U.S. venture capital model an international reputation that other countries seek to emulate. The North American venture capital industry has played a major part in developing several of the most successful American companies, such as Microsoft, Apple and Intel (Jørgensen and Levin, 1984). Bygrave and Timmons (1992, p. 1) emphasized the importance of the venture capital industry: “It [venture capital] has played a catalytic role in the entrepreneurial process: fundamental value creation that triggers and sustains economic growth and renewal. In terms of job creation, innovative products and services, competitive vibrancy, and the dissemination of the entrepreneurial spirit, its contributions have been staggering. The new companies and industries spawned by venture capitalists have changed the way [in] which we live and work.”

Over the last two decades, venture capital markets have emerged widely around the world. The European venture capital market is today not far from the size of the U.S. venture capital market. According to recent statistics from the European Venture Capital Association (EVCA) nearly €15 billion was invested by venture capital companies located in Europe in 2005 (EVCA, 2006)<sup>3</sup>. This figure is roughly 86 percent of the size of the U.S. market (PricewaterhouseCoopers/National Venture Capital Association, 2006). The Swedish venture capital market has followed the European growth trend and is today one of the leading venture capital markets in Europe. When measuring

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<sup>3</sup> Buy-out investments are excluded from the European data in order to make it comparable with the U.S. data.

private equity investments in 2005 as a percentage of total GDP, Sweden is the second largest investor (after Denmark) (EVCA, 2006).

The Swedish Private Equity & Venture Capital Association (SVCA) has today (May 2006) 114 active corporate members that have made approximately 1 500 venture capital investments in total (SVCA, 2006). Examples of successful venture capital backed firms in Sweden are Altitude, Price Runner, SQS, Fingerprint, Axis, Artimplant, and C-technologies.

The growth of the venture capital market has not been without disturbances however. The bursting of the Internet and dot-com bubble during 2000 also marked a historical peak in the history of the venture capital industry. During the “bubble-period” 1998-2000 there was a remarkable increase in valuations and capital volumes (Ofek and Richardson, 2003). Many have interpreted investors’ behaviour during that time as very illogical. Lamont and Thaler (2003, p 231) even argued that investors were “irrational, woefully uninformed, endowed with strange preferences, or for some other reason willing to hold overpriced assets”. The market collapse that followed had a huge effect on the venture capital industry, especially in the U.S. (NVCA, 2002). Mark G. Heesen, president of the National Venture Capital Association, said in mid 2003 “It will likely take several years for short-term private equity performance to return back to normal levels” (NVCA, 2003). The effect was not only a significant decrease in the number of venture capital funds and the amount of invested capital but the dot-com bubble also affected the behaviour of venture capitalists in the market who became “entrapped in the psychic prison of the Internet bubble” (Valliere and Peterson, 2004, p. 20). Today the industry even speaks of a “post-bubble strategy” (NVCA, 2006). The bubble-period and the following recession in the economy do highlight the need for research on investors’ behaviour on the venture capital market. Researchers have an important task to transfer experience and knowledge in order to strengthen the venture capital market for the future.

The size and activities of the (US) venture capital market are now back at the levels they were before the bubble-period (1998) (Pricewaterhouse-Coopers/National Venture Capital Association, 2006). The peak of the Swedish dot-com bubble was not as high as in the U.S. but the crash still rendered a serious blow to Swedish venture capital market.

The growing economic role and the significance of the venture capital markets for creating growth in society is one important argument for performing venture capital research, or as Mason and Harrison (1999, p 13-14) put it: “Venture capital is now recognized globally as playing a key role in innovation, wealth creation and job generation and is increasingly a key element in government efforts at both national and sub-national levels to generate economic growth. It is therefore important that our knowledge of this form of finance increases.” However, despite the importance, it is still a rather young research field, not least in Sweden. As Barry (1994, p. 11) noted: “empirical research on venture capital was virtually non-existent before the decade of the 1990s”. Another example of the youth of the research field is that the first academic journal with an explicit venture capital focus (*Venture Capital - An International Journal of Entrepreneurial Finance*) started as late as 1999<sup>4</sup>. The lack of research in the Swedish context can be exemplified with the following: A search in peer-reviewed journals on the article database EBSCO Business Source Premier<sup>5</sup> with search terms “venture capital” and “Sweden” resulted in only 23 hits, of these hits only thirteen articles are empirically studying the venture

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<sup>4</sup> There are of course several other journals that started earlier that also frequently publish venture capital research, for instance *Journal of Business Venturing*, *Small Business Economics*, *Entrepreneurship: Theory & Practice*, and the *Journal of Small Business Management*. To this there are also several journals with a more practitioner-focus (e.g. *The Journal of Private Equity*).

<sup>5</sup> EBSCO Business Source Premier is “the industry’s most used business research database, providing the full text for more than 8,800 serials”

(<http://ebscohost.com/thisTopic.php?marketID=4&topicID=2> / [Accessed 20 August 2006])

capital market in Sweden. As a comparison, a search on only the term “venture capital” in peer-reviewed journals resulted in 2144 hits<sup>6</sup>.

An obvious argument for the need for more research on the venture capital market in Sweden is that differences in economic and social structures and legal and fiscal environments may create an industry different from the U.S. (role)model of venture capital. Studying an “emerging” venture capital market as Sweden might also give more general knowledge about how venture capital markets are created outside the US. Several studies have shown that legal or cultural differences or the youth of a market can change the way actors in the market behave. For instance, Cumming and MacIntosh (2002) demonstrated that differences in legal and institutional factors between the U.S. and Canada created differences between the venture capital industries in the two countries (e.g. that U.S. venture capitalists in general are more specialized investors). Another example was given by Black and Gilson (1998) who illustrated how differences in capital market organisation and regulation affect the development and behaviour of the venture capital industry. Their major proposition was that bank-centered capital systems (as in Germany and Japan) might have a negative effect on the vitality of the venture capital industry, compared to the more stock market-centered system in the US. Black and Gilson (1998) also discussed several other explanations for intercountry variations in venture capital, for instance differences in pension fund size and regulation, variations in labour market restrictions and cultural differences in entrepreneurship.

There are many interesting and important aspects that can be chosen when doing venture capital research. Gaps and challenges can be found almost everywhere.

Venture capital can, for instance, be studied from an industry-market perspective where the main focus is to understand and analyse the venture

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<sup>6</sup> This should of course not be seen as a total count of all academic papers on venture capital and is only a rough indicator on the lack of research on venture capital in Sweden.

capital industry from a macro level, e.g. by trying to find trends in market behaviour. Bygrave and Timmons (1992) had this perspective in their highly cited book *Venture capital at the crossroads* where they discussed how the U.S. venture capital industry had started to shift away from early stage investment (what they called classic venture capital) towards later stage investment (“merchant” venture capital). Another area that can be studied is the impact of venture capital on society. An example of such research is found in Kortum and Lerner (1998) who studied the impact of venture capital on innovation and found that the amount of venture capital activity in an industry significantly increased the rate of patenting in that industry.

Another important research area, one that is the focus in this thesis, is research that studies the process of venture capital investing. The venture capital process traditionally includes everything from raising money for investment funds, managing the investment process to the harvesting of the result (Tyejbee and Bruno, 1984; Fried and Hisrich, 1994; Gompers and Lerner, 2002). Hence, in this research area the focus is more from an inside perspective on venture capital rather from the macro (outside) perspective. In their highly cited work, Gorman and Sahlman (1989) phrased the questions *What do venture capitalists do?* in trying to capture the main research question in this area. However, knowledge about the venture capital process has developed since then and shifted away from pure descriptive studies of venture capitalists to focusing more on the relational aspects of the venture capital process. The venture capitalist is a relational investor as Fried and Hisrich (1995) pointed out.

Research on the venture capital process targets the actions and interactions between the actors involved in the process. The main actors are the investors, the venture capitalists and the entrepreneurs. Venture capitalists serve as intermediaries between investors (fund providers) and entrepreneurial ventures in need of growth capital, i.e. they act both as a supplier of capital and

competence to entrepreneurs and a seeker of capital from investors (Amit *et al.* 1998).

In order to understand many of the challenges in studying the venture capital process it is important to emphasise some of the basic differences between venture capital financing and traditional corporate finance (e.g. Copeland and Weston, 2005). It is in these differences that many of the empirical and theoretical challenges have their roots. Venture capital finance differs from corporate finance in many ways. Some of the most important differences include the degree of information asymmetry between outside investors and management (the entrepreneur), the role of contracting to resolve incentive problems, the level of involvement by outside investors, the role of diversification as a way to reduce risk and increase investment value, and the illiquidity of the market for venture capital investments (Smith and Smith, 2004).

One major challenge for venture capital firms (and for research in this field) is how to handle the information asymmetry that an investment in a young entrepreneurial firm gives rise to (Amit *et al.*, 1998). Venture capital investments in firms with a short history (lack of historical data) and in new industries give rise to information asymmetries between venture capitalists and entrepreneur of a much higher magnitude and importance than investments in publicly traded corporations. The theory of information asymmetry originates from agency theory (separation of management and control) (Eisenhardt, 1998) and suggests that the entrepreneur often has an information advantage over the venture capitalist. Information asymmetry creates two major problems that need to be dealt with, the risk for adverse selection and the risk for moral hazard (Amit *et al.*, 1998; Cumming, 2006). The risk for adverse selection is basically the risk that “hidden information” leads to bad investments (in firms with poor performance). The risk for moral hazard is about the risk that the entrepreneur acts opportunistically to the venture capitalists’ disadvantage.

How information asymmetries are handled has been a major research issue in venture capital research (see for instance Amit *et al.*, 1998; Sahlman, 1990; Wright and Robbie, 1996; Gompers and Lerner, 1999; Cumming, 2006). Agency theory and information asymmetry theory is often used when studying contracting issues in venture capital. Contracts between venture capitalists and entrepreneurs “address the two fundamental problems of information asymmetry and moral hazard by allocating cash flow rights, voting control, and decision rights” (Denis, 2004, p.311) Contracts can be used as screening devices to avoid adverse selection (Smith and Smith, 2004) and be used to avoid moral hazard problems (Elitzur and Gavius, 2003).

Another research issue that also can be derived from the problem with lack of information and the high uncertainty in venture capital investing is the issue of the valuation of young entrepreneurial firms. The traditional valuation models that estimate the value of a firm by discounting forecasted earnings or cash flows are usually not recommended in these contexts. Yet, venture capitalists are confronted frequently with companies whose current value must be estimated in spite of the fact that so much of the reward lies in an insecure future. Despite its importance for the venture capital process, research on venture capital valuation has been rather limited. One example of such research is Hering and Olbrich (2006) who studied how start-up companies in e-business are valued. Their main conclusion was that the major challenge was the surplus forecast, not the choice of valuation model. Other examples of such research involve those that try to describe what kinds of valuation methods are used by venture capitalists. For instance, Wright and Robbie (1996) found that valuation methods based on price earnings multiples seemed to be the most frequently used venture capital approach to valuation.

If and how venture capital firms actually create value in the firms they invest in is another interesting research question. As Mason and Harrison (1999, p. 27) stated: “Whether and in what ways venture capitalists add value continues to be

a lively focus for debate, with no consensus on the answers.” It is by their active role in their portfolio firms (for example by active participation on the board of directors, acting as a sounding board, monitoring financial performance etc) that venture capitalists are said to add value. However, despite considerable research on the value adding activities of venture capitalists, few studies have managed to empirically support the assertion that a venture capitalist’s involvement actually has a positive effect on business performance (Brau *et al.*, 2004; Manigart *et al.* 2002).

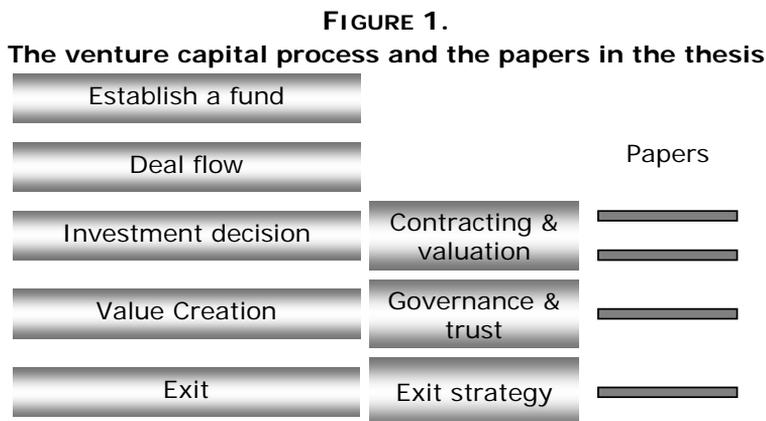
When the venture capitalist exit the investment marks the ending of the venture capital process. This exit can be done in several different ways, for instance by an initial public offering, acquisition, buyback or, in a worst-case scenario, by a write off (Cumming and MacIntosh, 2002). The potential for exiting from a prospective investment is crucial for a venture capitalist’s investment decision. A prime reason that exits are of such importance in the venture capital industry is that entrepreneurial firms, in the early stages of their development seldom are in a position to pay dividends to owners. The main return that venture capitalists get from their investments is the profit realised when they sell their holdings in the ventures. Hence, this illiquidity of the market for venture capital investments constitutes a major issue for venture capital investors. Research into venture capital exits has, however, been very limited despite the apparent importance of the issue. Bygrave *et al.* (1994), Cumming and MacIntosh (2002) and Schwienbacher (2002) are some of the exceptions.

## **1.1 Purpose of the thesis**

The overall purpose for undertaking this thesis was to increase the understanding of the venture capital process with an emphasis on the relationship between venture capitalists and entrepreneurs. This was done in four different papers and in this introduction. The four papers are positioned along the venture capital process from entry to exit. However, they do not

directly follow on one through the other (i.e. the second paper does not start where the first paper ends). Each paper can be seen as a freestanding inquiry into a certain aspect of the venture capital process (contracting, valuation, value creation and exit). The papers are also theoretically freestanding from each other, mainly because I do not believe that it is possible to cover the venture capital process under a single theoretical framework.

Figure 1 illustrates how my papers are related to the venture capital process (discussed in more detail in chapter 4). The process is broken down to three main phases, contracting and valuation, value creation and exiting. Two papers deals with the first phase (contracting and valuation), one paper deals with value creation, and the final paper deals with exiting.



Two papers deal with problems associated with the venture capitalists entering the relationship, contracting and valuation. The research problems in these two papers are:

**How is the venture capital contract structured and why is it so structured?**

and

**How do venture capital firms value entrepreneurial ventures?**

The third paper deals with the relationship between the venture capitalist and the entrepreneur during the value adding process and is guided by the following research question:

**How do governance and trust affect the performance of venture capital backed entrepreneurial firms?**

The fourth paper is studies venture capital exit strategies with the following questions:

**What kinds of exit strategies do Swedish venture capital firms use?**

**Is the venture capitalist's organisational form related to its exit strategy?**

**Does exit strategy affect exit-directed activities?**

## **1.2 Outline of the thesis**

As mentioned, this thesis consists of two major parts, first this introduction to the thesis and secondly a collection of four research papers.

However, the introduction part is more than an introduction to the papers. It also consists of three chapters that contribute to the overall purpose of the thesis.

**Chapter two** is a chapter where I examine the concept of venture capital and discuss terms and definitions. An understanding of the term venture capital is fundamental for understanding my research. Furthermore, misunderstandings and shifting definitions regarding venture capital terms are quite widespread, leading to several problems in the communication between venture capitalists, entrepreneurs, researchers and policy makers. Hence, the purpose is to set the language of venture capital. My original paper about venture capital terms and definitions was in Swedish and first published in the Swedish Venture Capital and Private Equity Associations (SVCAs) yearbook (Isaksson, 1998a). That paper was developed by “washing” my (early) theoretical understanding of

venture capital with an ongoing discussion with representatives from SVCA. The paper has since then gone through several revisions. The chapter will also appear in the forthcoming book, *Beyond the Valley of Death: Innovation in Venture capital and entrepreneurship*, published by SNS (Isaksson *et al.* 2006).

**Chapter 3** describes the history of the Swedish venture capital market. One reason for including this chapter in my dissertation is that it places the other papers in context. The Swedish governments' influence in the venture capital market was also important to highlight. In the last paper (Exit strategy and the intensity of exit-directed activities among venture capital-backed entrepreneurs in Sweden) I analyse how public sector venture capitalists differ in behaviour from private venture capitalists. Hence, the chapter gives more background to the role of public sector venture capitalists in Sweden. However, the most important reason to include this historical chapter is probably that a doctoral thesis on venture capital in Sweden needs to present the background for the reader to understand the market studied. This chapter is also a slight revision of a chapter that will appear in Isaksson *et al.* (2006).

**Chapter 4** reviews the venture capital process. In this chapter, I try to summarize what research has taught us so far about the venture capital process. I have also positioned the four papers that are appended to the dissertation. The majority of this chapter is also forthcoming in Isaksson *et al.* (2006).

In **chapter 5** the appended papers are summarized and complemented with a shorter discussion about the contributions.

## 2. Defining venture capital<sup>7</sup>

The debate regarding financing of SMEs and venture start-ups is characterised by an extensive confusion regarding the terms risk capital, equity capital, venture capital etc. It is therefore necessary to give a short explanation of the terms.

A firm can be financed by equity capital (i.e. risk capital), debt capital, or a combination of both options. The major difference between these sources of financing is that risk capital providers take a higher risk but also have a higher expected return than other types of capital providers. An exception from this fundamental difference between equity and debt capital is the soft loans that are provided by several governmental institutions for instance in Sweden, ALMI, Industrifonden or Norrlandsfonden. These governmental institutions offer soft loans that sometimes can be written off if the venture fails. In some cases, soft loans are also referred to as risk debt (*riskvilliga krediter*) or Government Granted Loans. However, soft loans should not be confused with risk capital. Not the least because venture capital involves some kind of active ownership by the contributor (Klofsten, *et al.* 1999).

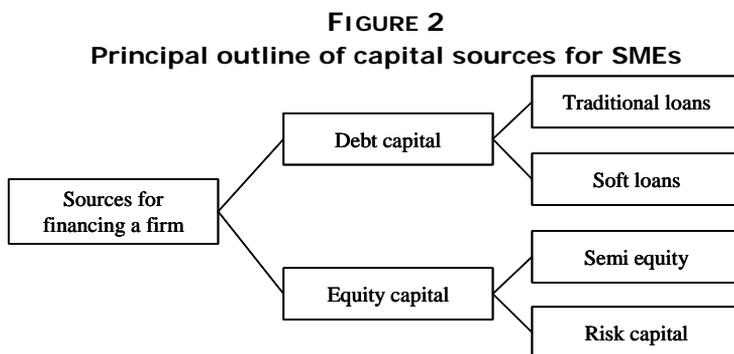
The term risk capital is commonly given two different meanings: One is in a broad sense including all kinds of capital that are invested in risky projects. The other is a more narrow definition meaning equity capital. The more narrow definition is the one primarily used by researchers, practitioners, and legislating bodies (see for instance Wetzels, 1983; European Commission, 1998; SVCA, 1998; EVCA, 2002). In some cases risk capital is defined even more narrowly as: “equity financing to companies in their start-up and development phases” (European Commission, 1998). The definition of risk capital as equity capital separates it from secured debt financing. Hence, the risk in risk capital demands

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<sup>7</sup> This chapter will in part be published in the forthcoming book: Isaksson, A., Vintergaard, C., Etzkowitz, H., and Klofsten, M, 2006. *Beyond the Valley of Death: Innovation in Venture capital and entrepreneurship*. Stockholm: SNS.

in fact that the equity owners take the genuine risk of the business, as opposed to debt owners whose capital usually is better secured in case of liquidation. However, an exact definition is not easy to derive and there are several semi equity capital instruments like convertibles<sup>8</sup> etc. that also can be regarded as risk capital. Grants and subsidies can also be seen as a form of risk capital under certain circumstances when they are used as seed capital for firm-formation.

Following the narrow definition of risk capital as an investment in exchange for a share in ownership, one can conclude that the alternative to finance a venture start-up with risk capital is to finance the firm with debt capital. See figure 2.



## 2.1 Venture capital and private equity

Venture capital is a subset of risk capital, in which the risk taken by the investor is offset by participation in the future success of the firm as part owner. The concept of venture capital as a source of investment has probably been around as long as there have been people prepared to put part of their wealth at risk for a potential gain. Isabella's financing of Columbus could, for instance, be

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<sup>8</sup> Convertible debt financing that has a feature allowing the debt to be converted to equity, often at the option of the investor, in the event of a default on repayment terms.

seen as a kind of venture capital investment (capital gain through discovery of a new route to India)<sup>9</sup>.

The more developed concept of venture capital investing, as we know it today, with subscribers, professional managers, and its own terminology, was however first developed in the U.S. after the Second World War (Gompers, 1994). Since then venture capital investment has become an institutionalised segment in the general economy.

Venture capital is often, especially in Europe, seen as synonymous with “private equity”. In this connection, venture capital refers to investments (with private equity) made by institutions, firms and wealthy individuals in the early- and expansion-stages of the newly established firm. The terminology of private equity is, however, also covering a range of other stages (Bridge financing, Replacement capital, Rescue/Turnaround, etc.), which goes beyond venture capital. Nevertheless, venture capital firms often participate in these various investment formats, simply to make money when it seems the best use of their capital even though it is for purposes other than firm-formation and growth.

Classic venture capital involved provision of business expertise and mentoring to relatively inexperienced firm-founders. Another frequently cited difference is the fact that venture capital investors are often more involved in the management and control of their portfolio firms compared to later stage investors (Fried *et al.* 1998). Among most professional venture capital organisations, venture capital is defined as a subset of private equity – focusing on earlier stage investments.

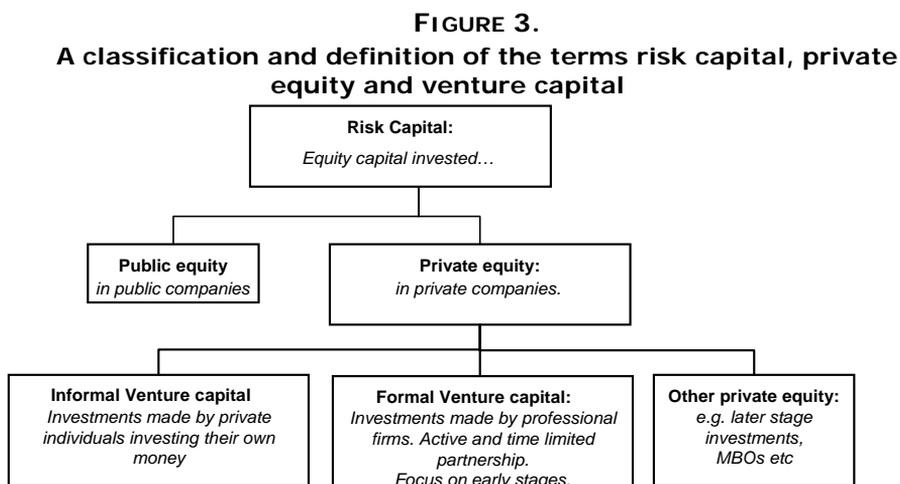
The European Private Equity and Venture Capital Association, EVCA, defines venture capital as “Professional equity co-invested with the entrepreneur to fund an early stage (seed and start-up) or expansion venture. Offsetting the

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<sup>9</sup> Of course, not all such projects have been made entirely, or only, for economic gain, sometimes these gains have been, and can be, just an added bonus. These were of course brought about for a higher goal, but many properly took part also hoping for some financial benefit from conquered lands, goods, and control of trade routes.

high risk the investor takes is the expectation of higher than average return on the investment.”, and private equity as equity capital provided to enterprises not quoted on a stock market (EVCA, 2006<sup>10</sup>).

Figure 3, capture the definitions and distinction of the terms risk capital, venture capital and private equity. As can be seen private equity is divided into three subgroups, informal venture capital, formal venture capital and other private equity. Formal venture capital is also sometimes referred to as “classic venture capital” and “other private equity” is sometimes only referred to as “private equity”. The distinction between venture capital and private equity can be found in arguments by, for instance, Wright and Robbie (1998) and Bygrave and Timmons (1992).



In the Figure 3, private equity is divided into three subgroups, informal venture capital, formal venture capital and other private equity. Formal venture capital is also sometimes referred to as “classic venture capital” and “other private equity” is sometimes only referred to as “private equity”. The distinction between venture capital and private equity can be found in arguments by, for instance, Wright and Robbie (1998) and Bygrave and Timmons (1992).

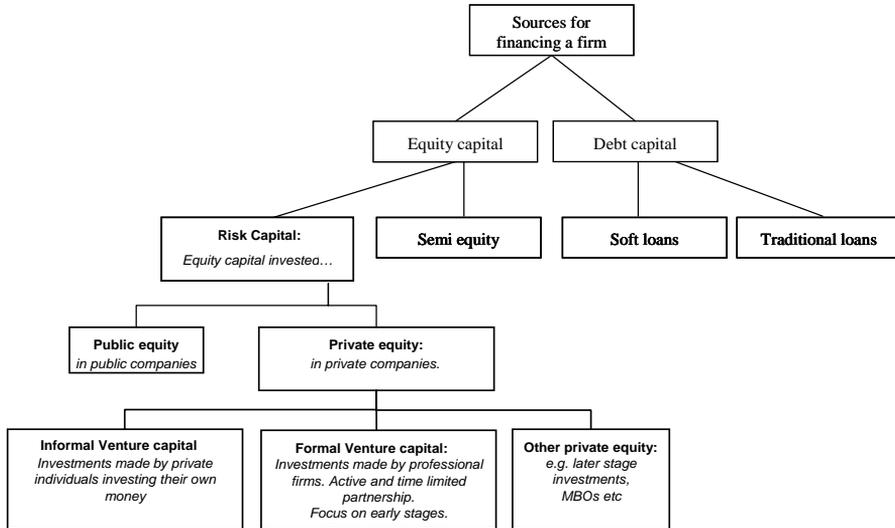
<sup>10</sup> [http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp) [Accessed 20 August 2006]

Informal venture capital is investments that are made by wealthy private individuals using their own funds (Sörheim and Landström, 2002). These informal investors are sometimes referred to as business angels (Wetzel, 1983). The difference between an informal investor and a formal venture capital firm is in practice often diffuse. Especially the distinction between very active business angels and venture capital firms is difficult to draw. Informal investors can for instance make investments via a company that the investor controls. It has also become popular in recent years in both Europe and U.S. to create formally organised networks of business angels (BAN's i.e. business angle networks) (Gullander and Napier, 2003).

Business angels often invest in earlier stages than other venture capitalists and also tend to be more involved with the daily operations of the portfolio firms (Landström, 1993). From a macro economic perspective business angels offer extremely valuable resources for the economy. Instead of using their personal wealth on consumer goods they use their money and competencies to develop new innovative businesses (Wetzel, 1983; Harrison and Mason, 1999).

By combining figures 2 and 3 we gain a fairly complete picture of the types of financing for new entrepreneurial firms.

**FIGURE 4.**  
**A classification and definition of the different sources of financing new venture firms.**



The classification of companies into the various subgroups allows us to look closely at what type of investment the company primarily pursues. It is however crucial to keep in mind that many companies combine venture capital and private equity investments, which in turn makes clear cut classification difficult.

## 2.2 Venture capital in the financial landscape for firm formation and growth

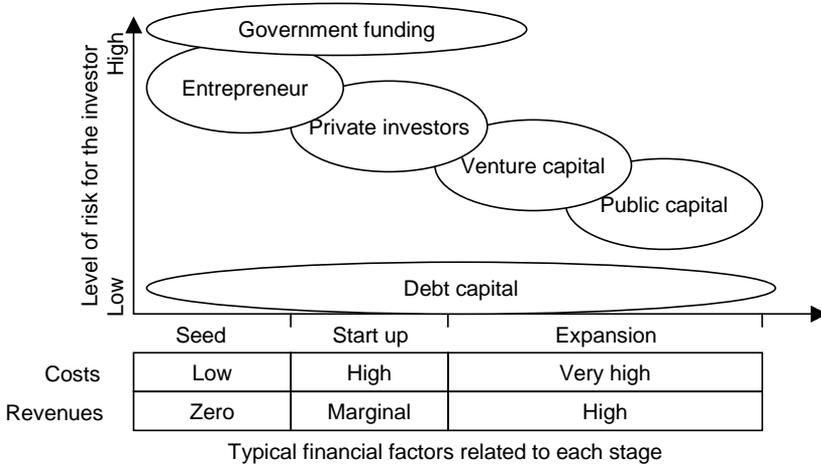
Venture capital is not the only source of finance for start-up firms. When seen in relation to other financing options and the total amount of capital invested in all firms, then venture capital as an asset or equity class becomes marginal. Furthermore, many firms start up without the need for venture capital. While some firms wish to access venture capital and are unable to, others avoid it for fear of deleterious consequences such as forced growth overextending the firm or the investor taking over. The reason why venture capital has attracted such attention is mainly due to the important impact it has on young firms' high growth potential, as evident with many new technology based firms. Venture

capital can be the only (and maybe the best) alternative for many of these firms. For instance, Isaksson (1999) surveyed venture capital backed firms in Sweden and found that 31 percent of these firms perceived that venture capital was the only available source of finance for their business. This figure was even higher for less mature firms in the survey. The importance of venture capital for the economy was even more apparent when added the fact that the firms included in the survey were growing much faster than similar firms. Other similar findings have been made on an international scale, further stressing the positive micro and macro economic effects of venture capital (Hellmann and Puri, 2000; Kortum and Lerner, 2000).

Besides supplying new start-ups with capital and competence, venture capital can work as a considerable leverage for other capital sources. Anecdotal evidence tells that for every unit of venture capital that a start-up receives an additional five can be borrowed from banks and other credit institutions. Evidently venture capital provides start-ups with more trustworthiness and strengthens the firm's position versus other potential financiers. This is due to the validation received by the project being picked for investment over so many other possible projects.

However, as mentioned earlier private venture capital is not the only source of risk capital for a firm. Figure 5 positions venture capital in a context of other capital providers, i.e. the financial landscape for a growing firm. The risk capital chain within the landscape represents many of the actors (entrepreneur, private investors, private venture capital and public venture capital) who supply the entrepreneurial firm with equity financing.

**FIGURE 5.**  
**The capital chain for a growing firm**



Starting up new entrepreneurial firms is a risky business. Needless to say actors who take this kind of risk also expect high returns. This is especially the case for ventures that are built on novel and unproved technologies. Such firms’ often require large amounts of capital to fund initial research. It can, for instance, easily take up to eight years for a life-science firm to develop a product to sell. Other types of venture companies, such as within the service field or even some IT solutions, can have a sellable product from day one and can hence build market share while perfecting the product and even create revenue from sales.

The risk/reward ratio is sharply different for equity and debt capital. The earlier the phases in an entrepreneurial firm’s development, the more risk the investor is willing to undertake but only in exchange for the prospect of greater reward. The equity investor’s upside is typically greater, at least in prospect and potential but so are their chances of loss. Hence equity investors often engage in more risky projects than debt investors. Within each category (debt and equity) risk profiles also differ e.g. government lending is on average more risky than bank lending.

The stages illustrated in Figure 5, is one way of categorising different phases that a growing firm passes in its life cycle. The issues and problems a firm faces are often very different from one stage to the next. In the figure these issues and problems are united in financial effects on costs and revenues. For instance, in the seed stage the firms usually have relatively low costs in developing the business idea or constructing the first prototype.

At this early stage the initial ownership model is also conceived and implemented. At the seed stage the risk for total loss is high, and so control and value become very important parameters for the venture capitalist when negotiating ownership models in relation to investment of resources. However, once the ownership issue is settled, implemented, and official, the effect is an added overall value in the venture. However the venture capitalists equity-share of the venture is relatively small at this point. Later the value of the venture will grow – for both entrepreneur and investor.

When the firm enters the start-up phase costs start to rise dramatically, e.g. from product development, market research, recruitment of personnel. At this time the revenue starts coming in, but at a low level. When the firm matures it reaches the expansion phase, sometimes divided into early and late expansion. In the early expansion stage, production and sales increase but the firm does not yet show any profit. In the later expansion stage the firm is usually starting to make a profit but needs additional capital for further development, marketing efforts, or product improvements.

Below is a short definition of the financial stages (according to the European Private Equity and Venture capital Association, EVCA<sup>11</sup>):

- Seed stage: Financing provided to research, assess and develop an initial concept before a business has reached the start-up phase.
- Start up stage: Financing provided to firms for product development and initial marketing. Firms may be in the process of being set up or

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<sup>11</sup> [http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp) [Accessed 20 August 2006]

may have been in business for a short time, but have not sold their product commercially.

- Expansion stage: Financing provided for the growth and expansion of a firm, which may or may not break even or trade profitably. Capital may be used to: finance increased production capacity; market or product development; provide additional working capital.

The seed and start up stages are often combined and referred to as early stage.

## **2.3 The structure of venture capital organisations**

Venture capital companies can be divided into several different categories based on source of contributed funds or by the ownership structure of the company.

Private independent venture capital firms invest their capital through funds organized as limited partnerships in which the venture capital firm serves as the general partner. Independent venture capital firms are the dominant form of venture capital organization both in the U.S. (Sahlman, 1990) and in Europe. In Europe was 76.8 percentage of all funds that where raised in 2004 contributed by independent venture capitalists (EVCA, 2004). This form of venture capital organization has also become the dominant venture capital firm organization in Sweden (EVCA, 2006).

If the venture capital firm is funded mainly from internal sources by a parent organization it is often labelled a captive venture capital organization (Jeng and Wells, 2000). That is, a captive venture capital firm is a company that belongs to an established corporation that is investing its own resources. The parent organization is often a financial institution, such as a bank or insurance company, but can sometimes also be a larger non-financial company. The latter

form is sometimes also called a corporate venture capital organization and treated as a separate category (McNally, 1994).

Definitions vary to some extent among researchers and practitioners. For instance, Cumming and MacIntosh (2002) separate the captive firms with regard to their parent company's line of business (corporate industrial and corporate financial).

Finally, public sector venture capital organizations are organizations that are financed and controlled by government institutions. The degree of government influence can vary from being totally owned to partly financed or supported by the government.

Public sector venture capital organisations differ from the other organisational forms of venture capital in that they are operating under statutory constraints, for instance in that they have a higher goal (e.g. to promote small firm growth) or that they are only allowed to invest in a certain region. The Swedish government has had a long tradition of creating public sector venture capital organizations. The very first venture capital corporation in Sweden (Företagskapital) was for instance partly funded by the government. Most of the public sector venture capital organisations in Sweden are today what Cumming and MacIntosh (2002) define as hybrid funds where the government invest alongside private investors.

The relation to and dependence on fund providers can affect how the venture capital organisation behave and act. The presence of an external investor may for instance have several implications on the behaviour of the venture capitalist. Investors may for instance influence investment strategies and time horizons of the venture capital firm (Sahlman, 1990). However, the most important effect is probably the more pronounced need for reputation and track record that independent venture capitalists need in order to attract investors' attention. For instance, Gompers (1995) argues that this might have caused some venture capitalists to take companies public to early. Furthermore,

Scwienbacher (2002) has found in his survey of European venture capitalists that there was a widespread belief that successful IPOs would give significant reputation benefits to the venture capitalist, indicating that independent venture capitalists might pursue an IPO exit strategy, even if a trade sale strategy is more expected and rational.

Captive venture capital organizations (and especially the corporate venture capital type) can differ in their strategic objectives from private independent companies in that that these firms might have corporate strategic objectives in mind while the private independents typically have investment return or financial objectives as their primary goal. Wright and Robbie (1996) found (on U.K. data) that captive firms differed in several dimensions from independent venture capitalists. However, several of these differences (for instance the use of different valuation methods) could probably be related to their finding that captive firms are more likely than independents to prefer investments in later stages (management buyouts and buy-ins).

Finally, public sector venture capitalists might differ in their behaviour relative to their private counterparts for instance in that they are limited by statutory constraints. The existence of higher long-term goals beyond making business profits is a notable feature that separates all public sector venture capital companies from their private counterparts is. For instance, in the charter of Industrifonden (one of Sweden's largest public venture capital organisation) it states that the all-embracing purpose of the foundation is to strengthen the renewal and growth of small and medium sized enterprises in Sweden. There is not much empirical evidence on the difference between public and private venture capital organisations. However, Cumming and MacIntosh (2002) argued that Canadian public venture capital firms, based on statutory constraints and other limitations, would make more investments in lower growth firms than their competitors. Isaksson (2006 – paper 4) also argue that the lack of appropriate incentive structures among investment managers in (Swedish) public

sector venture capitalists also could have an effect on the decisions they make. Ayayi (2004) also found indications that (Canadian) public sector venture capitalists had lower skill levels than their private counterparts. The lack of VC skills resulted in that they tended neither to be specialized in any particular industry nor able to focus their investment decisions on specific stages of development. Due to inexperience they were also insufficient in giving appropriate business advice to their investees. Ayayi (2004) also found that the returns of the Canadian public sector venture capitalists were considerable lower than those of their competitors.

### **3. A history of the Swedish venture capital market<sup>12</sup>**

The Swedish venture capital market has its roots in the 70's when the first formal venture capital firms were established. Over the following thirty years the industry went through two major cycles of growth and contraction. The first cycle started in the early 1980ties and ended around 1988-89. The second major cycle started around 1993 and peaked around 2000-2001.

#### **3.1 The first cycle**

The late 70's were characterised by a general economic downturn and a tax system that discouraged capital investments. Many different solutions were discussed to turn the negative trend around. Eyes were beginning to turn to the U.S. to try to find measures that could improve the entrepreneurial climate (Jørgensen and Levin, 1984). An investigation (SOU 1981:95) suggested that a new market for trading shares in new and small firms could be one solution, leading to the start of the Over-The-Counter market (OTC). A more liquid capital market together with a better economic climate in general and new

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<sup>12</sup> A revised version of this chapter will be published in the forthcoming book: Isaksson, A., Vintergaard, C., Etzkowitz, H., and Klofsten, M, 2006. Beyond the Valley of Death: Innovation in Venture capital and entrepreneurship. Stockholm: SNS.

favourable legislations for the capital market in the early 1980's initiated the first venture capital cycle in Sweden (Olofsson and Wahlbin, 1985). The wave was fuelled by small venture capital firms. Investors in these firms were mostly large industrial firms and financial institutions (banks, insurance companies). The Swedish government also got involved in that market by setting up regional development funds that supported small firms with soft loans and advice (Olofsson, 1985, 1986; Herzog, 1987, 1988,1990; Fredriksen, 1997; Landström, 1988).

During this “first wave” of formal venture capital around 30 new venture capital firms were established together with several government funds (Fredriksen, 1997). Such private venture capital firms that started during this time were VenCap, VenTech, Ventura, FourSeasons among others (Olofsson, 1985, 1986; Herzog, 1987, 1988, 1990; Fredriksen, 1997).

However, the market soon came into a halt when the stock market went down in the late 80's – together with several other circumstances that interplayed (increasing attraction in the property market by the investors, high interest rates etc). Many investors seemed to have under-estimated the time it would take to build up a properly working venture capital industry (capital, skills, competencies, and patience) and saw the venture funds as a means of investing profitably with a relatively short investment horizon. Subsequently, when the funds were exhausted many investors in the small private venture capital funds were unwilling to supply additional capital (Herzog, 1990). Another explanation for the failure was that the managers of these venture capital firms adopted large business management model style for developing young and small firms, which afterwards has been seen as counterproductive. It seems an alternative model was required to better fit the circumstances of organising firms in early development.

The problem with inexperienced venture capital managers was, however, not unique for Sweden. The U.S. experienced the same problem with the effects of

inexperienced venture capital managers. The following quotation from Lerner (1994, p 13) regarding U.S. was equally true for Sweden: "Many venture capitalists that received money in the 'boom' of the 1980's had little or no previous industry experience... experienced venture capitalists are and will be in short supply for some time".

After a shakeout period, most of the Swedish private venture capital firms left the industry. By the early 1990's the Swedish banking sector underwent a serious crisis. As a consequence of this crisis and the diminished interest in venture capital, many young enterprises with growth potential experienced severe difficulties in raising external development capital (Fredriksen, 1997; Isaksson and Cornelius, 1998b; Karaömerlioğlu and Jacobsson, 2000).

## **3.2 The second cycle**

Starting around 1995/96 the Swedish venture market underwent a tremendous growth. The main reasons for the upturn in supply of venture capital can be found in a booming stock market (again), increases in domestic private savings and allocations of capital from pension funds to the venture capital industry (see discussions in SVCA 1995-2006). Different government initiatives can also have had an effect on the increasing supply of venture capital. Part of the reason for the growth in the Swedish venture capital market in this period can probably be contributed to the change of focus for Industrifonden and the Swedish National Pension Fund to venture capital investments which happened to coincided with a major shift in the stock market (Gompers and Lerner, 1998; Jeng and Wells, 2000).

Demand side factors also played a fundamental role for the growth in the venture capital industry in the late 1990's, as the increase in the supply of venture capital were met by an increase in high technology ideas (e.g. a growing Internet related industry, spin-offs from older "locomotive firms" like L.M. Ericsson, Volvo, Astra, and biotechnology industries). As pointed out by Baygan (2003, p.

12) in a report to OECD: “Sweden’s strong research and development efforts and recent shift to a more technology-based economy has gained the country a particular advantage in attracting international capital”.

In addition, increasingly flexible new markets for trading shares in small and medium sized enterprises were introduced. A wealth of new venture capital companies entered the scene, especially private and captive firms. Because of the increasing amount of private venture capital in the market, the share of government venture capital firms decreased in relative terms (Isaksson, 1998c).

### **3.3 After the crash – the third wave?**

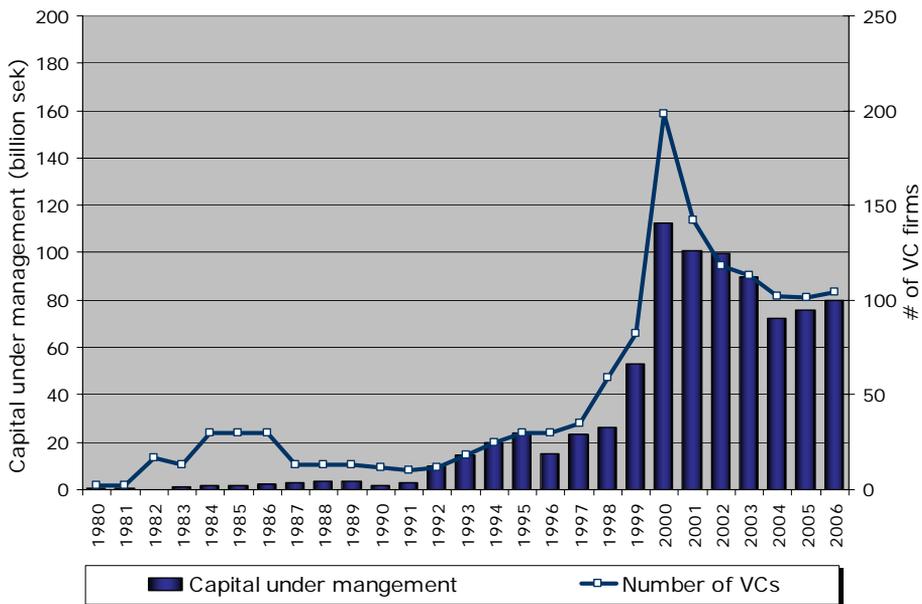
In the late ‘90s, the venture capital market was beginning to show signs of becoming overheated (Bygrave, 2002, Lashinsky, 2002). This was also very true for Sweden, where the market had grown from a few, mostly government managed, venture capital firms in the mid ‘90s to around 200 firms managing more than 120 billion SEK in 2000. The competition among venture capital firms in Sweden led to higher valuations and investments in earlier stages than the market traditionally had done (Förvärv & Fusioner, 2001). In 1999 Swedish venture capitalists were investing more in seed and start-ups than in any other European country (SVCA, 2000).

The market collapse that followed had a large effect on the Swedish venture capital industry. Many of the young venture capital firms that were created during the boom-years disappeared. However, at the same time there was an inflow of international venture capital to Sweden (SVCA, 2003).

The years that followed the crash were characterised by a very reluctant and risk avoiding market. The previously noted high interest to invest in early stages more or less disappeared. The Swedish private equity analyst Förvärv & Fusioner summarized their view on the market in 2003 by quoting a venture capitalist: “Yes we have money – but we are scared” (Förvärv & Fusioner, 2003, p. 1).

At present there are approximately 104 venture capital firms<sup>13</sup> in Sweden with around 80 billion SEK under management, a slight increase from previous years. This can be compared to the total private equity market in Sweden (venture capital and buyouts) that manages approximately 214 billion SEK (SVCA 2006). In figure 6 below, I have made an attempt to capture the development of the Swedish venture capital market from 1980 to the present in terms of number of venture capital firms and capital under management<sup>14</sup>. “Number of venture capital firms” shows firms that are located in Sweden and with a focus on investing in early stages (seed, start up and expansion). Hence, firms specialising in later stages (buy-outs) are not included. The same criterion is used for capital under management (only venture capital).

**FIGURE 6.**  
**Development of the Swedish venture capital market**



<sup>13</sup> Active venture capital firms located in Sweden with a prime focus of investing in early stages (i.e. buyout firms are not counted)

<sup>14</sup> See also section 3.3 “A concluding note of measuring venture capital markets” where some of the problems in measuring a venture capital market are discussed.

Source: My own compilation based on a number of sources<sup>15</sup>

As can be seen from figure 6, there was a drastic shift in the market between 2000 and 2001. The number of active venture capital firms continued to decrease until around 2004 when the number seems to stabilise. Interesting to note is that the amount of venture capital in the market did not decrease that dramatically. This can probably be explained by the substitution of larger actors for the many small firms that withdrew from the market, to some extent having been replaced by larger actors that filled the gap (SVCA, 2003). It is also important to mention that capital under management is more a measure for the size of the market, than a measure of how active the market is. Hence, during this period the capital was available, but venture capitalists were reluctant to invest, as Förvärv & Fusioner (2003) noted.

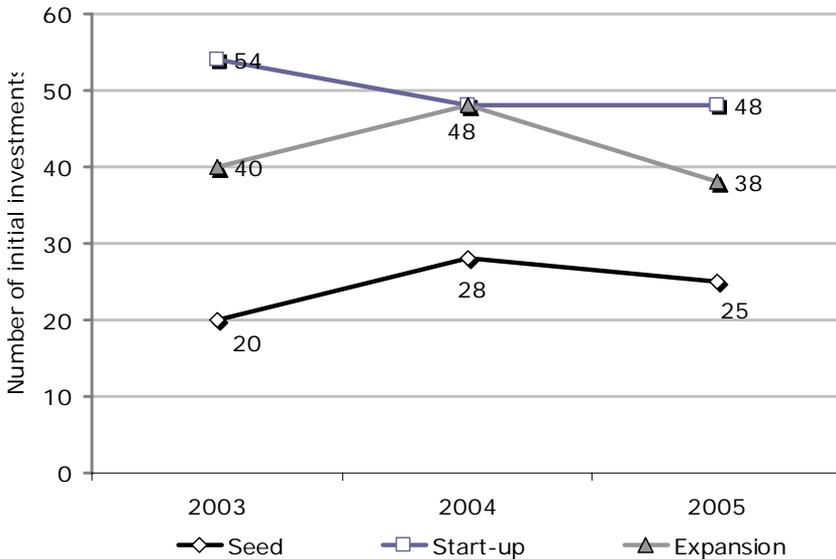
As an illustration of the investment levels during the last few years, figure 7 summarizes number of initial investments<sup>16</sup> made in different stages during 2003 to 2005.

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<sup>15</sup> Olofsson (1985), Fredriksen (1997) and SIND (1990) for the period 1980 to 1990. Nielsen (1994), Ds 1994:52 (1994), EVCA (1996) and Karaömerlioğlu and Jacobsson (2000) for the period 1991 to 1995. From 1996 to present it is mainly based on data from Förvärv & Fusioner's database combined with data from SVCA with adjustments based on my research.

<sup>16</sup> An initial investment is the first venture capital investment made in a firm ([http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp), accessed 20 August 2006).

**FIGURE 7.**  
**Number of initial investments, by stage<sup>17</sup>**



Source: Own compilations based on quarterly statistics from SVCA and NUTEK (NUTEK, 2006).

As can be seen in figure 7, the number of initial investments has been fairly stable during the period 2003-2005. There are neither any dramatic signs of increase nor of decrease. The same stable results are received when total number or amount of investments are analysed.

However, data from the first quarter of 2006 indicate a slight increase in the number and amount of initial investments in seed stages. During Q4 2005 and Q1 2006 a total of 47 MSEK was invested in 22 firms in the seed stage. This could be compared with Q4 2004 and Q1 2005, when 36 MSEK was invested in 14 firms, or Q1 2003 and Q2 2003 when 17 MSEK was invested in 8 firms.

Counting the total number of investments (including follow-on investments<sup>18</sup>) for 2005, there were 52 investments made in the seed stage, 197

<sup>17</sup> I have chosen initial investments as I see those numbers as better indicator of current conditions than total investments (that include follow up investments). Note also that these numbers is based on survey data with varying response rates and should therefore be seen as a rough indicator of current trends.

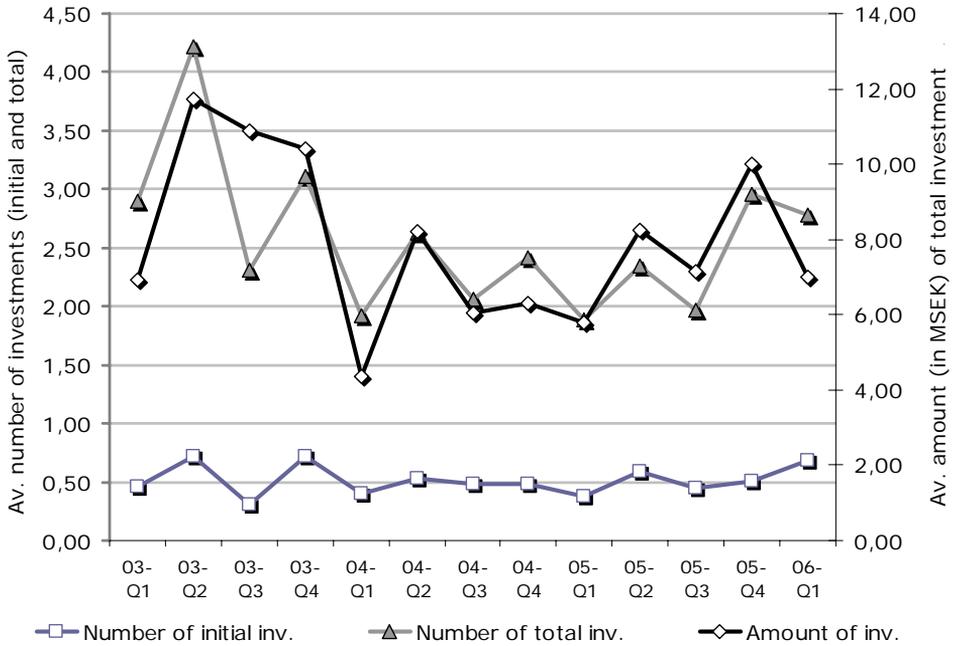
in the start up stage and 279 in the expansion stage. This can (with caution) be compared with the numbers for the year 1999 (EVCA, 2000) when 70 investments were made in the seed stage, 410 in start-ups, and 242 in the expansion stage.

A final chart to analyse investment activities is presented in figure 8. In that chart investments are measured per venture capitalist (both in numbers and in amount). The quarterly statistics are based on survey data with very varying response rates (between 59 to 85 percent for the period 2003-2006), which makes comparisons over time difficult. An alternative way of investigating changes in investor behaviour might be to break the numbers down to averages per investor. This is done on figure 8 where the data from each quarter were divided with the number of responses from that quarter (buyout investors excluded).

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<sup>18</sup> A follow-on investment is an additional investment in a firm that has already received funding from a venture capitalist ([http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp), accessed 20 August 2006).

**FIGURE 8.**  
**Average quarterly investments (amount and number) per venture capital investor.**



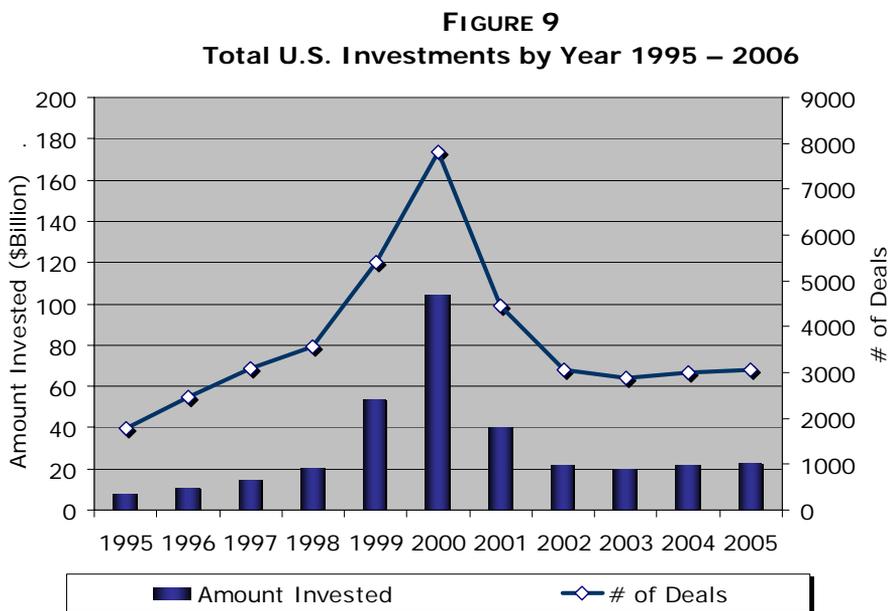
Source: Own compilations based on quarterly statistics from SVCA and NUTEK (NUTEK, 2006).

As can be seen in the graph (figure 8) investment behaviour has been fairly stable over time. The average investment per quarter for the whole period was 7,9 MSEK. It is also obvious that most of the investments that were made were follow-on investments. An average firm made 0,5 initial investments and 2,1 follow-on investments per quarter. Further analysis of the data also showed that 65 percent of all investments were made in expansion stages, representing 82 percent of total amount invested. This can be compared to the seed-stage that represented 4 percent of all investments and 5 percent of the amount invested. These numbers were also quite stable over time.

The Swedish venture capital market seems to have started to recover from the crash. Investment levels seem to be on a rather stable level (see figure 7 and 8). One positive sign is the development in the market for initial public offerings

(IPOs). According to an analysis from Förvärv & Fusioner (2006) the market for IPOs is booming in Sweden (May 2006). The market for IPOs is a very good early indicator of how the venture capital market will evolve in the near future. Booming IPO (and stock) markets have historically been one of the strongest driving forces behind the growth of venture capital markets (Gompers and Lerner, 1998), and a good market for IPOs is “critical to the existence of a vibrant venture capital market” (Black and Gilson, 1998, p. 45).

As a contrast, the development on the US venture capital market is illustrated in figure 9, although the numbers are not really comparable (due to lack of reliable and comparable data).



Source: PricewaterhouseCoopers/National Venture Capital Association, MoneyTree™ Report

Figure 9 illustrates the drastic decline in venture capital investing that occurred after year 2000, both in amount invested and in number of deals. Statistics from quarter 1 and 2 2006 show a slight increase. In Q2 2006, venture capitalists invested the highest dollar amount into the most deals since Q1 2002

(PricewaterhouseCoopers/National Venture Capital Association, Q2 2006 MoneyTree Report).

### **3.4 A concluding note of measuring venture capital markets**

Trying to measure the size of a venture capital market is a very difficult task. Especially when trying to find comparable historical and current data, and especially for a small and immature venture capital market such as Sweden's. The first major dilemma is the lack of reliable databases. It is only since the mid '90s that, for instance, the member directories of the Swedish venture capital association have become fairly reliable. Statistics from the European Venture Capital Association are even more unreliable. One reason for the lack of complete databases has been that the industry (especially the private venture capital industry) is characterized by discretion and reticence. The second dilemma is the speed in which the market changes; this was especially problematic during 1998 to 2001. A third problem is that counting venture capital companies and capital is very much a matter of definitions and judgements (e.g. what is a venture capital firm and how is capital under management counted). It is not unusual in some of the statistics to find that government lending institutions like ALMI or Norrlandsfonden are counted as venture capital firms.

Yet another problem in the counting has been the fact that often only members of specified venture capital associations were included in the counts, even though not all venture capital firms are members of SVCA or the EVCA.

Double counting of investments and capital is another bias that is common, i.e. first counting the capital of fund providers (e.g. Sixth AP Fund) and then counting the capital again in the venture capital fund that the fund provider invested in. Nevertheless, figure 6 (Development of the Swedish venture capital market) is an attempt to bring different sources of information together to

produce a complete picture of the Swedish venture capital market over more than 20 years.

To analyse investments in the Swedish venture capital market is even more difficult than is measuring the size of the market. Available statistics are of very poor quality due to measurement errors and response biases. The quarterly statistics from SVCA and NUTEK (NUTEK, 2001-2006) have improved the situation but many measurement response problems still exist. The quarterly statistics are based on survey data, with response rates varying between 59 to 85 percent (for the period 2003-2006). Hence, the data covers only a sample of the total population. The most severe measurement error in the quarterly statistics is probably double counting. For example, if three venture capital firms are jointly investing in one firm, this is recorded as three investments. This might lead to a perceived increase in investments when it actually is a sign of an increase in syndication<sup>19</sup> among venture capitalists.

### **3.5 The role of the Swedish Government**

Since the start the Swedish government has played an active role in trying to create a vital venture capital market in Sweden and reduce the equity gap (SOU 1981:95; Ds 1994:52; SOU 1996:69). The Swedish government's involvement can also be seen as a long period of trial and error; and there have been many errors. The regional venture capital firm that was created during the '70s and '80s was by and large only an expensive and unsuccessful venture (Riksdagens revisorer, 1996). Tax incentives for risk capital investments did not have any effect at all (NUTEK, 1998). Grants to new stock markets were surrounded with difficulties their impact can be questioned (NUTEK, 1997, 2000).

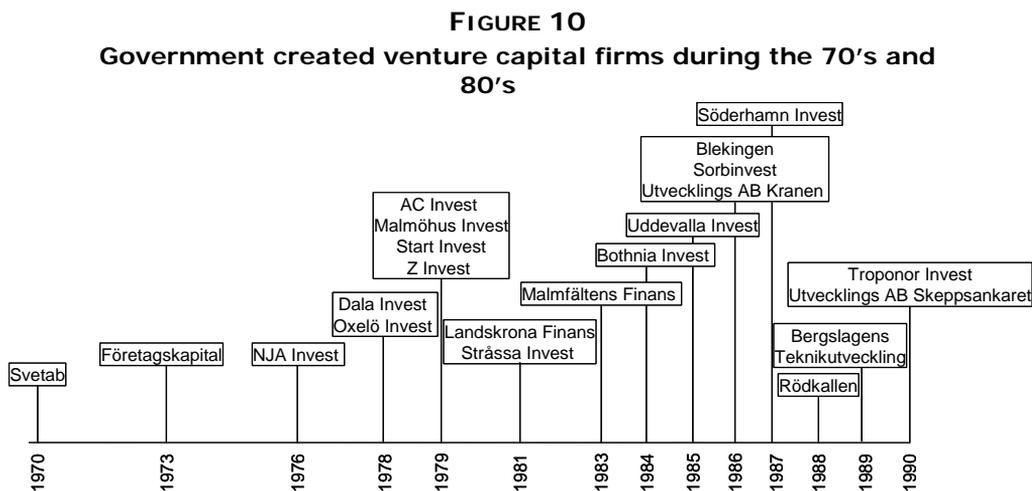
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<sup>19</sup> Syndication is when a group of venture capitalists jointly invest in a firm ([http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp), accessed 20 August 2006). See e.g. Manigart et al. (2006) or Wright and Lockett (2003) for a discussion on Syndication in the venture capital industry.

Even measures that have been seen as successful can, in retrospect, be questioned. The bursting investment “bubble” was to a large extent caused by an oversupply of venture capital (Valliere and Peterson, 2004), and the largest supplier of venture capital to the Swedish venture capital market before the bubble was through different government bodies like pension funds, Industrifonden, Teknikbrostiftelserna. Hence, the direct involvement by the Swedish government both strengthened a weak market in the early ‘90s and added to an oversupply that led to speculative investment behaviour around 1998-2001.

The government’s role in the market has been both direct, by creating entities (e.g. government venture capital firms) that invested in small firms, and indirect by trying to create a supporting environment for the supply and demand side of venture capital (e.g. tax incentives).

During the ‘70s and ‘80s the government (through local, regional or national bodies) founded around 30 venture capital firms. Figure 10 provides names and founding years for most of these.



Source: Riksdagens revisorer (1996), and my own research.

Företagskapital is often seen as Sweden’s first venture capital firm even though Svetab started a couple of years earlier. This is mostly a matter of

definition (Svetab did not define themselves as a venture capital firm though they acted as one). Very few of these firms are still active as venture capital firms. The rest have disappeared, merged, or changed focus (usually to privately owned industry groups).

In 1996 the Parliamentary Auditors (Riksdagens revisorer) did a review of the effects and successes of government venture capital firms that were created during the '80s (Riksdagens revisorer, 1996). Their overall judgement was not very positive. Very few of the firms had been able to invest in any successful and sustainable businesses. The Parliamentary Auditors estimated that around 400-500 persons were still (in 1996) working in businesses (mostly in one company!) financed by these venture capital firms. The total cost of the government's endeavour in these six venture capital firms was approximately 200 000 SEK per employed person.

The first half of the 1990's was a very gloomy and turbulent period for the Swedish economy. In 1990 asset (real-estate) prices fell dramatically as a backlash to the boom (or bubble) that had started around 1987. Together with several other micro and macro economic factors (e.g. high interest rates, currency market turbulence), a tidal wave of bankruptcies inflicted a heavy blow to the banking sector that resulted in a severe bank crisis in Sweden. The Swedish government was even forced to implement a bank support guarantee scheme in order to save the banking system from a total collapse. Currency market turbulence ravaged Europe, and Sweden, again in 1992. The Swedish central bank strove to maintain a fixed rate against the ECU (leading to abnormally high interest rates) until November 1992 when it gave up and allowed the SEK to float in the currency market, whereupon it depreciated sharply by about 25 percent (Lindgren 1994; Englund, 2002).

The creation (or change in regulations) of different governmental bodies that directly invest venture capital (especially Industrifonden, Swedish National Pension funds and Teknikbrostiftelserna) is probably the policy action that has

had the largest direct effect on the development of the Swedish venture capital market during its second cycle. However, besides these initiatives there have been numerous other policy initiatives tested during the 90's, such as tax incentives, support for second-tier stock markets and support for business angel networks. In the following some of these measures are discussed.

One measure that was taken was the creation of two equity investment companies, Atle and Bure, in 1992. These two companies were supplied with a total of SEK 6.5 billion. The Swedish government's justification, for intervention in the market and its direct provision of venture capital, was that it was in the national interest to satisfy the need for early stage funding in order to maintain economic growth and because the government believed the market was not responding adequately to this need (SOU, 1993:70).

The Swedish government's experience from the '80s of the difficulties in operating venture capital firms appears to have influenced the government's strategy when Atle and Bure were created. This time the aim was to make the companies private as fast as possible. The hope was that when the firms were started (with the goal to invest in new firms with growth potential), the government should reduce its holding in the firms and let the market solve any problems. The objective of Atle and Bure was much more market oriented than was that for the regional venture capital firms were created in previous periods. Following this strategy, the government started to reduce its holdings as early as 1993 when the firms were quoted on the Stockholm stock exchange. By 1995 the government had sold the rest of its holdings in Atle and Bure. The capital that was received for the sale was transformed into the foundation Industrifonden (Swedish Industrial Development Fund) to be used to supply new firms with capital support. Industrifonden was originally founded in 1979 with the objective of promoting industrial growth in Sweden. In practice the fund became a soft loan provider for Sweden's larger corporations (SOU 1993:70; SOU 1996:69). Together with the capital from Atle and Bure the

government changed the focus of the foundation from large corporations to small and medium sized firms. Loan financing is still the main activity for Industrifonden, but the fund has also become involved in venture capital (equity) financing to a greater extent. Industrifonden's business objective now is to act as an active co-financier, and to provide Swedish growth firms with development capital, competence and networks. Today, Industrifonden is the main government body that actively makes venture capital investments. So even though Atle and Bure did not meet the government's expectations directly, the capital from the sale of these firms was directed and used for venture capital investments.

Another important policy decision at this time was the change in the regulation of the Sixth Swedish National Pension Fund in 1996 (prop. 1995/96:171). The decision made it possible for the fund to invest its 10 billion SEK in unquoted firms. The role of the pension fund is now to create good long-term returns and maintain satisfactory risk diversification by investing risk capital in small and medium-sized Swedish growth firms, thus contributing to the development of Swedish business. The Fund is an independent owner that invests in a selection of private equity funds and directly owns shares in a limited number of growth firms. Currently the pension fund is one of the largest fund providers to the Swedish venture capital market in Sweden. In 2005 the Sixth AP Fund had over 14 billion SEK committed to investments in private equity funds or companies owned directly by the fund (The Sixth AP Fund, 2006).

A third policy decision more focused on the demand side of the venture capital market was the establishment of Teknikbrostiftelserna (roughly translated; The Foundations for Technology and Business Bridge-building) in 1994. The goal was to develop contacts between educational institutions and businesses, and between researchers and entrepreneurs. Besides developing various types of collaboration between educational institutions and the business world, Teknikbrostiftelserna also provided financing and help to make contacts

between participants and venture capital. Teknikbrostiftelserna has established different subsidies with different related activities including subsidies for innovation, patenting, technology incubators, seed capital fund, venture capital funds, etc (SOU 1996:69).

In 1993, as part of an industry revitalisation package, tax deductions were proposed for private investors who channelled equity to small businesses, with a minimum holding period of five years. A short-lived tax incentive scheme for risk capital investments was later tested during 1996 (Prop. 1995/96:109; SFS 1995:1623). This scheme (riskkapitalavdrag) was aimed at private investors who invested equity in small businesses. However, restrictions and limitations in the scheme made it ineffective in stimulating venture capital investments in small firms (NUTEK, 1998), and it was cancelled after only one year (Prop. 1996/97:045; SFS 1996:1614).

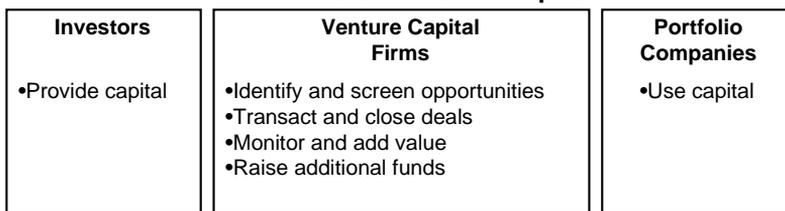
The formation of the Swedish over-the-counter (OTC) market in 1982 and the strong performance of the main stock market following financial liberalisation in the mid-1980's contributed to the initial development of the venture capital industry in Sweden. The second-tier markets have played a major role in financing the development of growth firms and offering exit routes to investors in Sweden. In order to further support the development of second-tier stock markets the government introduced a scheme for supporting initial public offerings and new small cap markets. The support provided a rather small subsidy that aimed at lowering the cost of making an IPO and was given to both the firm that went public and the market makers. Several new markets and unofficial trading markets were started during the late '90s. The scheme was judged to be moderately successful, to some extent due to the volatile markets in the late 90s (NUTEK, 2000).

Besides more direct venture capital initiatives and incentives there have been several programs focusing more on the demand side of venture capital, e.g. programs aimed at the creation of new firms and innovations.

## 4 The venture capital process<sup>20</sup>

Generally research on the venture capital process focuses on how the venture capitalist and the entrepreneur develop businesses together. It is important to clearly delineate the actors and relationships involved in order to understand the venture capital process. The main actors are investors (fund providers), venture capitalists, and entrepreneurs. Investors and venture capitalists represent the supply side of venture capital, while the entrepreneur represents the demand side. Venture capitalists serve as intermediaries (e.g. brokers) between investors and entrepreneurial firms in need of growth capital, i.e., they act both as a supplier of capital (financial and non-financial) to entrepreneurs and a seeker of capital from investors (Amit *et al.* 1998). The relationships are both contractual and reciprocal and build on considerable trust. If one of these actors loses this trust the relationships will be severely damaged (Shepherd and Zacharakis, 2001). To avoid any potential conflict, the relationship with investors is considered almost as important as relationships with portfolio firms.

**FIGURE 11**  
**Flows of Venture Capital**



(Source: Bygrave and Timmons, 1992, p. 11)

Figure 11 sets forth the principal actors involved. There are several kinds of interaction in these relationships. One is the relationship between investors and venture capitalists. Investors seek relationship with venture capitalists because they believe that venture capitalists are more effective at evaluating and developing entrepreneurial ideas (Amit *et al.*,1998). The contacts between

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<sup>20</sup> This chapter will in part be published in the forthcoming book: Isaksson, A., Vintergaard, C., Etzkowitz, H., and Klofsten, M, 2006. *Beyond the Valley of Death: Innovation in Venture capital and entrepreneurship*. Stockholm: SNS.

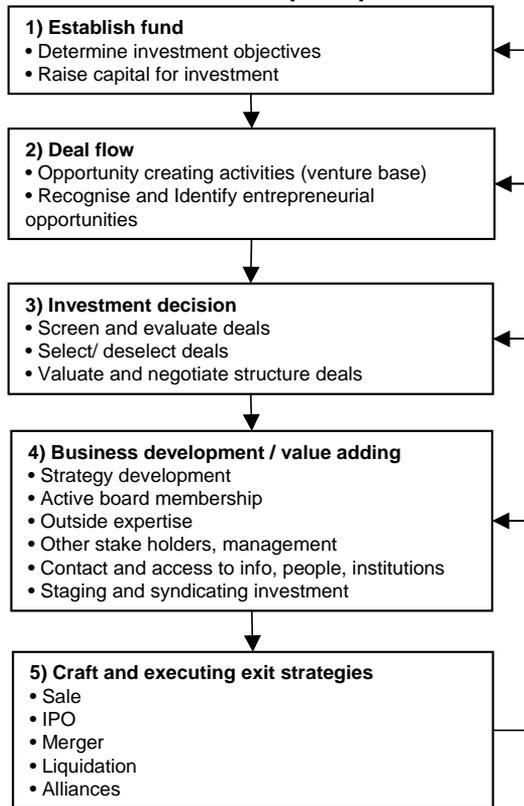
investors and venture capitalists are interactive, where the investor has the strongest influence in the early stage of the fund formation process. Once the agreement has been settled the venture capital company is relatively free to operate as it sees fit unless there is a severe disruption (Bygrave and Timmons, 1992; Fried and Hisrich, 1995).

The other key relationship is, of course, between the venture capitalist and the entrepreneur. The venture capitalist seeks a relationship with an entrepreneur who has an extraordinary business idea and who also is prepared to share the ownership and control with the venture capitalist. On the other hand, the entrepreneur wants a relationship with a venture capitalist in order to gain access to financial capital, different networks, business contacts and customers, all while trying to retain maximum control over their firm. The issue of ownership and control between venture capitalists and entrepreneurs is often a barrier that might cause difficulties in the relationships between the two parties (Berglöf, 1994; Smith, 2001).

## **4.1 Outlining the process**

To understand issues associated with the venture capital process, it is important to clearly describe how the process works. Bygrave and Timmons (1992) described the process as consisting of four different phases: 1) the investment decision, 2) contracting, 3) control and value adding, and 4) exit. Other authors, such as Tyebjee and Bruno (1984), identified five principal activities carried out by venture capitalists: 1) deal origination, 2) deal screening, 3) deal evaluation, 4) deal structuring, and 5) post-investment activities. The figure 12 illustrates the primary phases in the venture capital process and represents a merger of previous literature (Gorman and Sahlman, 1989; Bygrave and Timmons, 1992, Tyebjee and Bruno, 1984).

**FIGURE 12.**  
**The venture capital process**



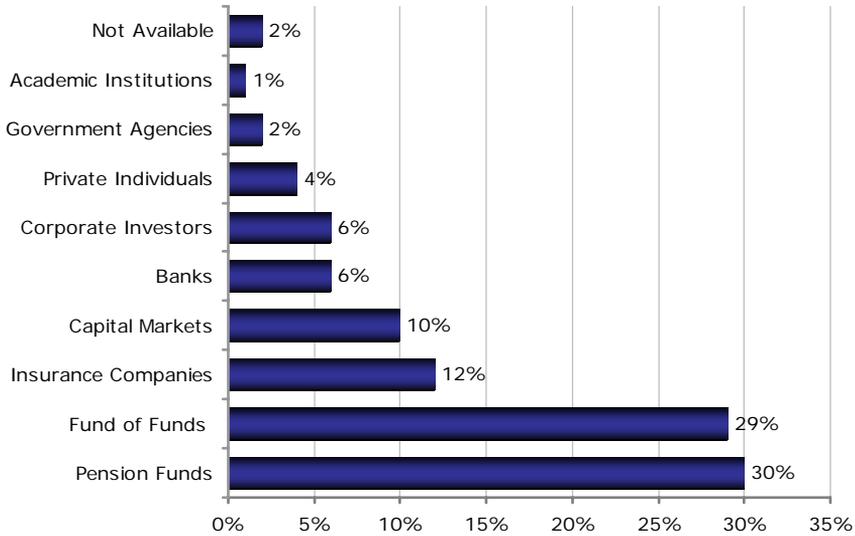
As illustrated in the model (figure 12), each of the five phases in the process has feedback loops to the previous parts of the processes. Each feedback loop represents a potential learning experience, which can be used and implemented in future processes. As an example it would make no sense to bring a product to market without first assessing future demand. It is important to notice that the individual phases in the process do not always develop in a logical and sequential order. The venture capital process is dynamic by nature and each of the phases is connected to the others and involves a wide range of stakeholders (Gompers and Lerner, 2002).

## 4.2 Establish a fund

The venture capital process starts when the venture capital firm is established. Depending on the structure of the firm (e.g. private, captive, or public – see previous chapter 2.3) this can be done in many different ways. The most common structure is a private independent firm that sets up funds. In the survey in Isaksson (2006 – paper 4) 77 percent of all funds in Sweden were private independent funds. Furthermore, according to EVCA, approximately 95 percent of venture capital investments in Sweden are made by private independent funds (EVCA, 2004). The reason for establishing a venture capital firm varies depending on the structure. Public venture capital firms normally have a “higher” long-term goal beyond making business profits, e.g. to strengthen the renewal and growth of small and medium sized enterprises. Captive venture capital firms are firms that are funded mainly from internal sources by a parent organization. (Jeng and Wells, 2000) These firms can also have corporate strategic objectives, besides ordinary investment objectives. For more details, see the discussion in chapter 2.3 and in paper 4 (exit strategy).

However, most venture capital firms start their operations by raising a fund from which the investments are made (Gompers and Lerner, 1998). The fund is frequently collected from a variety of sources (e.g. banks, pension funds, insurance companies) (EVCA, 2006). Figure 13 gives a current picture of fund sources raised by private equity funds in Sweden.

**FIGURE 13**  
**Private equity raised by investor in Sweden**



Source: NUTEK and SVCA, 2006<sup>2122</sup>

The investors often have preferences on industries and investment areas, but not on specific firms. The reasons for placing money in a venture capital fund are several, e.g.: high returns, diversification, avoiding active involvement (relative to making direct investments), and use other investor’s know-how in a specific area (Brooks 1999).

Research on “the formation of venture funds has received relatively little attention” (Gompers and Lerner, 2002, p. 21). The research that has been performed has often been policy oriented and trying to derive implications for programs to promote venture capital. An example of such research is Jeng and Wells (2000) who studied determinants of venture capital funding in a comparative study over 21 countries. Their main finding was that IPOs was the most important determinant of venture capital investing, followed by private pension fund levels. The results also corresponds with Gompers and Lerner

<sup>21</sup> Note that this statistics cover the whole private equity market in Sweden (including buyouts).

<sup>22</sup> Funds of funds is a private equity fund that takes equity positions in other funds ([http://www.evca.com/html/PE\\_industry/glossary.asp](http://www.evca.com/html/PE_industry/glossary.asp), accessed 20 August 2006).

(1998), who in a similar study on fundraising by the U.S. venture capital industry found that “regulatory changes affecting pension funds, capital gains tax rates, overall economic growth, and research and development expenditures, as well as firm-specific performance and reputation, affect fundraising” (p.1).

An important policy implication of the study by Gompers and Lerner (1998) and Jeng and Wells (2000) is that governments can play a strong role in influencing the growth of venture capital investing by creating new or modifying existing conditions that affect venture capital investments, for instance by changing regulations that prevent pension funds to invest in privately held small and medium sized enterprises. As discussed in chapter 3.1, these changes seemed to have a very positive effect on the development of the Swedish venture capital market.

Another study that can be related to this area is Gompers (1996) who highlighted the need for young venture capital firms to signal their ability to potential investors, what is called grandstanding. Even though this study focuses more on venture capitalists behaviour it also shows the impact fund providers can have on the behaviour on the venture capital market, for instance by focusing on investments in certain industries.

As with all businesses, venture capitalists must have an investment strategy. This is usually formulated by targeting a special set of investment opportunities: to invest in a certain geographical area (e.g. Northern Sweden) or a certain industry (e.g. biotechnology or computer software) (Gupka and Sapienza, 1992; Norton and Tenenbaum, 1993; Carter and Van Auken, 1994). For example, in Sweden 20 percent of the total amount invested 2005 was placed in the biotechnology industry, and 13 percent in computer related industries (Nutek and SVCA, 2006).

Other parameters of a funds strategy can be based on the stage in the development of a venture (e.g. pre-seed, seed, start-up, expansion) that the investment is placed in (SVCA, 2006). The selection of stages contributes to the

risk and return profile of the venture capital fund, i.e. early stages usually imply high risk and a high expected return (Kiholm and Smith, 2000). In order to minimize risk venture capitalists take an active role in the development of their portfolio firms. As part of their active role they often require board seats in the firm. Funds that place their investments in later stage investments tend to focus more on the long-term goals and less on daily routines in the firm. Another mechanism to control the risk of early stage investors is to stage the investments according to specific milestones (Gompers, 1995; Sahlman, 1990). Consequently, investors provide funding when specified milestones have been reached (Kiholm and Smith, 2000).

### **4.3 Deal flow**

There are basically two different approaches to discovering new venture opportunities for venture capital companies, a proactive and a reactive approach (Sweeting, 1991). In the proactive approach venture capitalists are actively seeking up potential entrepreneurial firms to invest in, for instance by attending industry fairs or by direct involvement in influential innovative environments. The reactive approach implies that venture capitalists wait for the business plan proposals to arrive. In an analysis of venture capital firms in the mid-1980's Tyebjee and Bruno (1984) found that the behaviour of venture capitalists in seeking out deals was to wait passively for deal proposals to be put to them. Sweeting (1991) also found that most deals were referred by third parties and that venture capitalists rarely try to discover new investment opportunities proactively.

In a study by Engebretsen and Lundberg (2000), seven Swedish venture capitalists were asked to estimate the main source of the business proposals they received. The two major sources for access to investment opportunities were the entrepreneurs themselves and the informal networks. Other sources were (in descending order): formal network/partners, financial intermediaries, and

proactive search. Like in Sweeting (1991) and Tyebjerg and Bruno (1984), a main conclusion was that venture capitalists almost without exception were applying a reactive, passive approach to deal generation.

Many investors have a preference for including other investors when placing their investment – syndicated investments or co-investments. The reason for including more investors is primarily to spread risk, access more opportunities, and to create a broader knowledge base for investment decisions. McNally (1997) argues, “Co-investments with venture capitalists (parallel investments) are a potentially beneficial way of identifying investment opportunities and also accessing the investment expertise of the venture capitalist” (p. 111). This relationship often constitutes a syndicate investment situation between two or more venture capitalists in a network (Bygrave, 1988; Dotzler, 2001). In order for venture managers to gain access to an opportunity from other venture managers, there is a reversible commitment to provide these managers with other venture opportunities.

## **4.4 Investment decision**

The investment decision may be divided into the following subparts:

- Investment evaluation
- Valuation
- Contracting
- Financial structuring

### **Investment evaluation**

Research has shown that for each project that is accepted, venture capitalists reject most of the proposals in the screening process (Mason and Harrison, 1999). The investment evaluation phase is an important and very time-consuming activity. It includes a complete examination of the venture (due diligence), which then receives funding based on very specific conditions. Tybjee

and Bruno (1981) found that venture capitalist spends almost fifty per cent of his/her time screening and evaluating.

The problems in selecting new entrepreneurial firms are related to the difficulties in estimating their potential and the high risk of failure. Many of these projects entail only limited information about the products or services. The business may only consist of sketched out business plans and preferable intellectual property rights of the product or service. There might only be limited knowledge about the market and future costumers. Consequently, there is a high level of uncertainty about the level of success. An often-stated problem is the information asymmetry between entrepreneurs and the venture capitalists (Amit *et al.* 1990).

In order to accommodate this incomplete distribution of knowledge investors make use of several methods. Some of these are reliance on self-selection by the entrepreneur (Gompers and Lerner, 1999), environmental-selection (Volberda and Lewin, 2003), social networks for knowledge transfer (Venkataraman, 1997), syndication of investment decisions (Sorenson and Stuart, 2001), and use of checklists and selection criteria (MacMillan *et al.*1985).

Almost all studies that have investigated the criteria venture capitalists use when they decide to invest in entrepreneurial firms have found that management-related-criteria are the key factor that influences their decision-making (MacMillan *et al.* 1985, Hall and Hofer 1993, Guild and Bachher 1996). As MacMillan *et al.* (1985, p 119) summarize their findings: “There is no question that irrespective of the horse (product), horse race (market), or odds (financial criteria), it is the jockey (entrepreneur) who fundamentally determines whether the venture capitalist will place a bet at all.”

## **Valuation**

An important step in the negotiation process is to determine the current value of the firm. The valuation process is an exercise aimed at arriving at an acceptable price for the deal.

Traditionally a valuation process goes through the following steps (Damodaran, 2002):

- Evaluate future revenue and profitability.
- Forecast likely future value of the firm based on experienced market capitalization or expected acquisition proceeds depending upon the anticipated exit from the investment.
- Target an ownership position in the investee firm to achieve desired appreciation on the proposed investment. The appreciation desired should yield a hurdle rate of return on a Discounted Cash Flow basis.
- Negotiating the valuation.

When valuing private firms, a number of estimation issues arise that do not exist when valuing public firms (Damodaran, 2001). These differences will affect both the valuation process and the final value of the private firm. Firstly, public firms display items in the financial statements according to accepted accounting standards and private firms operate in a less regulated environment. Secondly, while public firms are under a legal obligation to make a certain amount of information available to the public, there is less information available about private firms. Thirdly, current and historical prices for equity can be obtained for public firms but not for private ones. Fourthly, the costs associated with liquidating an equity position in a private firm are higher and the task more difficult due to the absence of a marketplace. Finally, owners of a private firm also tend to be a part of the management structure of the firm and, as such, often fail to differentiate between personal and business expenses, management salary and dividends. All of these differences will affect the discount rates used, cash flows and expected growth rates and hence the value of the private firm

Manigart *et al.* (2000) examined the valuation methods used by venture capital investors in the United States, Great Britain, France, Belgium and Holland and

investigated issues concerned the valuation of venture capitalist's investment decisions and the importance of accounting and financial information. Table 1 illustrates valuation techniques used, in descending order from the most used (highest average over the five countries) to the least used.

**TABLE 1**  
**Most commonly used valuation techniques (Manigart *et al.* 1997)**

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1	Capitalized maintainable earnings (P/E multiple – prospective basis)
2	Capitalized maintainable earnings (EBIT multiple)
3	Recent transaction prices for acquisition in the sector
4	Discounted value of free cash flows
5	Capitalized maintainable earnings (P/E multiple – historic basis)
6	Pay back period
7	Industry's special rule of thumb pricing ratio (e.g. turnover ratios)
8	Discounted future cash flows
9	Responses to attempts to solicit bids for the potential investee
10	Historic cost book value
11	Liquidation value of assets (orderly sale)
12	Dividend yield basis
13	Liquidation value of assets (forced sale)
14	Recent PE ratio of the parent company's shares
15	Replacement cost assets value

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Manigart *et al.* (2000) also showed that venture capital decision-making processes differ across countries due to, e.g., differences in institutional, legal and cultural environment. This might also suggest that decision-making differ in different economic condition. Not only venture capitalists become more cautious when times are bad (which is rather obvious) but also their methods in making decisions (e.g. screening and valuation) might be different.

Practitioners often claim the use of a “common sense” or “pit of the stomach” valuation approach (see paper 2). The method is based on investors' experience, knowledge and intuition, thus relying upon the personal skills of the investor. The rather vague nature of the common sense approach makes it difficult to determine when a certain investor actually uses it. It might well be an unconscious use of the approach as well as a conscious one (Connect 2002).

It is also often seen that when further rounds of financing are needed the valuation of the firm may considerably alter the initial estimation even under the same market conditions. One could however claim that what determines the “common sense” or “pit of the stomach” is a matter of experience and inbuilt evaluation methods. Therefore, this kind of decision-making might be just as qualifying as rational decision-making.

In a managerial context, venture managers often place “pit of the stomach” equal to trust issues. They argue that the evaluation of a venture most often is determined by if the entrepreneur can be trusted to complete a given task. Research has also showed that trust between venture capitalists and entrepreneurs have a positive effect on the financial performance of a portfolio firm (see paper 3 - trust).

## **Contracting**

Venture capitalists have a unique role in the capital market. As external investors, they must judge between risky projects, control for the risks they undertake and add value to those firms that they select. Once the venture capitalist and the entrepreneur begin negotiations on a potential investment, their interactions are subject to scrutiny. Anecdotal evidence indicates that conflicts may arise due to differing expectations about the role each party is expected to have in the future. These roles are subject to contracts and, for this reason, the initial contract between the parties may be regarded as a basis for successful co-operation (Barney *et al.*, 1994). This justifies the time spent on negotiation and contract writing in the venture capital investment process.

Landström *et al.* (1998) suggest that the negotiation process leading to a contract is intended to create a mutual understanding between the actors. When the deal has been written down a greater transparency is made of the mutual expectations. Such negotiation may surface important values and principles of understanding that is a requirement for an ongoing relationship. This is also supported by Sapienza and Korsgaard (1996), who believe that the negotiation

period is intended to allow both parties to build a long-term relationship. Landström *et al.* (1998) also argue that most contractual covenants are included in order to avoid agency problems, to protect investors against adverse actions of the entrepreneurs, and reduced the opportunity for moral hazard. Furthermore, they suggested that the negotiation period is also used to enhance goal congruence between entrepreneurs and investors, and to reduce information asymmetry. Thus, the negotiation process is more than a time set aside to identify and solve potential agency problems in the relationship as suggested by Chan *et al.* (1990) and Barney *et al.* (1994).

In a study by Kaplan and Strömberg (2003) different financial contracting theories were examined against actual case practice. An underlying assumption in the theories used in the study was the emphasis on contingency planning in contracting. Given this assumption, each negotiated contract would differ from any other due to the assignment of varying control rights appropriate to that specific investment. None of the theories examined adequately explained the selection of contractual covenants in the contract. They concluded that there was a high degree of standardisation in the contractual covenants used in venture capital agreements. Supporting this assertion, Jog *et al.* (1991) assessed the use of different contractual covenants and indicated that venture capitalists ranked almost all covenants in the contract as equally important. A study by Isaksson *et al.* (2004 – paper 1) on contracting behaviour among Swedish venture capital used institutional theory to explain the highly standardised behaviour among different sub groups of venture capital firms. For instance, early stage investors differed from later stage investors in their behaviour.

## **Financial structure**

The core of a venture capital investment is that capital and competence is transferred from the venture capitalist to the entrepreneurial firm. The transformation of competence is done in the value adding phase (described in the next section) while the transformation of capital can be seen as the final

ending of the investment decision phase. However, as indicated earlier, all capital is not provided at once, rather through stages – often according to predefined milestones (Kiholm and Smith, 2000). Through this multi-stage structure, the venture capitalist will have more control over management and the operation of the portfolio business (Sahlman, 1990).

A survey made by Isaksson (2000) on the structure of the deal between venture capitalists and entrepreneurs in Sweden showed six commonly used financial instruments used in the deal structure.

**TABLE 2**  
**Commonly used financial instruments among Swedish venture capitalists**

<b>Financial instrument</b>	<b>% Used</b>
(1) Equity capital	63%
(2) Convertible debt	20%
(3) Shareholders' contribution	7%
(4) Loans with separable option	4%
(5) Preferred stock	1%
(6) Participating loan	1%
Other instrument	4%

If the investment is made with equity capital, the investor will both have a stake in the firm and also take a genuine risk by connecting the returns completely to future dividends, and to capital gains when the investment is sold. The investor will be a “visible” owner of the firm and the portfolio firms solvency will be strengthened by the equity that is brought to the firm.

Preferred stock is another possibility that separates from “pure” equity by the adding of additional privilege (preferences). This privilege can for instance be that the holders have preferential rights to dividends in case of bankruptcy or that they have favourable dividend terms than other shareholders. Preferred stock can therefore be seen as less risky than equity capital (Bascha and Walz, 2001). According to Norton and Tenebaum (1992) is preferred stock the most common financial instrument for American venture capital firms. As can be seen

in table 2, Swedish venture capital firms do not seem to have adopted that custom completely.

Shareholders' contribution is an additional option for existing owners to contribute equity. Shareholders' contribution can be either conditional or unconditional. The equity owners of a firm can for instance make a shareholders' contribution to cover a deficit as an alternative to a new issue of shares. The advantage of this option is that the firm can amortize back the contribution (if it is conditioned) instead of reducing a too large stock of equity capital. Unconditioned shareholders' contribution can be used to cover losses and even out ownership shares.

## **4.5 Value adding**

The role of the venture capitalist does not stop after the investment is made in the venture. Venture capitalists take an active role in the development of their portfolio firms, for example by active participation on the board of directors, acting as a sounding board to the management of the firm, or helping with contacts and networks (Cornelius and Naqi 2002, Isaksson, 1999). By their active governance, venture capitalists have the opportunity to transfer their resources and competencies (e.g. skills, networks, reputation) to the firm in which they have invested. Depending on the strategy of the investor there is evidence of more or less active participation. The level of active participation also differ according to the specific stage of the investment i.e. early stage investments often require more active involvement.

The ability to create value in the firms that venture capitalists invest in is fundamental for the existence of the venture capital market. In a study of the effects of venture capital in Sweden, Isaksson (1999) shows that firms that are backed by venture capitalists grow considerably faster than similar firms without such backing. The reasons were found in the post investment contributions of the venture capitalists. When the entrepreneurs were asked what kind of post

investment activity they perceived to make the highest contribution for the development of the firm, they ranked “advice regarding financial issues” as number one. However, even though this was the top ranked contribution, it was only 37 percent of the firms that gave the contribution a 5 or 6 on a scale from 1 to 6. In descending order the firms then valued “help with contacts and networks” (23%), “sounding board for ideas” (21%), “strategic management of the firm” (19%), “recruiting of key personnel” (8%), “help with marketing” (6%), and finally “help with product competence” (3%). The effects on firm performance were significant: while the non venture capital backed firms were growing 6 percent in number of employees and 38 percent in revenue, the venture capital backed firms grow 65 percent in number of employees and 80 percent in revenue (measured from the time of the first investment). Similar results have been reported by other researchers (Coopers and Lybrand/Venture One, 1996; Coopers and Lybrand LLP 1997; SVCA and NUTEK, 2003).

A problem with empirical studies of the effect of venture capitalists’ post investment activities (e.g. monitoring) is to separate it from the effects of pre-investment activities (e.g. developing and shaping ideas, picking winners, skilful contracting) (Sapienza, 1992). There are also other effects that are very hard to measure and single out, for instance the certification effect that a financially strong investor adds. However, from a policy point of view this lack of clarity might not be an issue. If venture capital firm fills a gap in the capital market and the firms that are backed with venture capital grow and create new employments, it is not of importance if that is because venture capital firms are good in investment analysis or good in advising and managing.

When it comes to the value adding effects of venture capital firms’ post investment activities, there appears to be a contradiction in the research. While many researchers have found that active involvement of venture capitalists adds value to their investments (e.g. Gorman and Sahlman 1989, MacMillan *et al.* 1989, Sapienza *et al.* 1996), very few have managed to empirically show that this

value adding has an effect on business performance. In fact, there are studies that show that the degree of involvement by the venture capitalist is actually negatively related to business performance (Gomez-Mejia *et al.* 1990, Fredriksen *et al.* 1997). One explanation for this might be that venture capitalists tend to react only when they are needed, as “fire-fighters” (Fredriksen *et al.* 1997), indicating that venture capitalists are more involved in the poorest performing firms in their portfolios.

When Manigart *et al.* (2002) examined the long term effect of venture capital involvement by comparing the survival rate of 565 Belgian venture capital backed firms and 565 comparable firms, they found that venture capital backed firms do not have a higher probability of surviving than comparable non-venture capital backed firms. The result contradicts the “common wisdom” that venture capitalists in general add value. The cited authors conclude that finding venture capital from the right backer is probably better than receiving venture capital *per se*. This conclusion is in line with the findings of Jain and Kini (1995) and Brau *et al.* (2004). Jain and Kini (1995) found that the quality of venture capital monitoring was positively related to the post-issue IPO performance, i.e., that some venture capitalists are better than others in adding long-term value through governance. Furthermore, Brau *et al.* (2004) compared the performance of 126 venture capital backed firms after their initial public offering (post-IPO performance) with a control sample of non venture capital-backed firms, and found no significant differences between firms financed by venture capitalists and without venture capital support.

One problem with studying the value adding effects of governance on business performance might be explained by methodological difficulties involved in the measurement of value-added and performance. As mentioned earlier, it is difficult to separate the effect of skilful investment decisions and the effects of post investment activities (Baum and Silverman, 2004). Furthermore, many studies simply focus on whether venture capitalists perform activities beyond

contributing capital, and when some extra activities are found it is assumed that these activities add value. However, the contribution of venture capitalists might not be higher than what other shareholders or board members contribute. Also, traditional financial performance measures (e.g. profits, return on equity or IRR) are not that useful when it comes to young and fast growing firms that might not be able to show a profit until the very end of the venture capital investment cycle.

## 4.6 Exit

A prime reason why exits are of such importance in the venture capital industry is that venture in the early stages of their development seldom are in a position to pay dividends to owners. Those at later stages are using capital for growth and expansion. These firms, too, have difficulties with the concept of paying out dividends in times of financial need. In fact, most venture capitalists, through contractual agreement, prohibit the payment of dividends. Hence, the main return that venture capitalists get from their investments is the profit realised when they sell their holdings in the ventures.

The venture capital process usually ends with one of the following five exit mechanisms (MacIntosh, 2002):

- Initial Public Offering (IPO): The venture's shares are offered in a public sale on an established share market.
- Acquisition (or trade sale): The whole venture is sold to another company.
- Secondary sale: The venture capital firm's sell their part of the venture's shares only.
- Buyback or MBO: Either the entrepreneur or the management of the firm buys back the venture capital company's shares of the firm.

- Reconstruction, liquidation or bankruptcy: If the project fails the venture capital firm's last resort is to restructure or close down the venture.

A venture capital company has, almost by definition, a time limit for the investments they enter (i.e. their business idea is to buy, develop and sell). The time horizon can be in the range from 3-4 years up to 10 years, usually depending upon the venture capitalist's investment strategy (Bygrave and Timmons, 1992). A venture capitalist that, for instance, has chosen to invest in start-ups usually will hold that investment during a longer time period than a venture capitalist that is specialised in mezzanine investments (Bygrave and Timmons, 1992). Even though exit strategies intuitively are placed as the last part of the process, they are considered throughout the investment period. Venture capitalists will not consider making an investment unless they have a good idea about a possible exit scenario.

Likewise, during most of the post investment period the venture is made ready for an exit. According to Venture Economics (1988, p. 41) "A venture capital firm's exiting strategies are derived from its investment approach and focus. Firms with a preference for IPOs also tend to invest in firms that can be developed into successful standalone businesses, which will be suitable candidates for public offering. Venture capital firms with a "home run" investment strategy targeted at producing a few phenomenal winners aim to realize their gains through IPOs. Other firms aim at developing several moderate winners, trying to hit many "doubles and triples" rather than a few home runs. Such an investment approach may produce fewer IPO candidates but will yield several investments that may be suitable for profitable acquisition or alternative exits." Therefore, the exit stage is inbuilt through out the process and not to be considered last.

## **Initial Public Offering (IPO)**

In an IPO, the firm sells shares to members of the public for the first time. The venture capitalist will typically not sell its shares into the public market at

the date of the public offering. Rather, securities will be sold into the market over a period of months or even years following the public offering. Alternatively, after the offering the venture capitalist may dispose of its investment by making a dividend of investee firm shares to the venture capitalists owner (subscribers to the fund - investors). According to Cummings and Macintosh (2002) IPOs are the preferred exit mechanism for highly valued firms.

## **Trade sale**

A trade sale exit is when the venture capitalist exit to a third party who purchases the entire venture. One way in which this is accomplished is to structure the transactions as a sale of all the shares of the firm, in return for cash, shares of buyer, or other assets. The buyers will often be a larger, established company (industrial buyer) that are seeking a foothold on the technology possessed by the selling firm. In some instances, the buyer will be another venture capitalist. This will most often be a private equity investor, since they target more mature firms (Cummings and Macintosh, 2002).

## **Secondary Sale**

The venture capitalist may also exit by means of a sale of its shares to a third party. This type of exit differs from an acquisition in that only shares belonging to the venture capitalist are sold to the third party. The third party will often be a financial institution or another venture capitalist. While we know that information asymmetry occurs between the entrepreneur and the first round venture capital investor, this type of exits will put new buyer in a similar position. In such situation the secondary buyer will like the first round investor collect information and restriction to lever the level of asymmetric information (Cummings and Macintosh, 2002; Cumming, 2006).

## **Buyback / MBO**

In a buyback, the entrepreneur (or a group of insiders) repurchases the shares held by the venture capitalist (i.e. buys out the venture capitalist). A buyback will often involve considerable borrowing to retrieve the venture capitalists shares (Cumming and MacIntosh, 2002) and thus often seen as a leverage buy out (LBO) or management buy out (MBO). In many cases, the buyback can be an effect of exit clauses that are written in the initial contract between the venture capitalist and venture. As insurance for the venture capitalist there can be a clause in the shareholder agreement that forces the founder to buy out the venture capitalist if an IPO or a trade sale has not occurred within a certain timeframe (Cumming, 2002). This is however not that common in Sweden due to the fact that the founders seldom have the financial means to buy out the venture capitalist (Nyman, 2002).

## **Write-off, Reconstruction, Liquidation or Bankruptcy**

The last case is the worst-case scenario. It occurs when the venture fails and the venture capitalist tries to minimise its losses. The investment may be written off or forced into bankruptcy and liquidation. Reconstruction is another alternative. This may involve a complete take-over by the venture capitalist, dismissing of the entrepreneur and engaging a new management team in the hope of recovering all or part of the investment at a later point. Even if the venture failed there may be something worth recovering, such as assets, technology or patents.

If the venture capitalist continues to hold shares in the non-viable venture, the investment may fall under the category "living dead". Living dead investments have not lost the entrepreneurial team and are still functioning, however not at a benefit for the venture capitalist (Ruhnka *et al.* 1992). Other times the venture is recreated under a new identity and a new team. This most often occurs when there is still trust in the technology, but there is a need for changing focus.

## Research on venture capital exits

Research into venture capital exits has, however, been very limited despite the apparent importance of the issue. The book by Bygrave *et al.* (1994) is one of the first published books that more thoroughly discusses exit issues, including a contribution by Relander *et al.* (1994) that introduces the concept of exit strategy. Black and Gilson (1998) highlighted the importance of exit mechanisms for a venture capital industry. Notable are also the research by Cumming and MacIntosh on exit mechanism and strategies in U.S. and Canada (Cumming and MacIntosh, 2001, 2002; 2003) that provided the first comprehensive theoretical framework for understanding the comparative advantages and disadvantages of all forms of venture capital exits. In their “general theory of venture capital exits” Cumming and MacIntosh (2002, p 10) try to give a general explanation on when venture capitalists exit: “A VC will exit from an investment when the projected marginal value added (PMVA) resulting from its stewardship efforts, at any given point in time, is less than the projected marginal cost (PMC) of these efforts.” Even though the authors admit that several assumptions behind this theory are unrealistic (for instance it assumes that the investment can be sold for a true value at any given point), it is still a good starting point when trying to understand venture capitalists exit strategy.

In Cumming and Macintosh (2001) the significance of various factors that may influence the duration of a venture capital investment is analysed. Two factors that were found to shorten the average investment duration were the portfolio firm’s stage of development (at the date of the first venture capital investment) and the availability of capital to the venture capital industry. However, factors that were significant in their US sub-sample were insignificant in the Canadian sub-sample. Cumming and Macintosh propose that these differences are an effect of a less liquid and less skilled Canadian venture capital market (compared to the US). That is, Cumming and Macintosh (2001) see the

behaviour of the US venture capitalists as more rational and effective, for instance that

A working paper by Schwienbacher (2002) on venture capital exits in Europe and in the U.S. should also be mentioned in this context because it is the only study in Europe on an aggregated level. Schwienbacher (2002) found that although there were numerous similarities between exit behaviour in US and Europe, there were also important differences, in particular with respect to the duration of exit stage (the exit stage is longer in the US), the use of convertible securities (more used in the US), the replacement of former management (are more often replaced in the US) and deal syndication (deals are more often syndicated in the US). Schwienbacher (2002) suggested that most of these differences could be explained by the less liquid markets (both markets for human resources and exit markets) that European venture capitalists face. “This forces European venture capitalists to shop around for longer periods when trying to sell their shares and makes replacement of key employees more difficult” (Schwienbacher, 2002, p 30).

The major difference between European and US venture capitalists when it comes to exit route preferences is that US venture capitalists show a higher strict preference for IPOs while European venture capitalists show a higher strict preference for trade sales, see table 3.

**TABLE 3**  
**Preference of Venture Capitalists Regarding Exit Routes**

“In general, what is your preferred exit route to which you usually tend towards a priori?”	Europe	USA
(a) Strict preference for IPO	11 %	29 %
(b) Strict preference for trade sale	39 %	24 %
(c) Equal preference for IPO and TS	25 %	29 %
(d) No particular preference	13 %	12 %
(e) Preference for another exit route than TS and IPO; or no opinion	12 %	6 %

Source: Schwienbacher ,2002, p. 24

However, the majority of researches who study venture capital exit data have done it in order to study the post-exit effects and were usually concerned about stock market issues, i.e. typically how venture capital backed firms perform after an IPO or the issue of over or under pricing of shares (e.g. Barry *et al.* 1990; Megginson and Weiss 1991; Lerner 1994). Barry *et al.* (1990), examined the differences between venture capital backed IPOs and non-venture capital backed IPOs. His results indicated that venture capital backed IPOs used more distinguished underwriters, were introduced at lower P/E ratios and that the venture capital funds, holding on average 16.2% of the equity, did not sell the majority of their holdings until at least a year after the original listing. This latter statistics is probably due to US legislation. Lerner (1994), in a study of 350 biotech companies, found that venture capital backed companies usually made their IPO at higher market values than companies without VC backing.

Swedish research on venture capital exits is very limited. One of the few studies that are reported is Isaksson (1998). In that study it is shown that trade sales have been the most used exit mechanism in Sweden, with an exception of a couple of years in the late 90s when IPOs were more common. In Isaksson (1998) it is also shown that when venture capital firms were divided into different organisational forms, none of the public (e.g. government owned) venture capital firms had an IPO strategy while this strategy was the unconditionally most preferred strategy among the other firms. Results from Isaksson (1998) also indicated that most of Swedish venture capital firms were highly interested in issues concerning the exit, and that the exit strategy influences their work with the firms in which they have invested from the beginning to the end of the venture capital process. However, some firms had a more active exit strategy than others. Firms that were identified as having an IPO strategy were for instance more active than the total population. In Isaksson (2006 – paper 4) exit strategies and exit-directed activities in venture capital relationships are further analysed.

## **5. Summary of the papers and contributions**

### **Paper 1: Institutional Theory and contracting in venture capital: the Swedish experience**

Isaksson, A., Cornelius, B., Landström, H., and Junghagen, S.

Published in: *Venture Capital*, 6(1):47-71.

#### **Aim of the paper**

To empirically investigate the standardisation of the contractual strategies applied in the Swedish venture capital industry by (1) describing the terms used in venture capital contracts in Sweden, and (2) explaining the use of these terms by applying an institutional theory approach.

#### **Method and data collection**

A questionnaire regarding the use of 79 contractual covenants was sent to thirty-five Chief Executive Officers of venture capital firms in Sweden (total sample), with the response rate of 77 percent. Factor analysis and discriminant analysis were used to analyse the data.

#### **Summary findings**

Our results indicate that the greatest differences in contractual strategies occur among those with differing investment preferences. There appear to be two distinct venture capital cultures controlling contractual choices in these groups. The public and the non-public sector have limited variations in their contractual choices, although public funds employ slightly more standardised strategies. Little difference was found between the contractual choices made by experienced and inexperienced venture capitalists. Our findings generally conform to the outcomes predicted by institutional theory.

# **Paper 2: How do venture capital firms value entrepreneurial ventures?**

Fredriksen, Ö., Isaksson, A.,

Presented at the *Babson College-Kauffman Foundation Entrepreneurship Research Conference* (BKERC), Boulder Colorado, June 2002.

Revised and submitted to TECHNOVATION

## **Aim of the paper**

The main purpose in undertaking the research presented in this study is to gain a better insight than currently exists into how venture capitalists value entrepreneurial companies. More specifically, the following objectives are addressed:

1. to examine the valuation practices of venture capital firms
2. to investigate whether these practices differ depending on the macro conditions, such as market boom or bust.

## **Method and data collection**

Quasi-experimentally designed case studies involving in-depth interviews with seven managers of venture capital firms 1999 and six other managers in 2002. A real example, a case prospectus of a firm was valued by the firms and thereafter used as a basis for the interviews.

## **Summary findings**

Contrary to our expectations, in times of heightened stringency and economic downturn, venture capital investors employ fewer valuation models than they do in boom times. The most implemented valuation strategies were DCF-models and relative valuation methods in 1999. It also appears that relative aspects of the valuation had a very strong influence, i.e., that market conditions and market valuations are important benchmarks. The respondents also relied on “rule of thumbs”, ”common sense” or “pit of the stomach” valuation, “kick-the

ture-valuation” as one VC manager suggested. In 2002 valuations were even more based on relative valuation and ”common sense” and less on theoretically sound DCF techniques. In some cases even asset based (liquidation) valuation was used. Overall, the results of our study suggest that VCs at least try to use some of the theoretically sound methods and combine them with relative valuation and “rule of thumbs”, ”common sense” or “pit of the stomach” valuation. The relative aspects of the valuation have a very strong influence.

Two different patterns in choosing the required rates of return were found. One approach was to accept the entrepreneurs forecast and at the same time add a considerable risk premium on the required rate of return. The other approach was to adjust the forecast to a more “expected scenario” and use a more moderate rate of return in discounting procedures.

## **Paper 3: The effects of governance and trust on performance in a venture capital relationship**

Isaksson, A.,

Presented at the at the 2004 *Babson-Kauffman Entrepreneurship Research Conference* University of Strathclyde, Glasgow, Scotland, June.

Revised and submitted to *Journal of Business Venturing*

### **Aim of the paper**

To empirically examine the trust - governance relationship and to study how this relationship may affect the performance of venture capital backed entrepreneurial firms in Sweden. The study tests the proposition that the simple relationship between the venture capitalists governance of portfolio firms and their portfolio firms’ performance will be explained by an indirect effect whereby governance increases the trust in the relationship, that in turn has a positive effect on performance.

## **Method and data collection**

Questionnaire data from 152 CEOs of portfolio firms, with a response rate of 54 percent. Multi-item scales were developed to measure governance, trust and performance. Path analysis was used to examine the interrelationships among the variables.

## **Summary findings**

Results supported the proposition and showed that the simple relationship between the venture capitalists governance of the portfolio firms and the portfolio firms' performance can be explained by an indirect effect whereby governance increases the trust in the relationship that in turn has a positive effect on performance. The study demonstrates the importance for venture capitalists of having a governance structure that creates a trustworthy relationship between them and the entrepreneur. If venture capitalists succeed in this endeavour they also increase the chances of getting a higher performance. The study also highlights the importance of venture capitalists relational governance on performance. The presence of trust, cooperation, joint planning and problem solving etc. is fundamental for relational governance, not the least because it allows the alliance between venture capitalist and entrepreneur to transact with less complex safeguard mechanisms.

## **Paper 4: Exit strategy and the intensity of exit-directed activities among venture capital-backed entrepreneurs in Sweden**

Forthcoming in: *Venture Capital: A European Perspective*. Gregoriou G.N., Kooli M. and Kräussl R. (eds). Elsevier. October 2006

### **Aim of the paper**

The aim of this paper is to analyse exit strategies and exit-directed activities among entrepreneurs in venture capital relationships. The study focuses on the

effect of the venture capital organization (independent, public sector and captive) on exit strategy and exit-directed activities.

## **Method and data collection**

The study is based a questionnaire sent to 282 entrepreneurs in venture capital backed companies in Sweden (with a response rate of 54 percent).

## **Summary findings**

The findings indicate that organizational form of the VC (especially when comparing private independent VCs and public sector VCs) affects exit strategies and activities. Entrepreneurs backed by public sector venture capital organizations tend to have fewer trade sale exit strategies and more buyback strategies. Furthermore, the proportion of unclear exit strategy was significantly higher among the entrepreneurs financed by the public sector VCs. Examination of whether the intensity of exit-directed activities varies depending on the exit strategy and VC's organizational form suggested that there is a significant difference in the intensity of exit-directed activities between different exit strategies. This difference shows up especially strongly when comparing IPO and trade sale exit strategies. A trade sale exit strategy is found to be associated with significantly more activity and integrated into the firms overall strategy. On the opposite side is the buyback strategy that seems to be handled more on an ad-hoc basis. There was no direct relationship between the intensity of exit-directed activities and VC organization form. However, firms exiting via trade sale and IPO from public VC were found to exhibit higher intensity of activities compared with firms exiting via the same strategies from independent VCs.

## **5.5 Contributions**

The overall purpose of this thesis has been to increase the understanding of the venture capital process. This purpose has been accomplished through work reported in the three chapters of this introduction to the thesis and four

appended papers. All these elements contribute to the overall purpose on different levels. A concise summary of what I consider the major theoretical, methodological and empirical contributions of the thesis is presented below.

### **5.5.1 Theoretical contributions**

It is fair to say that the existing body of literature on venture capital is rather limited both in scale (number of studies) and scope (range of specific issues addressed) when compared to a more established research areas (e.g. corporate finance). The research field has had a tradition of often being more empirical than theoretical as well (Mason and Harrison, 1999). The agency theoretical framework (Eisenhardt, 1998) has been the dominating theoretical approach in understanding the venture capital investing process (see e.g. Sapienza and Gupta 1994, Lerner 1995, Smith, 2005, Carpentier and Suret, 2006). However, this framework has also been criticised for being too limited in understanding the complexity of a venture capital relationship (Landström, 1992). The major theoretical contribution of this thesis has been to show how complementary or alternative theories can contribute to an increased understanding of the venture capital process.

- Paper 1 (contract) builds upon institutional theory in order to explain the contractual relationship between entrepreneurs and venture capitalists. The paper also contributes to traditional agency theoretical approaches in its indirect criticism of the assumptions underlying that theory.
- The main theoretical contribution of paper 2 (valuation) lies in illustrating the problems inherent in applying traditional financial theories when trying to understand the venture capital valuation process.

- Paper 2 also contributes to a rather limited theoretical attempts to explain how venture capital decision processes are affected by its contexts.
- Paper 3 (trust) develops and applies theories of trust and shows the one of the possible ways to integrate the concept of trust, relational governance, and agency theory
- Paper 4 (exit) contributes to theories on allocation of control and exit strategy.

### **5.5.2 Methodological contributions**

Methodological contributions are important for a young research field such as venture capital. The main methodological contributions of this thesis are:

- Chapter 3 (history) shows limitations and provides possible solutions in how to measure a venture capital market.

All papers have parts in their methods that have some methodological contributions, e.g.:

- Test of institutional theory in paper 1.
- Use of experimental designed case studies in paper 2.
- Empirical measurements of trust in paper 3.
- Empirical measures of exit intention in paper 4.

### **5.5.3 Empirical contributions**

Venture capital research is still a young research field. It was first in the early years of the 1990s the research field started to emerge (Barry, 1994). Despite considerable efforts, “there remains much that is unknown or inadequately understood about this market place” (Mason and Harrison, 1999, p 100). Venture capital research has been dominated by studies from the U.S. Given that institutional, legal and cultural environment affects the behaviour on the venture capital market (Manigart et al., 2000; Cumming and MacIntosh, 2002), the need

for empirical contributions from outside of the U.S becomes pronounced. The work reported in this thesis builds upon data collected in Sweden, and thus fills in the recognized lack of empirical research on Swedish venture capital market. Furthermore, a significant portion of the material presented has empirical relevance even in the international context. To summarize, the main empirical contributions are empirical descriptions of:

- the development of the Swedish venture capital market.
- the role of the Swedish government for the creation of the Swedish venture capital market.
- how venture capital contracts are designed in (Sweden).
- how Swedish venture capital firms value entrepreneurial ventures.
- the empirical link between governance, trust and performance
- exit strategy and behaviour among (Swedish) venture capital firms..



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