Venture Capitalists on the Seed Stage Arena

A Fit or Misfit

Johan Adolfsson

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Title Venture Capitalists on the Seed Stage Arena - A Fit or Misfit

Author Johan Adolfsson

Abstract
Background: Growth oriented entrepreneurial businesses need funding for the development of their idea, technology, product etc. However, for the businesses in the very earliest stages of development, access to funding is very limited. Growing young ventures are important job creators and positively affect growth in an economy. Bridging the gap of funding to these companies is therefore on the agenda of governments around the world.
Purpose: To describe the situation facing seed stage investing venture capitalists. I will emphasize difficulties and evaluate venture capitalists ability in addressing them. Effects of the difficulties in form of access to financing for entrepreneurs and a possible need for government intervention will be examined.
Method: Empirical information from seed stage investing venture capital organizations have been collected in the form of face-to-face interviews, email- questionnaires and a telephone interview. Organizations from Sweden, Denmark and Germany are included in the study.

Result: Several factors make seed stage investing unattractive compared to later stages. Important difficulties are higher risks, high costs for fund management, goal incongruence in the investor – venture capitalist relation and lack of bargaining power for seed venture capitalists. Environmental factors that have an impact on seed investing are the deal flow, the investment climate and access to soft funding. Seed stage investing is a very challenging business and the difficulties are to a large extent hard to overcome. The investors more likely have to accept them and I conclude that long term profitability of seed funds is unlikely, at least in absence of government support in form of soft funding towards the entrepreneurial businesses.

Keywords
Seed capital, Venture capital, Financing, Equity gap, Soft funding, Entrepreneurial activity, Öystein Fredriksen

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Titel Riskkapitalister och Investeringar i Sådd Stadiet

Författare Johan Adolfsson

Sammanfattning
Bakgrund: Små tillväxtorienterade företag behöver kapital för att utveckla sin idé, teknologi, produkt etc. Tyvärr är dock tillgången till kapital för dessa företag för närvarande mycket sparsam. Detta ses som ett problem ur ett nationalekonomiskt perspektiv eftersom tillväxtföretagen är mycket viktiga skapare av arbetstillfällen samt ekonomisk tillväxt.
Syfte: Att beskriva den situation riskkapitalister står inför vid investeringar i sådd stadiet. Jag poängterar svårigheter och värderar riskkapitalisternas kapacitet att hantera dessa. Betydelsen av statligt stöd i olika former diskuteras.
Metod: Empirisk information samlas in från riskkapitalister som investerar i sådd stadiet i form av personliga intervjuer, telefonintervjuer samt e-mail formulär. Organisationer från Sverige, Danmark och Tyskland ingår i studien.

Resultat: Många faktorer gör sådd investeringar oattraktiva jämfört med investeringar i senare stadier. Viktiga svårigheter är högre risk, högre förvaltningskostnader, målinkongruens mellan investerare och riskkapitalist samt brist på förhandlingsstyrka hos sådd aktörer. Dessa svårigheter är svåra att hantera och det är troligt att sådd investerare snarare måste acceptera dem. Att på lång sikt lyckas åstadkomma vinstgivande investeringar i sådd stadiet är inte troligt, åtminstone inte utan statligt stöd i form a mjuk finansiering.

Nyckelord
Seed capital, Venture capital, Financing, Equity gap, Soft funding, Entrepreneurial activity, Öystein Fredriksen

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1. INTRODUCTION

1.1. Background

1.1.1. Innovation and the Economy

Innovative new ventures constitute a disproportionately large source of economic growth and are often considered the most important force in job creation. (Gompers & Lerner 1998a, Amason & Sapienza 1993, Gregorio & Shane 2002) However, investors do not currently seem to be keen on investing in the earlier stage firms. Therefore good ideas and inventions can fail to reach the market due to lack of financing. This problem is discussed in terms of an equity gap and economists fear that it can restrain future economic growth. In the UK, widespread concern at the "shortterminism" of the financial markets is particularly referenced to the situation facing start-up and young companies. Decreasing willingness to invest in early stage, technology-based firms have been referred to as the evaporation of "classic venture capital" in the US. (Murray, 1994) The situation in Europe can thus be seen as even more alarming, since venture capitalists in Europe overall are more restrictive to early stage investments then their American colleges. (De Clercq & Sapienza, 2000) A factor explaining this situation could be that investors are risk-averse while early stage investments are highly risky. (Ruhnka & Young, 1991)

Based on this it is rational for governments to try and stimulate early stage investing. Different policy models have been used in trying to bridge the equity gap. In the US an indirect model has been used. The idea is to provide incentives for investments to be made, for example lower tax on early stage investments. A more direct model of stimulating small entrepreneurial activity has been used in Ireland. The Irish government is through the formation of venture capital funds directly investing in promising young firms. (Papadimitriou & Mourdoukoutas, 2002)

1.1.2. Sources of Finance

According to Hamilton (2001) there are three potential sources available for startups to finance their activity. They are self funding, seed capital from venture capitalists and large corporations venture funds. Each of these has a set of risk and reward tradeoffs for the entrepreneur.

Self funding includes money from friends, family and angel investors. Generally the self funded firms are formed from the entrepreneur's vision, filling a need were the entrepreneur has specific skills or resources. The self funded ventures are constantly under environmental pressure since funds are limited and growing sales is the only way to grow the business. The angel investors are sometimes considered to be under the category of venture funding, however angels are often more on the same wavelength as the entrepreneur and less focused on valuation. Self funding has been the dominant source of funding in the earliest stages of the business lifecycle. However reacting to the successful investments in the beginning of the high-tech boom, venture capitalists began to invest earlier and earlier. *Seed capital funding* from venture capitalists provide the entrepreneur with protection from the limitation of funds that shapes the life of the self funded firm. However, now the threat to the entrepreneur lays in whether it will be capable of performing up to the demands of the venture capitalist. Venture capitalists demand high growth in their invested money in a relatively short timeframe. The third source, *corporate funding*, constitutes of investments made by corporations. Investments are often made in spinouts from their own activity, but this connection does not always exist. Generally investments are made for strategic reasons and financed entrepreneurs are working in areas related to the corporation's activity.

From these three sources of funding for entrepreneurs I have chosen to study the venture capitalists investing patterns, this for two reasons. Firstly, because venture capitalists moved towards investing in earlier stages during the high-tech boom, while in more normal markets the challenges of investing are stronger. The suitability of venture capital investing is put up to test. Secondly, because of the history of growing venture capital activity presented next.

1.1.3. Venture Capital Funding

Venture capital dates back to the formation of American Research and Development in 1946. The following decades a number of other venture capital funds were started, but venture capital activity did not increase on a large scale until a policy change in the US 1979. Pension funds had been avoiding venture capital since they had limited freedom to do high-risk investments. After 1979 pension funds where free to do highly risky investments, providing that their portfolio where diversified. Venture capital funding thereafter started to grow dramatically. (Kortum & Lerner, 2000) In Europe the funds raised have been increasing rapidly over the last decade.

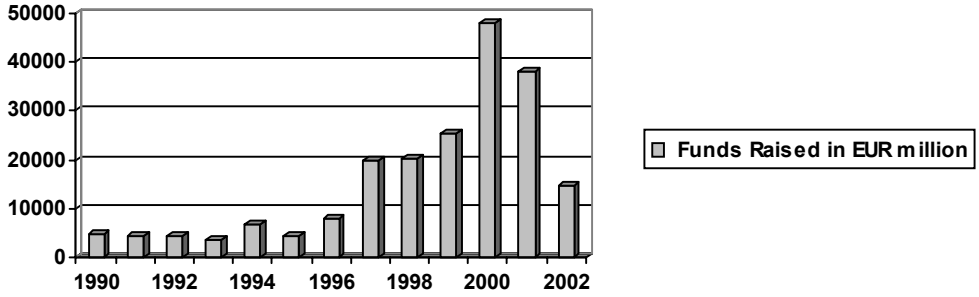

Figure 1: Funds Raised by VCs in Europe.[1] (EVCA, 2002. p. 46, and evca.com, 2003-03-13)

Venture capital activity is dependent upon the current market conditions, which can be seen in Figure 1 and Figure 2. In recent years the amount of seed capital raised has changed dramatically. During the high-tech boom seed capital funds, as a subcategory to venture capital, increased dramatically, until it reached its peak year 2000. Thereafter a steady decline has been observed. Funds raised in 2002 were lower than what was observed in 1998. During 2001 7% of venture capital investments were made in seed capital (EVCA, 2002 p.59).

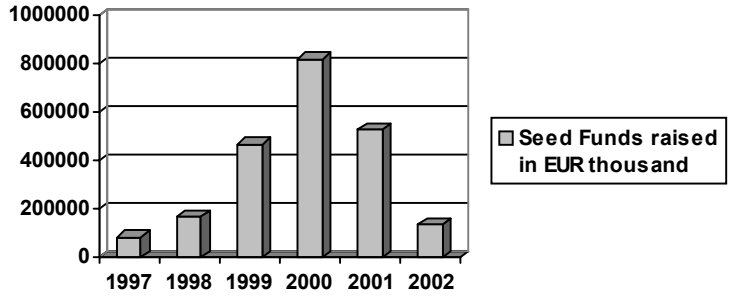

Figure 2: Seed Funds Raised by VCs in Europe. [2] (EVCA, 2002, p.78, and evca.com, 2003-03-13)

[1] 2002 amount of funds raised includes estimation for the fourth quarter.
[2] ibid

1.1.4. An Area of Great Importance

It is imperative to future economic growth that young companies are allowed to grow. To facilitate this, one important feature is securing appropriate funding mechanisms. The current lack of financing available for seed stage ventures implies that investing at this stage is financially unattractive. There are apparently real difficulties, which I aim at identifying. I believe doing so to be very valuable when trying to stimulate investing in the seed stage, and thereby bridge the equity gap. The long term growth of venture capital activity (Figure 1) makes the financing role of venture capitalists increasingly important, which justifies focusing on venture capitalist as the source of finance.

1.2. Problem Area and Research Questions

I find it interesting to study why a pattern of few early stage investments has occurred. What are the differences between investing in the seed stage and investing in later stages? One feature of importance already mentioned is the high risky nature of early stages. However there are probably other features as well to consider for the investor.

- What are the important differences that make investing in the seed stage unattractive compared to later stages?

The environment surrounding the venture capitalist is likely to affect the possibilities for successful seed investing. For example the impact the high-tech boom made, and still makes, shows the great influence the environment can have on venture capital activity. Not only market conditions but also other factors such as research activity and government intervention will be considered, when studying the investment environment of venture capitalists. Government intervention refers to so called soft financing programs.[3]

- In what ways do different environmental factors influence the venture capital activity in seed investing?

I will hereafter study how these seed stage differences in combination with environmental factors effect the suitability for investments by venture capitalists. How venture capitalists work is studied and this framework is used

[3] Government funded loans to young entrepreneurial ventures, see 4.4.4 and 5.2.3.

to investigate whether their methods solve for difficulties in investing in the seed stage.

- Are venture capitalists suitable for seed stage investing?

1.3. Purpose Statement

To describe the situation facing seed stage investing venture capitalists. I will emphasize difficulties and evaluate venture capitalists ability in addressing them. Effects of the difficulties in form of access to financing for entrepreneurs and a possible need for government intervention will be examined.

1.4. Delimitation

I choose not to include self funding and corporate funding of seed stage companies. I believe focusing on one party will facilitate possibilities for a more in dept study. Venture capitalists from Sweden, Denmark and Germany will be included in the study. The results are therefore primarily applicable to these three markets.

1.5. Terminology

The term venture capitalist (VC), in my study, refers to the organization operative in venture capital investing, particularly when describing actions and views of venture capitalists. When I refer to individuals in venture capital organizations I use terms such as employee, partner, or investment manager. I frequently use investment manager and refer to all the employees of the venture capital organization active in management of portfolio companies, not only the employees actually titled investment managers.

The term venture capital funds are often used in venture capital literature. A definition of a venture capital fund is; a pool of capital risen periodically by a venture capital organization. Usually in the form of limited partnerships, venture capital funds typically have a ten-year life, even though extensions of several years are often possible. (Gompers & Lerner, 1999, p.344) In this study far from all venture capitalists are organized using a fund the way it is explained above. This is explained further in 4.1.1, however for the purposes of this thesis, venture capital fund discussions can be broadly applied. Both to venture capitalists structured and not structured in this manner.

1.6. Disposition

The remainder of the thesis will be organized in the following way:

Chapter 2: *Methodology* outlines how the study has been conducted and the reasons for doing so. Criticism to chosen methods is presented continually through the chapter.

Chapter 3: *Venture Capital Framework* constitutes a review of current theory in the venture capital area. It is specially directed towards theories relevant for early stage investing.

Chapter 4: *Venture Capitalists and Seed Stage Investing* presents the views of venture capitalists investing in the seed stage. Descriptions of the venture capital organizations, their views of seed investing difficulties and environmental factors as well as strategies in investing, are included.

Chapter 5: *Analysis* constitutes of my investigation of the research questions asked, using relevant theories and empirical findings.

Chapter 6: *Conclusions* outlines the key findings of the study. I provide my view of seed investigating venture capitalists and suggest an area of interest for future research.

Chapter 7: *Bibliography* informs of the primary as well as secondary sources of information used in the study.

Chapter 8: *Appendix* consists of the questionnaire used in interviews.

2. METHODOLOGY

2.1. Thesis Focus Evolves

The area of study largely effects appropriate method to use. Studying venture capitalists investing in the seed stage have been as interesting as it has been challenging. I have worked in the area appointed by PVA-MV AG in Rostock, Germany. My supervisor at the company, Sascha Höcherl, defined a broad area of interest. Decided from PVA-MV was for me to work in the area of venture capital fund management. The specific focus of the thesis was left open for me to decide. A couple of factors effected the decision. Firstly, of course, I would not choose to study an area that does not interest me. Secondly I did not want to study an area in which too much is already known. With the aim of finding a topic matching these criteria I extensively studied current venture capital literature. Lundahl & Skärvad (1999) regard studying prior knowledge in the area to be an effective way of practicing research. Doing so the researchers avoid squandering time and energy investigating what others have already concluded.

Reading about venture capital I soon found interesting results and patterns that I wanted to investigate further. Many findings conclude that entrepreneurial activity is a very important source of job creation and economic growth. Further, financing in the earliest stages of company development was decreasing. These two conclusions put together provided reason for distress signals about the future economy. Governments have reacted and intervened to support entrepreneurial activity. What I found is not as well explored as the reasons for lack of financing to the earliest stages, and specifically the stage often referred to as the seed stage. This is how the focus of my study evolved. Extensive insight into the venture capital research also provided great help for the work to be done ahead.

2.2. Type of Survey

Gilje & Grimen (1992) describe two different ways of conducting a study. They are the inductive and the deductive approach. In the inductive approach the researcher should enter the investigation with an open mind to study a number of cases. Information from these cases is concluded and used to come up with new theories. The deductive approach starts from current theories. The researchers set up hypothesis and thereafter try and falsify those using empirical studies. My starting point is empirical findings from the venture

capitalists situation, which I use to try and provide broader conclusions. In the study venture capitalists are the sources of primary information i.e. information that have not previously been documented. (Ericsson & Weiedersheim-Paul, 1999) My study can not be seen as a pure inductive approach since my previous studies and literature readings to a large extent will effect my conclusions.

Ericsson & Weiedersheim-Paul (1999) separates a qualitative study from a quantitative study based upon whether the information desired is of quantifiable nature or not. In my study both types of data are important. The quantifiable data can be used when evaluating the information gathered. For example, in my study, the answer to what value VCs can provide to ventures is evaluated by; (1) asking how many investment managers per portfolio companies they apply and (2) asking what background the managers have. However, by itself, the qualitative information is the most important for my purposes. Therefore a methodology of information gathering which can provide this kind of information was essential.

2.3. Survey Approach

2.3.1. Form of Correspondence

To use face-to-face interviews, to the extent possible, was at no point questionable for me. Ericsson & Weiedersheim-Paul (1999) say face-to-face interviews provide benefits since the interviewees' ways of expressing themselves, with body language as well as speech can be studied. This adds to the value and credibility of information.

For time and financial reasons I could not commit face-to-face interviews with all studied VCs. The Danish and German interviewees were instead offered the choice of either a telephone interview or an email questionnaire. The questionnaire is available in 8.1 and is largely same for face-to-face interviews as it is for telephone interviews and email correspondence. The questionnaire was discussed with my supervisor Sascha Höcherl before the first interview. Sascha is experienced in the venture capital field and could provide valuable input to my suggested interview guide and questionnaire.

Lundahl & Skärvad (1999) mean that using different methods of collecting data can damage the reliability of the investigation, since the surrounding of the interviewee do influence the answers from respondents. Standardizing the

investigation is therefore preferred. I think it was helpful to have started with face-to-face interviews. I learned which questions were hard to understand and could enhance the accessibility of these questions. However, it was important for me not to change the meaning of the questions, since this would inhibit the possibility to do comparisons (Lundahl & Skärvad, 1999).

2.3.2. Scope of Study

Eisenhardt (1989) say the number of studied cases decides the balance between depth and scope of the study. For my purposes I believe the method of a relatively large number of cases was the better approach. Comparing different views provides good value for my thesis. Venture capitalist are also often employing only a few investment managers and the information you cannot get from one of them in the context of an interview, is probably information they do not want to share with you anyway.

In a case study you can acknowledge that a phenomenon exists and that processes etc. work. However, you do not know if they are common. (Wallén, 1993) Because of this the empirical information presented in the thesis and used in the study is probably not an exact picture of overall views. However, studying the number of venture capitalists investing in seed capital which I have, the study will hopefully reflect reality pretty well. I build this on the basis that the number of seed investing VCs is limited, and that I have interviewed quite a few of them. This is also in line with Lundahl & Skärvad (1999) and Wallén (1993) who mean that it is possible to draw some general conclusions from a limited number of observations. Wallén mean that detailed results of a specific case cannot simply be applied to other cases. However the basics of processes and procedures can.

According to Merriam (1994) the extra input of a case studied will be decreasing with an increasing number of cases. Prior answers are confirmed by new answers, but not much more comes out of the interview. I could feel this decreasing input effect, which tells me that my understanding for and information about the venture capital activity have reached far. After having studied cases in Sweden I studied a couple in Germany as well as Denmark in order to broaden the sample a little further, and hopefully increase the extra input of each case studied.

2.3.3. Sample of Interviewees

When I decided for which venture capitalists to interview I used a couple of guides. Firstly I studied the homepage of the European Venture Capital Association (www.evca.com). Member companies of this association provide information of e.g. the stage of investments they do. This was therefore helpful in identifying some interesting companies. Secondly, my supervisor Sascha Höecherl could provide input to which seed venture capitalist in Germany and Denmark that would be of interest. Thereafter I searched for venture capitalists through accessing the homepages of Swedish universities, since most seed investing VCs are connected to universities. The methods I used to find appropriate interviewees may seem a little ad hoc but I hope that, by using different channels, I managed to reach a broad range of seed investing venture capitalists. I where aware of the risk that some venture capitalists might not want to participate in the study, therefore I contacted many venture capitalists from the beginning. I contacted about double the amount of which in the end was interviewed.

I contacted the venture capitalists asking if they agreed to an interview. The initial contact was generally via email. If I had got no response within a week I called the respective company. The sample was changed via the contacts with venture capitalists. After having explained the focus of my thesis I was several times provided with additional sources that they believed to be valuable for me. This method is by Lundahl & Skärvad (1999) referred to as the snowball selection. They also say that with a sample like this, which is not randomly selected, you can not in a statistical sense draw general conclusions. However as discussed before, due to the relatively small number of seed investing venture capitalists and a reasonably large number of interviews, I believe I will be able to draw some conclusions of value in a broader sense then only within the exact context of my study.

The study includes interviews of 13 organizations investing partly in early stages. All of them, except for one, consider themselves to be investing in the seed stage. The reason that an organization that is not investing in the seed stage was interviewed is that the distinction between seed stages and later stages is not always clear. Some information from this interview could still be used. All organizations but one, who is an incubator, are venture capitalists. I saw the incubator as an interesting organization investing at the seed stage and considered the denomination of the organization less important. In 7.4 Interviews only 12 organizations are included since an organization requested

anonymity. This organization responded by e-mail questionnaire, which add up to four questionnaires, one telephone interview, and eight face-to-face interviews. Some of the organizations are entirely or in part owned by a government, while others are entirely private owned. All consider the commercial orientation in investing important.

Once the sample of venture capital organizations was set, deciding whom to interview within the organizations was for me a straightforward matter. Generally, all employed individuals were working with management of the fund and therefore any employee would be interesting. As seen in 7.4 many are CEOs.

2.3.4. Interview Execution

During the interviews it would have been preferred to have a companion in order to absorb all the information. Still, I preferred taking notes to using a tape recorder because I felt that the interviews would be more relaxed. I would also save valuable time by taking notes at once. During interviews I discovered another advantage. The time I took notes worked as a break for extra consideration for the interviewees. Many valuable opinions where explained during this extra breather.

However there is still the problem that I can have missed information. To limit this risk I always took an hour directly following the interview to think trough all the questions. I tried to remember additional information and clarified my notes. Right after the interview I asked for permission to come back with additional questions. Everyone accepted this and the option have been used for clarification reasons as well as one time when time ran out before all questions were answered. Generally the interviews took a little more than an hour. The telephone interview took 45 minutes.

There are a couple of effects that can skew the information acquired from interviews. One effect mentioned by Ericsson & Weiedersheim-Paul (1999) is that the interviewee can sometimes realize, by the way the questions are asked etc., what answers that are expected from them. Another effect, that adversely effects the information is when the interviewee provides a dishonest answer (Lekwall & Wahlbin, 1993). This can happen if the interviewee wants to give a positive picture of him or herself and the company. If this is the case the validity of the investigation can be questioned. Validity concerns whether or not the investigation is measuring what it is meant to (Lundahl & Skärvad,

1999). If venture capitalists are lying, then the answers are not a good indicator of what I, as the researcher, am investigating. In this case an interview and the questionnaire are the wrong instruments for the study.

Naturally, it is hard to see whether these two effects have played any role in my investigation. However, asking additional questions, controlling for answers as described above has been used to try and control for the latter effect.

2.3.5. Information Composition

After the telephone- and regular interviews were accomplished and email-questionnaires were received, I started to assemble the data. I used a method of focusing on specific areas reading through the selected information from each venture capitalist. On a separate sheet the information from all VCs were recorded. This information was then condensed to show general patterns as well as differences in venture capital views. I have chosen to provide the source of each opinion only in the case of quotations. The reason for this is that it would very hard for me to get access to interviews if I would not give respondents this degree of anonymity. I am also sure that some of the information from investment managers never would have been shared, if I were to provide sources continuously through the empirical chapter.

Hopefully the way I have managed the information from the beginning with formulating the questionnaire to last part of composing the information have guaranteed, to the extent possible, the credibility of presented information.

3. VENTURE CAPITAL FRAMEWORK

In this chapter I present venture capital from a couple of perspectives. I firstly define seed and venture capital. Secondly, I describe why and how venture capitalists participate in managing the ventures and then their investment strategies. The following section describes the relation to other investors, after which risk and venture capital is discussed in depth. I conclude the chapter describing a couple of aspects about technology and venture capital.

3.1. Defining Venture Capital

Venture capitalists facilitate the flow of both funds and information between providers and users of capital, and, like any provider of risk capital, they monitor and advice ventures on strategic issues. Venture capitalists are usually organized in partnerships primarily focused on the financing of developing high growth firms that do not have access to public securities or institutional lenders. There is a gap between these sources of finance and finance from family, friends etc. This gap is where venture capitalists normally position themselves. The involvement of the venture capitalists can be very early in an idea stage or much later in the form of one or to rounds of finance. These are all, to some degree, uncertain and risky stages, and the cost of venture capital is therefore high. The ending of the involvement usually takes place by the sale of the company in the public market or through a merger. (Amason & Sapienza 1993, De Clerque & Sapienza 2000).

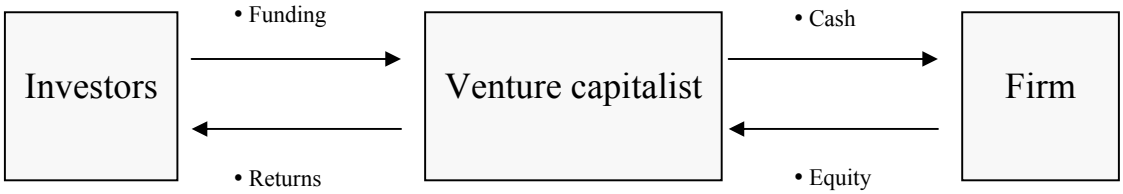

Figure 3: The Venture Capital Process. (Gompers & Lerner, 1999, p.9)

Fredriksens (1997, p.16) definition of venture capital is:

> *Venture capital firms are organizations, which invest equity capital in high-risk projects and supply management resources. The investment is time limited.*

This definition is applicable to my study. This is for two reasons, firstly because high-risk is highlighted and secondly because the time limited feature is mentioned. These are both important factors for the particular niche of venture capital seed capital, which is the focus of this study.

> *Seed capital is defined as investments in companies in the earliest stage of their development prior to having produced a commercially sold product or service.*
>
> (Murray, 1994, p.440)

The European Private Equity & Venture Capital Association (EVCA) uses a narrower description separating seed capital from start-up capital. Seed capital is defined as:

> *Financing to assess and develop an initial concept before a business has reached the start-up phase. Start-up financing is provided for product development and initial marketing. Companies may be in the process being set up or may have been in business for a short time, but have not sold their product commercially.*
>
> (EVCA, 2002, p. 304)

After the start-up stage the next stage is other early stage capital. This stage is defined as:

> *Financing provided to companies that have completed the product development stage and require further funds to initiate commercial manufacturing and sales. They will not yet be generating profit.*
>
> (EVCA, 2002, p. 304)

Investments in later stages than these are not part of my study and I do not provide those definitions. For the interested, EVCA (2002) provides definitions for all venture capital stages.

3.2. Venture Capitalist Intervention

3.2.1. Venture Capitalist Activities

Venture capitalist activity can be divided into pre- and post-investment activities. *Pre-investment activities* include raising money, the search and selection of investment opportunities, and structuring the deal. The *post-investment activities* are also called the management phase. The venture capitalist assists and monitors the ventures and later on exits the investment. Venture capitalists spend a high proportion of their time performing post investment activities. (Fredriksen & Klofsten, 2001) Wells (1974, in Fredriksen, 1997) study showed that 2/3 of the time is spent on post-investment activities.

In the post-investment activities the most important role of the venture capitalist is the role as a financier, however several other roles are important too. Venture capitalists are important discussion partners, mentors, and coaches. The communication between the venture capitalist and entrepreneurs are in form of board meetings as well as informal contacts and financial reports. Venture capitalists follow the ventures closely since they constitute the possibility for future returns. The more they can assist the venture the more they hope to gain from their investment. Through active participation the venture capitalist acts as a consultant to the venture. This separates venture capitalists from many other passive investors. That venture capitalists really do work actively, shows in the reliance from entrepreneurs to trust the venture capitalist as the primary source of external competence. (Fredriksen & Klofsten, 2001)

Gupta & Sapienza (1992) found venture capitalists use less geographic and industry diversification, when investment risk is high. Instead they increase monitoring and involvement. Venture capitalists utilize special expertise e.g. relevant technical and managerial experience on their staff in an attempt to alter the risk/reward relation. De Clerque & Sapienza (2000) mean that venture capitalists who spread significant costs of monitoring high-tech investments over similar lines of business become specialists in these related areas. The specialized knowledge can then be utilized in current and future investments and improves abilities in evaluation and selection of ventures as well as assistance towards them. By specializing in industry the venture capitalist can develop a crucial understanding for the technology. Of course venture capitalists never become specialists in the technologies; their core

competence is still in the areas of strategies, finance etc. However in order for the cooperation between venture capitalist and entrepreneur to be fruitful for both parties, a shared base of knowledge is very helpful. For example the venture capitalist will be able to use its network better by providing the entrepreneur with the correct contacts. On the other hand, the entrepreneur will be able to communicate its view about future developments of the technology more effectively. Therefore, by specialized investments, the venture capitalist can benefit from synergies. Gupta & Sapienza (1994) mean that specialization benefits lead to the existence of a fundamental limit to the number of diverse ventures and industries that venture capitalists effectively can invest in.

3.2.2. Frequency and Openness

Fredriksen & Klofsten (2001) mean there is a benefit/cost tradeoff to consider when deciding the degree of frequency in communication. Greater involvement is not always cost effective, the benefits has to be balanced against the costs. Sapienza & Timmons (1989) claim that the venture capitalist involvement may have positive as well as negative effects, they mention the costs:

- Slower decision making and loss of autonomy for entrepreneurs
- Venture capitalist sacrifices time that could be spent on e.g. raising money, finding investment opportunities or helping troubled ventures

And the benefits:

- Help facilitate implementation of idea
- Buffer entrepreneur in difficult periods
- Help manage risk by hands on involvement

Two factors seem to influence the degree of involvement of the venture capitalist. They are the level of technology and the stage of development of the venture.

In ventures pursuing *high levels of technological innovation* the entrepreneur often believe that a superior product and technology compared to competitors is all that is needed for success of the venture. It is very hard for the venture capitalist to fully understand the technology. The entrepreneur is therefore likely to have the primary responsibility for formulating strategies. Studies

have shown that conflicts are more likely to occur between the venture capitalist and the entrepreneur in cases with high technological innovation. Conflicts are generally associated with lower venture capitalist effectiveness. Since conflicts are less likely to occur between parties frequently interacting, information sharing is in the case of high tech ventures extra important. A positive relation between information sharing and technological innovation has a result in several studies. (Amason & Sapienza, 1993, Sapienza & Gupta 1994)

Venture capitalists are also more involved in ventures in the *earliest stages*. For instance, because of their uncertain circumstances, entrepreneurs managing early stage ventures are likely to turn to venture capitalists more often for advice and informal counseling than established ventures do. The venture capitalist helps the entrepreneur to overcome the liabilities of newness (Fredriksen, 1997). Studies have shown that the frequency of interaction between venture capitalists and venture is higher in early stages. (Amason & Sapienza 1993, Sapienza & Timmons 1989, Sapienza & Gupta 1994)

The geographic distance from venture capitalist location to the venture location affects the degree of involvement. Due to the transaction costs involvement are more efficient when the distance is short. Personal interaction provides a central mechanism for acquiring information and physical contact enhances the interaction. Therefore geographic proximity lowers the cost of monitoring ventures. The quality and amount of assistance that a venture capitalist can provide is higher when investing in ventures located close. Since venture capitalists want to monitor early stage ventures a little extra they prefer to invest nearby in order to facilitate the involvement. Later stage investments, presumably more viable, need not be watched so carefully and ventures can be located further away. (Gregorio & Shane 2002, Sapienza & Timmons, 1989)

Amason and Sapienza (1993) found a somewhat frightening result about openness in the entrepreneur–venture capitalist relation. It seems like there is less openness between *early stage high-tech ventures* and the venture capitalist then later stage high-tech ventures and venture capitalists. Korsgaard & Sapienza (1996) give a possible explanation for this. They say that the entrepreneur might feel that sharing information would possibly endanger their position. Therefore, for the time being, keeping information might be in their best interest.

3.2.3. Reasons for Intervention

There are two theoretical points of view as to why VCs mediate in the management of their portfolio companies. They are firstly to reduce *business risk* and secondly to reduce the threat of *opportunism***.** (Sapienza & Timmons, 1989) Business risk is defined as the uncertainty of receiving adequate returns on investments due to the competitive environment. Entrepreneurial companies often explore markets where competition is in an infant phase, where the nature of buyers, suppliers, competitors, products and so on is still not developed and established. This means that they are subject to more business risk than larger companies. (Porter, 1980)

Venture capitalists are financial intermediaries investing in the special circumstances described above. Why is this role then suited for venture capitalists? Generally financial intermediaries are considered to have an important role in alleviating moral hazard and information asymmetries (Lerner J, 2002). There are information asymmetries in two directions in the relation between the young entrepreneurs and the venture capital firm. Entrepreneurs generally have a more technology-oriented background while they lack commercial experience (Murray, 1994). Entrepreneurs are provided funds from venture capitalists in return for part of the ventures equity stake. Since there is an information asymmetry between the parties there is the risk that the entrepreneur can use the situation and acts in his own interests. Jensen & Meckling (1976) call this opportunistic behavior. Opportunism leads to agency costs on the hands of the venture capitalist. There are different views on whether there really is a risk for opportunistic behavior in the venture capitalist – entrepreneur relation.

Sahlman (1994) builds a lot of his theories on the bases of agency costs and believes that shirking from the entrepreneurs' side is a real threat that needs to be dealt with. Sapienza & Gupta (1994) on the other hand represent the view that the relation venture capitalist and entrepreneur has to be built upon trust. They say neither of the parties has much to win from deceiving the other. Instead the role of agency costs is in form of unintended conflicts such as lack of goal congruency. Venture capitalists are first and foremost concerned with increasing the value of the venture. Entrepreneurs on the other hand might seek other organizational and personal goals. (De Clerque & Sapienza, 2000) Amason & Sapienza (1993) mean that it is important to consider that many entrepreneurs are strictly innovators. They are motivated primarily to develop their technology. Therefore financial goals are often considered less urgent to

fulfill. While this is an example of how incentives of entrepreneurs can be harmful for venture capitalists, the opposite situation is as easy to imagine. Consider a venture capitalist in need of money for other investments. He has an incentive to try and bring the portfolio firm public as soon as possible, while this might harm the entrepreneur if the venture is not ready for an IPO.[4] (Barry, 1994) These are only two of many possible situations where the incentives of venture capitalists and entrepreneurs can differ.

Admati & Pfeiderer (1994) identify what they call the over-investment problem. The entrepreneur has put a lot of time and effort into the business and therefore he tends to go along with the project as long as there is a chance of success. This is rational for him since others provide the new capital. If the business is a failure he gets no payoff. However, he does not financially lose either, since he is not providing the additional capital. The entrepreneur has an option-like position. These possible incentive differences are important for the venture capitalists to consider when deciding for strategies to use in their investments.

Fredriksen (1997) share the view of Sapienza and Gupta (1994) that opportunism is not a major concern. He means that the entrepreneur – venture capitalist relation should be looked upon as a coalition, with entrepreneurs and venture capitalists on the same level as partners. Several studies have tested the existence of opportunism in the venture capitalist entrepreneur relation. Barney et al (1989, in Fredriksen & Klofsten 2001) found support while many other found weak or no support. Two examples are Sapienza & Timmons (1989) and Fredriksen & Klofsten (2001). Fiet (1995, in Fredriksen & Klofsten 2001) have showed that venture capitalists generally are more concerned with the business risk than the threat of opportunism. However, Fredriksen & Klofsten (2001) found weak support for venture capitalist governing their ventures in order to control for business risk.

Fredriksen & Klofsten (2001) therefore claim that venture capitalist involvement cannot be explained by either the threat of opportunism nor business risk. They mean venture capitalists intervene not to govern and monitor but to provide assistance, especially to troubled and/or inexperienced ventures. This is a more positive view of the venture capitalist role intervening

[4] IPO = Initial Public Offering: The sale of shares to public investors of a firm that has not hitherto been traded on a stock exchange. (Gompers & Lerner, 1999, p. 345)

to add value. Most studies support the view that venture capitalists do add value to ventures (Fredriksen 1997, Sapienza & Timmons 1989)

De Clerque & Sapienza (2000, p. 64) believe differences in backgrounds, expertise and values between the venture capitalists and entrepreneurs can, in some cases, make up for a great combination. They found value added by venture capitalist to be positively related to:

- The level of innovation pursued by a venture
- The frequency of interaction between the investors and the entrepreneurial CEO
- The openness of communication between the two
- Similarity of perspectives on the importance of key venture objectives

They also mention conflicts playing an important role. The existence of different approaches lead to better decision making, however decisions are harmed if the different approaches lead to conflicts on a personal level.

Amason and Sapienza (1993) claim that when circumstances are demanding, and uncertainty high, greater information processing can improve performance. Interaction between venture capitalist and entrepreneur can stimulate creativity and enhance decision making in ambiguous conditions. As time passes and difficulties are overcome by the two a deeper relation can develop. Trust and shared knowledge streamlines the interaction process. Korsgaard & Sapienza (1996) identify the ability to quickly build trust as a possible source of cooperative advantage to competitors. They mean that trust can mitigate fears of opportunism and thereby build a much-needed open relationship.

3.3. Venture Capitalist Investment Strategies

Venture capitalists use a number of strategies to create value in their portfolio. First, only a very small fraction of entrepreneurs looking for financing are accepted. Venture capitalists often demand a business plan from ventures seeking funding. Receiving many plans they only accept the most promising ones. (Ruhnka & Young, 1991) There are many mechanisms used by venture capitalists to alleviate the agency problem and reduce the risks after the initial investment has occurred. The mechanisms I will describe are high rate of return, structuring incentives, staging of capital, stage focus, diversification and syndication.

3.3.1. High rate of Return

Venture capitalists use a high rate of return, which for the entrepreneur mean a high cost of capital. The high cost of capital imposes a strong incentive for the entrepreneur to use it wisely. It also forces the entrepreneur to only accept money from investors who will increase the value of the venture. The relation has to increase the value so much that the change makes up for the cost of capital. (Sahlman, 1994)

3.3.2. Structuring Incentives

The compensation of the entrepreneur and the venture capitalist is set up so that both the entrepreneur and the venture capitalist benefit when the venture is doing well. However if the venture does poorly the entrepreneurs bear a disproportionate part of the risk. Deals are set up so that upon liquidation the venture capitalist receives the proceeds and the entrepreneur have worked for very low compensation levels. (Sahlman 1994, Brealey & Myers 2000) The venture capitalist might also use anti-diluting clauses to protect itself from excess dilution should the value of the venture sink before upcoming financing rounds. (Ruhnka & Young, 1991) Prices for shares in earlier rounds are adjusted down so that they match current valuation. The use of these clauses has increased following the collapse of the information technology boom. Venture capitalists are desperately trying to protect themselves from the decreases in valuation. (Braunsweig 2001, Campbell 2001)

3.3.3. Staging of Capital

Staging of capital is the idea that the venture capitalist provides capital based on set milestones, in contrast to providing a lump sum from the beginning. By providing a modest amount up front for the completion of e.g. a business plan, the venture capitalist reserves the right to invest more in a second round, if the business plan sounds interesting. By staging the commitment of capital the venture capitalist gathers new information about the project and its environment. Therefore VCs can make more informed stage by stage decisions on whether to invest more or not. (Sahlman, 1994) Directing future funding to prior "winners" is called *parlaying of funding*. Winners refer to the ventures able to achieve the set objectives and that are showing good prospects. Ruhnka & Young (1991) claim that specifying objectives for a specific round of funding help facilitate measures of venture performance. It is a means of directing maximum venture effort on critical objectives that must be achieved before the venture can move forward.

3.3.4. Stage Focus

Ruhnka & Young (1991) found that Venture Capitalists tend to use what they call a *portfolio failure avoidance strategy*. The idea is to allocate a larger portion of money in later, safer, stages. They have higher probability of positive returns and also producing earlier cash flow. However this strategy reduces the chances of finding the "big hits" among early stage ventures. According to venture capitalists the strategy has evolved since the ability to attract future institutional funding would be inhibited if final portfolio return were negative.

However, there is also a discussion as to whether VCs really are investing in the earliest stages. Gregorio & Shane (2002) and De Clerque & Sapienza (2000) claim that VCs in general are late stage investors. It is believed that this trend is even stronger in Europe compared to the US. Other sources of funds, such as business angels and government agencies may be more important in the earliest stages. Muzyka (2003-02-27) claim that the returns for venture capitalists in first round on aggregate have been very poor. In fact they show moderate losses in spite of the fact an acceptable return should be high, due to higher risk in the earliest stages. Risk will be further discussed in section 3.5 in which Figure 4 illustrate the high risk of early stages. Campbell (1998) claim extracting decent returns from seed investments are hard, which can explain why even venture capitalists active in the early stages tends to shy away from the seed stage. Bowman (2001) mean before the tech-boom, seed capital was the arena of business angels and not VCs. This changed during the tech-boom, but now VCs, burnt by their experiences, are turning back to later stage investments. Campbell (1998) says that the small number of dedicated seed funds is probably the reason why so little data on seed fund performance is available.

3.3.5. Diversification

Diversification is a means of reducing risks by investing in a number of ventures. This way each individual investment risk becomes less important in the portfolio. The diversification can include investing in different industries, geographic areas, and stages. In Figure 4 it can be seen that the risks vary widely across different stages. The idea with industry and geographic diversification is that if a region or an industry stalls, the portfolio can be able to perform anyway. It is less likely that all industries and regions are troubled at the same time. (Ruhnka & Young, 1991)

3.3.6. Syndication

Syndication is a joint investment between venture capitalists.[5] According to Gompers and Lerner (1999) an advantage with syndication is the opportunity it presents to compare views of target companies with other venture capitalists. If several independent observers agree to invest, it should be more likely that the decision to invest is correct. Syndication can also be a way to avoid risks through risk sharing. By investing in many syndicated deals, the venture capitalist can achieve a greater diversification than without syndication.

Admati and Pfeiderer (1994) suggested a fixed fraction contract to solve for the insider problems that can occur (3.4.1). This fixed fraction contract implies that future investments must be syndicated. However, in 2001 only 29% of venture capital investments were syndicated. (EVCA, 2002, p. 60) Gompers and Lerner (1999) give a possible explanation when they discuss specialization. In highly technological areas venture capitalists can develop special skills as described in 3.2.1. Not wanting to share the benefits of the skills can be a reason to making investments single-handedly.

3.4. Venture Capital Society

3.4.1. Venture Capitalists as Insiders

Venture capitalists are as discussed active investors in the companies they finance. They sit in the board of directors, provide advice, hire key managers, etc. Having this position they possess information not publicly available. The venture capitalists have an opportunity to use its excess information to their advantage at expense of other venture capitalists. Venture capitalists do, if they can, time their distributions of shares to when they consider them overvalued. (Gompers & Lerner, 1998b)

Admati and Pfleiderer (1994) mean that the insider position can lead to sub-optimal investment decisions. If the inside investor is the only one to provide new capital he will be inclined to under-invest. The investor provides all the new capital but only receives a fraction of the payoffs. By acquiring inside information he can also get bargaining power that enables him to put pressure on the entrepreneur. Thirdly, and perhaps most important, sub-optimal

[5] Syndication is defined as the joint purchase of shares by two or more venture capital organizations or the joint underwriting of an offering by two or more investment banks. (Gompers & Lerner, 1999, p.348)

decisions can be made when including new outside investors. The entrepreneur and the investor have got information not available to other investors, which can be used to their advantage e.g. by overpricing. The suggested solution to these problems is a contract under which the inside investor always owns a fixed proportion of the firm. The contract is called the fixed fraction contract. However venture capitalists frequently cannot invest through all stages and in these cases the insider position can become a burden. If the insider, venture capitalist, who knows most about the venture, do not invest, this sends warning signals about the venture to other investors. (Brealey & Myers, 2000)

3.4.2. Investors

Venture capitalists are dependent upon investors to provide funds. Reputation plays an important role when investors choose funds. Older and larger venture capitalists have higher possibility of raising funds. When venture capitalists are raising additional capital for funds, experience say, young firms are less fortunate. Mutual funds have been studied extensively and poor previous performance does not seem to inhibit the raising of capital for most funds, only the young funds are restrained. Good previous performance is a positive factor determining the access to capital for all funds seeking money. However tracking the performance of venture capital funds is not as easy as mutual funds. Because the companies in the fund are not valued in a public market accounting principles are used in performance measurements and the statistics can be ambiguous. (Gompers & Lerner, 1998a)

The introduction and steady increase of institutional investors in venture capital has supported growth in the industry. However it has also changed the nature of the venture capital business. There are speculations that venture capital activity is becoming more impersonal which alters the venture capitalist - entrepreneur relation. These changes could have serious implications on entrepreneurial activity. (Amason & Sapienza, 1993)

3.5. Risk and Venture Capital

The highly risky nature of early stage investing has been mentioned a couple of times above. I will now look into the uncertainty and risks of early stages. I also discuss the origins of risks.

3.5.1. Risk or Uncertainty

There is a theoretical distinction between risk and uncertainty. *Decision making under risk* appear when the person who will make the decision knows the possible outcomes as well as the probability of occurrence attached to each outcome, but not what action that leads to which outcome. Decisions are *made under uncertainty* when the possible outcomes are known but not the probabilities. Entrepreneurial activity involves decision making under true uncertainty since, often, neither the outcome nor the possibilities are known. (Ruhnka & Young, 1991) However, forecasts of turnover and probabilities are means of handling the uncertainty for venture capitalists. A theoretical perspective of risk is therefore of essential value for the thesis, even if the decisions really are made under uncertainty.

3.5.2. Risk Assessment

The dominating explanation to how people assess risk is based upon expected utility. People evaluate risk by a quantitative process of choosing between different prospects by weighing the values of possible outcomes by their probability to occur. They then select the option with the highest expected utility. This method of describing decision making under risk has proved to be useful. However, there have been studies done, showing that there are anomalies in special situations. The *certainty effect* means that when an individual have the choice of a certain gain and a higher almost certain gain, the choice is often the certain gain even if the expected value of the almost certain option is higher. The individual becomes risk-averse and values the certainty higher than potential gain. Another anomaly is the *reflection effect* and in this case the individual becomes risk seeking. The effect means that if an individual is facing a loss he would choose an almost certain loss over a certain loss, even if an expected value calculation would indicate the certain loss as a better choice. This choice is made in order for the individual to have the chance of not losing at all. (Ruhnka & Young, 1991)

3.5.3. Risk Tolerance

According to Ruhnka & Young (1991) three factors determine the venture capitalists sensitivity to risk. They are:

- Minimum portfolio target rates of return the venture capitalist reasonably needs to achieve
- The potential gain and loss relationship in the current portfolio, to which new investments are added

- The venture capitalists general tolerance for risk

The existence of an ideal level of risk, depending upon the factors above, is the foundation of Ruhnka & Youngs (1991) two-step process in venture capitalists screening for prospects. The first step consists of identifying those prospects with acceptable probability and magnitude of potential loss. These probabilities and magnitudes are different for each venture capitalist dependent upon their ideal level of risk. The second step is to, among the prospects, find those with the highest expected gain should they succeed.

3.5.4. Risk Experience and Stage

A survey made in 1986 venture capitalists was asked to estimate the typical risk of loss of their investment in different stages. It was found that the estimated risk of loss is very high for seed and start-up stages but then steeply declines. The same pattern goes for the expected return in the various stages. (Ruhnka & Young, 1991)

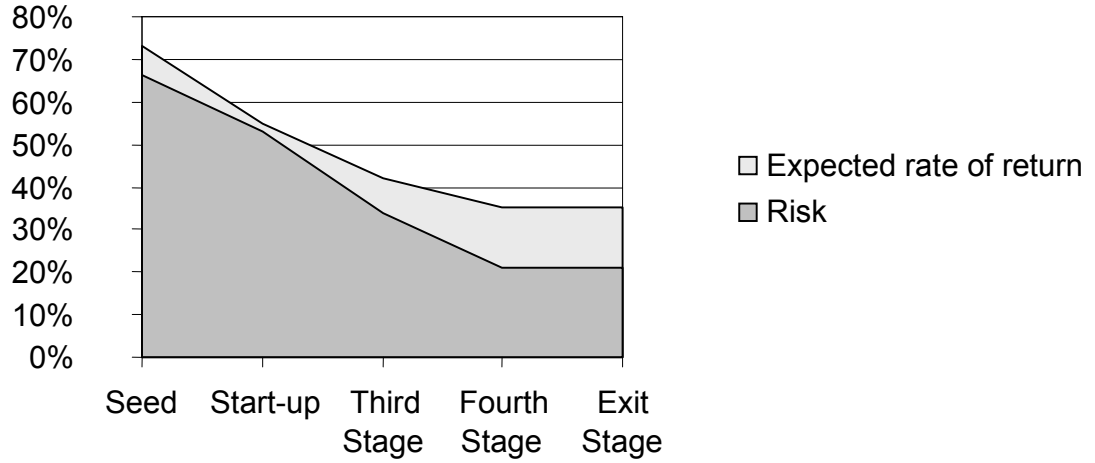

Figure 4: Risk and Expected Return. (Ruhnka & Young, 1991. p.123)

The shape of these curves can in part be explained by what is often referred to as the *liability of newness*. It concerns the idea that because of untested markets, management, channels of distribution, etc. new businesses are less viable. (Stinchcombe, 1965 in Fredriksen, 1997) This is part of the reason why venture capitalists have such an important role in new ventures. (Fredriksen, 1997) It is likely that investors with low levels of ideal risk will invest for the

most part in later stages. Investors with higher levels of ideal risk will invest more in earlier stages. In earlier stages there are higher returns to gain if the venture is a success. (Ruhnka & Young, 1991)

3.5.5. Identifying Risks

Ruhnka & Young (1991) divide risks into two kinds based on where they originate. There are internal and external risks facing companies. Internal risks are for example technical difficulties developing the product or technology, poor management, inability to attract finance, high capital burn rate etc. External risks are for example potential market to small, technological shifts, unanticipated competition, no exit opportunities for venture capitalist etc. The external risks are in many cases uncontrollable for the venture capitalist. Interestingly the decline in risk is almost exclusively due to reductions in internal risks. These reductions occur when ventures through time overcome technical problems, build management competencies etc.

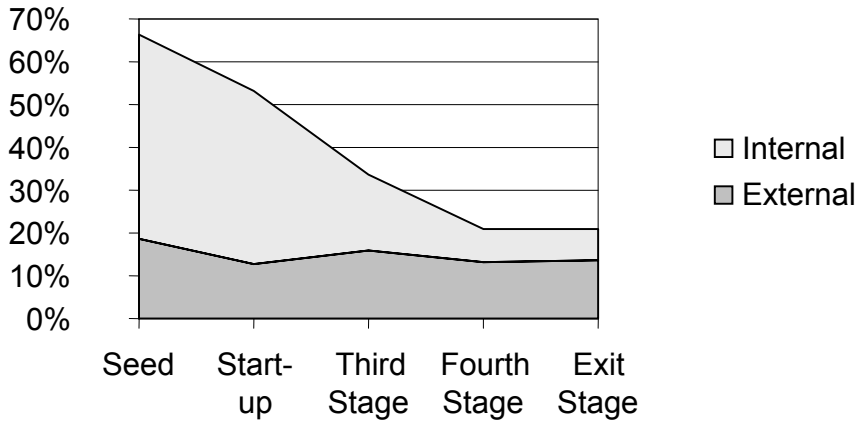

Figure 5: Risk Sources. (Ruhnka & Young, 1991. p.126)

Risk estimates for early stages include all the probable risks a venture will face, both internal and external. Therefore external risks are always included but do not predominate until the later stages. This is when the venture really gets exposed to the competitive market forces. Especially important for the venture capitalist in the exit stage is the liquidity risk of the venture. The final return on the investment is highly dependent upon a good exit climate.

Sapienza & Timmons (1989) suggest that there are two key determinants of risk to a venture. The risks depend on:

- The entrepreneurs experience with task environment, e.g. the market and technology
- The entrepreneurs experience with managing new ventures

Entrepreneurs with lack of experience with task environment or managing new ventures are likely to be the ones in most need of venture capitalist assistance. This is a somewhat unfortunate combination since venture capitalists value experience to a high degree when selecting ventures.

Sapienza & Timmons (1989) mean that when venture capitalists increase ownership their risks might be doubly increased. They face greater exposure to business risk since their stake rises. On top of that they face increased risk of opportunism since the return incentives of the entrepreneur are lower due to decrease in ownership.

3.5.6. Venture Capital Experiences

Statistics show that around one sixth of venture capital investments are complete losses. Close to half either break even or show moderate losses. The very best investments play an important role if the venture capitalists are to show positive returns. (Lerner, 2002) According to Ruhnka & Young (1991) the rule of thumb is that 30% of investments ultimately turn out to be winners. Not surprisingly venture capitalists only invest in companies with very high growth potential. (Amason & Sapienza, 1993) Venture capital investments are therefore focused into a few industries believed to have this great potential. Increased fundraising increases competition for transactions in these industries, rather than provides diversification to other industries.

3.6. Technology and Venture Capital

High-technology ventures often show a couple of patterns other ventures do not. For high technology ventures it often takes longer time for the development and commercialization of products to be finalized. Therefore it is important for the venture capitalists to be patient concerning the timing of returns. De Clerque & Sapienza (2000) also mentions a general trend towards rising costs of R&D, combined with shorter life cycles for new products. Burn rates of technology ventures are generally higher than for non-technology ventures. Expenditures in high-tech ventures are also highly intangible and knowledge based, therefore finding the value of the ventures assets is very difficult. Thorough investigation and monitoring is needed. These three factors are of course all negative in the eye of a potential investor in high-tech

ventures. However, high technology investments are still what venture capitalists are most interested in. Perhaps this is because they have developed expertise in handling these difficulties.

4. VENTURE CAPITALISTS AND SEED INVESTING

This chapter presents the empirical findings from venture capitalists. In the first section I describe the venture capital organizations. Following is a presentation of overall industry views and definitions of seed capital, after which the venture capitalists identify difficulties of seed investing. I then report the venture capitalist ideas about environmental factors affecting their activity. The chapter is concluded by venture capitalists investment strategies.

4.1. The Venture Capital Organization

4.1.1. Structure

There are two basic formations in which the venture capitalists set up their business. Knowing about these two structures is valuable to understand the context venture capitalists are in. The difference between the structures lies in whether or not the capital under management is on the balance sheet of the organizations or not. If capital is held inside the VC I call the structure a *holding structure*. If capital under management is outside the VC this is called *fund structure*. This is a venture capital fund, as described in 1.5.

Holding Structure:
This structure, Figure 6, is used often when the number of investors is few. The structure makes a difference for income streams of venture capital organization. With the holding structure the venture capitalist is using its funds raised for two purposes. Firstly investing in promising companies, but the funds also pay management costs. The income of the venture capitalist depends solely on the success of its investments.

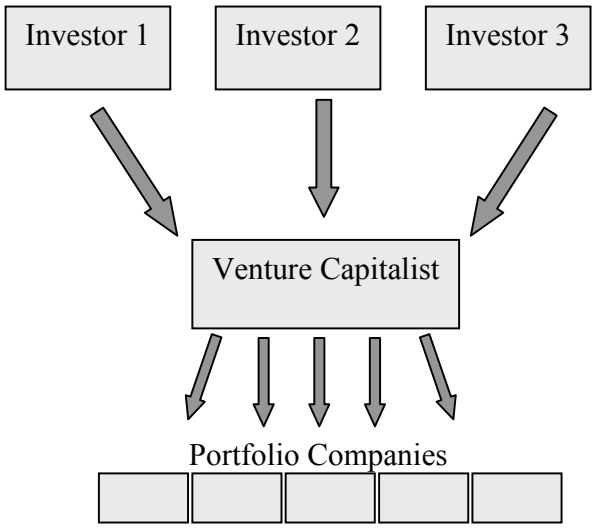

Figure 6: Holding Structure. (Own Illustration)

Fund Structure: In this structure (Figure 7) the funds raised is held in a fund. The fund usually only contain the funds and no personal. The venture capitalist is assigned to manage the fund. Managing the fund the venture capital organization receives compensation. Normally the seed stage venture capitalists acquire a management fee of around 3.5% of the fund volume.[6] The idea of the fee is that it should cover the costs of management.[7] The venture capitalists also receive an income based on the performance of the fund. This possible income stream is called carried interest.[8] Seemingly a normal percentage of the increase in fund value, that venture capitalists claim, is 20%.

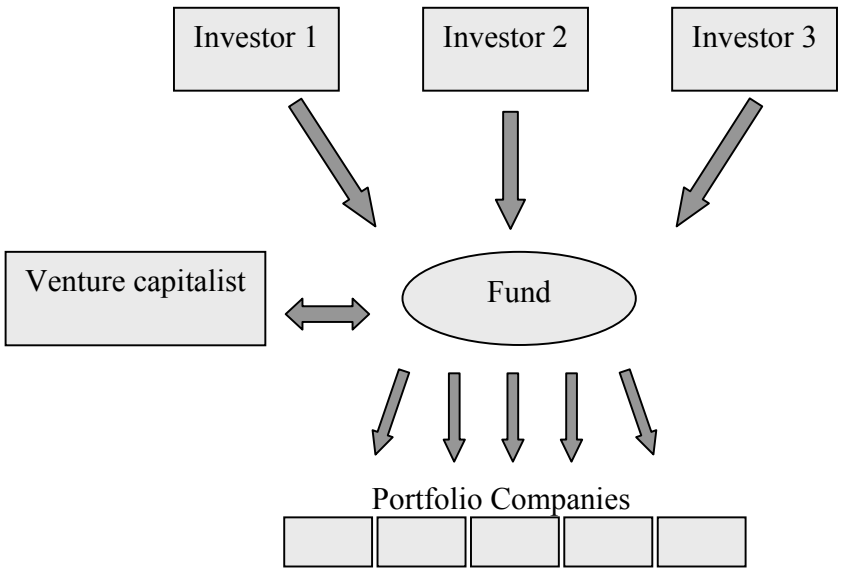

Figure 7: Fund Structure. (Own Illustration)

Choice of Structure: It seems to be more common for venture capitalists that have more investors, to choose the fund structure. Venture capitalists managing more money also seem to be keener on this structure. Reasons

[6] Management fee is the fee, typically a percentage of committed capital or net asset value that is paid by a venture capital fund to the general partners to cover salaries and expenses. (Gompers & Lerner, 1999, p.346)
[7] In my sample sometimes only parts of the management costs are covered by the management fee e.g. administration and screening for new ventures. At other times it also compensates for costs of the management of current portfolio companies.
[8] Carried interest is the share of profits that are allocated to the general partners of a venture capital partnership. (Gompers & Lerner, 1999, p.343)

mentioned to have the fund structure are tax- and compensation of management purposes. Venture capitalists managing less money, often in the earliest stages, are more often structured according to the holding structure. One reason to have this structure is that the fund structure has a predetermined life of 7-10 years. Venture capital organizations using the holding structure claim they can be more patient towards their portfolio companies. Next I will provide a set of technical data of the interviewed of venture capital organizations. Thereafter the management is discussed.

4.1.2. Technical Data

This section of technical data from the seed investing venture capitalists aims to provide a picture of the venture capital organizations and activity.

Basics: Fund size is the amounts of funds available for investing. I also provide information on number of investment managers.

- Fund size range: 5.5 to 33 million Euro
- Average fund size: 12 million Euro
- No. of investment managers: 1 to 6
- Average No. of investment managers: 3

Investments: I provide information on the number of investments in the portfolios of selected venture capital organizations. I thereafter provide a measure of the normal ratio between investments and investment managers. Total investments refer to the amounts venture capitalists can invest in one single venture. First investment size relates to typical amounts invested in the primary investment. As will be discussed in 4.5.5 venture capitalists invest in a varying number of rounds.

- No. of investments: 4-26
- Average No. of investments: 10
- Average No. of investment managers / investment: 3 to 4
- Total investment size range: 200.000 Euro to 3m Euro
- Average total investment size: 500.000 Euro
- First investment size range: 50.000 to 750.000 Euro
- Average first investment size: 200.000 Euro

Management costs: The management costs refer to the operational costs of running the fund per year. Management salaries are a considerable part of costs. The management cost range (%) relates the costs to the size of the fund.

- Management cost range: 330.000 to 1 million Euro
- Management cost range (%): 3 to 6 % of fund volume

Exemplification: I will provide some examples of a couple of funds size and cost relation. The first is a relatively large fund, thereafter a relatively small and then a normal sized fund.

(1) 33 million Euro Fund
- No. of investment managers: 6
- Management costs: 1 million Euro
- Management costs of fund volume: 3%

(2) 5.5 million Euro Fund
- No. of investments managers: 1
- Management costs: 330.000 Euro
- Management costs of fund volume: 6 %

(3) 11 million Euro Fund
- No. of investment managers: 3
- Management costs: 400.000 Euro
- Management costs of fund volume: 3,6%

4.1.3. Management

The experiences and expertise of the investment managers in the venture capital organizations are diverse. There are VCs with primarily financial background. Others are more specialized towards technological knowledge. Many venture capital organizations however try and get a mix of the two, ultimately adding some legal expertise. There is a wide acceptance that industry experience is more important than academic expertise. Experience in building organizations, understanding for entrepreneurial environment and working in boards of companies is considered important.

What do venture capitalists then see as their most important contribution? I have chosen to divide contribution into form of contribution and area of contribution.

With *form of contribution* I mean channels used to help manage the portfolio companies. Three different forms emerge. Firstly, all venture capitalists are working in the boards of their companies. They say this direct contribution is time demanding and there is a limit to how many companies one investment manager can effectively assist. Three to four companies per investment manager are generally what venture capitalists say is possible in the active investment period, see 4.5.5. Venture capitalists also recruit individuals who they think can provide competencies needed, to the young venture. Thirdly, using an extensive network venture capitalists claim they have access to special expertise when needed.

The *areas of contribution* that venture capitalists believe to be most important are to do with building the organization, strategic advice, and future fundraising. Building the organization refers to providing structure and responsibilities within the company. Strategic advice involves understanding the market for the product and directing the development thereafter. This is claimed important since within the company, the focus generally is on technology. By keeping close contact with later stage venture capitalists and other later stage investors, venture capitalists increase the companies' access to future fundraising. This is also achieved by setting up the objectives for the young ventures, so that they will fit into what later stage investors want.

4.2. Seed Stage Capital

4.2.1. Different Views

My focus in this thesis is to study the seed stage investing by venture capitalists. When talking to venture capitalists a scattered picture of what seed really means appear. Many VCs have their view but agree that this is not the only way to look at it. Other VCs do not consider the definition to be very important. The importance lay in what we do, not what we call it, are their opinion. In industry it seems acceptable to define stages according to many variables. Used variables are the valuation of the venture, the number of financing rounds occurred, lifetime of the venture, turnover of the venture and stage of technology development. Definitions also tend to change and over time new terms are invented.

4.2.2. Defining Seed Capital

Taking into account all different views, the most common way to try to define seed capital is by using the stage of technology development. Many mention that this stage is about achieving a proof-of-concept. A descriptive definition that at the same time positions many of the venture capitalists view of seed is that:

> *A formal business plan exists; the aim at this stage is (1) to obtain proof of concept at the technological level which at the same time serves as a commercial proof-of-concept, (2) to develop the company to be to the tune of 1.5 to 3 million Euro pre-money valuations.*[9]
>
> (Andersson, 2003-04-13)

Generally the venture in the seed stage has no turnover. If there is some turnover it is in the form of early test sales. Stage of technology development in these stages are highly correlated to what value the venture can claim (4.3.4). Within the seed stage, a commercial acceptance has not been demonstrated. The goal of the stage is a technologically working prototype and some form of commercial acceptance. However, when this is fulfilled it marks the end of the seed stage. This also means that the investments cannot be too high, in order for the entrepreneur to remain the majority owner. The group with this view of seed capital is therefore typically investing between 50.000 and 200.000 Euro in a seed round.

Other venture capitalists have a slightly different view of seed capital. They mean that sale can have occurred. They invest when the technology has had some acceptance from the market; technological development is no longer the essence of the business. These venture capitalists look upon their role predominately as helping for the venture to reach the market. Since technological development has come further the typical first investments are higher. A first investment for these later stages of development can be

[9] Pre-money valuation is the product of price paid per share in a financing round and the shares outstanding before the financing round. (Gompers & Lerner, 1999, p.347)

between 200.000 and 750.000 Euro. The figures vary depending on whether investments are syndicated or not. [10] (4.5.2)

The other way to position the seed stage is to look at when the seed stage can be said to start. In industry terminology a stage before seed exists. This stage is called the *pre-seed* stage.

> *Persons with ideas come to us for funding, not companies.*
>
> (Hansson, 2003-03-25)

In the pre-seed stage you start from the very beginning with starting up the company, working out a business plan and develop management. Some mean that this stage can be overcome largely without additional funding. Others mean additional capital of up to 100.000 Euro is needed in the pre-seed stage.

4.3. Seed Investment Difficulties

When discussing the difficulties of seed investment, a range of difficulties arise. They are to do with Risk, Lack of Information, Recruiting, Investment/Cost Ratio, Goal Divergences, and Bargaining Power

4.3.1. Risk

Almost all venture capitalists see the high risks of investing in the seed stage as the biggest problem and challenge to overcome. Some even claim that the risks themselves are so high that investing in the seed stage over time cannot be profitable. There are simply so many potential problems to overcome for the venture before a trade sale or IPO is realistic.

> *It is important to, as early as possible, try and foresee where problems can arise and find out if they can be solved.*
>
> (Andersson, 2003-03-25)

If foreseen problems are not believed solvable, as mentioned before, venture capitalists see abandoning bad projects early as important. In the optimal case, these projects would not be funded in the first place. One venture capitalist

[10] Not all venture capitalists I have interviewed say they do seed investments. Only that they are investing in early stage. Therefore, this venture capitalist's view of seed capital has no relation to the amount of its earliest investments.

says that the only way to have a profitable commercial seed fund is to invest with extreme selectivity. Engaging in perhaps one investment per year when the circumstances are extraordinarily good is a way to increase the probability of profitability. However identifying which companies that would fit into this strategy would be problematic and largely has to do with lack of information.

4.3.2. Lack of Information

Because of the early stage of entrepreneurial activity the venture capitalists do not have access to much information. In later stages the venture has got a history and there are financial reports etc. In the seed stage the decision to invest is based upon a "gut-feeling". A more structured method is, if possible, naturally preferred by venture capitalists. Many VCs as an important tool mention a proper due diligence investigation when selecting ventures.[11] On the other hand, many say that that you cannot demand as much information as you might like to, from seed stage ventures.

Often development of technologies and companies tend to take longer and cost more than the initial expectation. This is nothing strange since the initially so little information is available. If a project either takes longer or costs more than expected, the return of the seed investments often suffer, because when the share price in the next round is negotiated, an increase in value from the seed round cannot be supported. The return of the seed stage itself is therefore low or maybe non-existent.

4.3.3. Recruiting

The risky nature of the seed stage companies is also a problem for venture capitalists wanting to recruit competent personal to ventures. Coming to a risky venture without much money is not exactly the desire of every competent manager. However this is mentioned problematic not by all venture capitalists and one solution suggested is to hire specialized part time staff.

4.3.4. Investment/Cost Ratio

Many VCs mention the problem of high costs of management in comparison to investment. The seed stage ventures need a lot of management help in comparison to their need for money.

[11] Due diligence is the review of a business plan and assessment of management team prior to a venture capital investment. (Gompers & Lerner, 1999, p.344)

What you invest in seed stage companies is 95% time and 5% capital.

(Segerborg, 2003-03-26)

The seed stage ventures can not defend a very high valuation. Venture capitalists also want the entrepreneur to keep his motivation and cannot claim at too much ownership. The investments in seed are therefore always moderate to their amount. For venture capitalists in this stage this means they have high costs of management per invested amount of capital. This is a clear disadvantage to later stage rounds where investments are higher and costs of management lower per invested capital amount.

4.3.5. Goal Incongruence

Some VCs mention a difference in the mind-set of entrepreneurs compared to their view. Sometimes there is a clash between the entrepreneur's wishes to fulfill ambitions in science and the commercial orientation of the venture capitalist. VCs generally have a certain way of going about their business. If the entrepreneur is not ready for this commercially oriented leading actor to enter the organization, the involvement can do more bad than good.

VC-management at its worst may seem like screaming at a flower to grow.

(Svärdström, 2003-03-28)

4.3.6. Bargaining Power

The venture capitalists investing in seed generally have a limited ability to participate in later rounds of financing. They are focused on investing in the earliest stages. This means that when additional funding is needed, new investors eventually have to provide all the funding. The venture capitalist ends up in a situation where his credibility can be questioned. If the VC, who knows more about the company than most, is not investing, why should others do? Some interviewed venture capitalists believe that this is a disadvantage in terms of the valuation and therefore the profitability of seed investments. Other factors which are also highly important for the profitability of seed investments are environmental forces, and these will be discussed in the following section.

4.4. Seed Investment Environment

The ability for successful seed funding is according to the venture capitalists dependent upon a number of outside factors. Mentioned factors include society view of entrepreneurial activity, seed funding history, general market conditions, and access to soft financing.

4.4.1. Society View of Entrepreneurial Activity

It is important that there is an acceptance from the society towards failing start-up a business. It is often considered something bad having started and been forced to liquidate. This can lead to fewer entrepreneurs going for a commercialization of their inventions. In the long run it inhibits the deal flow for seed investors.

It is also considered very important that universities, in the areas that venture capitalists want to invest, are driven in the direction towards commercialization. The importance lays not so much in the numbers of researchers as it does in their minds. Naturally quality research is also a requirement for success in seed stage investing.

4.4.2. History of Venture Capital

The high-tech boom and collapse have changed the minds of investors in early stages. Firstly there where a quite large number of investments that showed exceptional returns. They have set the target for investments, which have lead to extreme requirements towards seed stage companies. After the collapse many investors learned a lesson and are now choosing to invest in later stages in order to limit the risks. This has lead to difficulties in exiting investments and finding follow-on funding for seed stage VCs.

A disbelief in technology has developed after the high-tech boom. Companies are distant to buying new technology from young ventures. Since the ventures do not sell their products, new investors are hard to attract. If no new funding is provided, the young companies are considered even more risky. Therefore even more resistance towards buying their products develops.

4.4.3. General Market Conditions

Some say that seed investing can be a profitable business since investing this early mean you acquire the option to invest in the more profitable later stages. However, if true, this can only be true for the cases when there is some competition among investors to invest in the stages after seed. This is not the

case when the market conditions are poor. Valuations are generally low and no one either sells or buys.

> *Today you can calmly wait and invest in later more profitable rounds with lower risks.*
>
> (Olofsson, 2003-03-25)

In these poor conditions many investors prefer later stage investments. Valuations have dropped for innovative companies who have already come far in their development. Venture capitalists see logic in investing in these stages instead. They mean that why should investors pay almost as much for something so much more risky and undeveloped. It is therefore hard for the venture capitalists investing in seed capital to find follow-on investors. It is also hard for the venture capitalists to find opportunity to exit their positions at acceptable levels of valuation. One venture capitalist says that if the market does not improve, they have an impossible task in succeeding to reach required rates of return in their current fund.

The movement towards later stage investments is considered a problem in the long run. Someone has to do the work in the early stages in order if there are to be any later stage ventures. However, not many venture capitalists choose to do much about it. There is a broad consensus that so called soft money is needed in the earliest stages.

4.4.4. Access to Soft Funding

Soft money is government-funded investments in very early stage ventures. Usually when the venture capitalist make a seed investment, based on the amount invested, the venture capitalist can get an additional amount invested in form of a government-funded loan to the venture. This is called soft funding and in cases when ventures are successful interest on the loan and the principal is repaid. If the venture fails and is liquidated, the government claims no retribution.

Because of all the difficulties in seed investing (4.3) most venture capitalists claim this kind of money is a necessity. Soft funding is provided to a varying degree to ventures in which interviewed venture capitalists invest. One venture capitalist sees the danger of too much soft money, since it can inhibit the possibilities to get further funding later on. Too much financial aid is

believed harm the focus and efficiency in the young ventures. However, the consensus is that soft money is needed and it is of extra importance in times of poor market conditions with low valuations.

4.5. Seed Investment Strategies

In this chapter I will describe the relationship between the seed investing venture capitalists and entrepreneurs.

4.5.1. Ownership

Two features are to be described. Firstly the form of ownership and secondly the ownership share claimed by venture capitalists.

Ownership form: By definition, venture capital, mean the investment somehow leads to equity or equity linked position. There are however many different solutions for contracts that do this. Used alternatives are e.g. preferred stock, common stock, convertible debt, and options.[12] There are different opinions as to whether using all these different solutions or not is positive for the venture capitalist and its' ventures. Some say that a mix is good and that different situations call for special solutions. It seems to be a common strategy to use convertible debt when the venture needs a little more money in order to be ready for the next financing round. The reason for this is that the valuation of the venture is postponed until the later round. These small extra "rounds" are often not planned and if a valuation were to take place it could be low. So, postponement of the valuation saves the venture capitalist from sending warning signals to future investors.

However, almost all venture capitalists say that the valuation and set up of ownership is what they fight most often about with their portfolio companies. Some mean that the more complicated the structure of this, the more problematic it becomes.

> *Rounds that create stock with different values are a common source of conflict. My experience tells me that as soon as you put the owners in different boats, you are laying the foundation for problems.*
>
> (Olofsson, 2003-03-26)

[12] Convertible debt is a security that can be converted to another security (often common stock). The convertible shares often have special rights that the common stock does not have. (Gompers & Lerner, 1999, p. 344)

This problem occurs for example with anti-dilution clauses. When the value of the venture is decreased in between rounds the venture capitalist protects itself using anti-diluting clauses. The price of prior rounds the venture capitalist participated in is, if higher, adjusted downwards until it meets the current valuation. This means that the venture capitalist is not diluted because of letting other investors investing to the lower value. However the dilution of the entrepreneur is severe.[13] Anti-dilution or not can often be the result of a negotiation between the entrepreneur and the venture capitalist. The investment climate largely determines who has the stronger bargaining power in this decision.

Ownership share: The most important factor to consider when deciding what stake to claim entering a venture is of course the potential returns for the venture capitalist. However, the relationship between payoff and share is not simple. A high stake does not automatically lead to high potential returns. Firstly, if the valuation of the company is fair, a high stake should lead to a larger investment. Secondly, it is important to consider the incentive of the entrepreneur. He will get diluted trough all the stages and in order to keep him motivated he needs a fair share of the business to begin with. None of the venture capitalists I have interviewed start off by claiming over 50% of the venture. A normal share is around 25% for the seed investment. Generally the venture capitalists are then diluted trough time. Some manage to keep their share for a round or two (5.4.4). The share claimed by the venture capitalist also depends upon a third factor, syndication. Syndication means including another venture capitalist in the investment. When syndicating deals, venture capitalists normally claim a lower share of the ownership to begin with.

4.5.2. Syndication

An important benefit using syndication mentioned by venture capitalists is that they can defend their share of ownership longer. This is due to two factors. Firstly when investing using syndication, each venture capitalist claim a lower share of the ownership. Therefore they have a lower share to defend. Secondly, since each venture capitalist does claim a lower share they do not invest as much in the seed round. Because of this they have more money left over for follow-on funding. More money and lower share to protect helps the venture capitalist to keep its ownership share longer. This is considered extra

[13] The venture capitalist can still be diluted, only not because of the decrease in value.

important in times when it is hard to find follow-on investors and exit investments. Syndication can also help by adding competence to the venture. Every venture capitalist probably has their area of expertise, therefore combining two or more increases the knowledge base available for the entrepreneur. The venture capitalists can also share the management assistance of portfolio companies between themselves.

4.5.3. Return on Investment

The seed investments take place in extremely young ventures when very little is known about them. Finding the accurate valuation is extremely difficult, if not impossible. Deciding required return on investments when selecting ventures is therefore hazardous. Some venture capitalists say it is impossible and unnecessary. The important thing is if there is the feeling that the company can become a real success. Though all venture capitalists mention the valuation problem, some venture capitalists are more comfortable about talking in terms of returns on investment.

Normally the reasoning (Figure 8) starts with what investors' claim in return for their investment in the venture capitalist business. There is generally demand of around 15-20% per year on the invested funds. The average cost of management is 3.6% (4.1.2) of total capital. Not all funds are invested by the venture capitalist. Some, normally around 50%, are kept liquid as a buffer for future investments. Liquid assets yield a moderate return of about 5% at the moment. Since half of the fund size yield these low returns, and taking into account management costs, the required return from the portfolio of companies is around 35%. Accounting for an unknown number of failed investments the required return on individual companies ends up high. Some venture capitalists say considerably higher than the portfolio return. One venture capitalist says that in ten years the value investment should have the potential of having increased ten times. Another venture capitalist mentions 100% ROI yearly. The ROI is of course related to the level of risk.

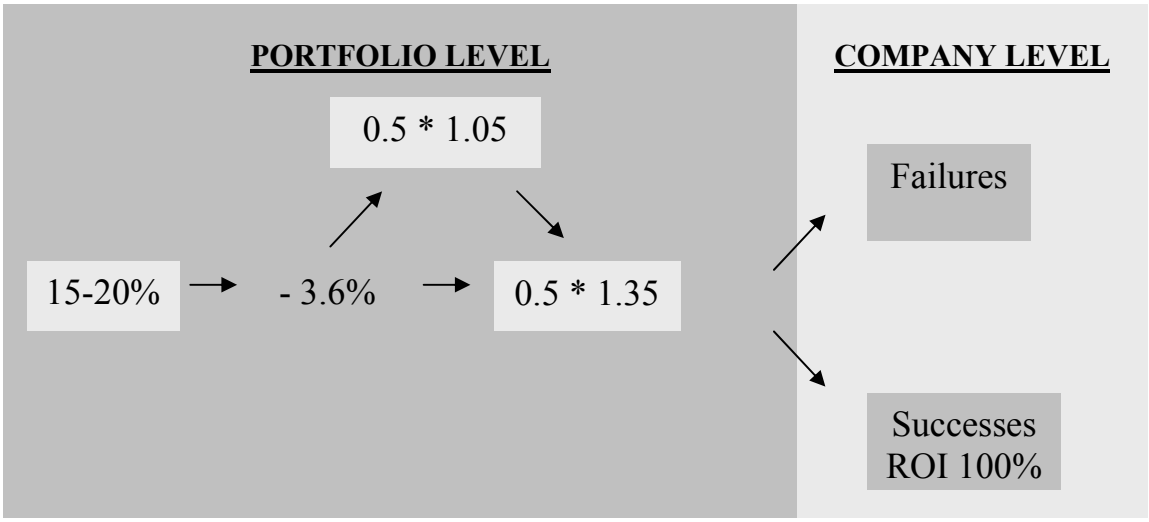

Figure 8: Return on Investment. (Own Illustration)

4.5.4. Staging of Capital

Venture capitalists try to secure funds they provide by staging their investments. This means that within rounds they do not provide the entire amount up front. Instead they commit a certain amount first for a set objective to be achieved. Often these objectives are called milestones. The idea is that only when the milestone specifications are fulfilled, more funds are committed.

All venture capitalist share the view that a balance between performance and capital is needed. However not all venture capitalists use it as extensively. The strict users of staging can use as much as four different stages of committing capital within a financing round.[14] In order to use staging it is important to set up milestones that can be judged to be met or not. Examples of such milestones are working prototype or the first paying customer. Setting up milestones is not always easy, especially in early stages with all the uncertainty. Discussions whether or not the milestone measures are met are common.

[14] The extent of staging within a round is related to the funds provided in that round. Staging can also be said to work by providing many small rounds and set objectives for each round.

Among the venture capitalists many say that a key to successful seed fund management is to be able to abandon the bad projects early. To be able to do this effective staging of capital is needed.

> *Abandoning a seed investment is truly difficult since there is always something good that is "just about to happen"*
>
> (Olofsson, 2003-03-26)

However abandoning the project and the entrepreneurs is not an easy task. Sometimes it is hard to determine whether set milestones are achieved. Another issue is that there is always tomorrow, and in the entrepreneur's positive state of mind the breakthrough will probably come soon. The question is, is he/she right or wrong?

4.5.5. Investment Horizon

The venture capitalists are the lead investor, or one of the lead investors in syndication, for a varying number of rounds. The smaller venture capital organizations can be leading investors only for the initial investment and larger ones maybe for two or three rounds. After that, venture capitalists active in later stages or other investors take over the role as active investors. The seed stage venture capitalists, which are the ones I am interested in, now take on a passive role supervising their investment. They generally no longer take place in boards of the ventures or provide assistance whenever it is needed. In order to have other investors interested in investing as lead investors the seed stage VCs work in two ways. Firstly they work hard to build the ventures to get a good reputation among later stage investors. Secondly the VCs keep close contact with the later stage investors and invite them for presentations of current portfolio companies etc. Communication with the later stage investors is considered a very important task by the seed investing venture capitalists.

Normally the venture capitalists invest with the plan to exit the investment within five to eight years, through IPO or a trade sale. Some of the smaller VCs do occasionally sell part of their investments earlier but this for the purposes of liquidity rather than returns. The market largely affects the decision to exit. In a climate with low valuations, companies are held in the portfolio until acceptable levels of valuation reappear. However to hold on to old investments in the portfolio can hurt the venture capitalist relation to investors.

It can be good to do an exit, just to show investors that you can.

(Jacobsson, 2003-03-25)

4.5.6. Investment Focus

My study is concentrated towards venture capitalists primarily active in the seed stage. Therefore, automatically, the studied venture capitalists are largely focused on early stage investments. Other choices venture capitalists make is specializing in industry or not and deciding for region of investing. All the venture capitalists invest solely in ventures with technical orientation. This does not however mean that all of specialize in industry.

Most venture capitalists say that specializing in an industry is preferred to diversifying across industries. Lower risk from diversifying is generally not considered as important as the value of specializing to really understand the technology. However, only five of the interviewed venture capitalists are specialized investors. The reason for this is to do with the deal flow. Geographical closeness is generally considered to be even more important than specializing. In order to get a sufficient flow of possible investments, both are often not possible.

The earlier the stage, the greater the need for spontaneous meetings.

(Homann, 2003-03-31)

Companies in seed stages are considered to need a lot of advice. Often it is not easy to plan when advice is needed. Geographical closeness facilitates that advice can be given when it is most needed. Other reasons mentioned for the importance of geographical closeness is building a relation and information sharing. By repeated face-to-face contact you develop a deeper understanding of the entrepreneurs. An advantage mentioned is that if you get to know the entrepreneurs personally you see how they are doing. If something is bothering the entrepreneur you talk to him about it. It is also believed to be harder for the entrepreneur to withhold information, when the geographical distance is low and meetings frequently occur. However, in general the VCs do not think that portfolio companies withhold information purposely. They trust the portfolio companies and say that doing so is important.

Some venture capitalists mention prior cases investing in companies based far away, and say it was problematic. A majority of the VCs only invest within a close region. Many of them can for that reason not specialize in industry as well. Some mean that this is not so much of a problem, because the focus within the company is on technology. The issues most important for the venture capitalists to deal with lay not in the technology itself. High-tech industries, apart from biotechnology, are also by some venture capitalists considered to be quite alike. However, VCs that do specialize see great value in doing so. Benefits mentioned are synergies between companies, better ability to pick promising companies, and better ability to provide good advice. Their view is that specializing indeed is more important than geographical closeness, since clever money is a necessity.

> *Evaluation of very early stage investment opportunities in biotech requires thorough understanding of science, IPR issues, industry specific business models and market dynamics. Otherwise, the best opportunities may be missed as the level of uncertainty is very high as a decision will necessarily be based upon incomplete information.*[15]
>
> (Andersson, 2003-04-13)

The VCs specializing in industry generally invest countrywide or even in neighboring countries. Only one venture capitalist specializes in industry and invests in only the local region.

[15] IPR = Intellectual Property Rights

5. ANALYSIS

The analysis is structured in accordance to the order of the research questions. The first section includes my results to the first question concerning difficulties in seed investing. In the second section environmental factors are identified and discussed. In the last section I analyze venture capitalists activity, specifically the ability to handle seed stage investing.

5.1. Seed Investment Difficulties

Venture capitalists identified difficulties in six areas when investing in the seed stage; they were risk, lack of information, recruiting, investment/cost-ratio, goal divergences and bargaining power.

I consider risk, lack of information and recruiting to be closely tied together. Lack of information is a source of risk, while the recruiting problems are due to risks. Competent people are considered hard to attract to ventures with an uncertain future. The three are therefore all *risk* related difficulties. The investment/cost ratio is based on the relation between investment size and costs and I call this problem *investment inefficiency*. *Bargaining power* and *goal divergences* are also considered to be separate dimensions of difficulties.

5.1.1. Risk

Venture capitalists have to base their investment decisions on a "gut-feeling" rather then a proper due diligence investigation. Because investment decisions are made on vague information about the venture and its future, unexpected news are bound to come. De Clerque & Sapienza (2000) mention the intangibility of technology ventures as problematic for valuation. They mean that in order to have a proper valuation done, thorough investigation and monitoring of ventures are needed. Venture capitalists see this kind of investigation as impossible in the seed stage. The valuation on which the first investment is made becomes slightly ad-hoc based. The problems venture capitalists see in this is that seed stage investment returns often are adversely affected by new information, such as longer development processes and higher costs then expected. The ability to make an informed investment decision could be negatively affected by the information asymmetries that Murray (1994) mentions. Amason and Sapienza (1993) found less openness between early stage technology ventures then was the case for later stage technology ventures. The entrepreneur might initially see threats to their idea

that venture capitalists do not. However if sharing the information could inhibit funding, he/she probably will not share that information. The more information the entrepreneurs keep to themselves, the less informed investment decisions can be made by VCs.

These are problems to do with lack of information leading to risks for venture capitalists. There are also risks built in to the nature of seed stage firms. The definition of seed capital is used by EVCA is:

> *Financing to assess and develop an initial concept before a business has reached the start-up phase. Start-up financing is provided for product development and initial marketing. Companies may be in the process being set up or may have been in business for a short time, but have not sold their product commercially.*
>
> (EVCA, 2002, p. 304)

The dominant industry view is captured by the definition.

> *A formal business plan exists; the aim at this stage is (1) to obtain proof of concept at the technological level which at the same time serves as a commercial proof-of-concept, (2) to develop the company to be to the tune of 1.5 to 3 million Euro pre-money valuations.*
>
> (Andersson, 2003-04-13)

EVCA's definition does not specify seed capital itself but positions seed before the start up-phase. The industry view is that the core of the seed stage is to develop technology with the aim of functioning technology and some acceptance from the marketplace. These definitions both show that seed capital is funding for very early phases. Within the seed stage, technology is developed without knowing whether a product can be produced and whether there is a market for it. Later, when a proof-of-concept is achieved, the venture is no longer a seed stage venture. Ruhnka & Young (1991) define risks as being internal or external. Investing in these stages the venture capitalists take on both to a large extent. Venture capitalists mention the reality that, the earlier you invest the more problems is to be overcome within the venture, before it is mature enough for a trade sale or an IPO.

Sapienza & Timmons (1989) claim that risks in venture capital investing is dependent largely on managements experience with managing a venture and experience in task environment. To me, it seems realistic to assume that seed stage venture overall have less experienced management. Due to having been in business for a short period management experience have yet to be developed for many entrepreneurs. The nature of seed stage ventures as innovative also inhibit the possibilities fully grasp the task environment. Liability of newness is a term referring to higher risks in earlier stages. Because of untested markets, management, channels of distribution etc. early stage businesses are less viable (Stinchcombe, 1965 in Fredriksen, 1997). In Figure 4 the expected risks of loss in various stages are shown. The risks of loss are in the seed stage estimated as high as 67%. (Ruhnka & Young, 1991) It is understandable that some venture capitalists claim seed stage investing simply is too risky to be profitable on a commercial basis. The high risks play an important role in explaining the current lack of seed funding.

5.1.2. Investment Inefficiency

Venture capitalists mention a disadvantage to later stage VCs in the relation between management costs and investment sizes. There are two basic reasons to why seed investments have an unfortunate situation in this respect. They are that assistance is needed to a higher degree in earlier stages and that that seed stage investments are moderate to their amount. Venture capitalists are in the active investment period members in boards of ventures and this work is very time consuming. Maximum three to four ventures per investment managers is considered possible, if assistance is to be of good value. The salaries for investment managers are the dominant source of costs for venture capitalists. Investments are lower to their amount, since ventures cannot defend a high valuation and do not need as much capital as in later stages. Venture capitalists mention that the importance of keeping the entrepreneur motivated decreases the amount they can invest. Since entrepreneurs are diluted over time venture capitalists prefer not to own more than around 25% of the venture after the seed round. If you want to own no more than 25% you do not invest more than 25% of the ventures value.

Several studies have shown that in the earliest stages the ventures need the most help (Amason & Sapienza 1993, Sapienza & Timmons 1989, Sapienza & Gupta 1994). Overcoming the liabilities of newness is helped by utilizing the experience of venture capitalists. Figure 5 also give rise to support for the view that assistance can contribute to a large extent. The figure shows the

distribution of internal and external risks in the earliest stages. Internal, and controllable, risk predominates in the seed stage. The internal risks are overcome when ventures through time overcome technical problems and build competencies. (Ruhnka & Young, 1991) Venture capital intervention can help solve problems and build competencies. However as, Fredriksen & Klofsten (2001) say, it is important to consider the tradeoff between costs and benefits of assistance.

Venture capitalists mention that later stage investors invest higher amounts and also do not intervene as much. This gives more efficient investments since a low proportion of funds pay for management. In my sample the ratio between yearly management costs per fund volume ranges from 3% to 6%. The average yearly costs of management are 3.6%. With an investment horizon of 10 years 36% of initial funds vanish in form of costs. This illustrates that the venture capitalists task to fulfill the expected yearly return becomes more challenging as their costs of management increases.

The fund with 3% costs per year is the largest fund in the sample and probably has the ability to keep investing in several rounds after the initial investment. The fund with the highest ratio are the smallest fund and do not invest more after the initial investment. The significant difference of 200.000 to 3m Euro as the maximum amount that can be invested in any one venture, within my sample, is interesting in this respect (4.1.2). In order to have the same investment/cost ratio the venture capitalist investing 3m Euro need to spend 15 times as much on management of that venture.[16] I believe this very unlikely to be true, since part of the amount is invested in relatively later stages with less need of assistance in relation to capital.

I believe my small sample of venture capitalists can serve as an example of the effects that are even more evident between seed stage venture capitalists and venture capitalists investing solely in later stages. To conclude this discussion the high costs in relation to funds invested is a disadvantage for the efficiency of investment. The structure of the venture capital organization plays role in how the costs for management are paid for, as seen in 4.1.1, however the difference is purely esthetical and do not effect the inefficiency. Either the costs are paid for in form of a separate management fee or withdrawn from the fund amount; it is still as costly for investors.

[16] 3.000.000/200.000 = 15

5.1.3. Goal Divergences

Venture capitalists mean that in the seed stages of venture development, entrepreneurs are sometimes not ready for venture capitalist involvement. The commercial orientation and strict guidelines from venture capitalists can for some entrepreneurs be a harmful rather than helpful. Amason & Sapienza (1993) mean entrepreneurs are motivated primarily to develop their technology. Therefore financial goals are often considered less urgent to fulfill.

This situation is something I believe that seed stage venture capitalists are likely deal with more than later stage VCs. Entrepreneurs interested solely in the development of technology have probably fled the venture capitalist scene before reaching later stages. And if they have not, venture capitalists have probably abandoned them.

5.1.4. Bargaining Power

The seed stage investing venture capitalists are generally focused on investing in the earliest stages. Their funds are limited as they are investing in stages where investments are relatively small to their amounts. The statistics can be seen in 4.1.2. This is so, since, as said before, amounts of capital needed in seed stage ventures are low, as are valuations. However in later stages the capital need of ventures increases. Additional sources of capital are needed and later stage venture capitalists are approached. This is when the seed stage venture capitalists experience the difficulties concerning bargaining power. They mean that since they do not invest, and the ventures are in need of capital, they have a weak position in negotiating deals. Like Gompers & Lerner (1998b) mention, the seed stage venture capitalists possess information not publicly known. If they do not invest, later stage venture capitalists probably believe they know something others do not. Some venture capitalists in my sample have mentioned this as a problem that can harm valuation of the venture, when negotiating for additional capital. Return on seed stage investments is thereby harmed. This is in line with the reasoning of Brealey & Myers (2000).

5.2. Seed Investment Environment

The venture capitalists mention four different environmental factors influencing their activities. They are society view of entrepreneurial activity, seed funding history, market conditions, and access to soft financing.

The society view of entrepreneurial activity relates to opinions such as that it is important that there is an acceptance towards failing a business. University research is also included, specifically the importance of a positive mind-set towards commercialization. These are factors influencing the *deal flow* of venture capitalists. Seed funding history and market conditions are both affecting the venture capitalists in similar ways. They influence the *investment climate* and thereby the possibilities of finding syndication partners, follow-on financing and exit opportunities. *Soft financing* is governmental intervention to support entrepreneurial activity.

5.2.1. Deal Flow

The deal flow for venture capitalists dependents upon a number of factors, partly the entrepreneur based factors mentioned above. It is crucial that the entrepreneurs see commercialization as a path for them. Again, the research of Amason & Sapienza (1993) tells, entrepreneurs main focus is generally not financial success. The venture capitalists also mention the presence of quality research as a necessity. However, the demands for research are varying.

The venture capitalists are spread out in different regions in Sweden, Denmark and Germany. As mentioned earlier some of the VCs invest locally and some invest countrywide or even across countries. If you are willing to invest broad geographically the presence of quality research should not be a problem. However, these venture capitalists might be able to set higher demands on the technology in order to invest. As mentioned before these VCs specialize in industry. Specializing in industry is by venture capitalists considered positive, however the local deal flow most times do not allow for it. The deal flow situation of venture capitalist will be of crucial importance when investigating the venture capitalist activity in seed stage investing, section 5.3.

5.2.2. Investment Climate

Venture capitalists mean that the high-tech boom and its collapse are still playing roles in venture capital activity. Extreme returns before the collapse have set high demands on returns in minds of investors. Then, the collapse of stock markets created significant losses for investors. Investors burnt by their experiences are fleeing the earliest stages in order to minimize risks. Ruhnka & Young (1991) would define this as investors being risk averse. Their ideal level of risk has after their experiences decreased. Ruhnka & Young (1991) mean that investors use a two step process when investing. First they identify which investments have a risk level matching their preferences. After that they

identify the ventures within this group that have the highest potential. Since the ideal level of risk for many investors have decreased, investing in the earliest stages are no longer even an option for these investors, no matter the potential. This is in line with what is called the *portfolio failure avoidance strategy*, which mean that investors invest later to avoid losses. Venture capitalists express a clear view that many investors, such as venture capitalists, are fleeing towards later stages. They identify that the risk reward situation in later stages currently is in favor of later stage investing. The potential positive effect of investing early, in order to get the chance of investing later too, does not currently hold. There is no competition for deals in stages after seed.

Because of the current market conditions finding co-investors and exit opportunities are extremely difficult. The venture capitalists want to find follow-on investors to take over as leading investors when their active investment period normally ends. When market is slow this external difficulty of finding investors influences the venture capitalists activity. According to Ruhnka & Young (1991) external risks predominate in later stages (Figure 5). Internal risks are eliminated through development while external risks stay the same. However, to me it seems like the seed venture capitalists highlight the external risks at an early stage. I believe this have to do with a slightly different focus. Ruhnka & Young (1991) look at the development of a venture from start to a natural exit like an IPO. This is slightly different to seed specialized venture capitalists which are dependent upon other investors to invest before an IPO is possible. External risks therefore come in to play earlier for the specialized seed venture capitalists. The investment climate can therefore be connected to even higher risks for seed stage venture capitalists.

5.2.3. Soft Financing

Soft financing is government funded aid to entrepreneurs. Since the loan to the venture does not have to be repaid if the venture fails, it can positively affect the venture capitalist ability to invest in risky ventures. Venture capitalists do not have to provide all the money for the development of ventures. If venture capitalists can invest less, and entrepreneurs still have enough money to develop their idea, this helps the VCs. Interviewed venture capitalist have a very positive picture of soft financing, which is not to hard to understand. Another part in the business of venture capital agree that soft funding is needed, namely the entrepreneurs.

The entrepreneurs say that the presence of soft funding is needed not so much for the financing, but more for the impact on management of entrepreneurial activity. The entrepreneurs mean that venture capitalists are to short-sighted focusing on quick returns rather than growth and innovation. In addition they lack willingness to take on a challenge and accept the risks. Entrepreneurs say that this makes long-term commitments impossible. The government loans are not about throwing money to ventures hoping for the best. Rather, the Swedish government organization Nutek, had a method of funding including management support in form of e.g. seminars. The long term development was prioritized over short-term returns. The Nutek program has been closed but entrepreneurs are crying to get it back. (Bengtson et al, 2003-04-24) The strong and active support for soft financing from the entrepreneurs' point of view is an interesting input to the debate on soft financing.

5.3. Venture Capitalists and Seed Investing

5.3.1. Venture Capitalists Role

There are a couple of explanations to why venture capitalists get involved in ventures, which has been discussed before. Increasing in popularity is value adding aspirations explaining involvement by VCs, see Fredriksen & Klofsten (2001). The reason for involvement should affect the activities venture capitalists take on. If the most important reason would be to deal with *opportunism*, then the focus should be on leveling the asymmetric information by monitoring, reporting etc. To reduce *business risk*, defined as uncertainty of receiving adequate returns due to the competitive environment, is another explanation for involvement. If this would be the main reason for involvement, intervention should be directed towards the environment and potential market of ventures. If the venture capitalist is involved primarily to *add value*, then the involvement of venture capitalists should be very much of an assisting nature.

My sample of venture capitalists is more concerned with assisting then monitoring ventures. They say that they trust in the entrepreneurs and have to do so in order to facilitate good working conditions. This is in line with Korsgaard & Sapienza (1996) who mean that trust in the venture capitalist-entrepreneur relation can give a competitive advantage. Some VCs specifically mention the importance of strategic advice to entrepreneurs, since entrepreneurs themselves don't focus on this aspect. Generally they are the

"later than seed stage" VCs, as described in 4.2.2. They express views that fit into reducing business risk as important.

All the venture capitalists work closely in the portfolio companies. VCs investing in no more than 3-4 companies per investment manager prove their active role. The large proportion seeing local investing as important in order to facilitate hands on assistance and advice when needed, also do indicate active participation. I see a majority of the seed stage investing venture capitalists as entities aiming to add value and find Fredriksen & Klofstens (2001) description of venture capitalists as consultancy working investors to be suitable.

Seed investing have its difficulty with risks etc. explained above, and having an active, value adding, role as a venture capitalist is naturally challenging. I will work through how venture capitalists try to overcome difficulties taking into account the deal flow and the investment climate. I divide the activity in pre- and post-investment activities.

5.3.2. Pre-Investment Activities

Before the deal is set venture capitalists *select* ventures to invest in. They decide whether to *syndicate* the investment or not and they *structure the incentives* of entrepreneurs.

Venture Selection

Venture capitalists carefully select ventures to invest in, generally only among technology oriented ventures. The ventures have to have a very high potential since investing in high risk requires high returns (Ruhnka & Young 1991, Sahlman 1994). Rhunka & Youngs survey presents required rates of return in excess of 70% (figure 5) while my interviews show required rates of return in the seed stage can be as high as 100% yearly. To expect these high returns is understandable, since the successful ventures need to pay off for many failed ventures, in accordance with Lerner (2002).

Using the selectivity to the extreme investing only when conditions are extraordinary, is one suggested solution to deal with the high failure rates of seed stage ventures (Figure 4). However, the strategy is not easy to practice. Firstly, venture capitalists agree that to a large extent the decisions to invest have to be based upon a "gut-feeling", due to lack of information. Extreme selectivity would result in choosing ventures that give VCs the very best "gut-

feeling". If they are the best ventures only the future can tell. Secondly, venture capital organizations need a number of investments to keep personal busy and capital under management invested. The venture capitalists seem to be structured in a matter to invest in a number of ventures per year, rather than more sparsely. Selection is however still of great importance. According to De Clerque & Sapienza (2000) specializing in industry helps in the selection process. This is also mentioned by interviewed venture capitalists that do specialize. One venture capitalist says that if you do not specialize, you will probably miss the best opportunities (see 4.5.6).

Syndication
According to Gompers and Lerner (1999) syndication helps in the selection process. They mean that since syndication is a joint investment at least two investors must have agreed on that investing is a good choice. Syndicating investments can be a way of dealing with the risks of investing since more information probably can be gathered by the more venture capitalists investing.

However true this is, the venture capitalist mentions other reasons for syndicating deals. Firstly, they mention the positive effect of adding competence which means that management can be shared among the VCs. This could possibly have positive effects on the relation between invested amount and costs of management. Seed investing could be more efficient than without syndication, since the costs of management is shared. The venture capitalists also mention that they normally invest less when they syndicate deals. This means that they can keep investing a little longer, which is considered positive by venture capitalists. They refer to the problem of bargaining power and risk of low valuations after the seed round. With more capital left over they are in a better position to on their own decide whether or not to invest later. They also mention the importance of being able to invest, when the willingness to invest among other investors are low. After the high-tech boom more investors are risk averse and invest late. A problem with syndication as the solution for this issue is that investors willing to syndicate deals are probably also fewer, when investors generally are restrictive to investing.

Structuring Incentives
Sahlman (1994) mean that setting up compensation levels is important to guarantee entrepreneur performance. The compensation of entrepreneurs can be high when the venture is doing well and low when it is not. This is one way

of dealing with possible the goal divergences in the venture capital-entrepreneur relation. However, again, entrepreneurs are often not so concerned with the commercial side of the venture, but more the technologic achievements (Amason & Sapienza, 1993). Therefore in many cases I do not see the financial incentive programs as efficient ways to handle the difficulty of goal divergences that are common in the seed stage ventures. Venture capitalists also mention that the valuation and compensation is what most conflicts with entrepreneurs are about. Bengtsson et al (2003-04-24) representing a group of Swedish young venture CEOs mean that in order to facilitate innovation in ventures, financial objectives sometimes have to be considered less important, especially in the short run. If long term commitments to technology development are not allowed, innovation and venture success in the long run will be inhibited.

According to De Clerque & Sapienza (2000) one of the four factors influencing value added by VCs is similarity in key objectives. I believe, in line with the reasoning of Bengtsson et al (2003-04-24), that in markets with risk-averse investors and short run focus, venture capitalists and entrepreneur objectives are likely to be dissimilar. This can possibly lead to venture capitalists failing in their value added intentions, since shared objectives are important.

5.3.3. Post-Investment Activities

Post-investment activities used by venture capitalists include the active *assistance* in ventures, *staged funding* of ventures and *communicating* with later stage investors.

Assistance

Sapienza & Timmons (1989) claim venture capitalists involvement may provide three positive effects. The positive effects are that they can help facilitate implementation of idea, buffer entrepreneurs in difficult times and help manage risks by hands on involvement. The two latter effects are to do with the entrepreneur being involved to handle risks. The work of Gupta & Sapienza (1992) says that venture capitalists increase involvement when risks are high in order to alter the reward-risk relation. Involvement has been found to be more frequent in early stages and technology oriented businesses. (Amason & Sapienza 1993, Sapienza & Timmons 1989, Sapienza & Gupta 1994)

The seed stage venture capitalists are investing in a risky stage and also in technology oriented ventures. In order to keep a close contact and be able to assist entrepreneurs when needed, many of the venture capitalists invest only in the local region. Their frequent communication and assistance is in accordance with theoretical views of how risks are dealt with. Frequency and openness in communication are also found to positively related to value added (De Clerque & Sapienza, 2000). Fredriksen & Klofsten (2001) mean greater involvement is not always cost effective, the benefits has to be balanced against the costs. In the case of seed stage investing, a very high frequency can probably be supported due to liabilities of newness and high risks mentioned above. However the degree of involvement is costly, and this is part of the reason for the inefficiency problem that seed venture capitalists experience. This difficulty of seed investing is probably not possible to overcome. Investing in later stage ventures demanding less assistance per capital invested is more cost efficient. The seed stage investors will have to try and compensate this with higher returns.

In order to succeed in providing the benefits of involvement venture capitalists are likely to specialize in industry to become specialists. Assistance, as well as the selection of ventures, is more effective if venture capitalists have developed specific knowledge in the area. (Gupta & Sapienza 1992, Clerque & Sapienza 2000) Gupta & Sapienza (1994) even claim that there is a fundamental limit as to the number of diverse ventures venture capitalist can effectively invest in. Venture capitalists in my study generally agree and see specialization as preferred, compared to diversification as an investment strategy. However, five venture capitalists are specializing in industry, and eight are not. The reason is that venture capitalists have to choose from investing within the local region or specializing. The deal flow of the local region is most times not good enough for specializing to be possible. In this case environmental factors inhibit, for all interviewed venture capitalists except for one, the ability for venture capitalists to choose the ideal strategy of investing locally and at the same time specialize. Since the closeness to ventures is considered more important in the seed stage than in later stages, this problem is also more applicable to the seed stage than later stages. Because specializing and local investing in the seed stage is a rare luxury, I conclude that the ability to deal with risks is hampered for most venture capitalists.

Staged Funding
Staged funding involves providing capital based on set milestones. When the venture is using the first capital provided, the venture capitalist gathers information about the venture. The decision whether to invest more or not is therefore based on more extensive information. (Sahlman, 1994) The seed stage VCs use this strategy extensively and see a balance between performance and capital as crucial. The venture capitalists consider the ability to quickly foresee which ventures that are likely to be losers and stop funding them early, as a key success factor in investing. To commit capital in small portions is one way to see to that as little money as possible is provided to likely losers. Ruhnka & Young (1991) describe this way of directing funding to prior "winners" as parlaying of funding. Staged funding is also seen as a way for VCs to direct the entrepreneurs' attention to critical objectives, which are measured by the milestone objectives.

Staged funding is meant to deal with the high risks of the seed stage. Since, according to Ruhnka & Young (1991), 67% of seed stage companies are expected to fail, it is rational for the venture capitalist to try and exclude as many of these as possible. Excluding the future losers is very difficult in practice. The VCs mention the huge uncertainty in early stages as problematic, since no one knows what will happen tomorrow. Venture capitalists see decisions to invest as largely built upon a "gut-feeling" and even if getting to know the entrepreneurs help, much about the future cannot be foreseen. However, venture capitalists see great help in staging of capital to direct funding to ventures in which it is most likely to pay off. I too believe that parlaying of funding is helpful and needed in order to increase the likelihood of positive portfolio returns.

Communication
Communicating with later stage investors is considered an important task by venture capitalists. They need a good relation to these investors since they generally cannot finance a company from the seed stage to an IPO or a trade sale. Experiencing a disadvantage in valuations of portfolio companies, above referred to as the bargaining power difficulty, venture capitalists see a good reputation important in overcoming the disadvantage. Building high quality ventures the VCs hope to guarantee that there will be investors willing to invest at a respectable valuation. However, the investment climate largely affects the valuation. Many of the seed stage investing venture capitalists

agree that market conditions determine if positive portfolio returns are possible.

6. CONCLUSION

6.1. Seed Stage Investing – Difficult in its Nature

The difficulties in investing in the seed stage for venture capitalists are risk, investment inefficiency, goal divergences and bargaining power. I conclude by discussing whether I see venture capitalists capable of solving the difficulties and suitable for seed stage investing.

Venture capitalists use several means of reducing the *risks*. Most apparent are selectivity, assisting ventures and parlaying of funding. However lack of information make selection and parlaying of funding very difficult in practice. In order to succeed in handling the risks I believe geographical closeness to ventures, to facilitate assistance, and industry specialization, for the benefit of assistance and selection, are important. Therefore I mean that successful seed investing is dependent upon a local deal flow within an industry. However, in my sample this is the case only for one venture capital organization. I mean that this tells that a majority of venture capitalists are not capable of, to a sufficient degree, handling the high risks.

Further the *investment inefficiency* is dealt with solely by syndicating investments. This can help because more investments can be made in later stages and through sharing of management. However, when most needed, the possibility to syndicate may not exist. Apart from maybe trying to cut unnecessary costs, I see methods of overcoming the inefficiency very hard to come by. Inefficiency is a disadvantage compared to later stages founded in the nature of seed stage ventures. It is up to any seed investor to accept, rather than to try and change.

Goal divergences between investors and entrepreneurs are also natural. Investors see predominately to their financial returns while entrepreneurs do not. For example, if venture capitalists see abandoning less promising ventures as early as possible, as a key success factor, how will venture capitalists and entrepreneurs ever share views? Lack of *bargaining power* is considered to be problematic for the valuation of ventures. Syndicating investments as well as building a good reputation are means of avoiding the problem. This difficulty I consider being the minder of the four and also seem possible to solve using venture capitalists strategies and connections to late stage investors.

In summation seed investing is extremely challenging. A sign that solely investing in the seed stage seed probably is not profitable is that no venture capitalist exits their investment after the seed stage. Rather they exit in an IPO or a trade sale. I do not consider the difficulties to be solved by venture capitalists. However, I also see them as largely unsolvable for any investor seeking profitability in investments. Therefore I consider venture capitalist to be as suitable for seed investing, as is possible to be. However, they are probably not able to profit from seed investments in the long run, without government aid in form of soft financing.

6.2. Need of Soft Financing

I think soft financing of seed stage ventures could complement private venture capital and help VCs overcome some of the difficulties in investing. Firstly the high risks of investing in seed stage, which venture capitalists believe to be the most important difficulty, are reduced. Venture capitalists do not provide all the capital and the government loan do not have to be repaid if the venture fails. Essentially, the government takes on part of the risks, but do not claim very high financial returns in doing so. In times when investors, including the venture capitalists, are risk averse, this can help increase investments in the seed stage.

Soft financing is also likely to help in management of ventures. Soft financing programs, such as NUTEK, include management support and a network of competence in entrepreneurship related areas (Bengtson et al, 2003-04-24). This can ideally help the venture capitalists and its activities in two ways. Firstly, since assistance partly is covered by the financing program, reducing the frequency of assistance could be possible, without negative impact on venture performance. Reducing assistance means reducing costs of management. Secondly, since goal divergences are apparent in the entrepreneur-venture capitalist relation, introducing a third party could help overcome some divergences. Entrepreneurs mean that soft financing programs are more understanding towards long term commitments than short sighted venture capitalists are.

It is widely accepted that on a society level success of young growth oriented ventures have great impact on job creation and growth. However, proper evaluation of whether soft financing is needed to a larger extent in particular markets is beyond the reach of this essay. However, it would be an interesting topic for future research. To me, this much is clear though. Without soft

financing programs, little or no private venture capital will be invested in the seed stage. This is especially true when investment climate is poor. I believe lack of seed funding is very unfortunate for any market economy. By providing soft financing, governments can inspire the growing venture capital industry to direct investments to the seed stage. These investments can, in the best case scenario, prove to be of good value for venture capitalists and entrepreneurs, as well as the government and economy.

7. BIBLIOGRAPHY

7.1. Literature

7.1.1. Articles

Admati A. & Pfleiderer P., 1994, *Robust financial contracting and the role of venture capitalists*, Journal of Finance 49, pp. 371-402

Amason A.C. & Sapienza H. J., 1993, *Effects of Innovativeness and Venture Stage on Venture Capitalist-Entrepreneur Relations*, The Institute of Management Sciences, Interfaces 23:6, pp. 38-51

Barry Christopher, 1994, *New Directions in Venture Capital Finance*, Financial Management, Vol. 23 Issue 3, pp. 3-15

Bowman Louise, 2001, *Who is filling the gap?*, European Venture Capital Journal, London, Nov 1, pp. 40-44

Braunsweig Carolina, 2001, No More Easy Street: *VCs Tighten the Purse Strings,* Venture Capital Journal, May 01, pp. 36-39

De Clercq D. & Sapienza H.J., 2000, *Venture Capitalist–Entrepreneur Relationships in Technology-Based Ventures*, Enterprise & Innovation management Studies, Vol. 1, No 1, pp.57-71

Eisenhardt Kathleen M., 1989, *Building Theories from Case Study Research*, Academy of Management Review, Vol.14, No.4, s. 532-550

Frediksen Ö. Klofsten M., 2001, *Venture Capitalists Governance of their Portfolio Companies*, Journal of Enterprising Culture, Vol. 9, No. 2, June, pp. 201-219

Gompers P. & Lerner J., 1998a, *What drives Venture Capital Fundraising*, Brookings Papers on Economic Activity, pp. 149-205

Gompers P. & Lerner J., 1998b, *Venture Capital Distributions: Short-Run and Long-Run Reactions*, The Journal of Finance, Vol. 56 No 6, pp. 2161-2183

Gregorio D.D., Shane S., 2002*, Why do some Universities generate more start-ups than others?*, Research Policy, Vol. 32, pp.209-227

Gupta A.K. & Sapienza H.J., 1992, Determinants of Capital Firms: *Preferences Regarding the Industry Diversity and Geographic Scope of Their Investments*, Journal of Business Venturing, pp. 347-362

Gupta A.K. & Sapienza H.J., 1994, *Impact of Agency Risks and Task Uncertainty on Venture Capitalist - CEO Interaction*, Academy of Management Journal, Vol. 37 No 6, pp. 1618-1632.

Hamilton R.H., 2001, *E-commerce new venture performance: how funding impacts culture*, Electronic Networking Application and Policy, Vol. 11. No 4, pp. 277-285

Jensen M.C. & Meckling W.C., 1976, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, Journal of Financial Economics, Vol. 3, pp. 305-360

Korsgaard M.A. & Sapienza H.J., 1996, *Procedural Justice in Entrepreneur-Investor Relations*, Academy of Management Journal, Vol. 39, Issue 3, pp. 544-575

Kortum S. & Lerner J., 2000, *Assessing the contribution of venture capital to innovation*, Journal of Economics, Vol. 31 No 4, pp. 674-692

Lerner Josh, 2002, *When Bureaucrats Meet Entrepreneurs: The design of effective "public venture capital" programmes,* The Economic Journal, Vol. 112, pp. F73-84

Murray Gordon, 1994, *The European Unions support for new technology based firms: An assessment of the first three years of the European seed capital fund scheme*, European Planning Studies, Vol. 2 Issue 4, pp. 435-462

Papadimitriou, S. & Mourdoukoutas P., 2002, *Bridging the start-up equity financing gap: three policy models*, European Business Review, Vol. 14 No 2, pp.104-110

Ruhnka J.C. & Young J.E., 1991, Some Hypothesis About Risk in Venture Capital Investing, Journal of Business Venturing, Vol. 6, pp. 115-133

Sahlman William A., 1994, *Insights from the Venture Capital Model of Project Governance*, Business Economics, Vol. 29 Issue 3, pp 35-38

Sapienza H.J. & Timmons J.A., (1989), *The Roles of Venture Capitalists in New Ventures: What determines Their Importance?*, Best Papers proceedings, Academy of Management

7.1.2. Books

Brealey R.A. Myers S. C., (2000), *Principles of Corporate Finance*, 6th edition, McGraw-Hill, Boston

EVCA, 2002, 2002 EVCA YEARBOOK, The European Private Equity & Venture Capital Association

Ericsson L.T. & Weiedersheim-Paul F.,1999, *Att utreda forska och rapportera*, Liber Ekonomi, Malmö

Fredriksen Öystein, 1997, *Venture Capital Firms Relationship and Cooperation With Entrepreneurial Companies*, Linköping Studies in Science and Technology, Thesis No 625

Gilje N. & Grimen H., 1992, *Samhällsvetenskapernas förutsättningar*, Daidalos AB, Göteborg

Gompers P. & Lerner J., 1999, *The Venture Capital Cycle*, MIT Press, Cambridge Massachusetts

Lekwall P. & Wahlbin C., 1993, *Information för marknadsföringsbeslut*, IHM Förlag AB, Göteborg

Lundahl U. & Skärvad P-H., 1999, *Utredningsmetodik för samhällsvetare och ekonomer*, Studentlitteratur, Lund

Merriam Sharan B., 1994, *Fallstudien som forskningsmetod*, Studentlitteratur, Lund

Porter Michael E., 1980, *Competitive Strategy*, New York, Free Press

Wallén Göran, 1993, *Vetenskapsteori och forskningsmetodik*, Studentlitteratur, Lund

7.1.3. Newspaper Articles

Bengtson Leif et al, 2003-04-24, *Vi vill ha tillbaka gamla Nutek*, Debatt, Ny Teknik

Campbell Katherine, 1998, *Feeding funds into biotechnology*, Financial Times, London, Feb 3, pp. 14-17

Campbell Katherine, 2001, *Investors wield the bargaining power*, Financial Times, London, Jul 12, pp. 11-14

7.2. Electronical Sources

EVCA homepage, 20030312
http://www.evca.com/images/attachments/tmpl_21_art_11_att_249.xls

7.3. Other Sources

Muzyka Dan, 20030227, Venture Capitalists: How Do They Make Money?, EVCA Institute, Introduction Course Presentation

7.4. Interviews

7.4.1. Face-to Face Interviews

Andersson Ingvar, CEO, AB Chalmerinvest, Göteborg, 2003-03-25

Jacobsson Hans, General Partner, CR&T Ventures, Göteborg, 2003-03-25

Hansson Jörgen, Bransch Manager, Chalmersinnovation, Göteborg, 2003-03-25

Homann Nils, Investment Manager, Malmöhusinvest AB, Malmö, 2003-03-31

Olofsson Per, CEO, Teknibrostiftelsen, Linköping, 2003-03-26

Schatz Adam, Managing Director, Teknoseed, Lund, 2003-03-24

Segerborg Katarina, CEO, Iteksa Ventures AB, Linköping, 2003-03-26

Svärdström Jacob, CEO, KTH Seed Capital, Stockholm, 2003-03-28

7.4.2. Telephone Interview

Wintersö Trine, Managing Director, Symbion Capital, Köpenhamn, 2003-04-07

7.4.3. Email Questionnaires

Andersson Poul, Administrative Director, BioVision, Hörsholm, 2003-04-13

Mannhart Boris, Investment Manager, BioM AG, Munchen, 2003-04-12

Lindemann Bjoern, Managing Director, BioAgency AG, Hamburg, 2003-04-28

7.4.4. PVA-MV AG Contact

Höecherl Sasha, Senior Investment Manager, PVA-MV AG, February to April 2003

8. APPENDIX

8.1. Questionnaire

1 Basics

1.1 What is the legal form of your firm? Who are your investors?
A:
B :

1.2 How much capital do you have under management? (Latest fund) What is the average investment size? Normal first investment size? Maximum total investment in a venture?

A:
B:
C:
D:

1.3 What is the focus of you fund?

- Stage (A):
- Industry (B):
- Geography(C):

A:
B:
C:

1.4 How many companies are in the portfolio? How many do you think is a good amount?
A:
B:

1.5 What are your sources of income? How high is the yearly cost of management? Do you have a management fee towards investors? How high is it?
A:
B:
C:
D:

2 Management

2.1 How many people are employed working with fund management?
A:

2.2 What is their background? Industry background or finance background? Academic finance or industry finance?
A:
B:

3 Investee relation

3.1 In what areas can you provide value added services?
A:

3.2 Do you take place in the boards? Do your investors take part in boards of investees?
A:
B:

3.3 Are there situations and circumstances in which conflicts are likely to arise?
A:

3.4 Do you think your investees always provide you with accurate and timely information?
A:

4 Stage

4.1 How would you define seed capital? Until what stage of development do you consider the investment to be a seed investment? What is the difference between the pre-seed and the seed stage?
A:
B:

4.2 Which factors do you think are extra important to consider when investing seed capital compared to later stage capital?
A:

4.3 Do you have set expected returns for the different rounds of financing? If so are they general for all companies and stages? How high are they?
A:
B:
C:

4.4 What stake is a normal stake in the first round of financing? In how many rounds do you participate? When do you sell your stake?
A:
B:
C:

4.5 How do you secure that there will be investors willing to participate in later rounds of financing? Especially in later stages?

A:

4.6 First rounds investments have been observed to, on aggregate, have low returns compared to later stage. Why do you think this is so?
A:

5 Industry

5.1 Do you think specializing in an industry is better then diversifying across industries? What would be the benefits of each strategy?
A:
B:

5.2 If you have to choose from geographic focus or industry specialization when investing in seed stages which would you choose? Why?
A:
B:

6 Dealflow

6.1 How do you work to secure a deal flow? How connected to a University or Universities are you? Do you have exclusive right to all spinouts?
A:

6.2 What are the important measures that determine number spinouts of a University do you think? Eg, number of researchers, research budget, industry focus, track record.
A:

6.3 In your opinion, what is the relative importance of these acts? You have 100% to distribute on the three:

- Picking the right companies/entrepreneurs to fund (A)
- Giving them value added advice (B)
- Buy and sell companies with the right timing (C)

A:
B:
C:

(Please do not pay attention to which ones you can control yourself and not)

7 Advice

7.1 If you get to mention three success factors (abilities) for seed fund management. Which would they be?
A:

7.2 What are the most important outside factors that determine the performance of a seed fund?
A:

Formalities

Do you allow me to in the thesis write you and your companies name as a source in the end of the thesis? (If I want to use quote of yours I will contact you and ask for permission, since quotes call for a direct source.)
A:

Can I contact you again if there is something I have not understood?
A:

Do you want me to email a copy of the thesis to you when it is done?
A:

Thanks a lot for filling out this questionnaire. I very much appreciate your help.

Best Regards!

Johan Adolfsson, johad754@student.liu.se, 381 4024175