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Financing life science start-up ventures in Sweden

Can funding be facilitated from British venture capital?

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Abstract

Financing life science start-up ventures in Sweden: Can funding be facilitated from British venture capital?

Carl Andreasson

This thesis has been carried out within the framework of the Master of Science Programme in Sociotechnical Systems Engineering and performed for the Swedish Trade Council in London. The author investigates how the Swedish Trade Council can facilitate and bridge the contacts between venture capitalists in the UK and high-tech start-ups in Sweden.

High-tech ventures in the start-up phases often face a challenge in accumulating sufficient financial resources and skills to successfully move from concept stage to business, particularly within the life sciences'. High costs associated to time consuming and demanding product development cycles may require external investors which provide venture capital and expertise. However, many face difficulties in attracting venture capital partly due to the so-called equity gap, which relates to financiers unwillingness for taking on risk and investing in the early-stages.

The study shows that venture capital largely rely on local networks and are limited in their investments' geographical distribution. The interviewed market players also emphasise the importance of local networks in the investment processes. Given these characteristics, it may be difficult for a Swedish company seeking venture capital abroad without help from intermediaries. Although there is a role to fill for intermediaries in assisting in the investment discovery process, it is likely to prove difficult over time as tasks become increasingly cumbersome.

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Populärvetenskaplig beskrivning

Högteknologiska företag under uppstart står ofta inför utmaningen att ackumulera tillräckligt med finansiella resurser och kompetens för att framgångsrikt gå från idéstadiet till en fullfjärdrad affärsverksamhet. Denna utmaning är av särskild vikt inom sektorn ”life science” vilket ofta är förknippat med extremt höga kostnader förenade med långa produktutvecklingsperioder. För att gå från idé till företag kan det därför krävas externa investerare som kan bidra med riskkapital och kompetens för att hjälpa det enskilda företaget att utvecklas. Många företag står inför svårigheter att finna riskkapital, det så kallade kapitalglappet. Detta beror delvis pga. ett begränsat antal aktörer och att dessa har en preferens att investera i andra faser och belopp än vilka företag under uppstart efterfrågar.

Tidigare studier påvisar riskkapitalets till stor del lokala nätverkskaraktär och begränsade geografisk spridning och konkurrens i termer av investeringar. Vidare framhäver dessa studier ett förlitande till trovärdiga referenser för att maximera chansen för investeringar. Med tanke på dessa karaktärsdrag kan det därför vara svårt för svenska företag som är på väg att utvecklas söka riskkapital i utlandet. Frågan är då hur dessa praktiskt kan nå ut till riskkapital utanför närområdet.

Examensarbetet har genomförts vid Exportrådets lokala kontor i London, Storbritannien. Exportrådets övergripande syfte är att bistå svenska företag att växa internationellt och att främja svenskt företagande i utlandet. För att utreda hur Exportrådet kan facilitera och brygga kontakter mellan riskkapitalister i Storbritannien och högteknologiska företag under uppstart i Sverige har ett antal intervjuer genomförts med aktörer i branschen, däribland med riskkapitalister själva.

Resultatet från intervjuer med aktörer på marknaden bekräftar till stora delar de slutsatser tidigare studier kommit fram till i termer av riskkapitalets lokala och geografiska karaktär. Huruvida Exportrådet har en roll att fylla i att främja relationer mellan svenska nystartsföretag och brittisk riskkapital är dock svårbesvarad. Över kort tid finns en roll att fylla där flera riskkapitalister uttrycker intresse i att få hjälp med att identifiera potentiella investeringsmöjligheter. Över tid kan det dock vara svårt att effektivt och kontinuerligt ta reda på, och presentera möjligheter utan att göra riskkapitalbolaget allt större tjänster pga. att arbetet blir mer komplicerat. Därutöver behöver finansieringsfrågan utredas ytterligare då de företag som söker riskkapital ofta har en svag betalningsförmåga. Troligtvis måste finansiering sökas från riskkapitalbolagen ifråga men detta behöver utredas vidare vid kontakt med dessa aktörer.

Disclaimer

The research, opinions and conclusions presented in this thesis are to the full extent my own and not representative of the Swedish Trade Council unless explicitly stated. With that said, this thesis should be regarded as an academic study carried out within my Masters of Science programme in Sociotechnical Systems Engineering programme at Uppsala University, Sweden.

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1 Introduction

1.1 Start-up businesses importance and financial constraints

There is strong research and evidence backing the fact that entrepreneurial firms has a great impact on economic stability as well as strength. Innovation, dynamics, job creation, wealth and globalisation are all areas in which entrepreneurial firms have the most significant contribution. (Barringer & Ireland 2008; Landström 2007) Because of the firms' great collective impact on economies, entrepreneurial firms should be encouraged to grow in order to prosper and add to the economy of which it is a part. In a wider perspective, the entrepreneurial firm is an important asset when comparing the wealth and importance of geographic regions.

Öberg, Lundström and Halvarsson (Landström 2007) explain that "a country's or region's competitiveness lies in its capability to innovate". During the last decades governments have come to recognise that in order to sustain economic growth and create jobs, entrepreneurship must be facilitated through policy. Although, policy creation for encouraging entrepreneurship comes in various ways, one of the major components is the supply of venture capital for stimulating small business enterprise growth. (Landström 2007)

Naturally, ventures with high growth potential exist in all sectors and locations but there are indications that entrepreneurial ventures with the highest potential for growth are characterised as knowledge-based and technology driven. As such they are often based on intangible assets and operate in fields with rapid development and without any previous documented history. It is for such companies early-stage venture capital is needed for providing both necessary funding but also management skills for making sure the new start-up really takes off. (Landström 2007)

Even though entrepreneurship and the importance of venture creation is widely recognised, access to funding for small and medium-sized enterprises has consistently been considered as a long lasting problem, both in Europe and elsewhere.(Stokes & Wilson 2006) Foremost, the availability and cost of finance puts a major constraint on the formation and development of small and medium sized enterprises (SMEs). The constraint is even more severe for start ups which are technology based businesses with a fast growth pace.(Mason & Harrison 1995)

Why is it that many of these promising firms struggle to find funding for their projects and developments? According to Stokes and Wilson, there are observers suggesting that the lack of a large, liquid pan-European market, focused on the needs of smaller companies, acts as a major barrier to the development of early-stage capital in Europe which could provide these high growth firms with equity.(Stokes & Wilson 2006) Whatever the reason, it stands clear that in such policy creation, venture capital provides one important component for improving access to finance.

For the Swedish Trade Council (STC) in London, where I currently am employed, these questions and topics are of relevance in accordance with the overall mission of the organisation – to promote Swedish businesses abroad and increase exports. Could the STC function as a bridge between high tech start-up ventures in Sweden and venture capital companies in London in order to facilitate funding and in the long-term promote Swedish businesses growth and exports? In order to explore this area of interest further, this thesis is performed for building a foundation and knowledge in the local venture capital sector in the UK and London.

1.2 The role of venture capital in the innovation system

Venture capital has long been argued to be a key facilitator for promoting innovation, economic growth and employment by enabling and developing small firms with high growth. In this day and age, researchers are of the perception that there are few fast-growing high technology companies that either at some stage have not been financed by venture capital or tried to obtain it.(Landström 2007) One must however not think that venture capital is the sole facilitator for small firms as it only is one of numerous structural factors in countries where venture capital is considered as a 'success factor'. Other factors could be for example effective technology transfer conditions, incubators, foreign direct investment policy or funding for basic research. In addition, government and other non-government organisations may provide firms with 'soft money' which refers to one-time funding for special projects or purposes. Although a number of avenues are available for initial funding, Venture Capital is supported by a 'wide range of evidence' that the access to and availability of venture capital is a key element in keeping unemployment low and facilitating a well developed culture of entrepreneurship and innovation. (Lawton 2002)

In addition to being a provider of finance, the venture capital service industry also has another interesting dimension. It distinguish itself as a provider of competence and not only capital or funding.(Çetindamar 2003) In other words, one of the major differences between a bank and a venture capital investor is that the latter provide companies with support in non-financial ways as well as with money.(Bains 2008) However, a bank can only provide means to new ventures in the form of loans and regulations prohibit banks from acting as a venture capital investor.

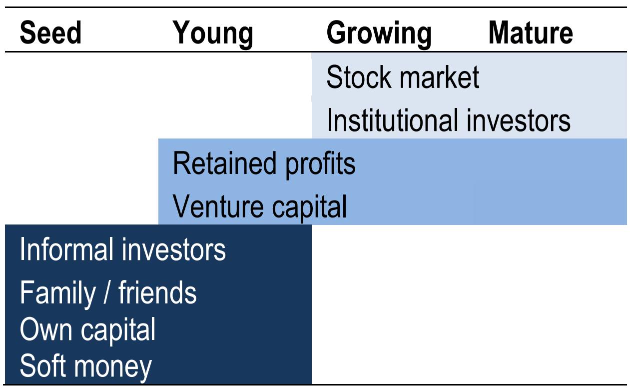

Figure 1: The relay race of funding

Entrepreneurial firms which are of interest to this study are most often seeking permanent capital in order to start-up, expand, develop or innovate. Therefore, they require equity capital from which the main sources are personal investments, venture capital institutions, public sector sources or public equity.(Stokes & Wilson 2006) Providers of finance and their corresponding investment stages of focus can somewhat simplified, but not restricted to, be illustrated as in Figure 1: The relay race of funding. For this study, venture capital is regarded as a primarily investor in and provider of equity in the young and growing stages of business development.

1.3 Funding requirements in life science start-ups

Financing a new high technology start-up company is a cumbersome task for even the savviest entrepreneur. External funding of start-ups is in many cases crucial in order for the start-up to take off and develop into a business. However, funding requirements and availability differs depending on which business sector a company is situated in.

Commonly, financial constraints are perceived as particularly severe in the fields of pharmaceutical discovery. For example are the barriers to entry in the pharmaceutical industry very high much due to the average product taking extensive time to develop from discovery to market approval - about 10-14 years. With such long processes it comes as no surprise that developing pharmaceuticals is a significant undertaking associated with extremely high expenses.(Barringer & Ireland 2008) Consequently, companies working in the fields associated to the life sciences face a tough environment for financing operations and require vast more start-up capital than most industries.(Bains 2008)

In biotech for example, few firms actually take their products to the market but instead are dependent on the large pharmaceutical companies such as Pfizer or Merck in the product development for reaching the market. Biotech firms usually earn money through arrangements of selling and licensing patent-protected discoveries or by partnering with larger pharmaceuticals through revenue-sharing. (Barringer & Ireland 2008) Hence, many biotech companies do not strive for continuous product development but instead aim at being acquired by one of the big firms in the business.

Because of the severe funding constraints in the life science sector especially for pharmaceuticals and biotech companies this thesis focus on the funding of these firms.

1.4 Problem statement

Venture capital is usually attracted to areas where new venture creation and growth is high and where novel ideas and talented individuals are incorporated.(Landström 2007) It is not difficult to argue that there are areas that are better known for fulfilling these factors and have a higher number of ventures, both in absolute numbers but also in turnover, as well as a more prominent talent pool. Hence, in such areas there ought to be a large number of venture capital firms seeking and investing in companies with high growth potential. However, not all areas are so fortunate in terms of venture creation but still produce interesting companies with no less potential for growth. The problem in such areas would be that venture capital may not be as readily available. This raises an important question. Would it be possible for new ventures created in less venture capital populated areas to reach out to areas with a larger number of venture capital firms?

The process for ventures in attracting investments from foreign venture capitalists is often very challenging and in research conducted by Mäkelä and Maula (2008) it is stated that “prior research falls short in explaining how ventures are able to attract cross-border investors to invest in them...”(Mäkelä & Maula 2008) Although this thesis by no means will address that issue completely, it will hopefully shed some light on the issues facing Swedish ventures in attracting British venture capital investments.

What we do know however is by investing close to home obstacles such as information asymmetries and geographical distance is minimized. Also, foreign venture capital companies investing abroad, for example in Sweden, face competition with regional and well-established companies. Therefore not being natural with the local conditions such as legal or institutional conditions becomes a significant disadvantage in comparison with the firms having local knowledge.

There are however examples where venture capital firms have invested internationally. These venture capital firms have often been more sizeable investors. Usually, they have been pushed by increasing fund sizes and driven by broadening their investment scope and desires to learn from foreign partners or competitors, or to leverage existing resources in order to create value.(Mäkelä & Maula 2005) However, these larger firms that often are established abroad are commonly not attainable for small start-ups.

With funding requirements being severe for companies in the life science sector and venture capital arguably being a smaller sector in Sweden than in the UK, what are options for finding venture capital in the UK? Are there ways to reach out to small to midsized British venture capital firms without having to establish abroad?

1.5 Background to the thesis topic and research context

This thesis is written in order to create a deeper understanding of the venture capital industry, both in general terms but also more specifically for the UK market and its function. When reading this thesis, please do keep in mind that this thesis has been performed and written part-time at the Swedish Trade Council in parallel to my full-time employment. As such, although large parts of the thesis are performed outside my work environment it has been written with the intention to benefit my work and its relationships with venture capital businesses in the UK.

The overall mission of the Swedish Trade Council (STC) is to help Swedish companies to grow internationally. The STC is in equal parts owned by the state and the Swedish business sector. The joint ownership is perceived to provide credibility that opens for business routes and contacts that otherwise would be more difficult to establish. Today, the STC is established in more than 60 countries worldwide, employing both local and dispatched personnel from Sweden.

The services offered by the STC are largely focused on international business development with focus on a number of structured consultant services. Examples of such services include advice and strategic analysis to actual establishment and marketing of products. But in addition to traditional consulting services, the STC is also assigned a government assignment for promoting Swedish businesses abroad. As an example of a government assignment a service could be events semi-funded by the government or basic export information which are offered as a free service.

Conclusively, I would like to briefly add that my predominantly engineering and technology background together with my interest in business could say to be coming together in this thesis as the field of venture capital to a large extent relates to the commercialisation of technology.

1.6 Purpose of the study

So why in terms of wider relevance is this study being performed? The answer lies in the hypothesis behind it and the aim of encouraging growth and funding of high-tech start-up ventures.

The basic underlying hypothesis that this study is based on assumes two things:

1. The Swedish market’s availability of venture capital is limited in the sense that it cannot provide funding to enough start-up ventures

2. By searching for private equity abroad, high-tech start ups could find expertise together with funding through venture capital which is not as readily available on the local market

If the start-up firm cannot succeed in or even desire funding through local venture capitalists, going abroad can be a reasonable option. Together these two components can be crucial for further growth and developing a start-up into a business.

The purpose of this thesis is to develop an understanding on how the Swedish Trade Council may help Swedish high technology start-up companies in Sweden to find funding in the UK. Can the Swedish Trade Council act as an intermediary in such a way that it acts as a bridge between start-up ventures in Sweden and British venture capital?

1.7 Key questions

In order to address the overall objective of this study it has been broken down in the following key questions for research:

1. Would it be desirable for life science start-ups in Sweden to reach British venture capital?
2. Under what circumstances are British Venture capital companies interested in working with intermediaries for reaching Swedish life science start-ups?
3. What could attract Swedish lice science start-ups in working with intermediaries for reaching venture capital in the UK?
4. What potential business model could be used for intermediaries between Swedish life science start-ups and British venture capital?

1.8 Scope of study

For this study, only institutional (or formal) venture capital is studied. Institutional venture capital are investments made in entrepreneurial ventures by full-time professionals who raise finance from pension funds, banks, insurance companies and other financial institutions.(Deakins & Freel 2003) Other types of venture capital (informal venture capital, corporate venture capital and public sector venture capital) will not be studied for other reasons than possibly explanatory to this study.

Due to this study dependency on a self-selected sample, it will be of limited use for making general assumptions about the overall market. Also, with recent developments in the venture capital industry in mind, this study has to be put into a temporal context with the industry’s current downsizing.(Mason 2009) With that said, it is not unreasonable to believe that the answers provided from interviews with market players are likely to be coloured with the current climate of downsizing.

1.9 Disposition

Chapter 1 is the chapter you have just read and basically gives a brief introduction to the subject of interest, why venture capital and start-up business is important and the problem affiliated to the economy’s dependence on the interplay between these industry players

Chapter 2 describes the methodology behind this thesis which outline and discuss how the study has been carried out in practical terms

Chapter 3 gives an in-depth introduction to venture capital and introduce the concept of an equity gap and its consequences. The chapter introduce the problem with new venture funding and reasons behind the difficulties in new start-up's quest for investors

Chapter 4 gives a brief introduction to the two venture capital markets of interest for this study. Of primary interest is the UK venture capital industry which should be put in context with corresponding industry in Sweden

Chapter 5 introduces the geographical structure of venture capital and constraints on investment patterns on both local and international levels

Chapter 6 puts the theoretical reasoning in context with actual interviews performed with people involved in the industry especially on the supply side of venture capital

Chapter 7 takes a discussion on the implications of the findings in chapter 7 and the theoretical reasoning that underlies this thesis

Chapter 8 wraps this thesis together by summarising the overall conclusions from secondary sources and interviews while setting these conclusions in context with the role of intermediaries for facilitating funding

2 Method and approach

2.1 Study design

This thesis has a relatively high reliance on secondary sources for the research conducted. In addition to performing a thorough literature study the research has been complemented with a number of interviews. For researching the main objective of this study through interviews, a cross-sectional study design has been used. The reason for doing a cross-sectional study is simply because it is best suited for studies aimed at finding out the occurrences of situations, problems, attitudes or issues by selecting and studying a cross-section of the population. (Kumar 2005) In other words, the cross-sectional study is of high relevance due to this thesis focusing on such occurrences among a study population.

The cross-sectional study design involve only one contact with the study population and is hence cheap to conduct and relatively easy to analyse. The greatest drawback of the cross-sectional study is that it cannot measure change. (Kumar 2005) But as this study is not dependent on measuring change any other study design than cross-sectional would make little sense.

2.2 Construction of a research instrument

In order to formalise and answering the overall research questions, a research instrument was constructed in accordance with the methodology of Kumar (2005). The research instrument acts as one of the first and major steps in operationalising the study.

Basically the instrument constitutes the input and output of the study and makes the process of operationalisation reasonably traceable. Since questions asked of respondents are derived from the research instrument, the quality of the received data depends on the quality of the research instrument. (Kumar 2005)

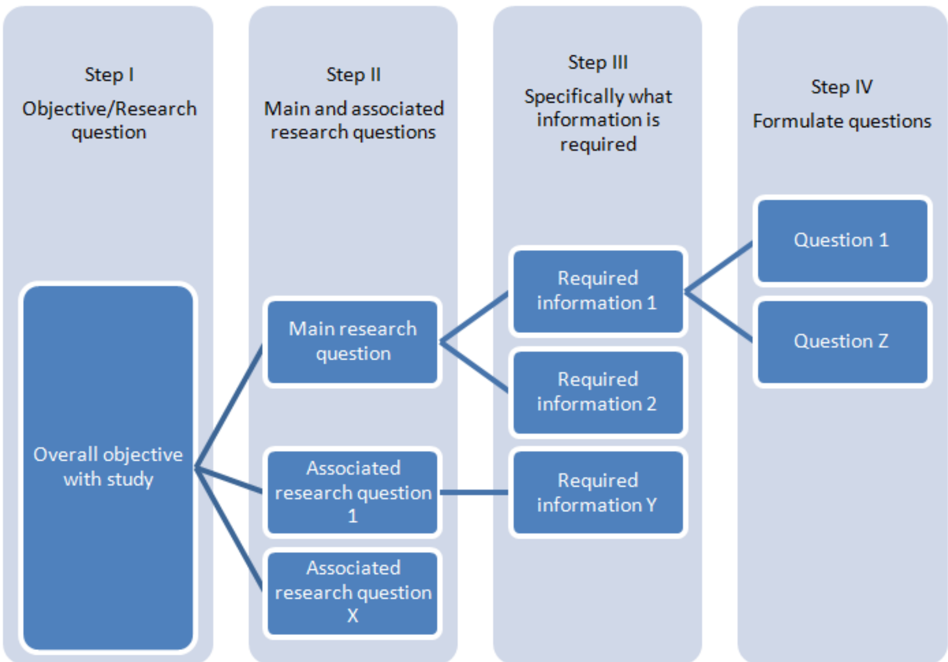

Figure 2: Interview questions are built incrementally through using the research instrument

For my study, I constructed a research instrument which was based on a simple excel sheet with its cells merged into a tree structure. The excel sheet constitute a method for breaking down the overall research question step by step into more manageable questions to be put forth in interviews. The excel sheet itself and the workflow during the construction of the excel sheet corresponds much to the layout illustrated in Figure 2: .

By starting off with overall objectives with the study it can be hard to decide on exactly which questions to later ask in interviews in order to address the objective. Stepwise breaking down the objective through deciding which the main and associated research questions are and what type of information that are needed, it simplified the process of deciding on what questions to articulate. The questions asked simply are addressing what information that is required for answering the main and associated research questions which are answers to the thesis overall objective.

2.3 Study population

For collecting primary data, interviews have been conducted with people working in the venture capital industry and related areas such as entrepreneurs involved in the life sciences or people working in related organisations and associations.

The selection of the study population has been performed in a combination of purposive sampling and snowball sampling. In purposive sampling the researcher, or myself in this case, have on the beforehand decided on which people who to contact. The reason for a slight reliance on the purposive sampling method is when the researcher has identified people which are likely to have the required information and may be open to share it with the researcher.(Kumar 2005)

Snowball sampling in this thesis originates from the purposive sampling method. Basically, the snowball sampling method is a metaphor for how a research sample gradually grows out of a few individuals. It is a network based sampling method which is dependent on referrals from interviewees. (Kumar 2005)

The combination of using purposive and snowball sampling has both its advantages and disadvantages. Of course, the method is highly practical and can provide easy access to knowledgeable people. On the other hand, a large part of the sample rests upon the choice of the individuals chosen for the first stage of interviews. Therefore, there is a slight risk of collecting biased samples if they are of the same particular set of people. (Kumar 2005)

Organisations
Abingworth
Anglo-Nordic Biotech Conference (informal interviews with participants)
Apposite Capital
Karolinska Institutet Innovations AB
MVM Life Science Partners
OLink Bioscience
Uppsala universitets Utveckling AB
Uppsala University

Table 1: Interviewed organisations

2.4 Contact phase

A first step before contacting any organisation for potential interviews has been to collect necessary company and contact information into a contact excel sheet. In this case, the information required has been the contact person together with the investment focus and criteria for the particular venture capital firm.

As far as possible, interview persons has been identified in beforehand and thereafter contacted for a possible interview. In some cases not enough information has been present to determine who to contact for a potential interview, only that the organisation itself is interesting for further contact.

In those cases where an appropriate contact could be identified in beforehand I have targeted people at venture capital firms having responsibility for investing opportunities in the overall life science field. Information regarding the right contact has in the majority of cases been available on company websites describing 'the team' at a particular venture capital firm. In those few cases where it has been unknown who to contact at a particular venture capital company, I have simply either dialled in to the general switchboard and presented myself and my work or identified an assistant who was working with the life science team at the company of interest.

After a general introduction has been made on the phone I have also followed up the phone call with a brief e-mail explaining my interest in the person further and reason for contacting him or her. This has been of great importance in order to formalise my interest and avoid any immediate misunderstandings or suspicions that could have ruined any possibility for scheduling an interview. In some cases though, where interest in participating in the study has been apparent from the start, an interview was scheduled right away with just a brief confirmation e-mail on meeting and short description of study.

Access for fieldwork of management, as this thesis is highly dependent on, can be very difficult and related to conditions about confidentiality and publication rights. (Easterby-Smith et al. 2008) Hence, research questions have in a few cases been somewhat determined more by access possibilities than by theoretical considerations. To some extent this has been the case for this study. Although interviews have not been strictly confidential there have been occasions when interviewees asked for discretion.

2.5 Collection of data

2.5.1 Primary sources

Data collection has relied on interviews with persons knowledgeable in foremost venture capital but also entrepreneurship. Interviews were performed in an unstructured manner where both structure and content was held flexible. The reliance on interviews is particularly useful in situations where in-depth information is needed, little is known about the subject area or when the interviewer seeks to understand the interviewee's perspectives. (Kumar 2005)

Interviews have always aimed at being held at the interviewee's premises. However, due to time constraints, half of the interviews were held over the telephone.

Interviews lasted between 20 minutes to just under one hour. The big variance in time is due to the different interviews characteristics and busy schedules. The shortest interview was conducted over the phone during peak travel time for the interviewee. Hence the interview had somewhat more intense and focused character whereas face to face interviews where the interviewee had scheduled meeting with me an hour or so were more informal in interview layout and open-ended.

For the interviews, a questionnaire was developed from the research instrument (as explained in section 2.2), covering questions of interest for research. The main objective by conducting qualitative interviews has been not only to get to know what the respondent's viewpoint is but also gain an understanding of why they have this particular standpoint. Not surprisingly, the first objective has been a lot easier to find out about in comparison to gaining an understanding of the reasons behind particular viewpoints.

Early on in the study, structured interviews were considered much due to requiring fewer interviewing skills and better comparability of data.(Kumar 2005) However, if the study would prove successful, it would be far more valuable to have established a good relationship for future collaborations which I suspected I could do better in during an unstructured, discussion-like interview. A treat from relying on an unstructured interview method is that the interviewer is free to formulate questions in own wordings as well as remaining context sensitive. Also, open-ended questions are more useful for seeking opinions, attitudes and perceptions.(Kumar 2005) This makes sense as this study seldom relies on hard facts or data but on information based on individual perceptions and attitudes.

With open ended questions I have as far as possible presented a topic of interest to reason about rather than putting forth a sharp question. However, as these topics were derived from the research instrument I have also been able to detail my questions whenever necessary. Therefore, when I did not receive the information I sought it has been easy to present more specific and precise follow up questions or simply to ask for a more thorough explanation.

A disadvantage from being dependent on unstructured interviews is that the comparability can be a problem as interviews are not conducted in the same rigid manner. (Kumar 2005) Furthermore, as I have gained experience during interviews, the questions asked have changed somewhat from interview to interview. For that reason, the results from latter interviews have differed from those performed early on in the study. This may involuntarily lead to a bias in the study.(Kumar 2005)

In interviews, as a first introduction to beginning the interview I have stated in what areas of interest this thesis is focusing on. For reason of discussion and establishing a trusting relationship in interviews, the order of the questions asked has been put forth in a logical progression as much as possible, given the unstructured layout of interviews.

Questions were asked with the intention of directing the interviewee and not let the he or she talk freely without intervention. This is important as the interviews otherwise may lead to poor data which is difficult to interpret.(Easterby-Smith et al. 2008) As Easterby-Smith et al. explains non-directive interviews where the interviewee have no clear picture on what questions the interviewer is interested in , it is likely to create too many assumptions which in turn risk of creating poor data. (Easterby-Smith et al. 2008) This has been a very difficult task with often the interviewee eager to present his company and his perspectives on the business. Directing the interview was often a process of letting the interviewee speaking relatively freely and stepping back in order not to delve further into unrelated topics.

Questions were asked in as simple everyday language as possible with the intention to avoid misunderstandings. A treat of the unstructured characteristic of interviews is the possibility of further explaining and directing questions as conversations goes on.(Kumar 2005) Therefore, any misunderstandings have hopefully been avoided as much as possible. However, as interviews have been performed in a non-native language to me and in some cases for respondents as well, there are certainly traces of language barriers affecting the quality of data. I may have not always realised when using the language in an erroneous or overly complex way which may distort the resulting data.

Within 24 hours after performing interviews, the collected data was transcribed into a document containing the bits and pieces of the interview being of interest to my research topic. However, in addition interviews were recorded for security as well as traceability.

2.5.2 **Secondary sources**

In those cases where secondary sources has been used for extracting relevant data two types of sources was used. First of all the study relies on a large extent of earlier research on venture capital and entrepreneurship. In particular, sources have been on the topic of start-ups and SME's funding requirements and the equity gap. This has been necessary in order to gain an overall understanding on the subject and of the challenges new ventures face in their funding requirements. Needless to say, with information being sparse on the specific topic, the task of collecting secondary sources has been very time consuming.

Secondly, this study relies on some background information received from publications made by semi-governmental and private associations (such as the BVCA).

Early on and for following the progress of the industry in order to be up to date on the development of venture capital, the mass media has been followed with sporadic interest. These however are no sources on which this study relies on but only followed for gaining perspective on the industry.

2.6 Critical review of method

As a majority of studies in the venture capital field, this thesis predominately focuses on the supply side of venture capital, from the investor perspective. I believe that the study would have benefited from, although making it somewhat more cumbersome to perform, a further insight in the demand side of venture capital, focusing on the firms that need investments. For this study it would have proved very time consuming and in the end costly and hence disregarded for the scope of this work.

Reliance on sources such as member organisations for mapping out venture capital players bias the sample towards larger investors whereas many smaller investors that may still be of interest are left out from the study. Even more important, these are players that may have greater need for having intermediaries to present investment opportunities for them. If they would be interested in investing in Sweden, we can only speculate in. In addition, the reliance on a snowballed sample selection naturally leads to a somewhat geographical bias as people tend to refer to other people in their close proximity and network.

3 The venture capital industry

3.1 What is Venture Capital?

Originally, venture money was the term used in USA to describe the funding that gets a business going. It was commonly used in the 1960s and 1970s referring to money put behind bright ideas without any certainty of return. (Bloomfield 2008)

On a more overarching level the venture capital industry can be seen as serving as a path for channelling an economy's savings into investments such as start-up firms which are yet to develop into fully developed businesses. (Çetindamar 2003)

Venture money is closely related to seed capital and is, at least in the UK, becoming an area that is increasingly becoming the domain of business angels and specialized investment firms. Whereas seed capital focuses on new business ideas, venture capital is somewhat more directed towards funding some aspect of early business growth.(Stokes & Wilson 2006) Venture money is supposedly the money to fill the equity gap which is a concept to be introduced later in this chapter. (Bloomfield 2008)

"...venture capital to include the seed, start-up and expansion stages and private equity as the umbrella term to include venture capital and management buyouts."(Arundale 2007) In the UK venture capital has commonly been used to describe all forms of equity funding in unquoted businesses made by external parties to the original business. However, in recent years a more distinguished use of the term venture capital has evolved. Hence, venture capital usually refers to early-stage funding while the term private equity refers to development capital and management buy-out money. A problem with that distinction is that it can be difficult to classify venture capitalists as these often can go on to become private equity investors in the same business they once provided venture capital to. (Bloomfield 2008)

Whereas the informal investor is made out from high net worth individuals investing their own money, the formal or institutional, venture capital market consists of professional fund managers who invest other people's money.(Landström 2007) As briefly illustrated in the diagram below, describing the venture capital continuum, investment types are not of strict mutually exclusive characteristics. Rather, investment patterns follow a rather smooth outline and exact players involved and the investments characteristics vary with the particular investment opportunity.

Informal investments **Formal investments**

Individual angels Angel syndicates Venture capital firms

Figure 3: Venture capital continuum (Mayfield 1999)

Venture capital can somewhat generically be defined as a financial investment in unquoted companies showing considerable growth potential. The investment made by venture capital firms can be seen as the bridge between the levels of capital which may be provided by the founder, family and friends and private investors, and the large amounts of money required for a listing at the stock market in order to attract large-scale institutional investments. If the target company is technology based, the venture capital investment often takes place after prototype or 'proof-of-concept' and start-up stages.(Deakins & Freel 2003) Venture capital companies influence the growth of its investments by offering its competence, not only by selecting which firms to invest in but also actively helping firms to develop.(Çetindamar 2003)

As previously noted, there is a discrepancy in the use of the term venture capital. Although a large number of venture capital companies do invest in start-ups, this is on the overall not a favoured field of investment. Instead most venture capital companies are actually involved in private equity funding such as management buy outs and/or expanding already successful businesses. In those cases that investments are made into start-ups, it is often directed towards businesses that seem substantial even in its early days and thereby capable of generating substantial profits within four to five years. Because of this, many start-up investments are made into new, high technology industries. (Stokes & Wilson 2006)

Often the entrepreneur is arguably likely to have less commercial experience than the venture capitalist which suggests that they would benefit from the venture capitalists experience and advice. Such support can be everything from “expertise, networking, contacts, sounding board for ideas, help developing strategy and identifying and recruiting top managers”. (Bains 2008) As one might tell from the argument and theories around venture capital, it is reasonable easy to argue for the many kinds of value-adding features of having a venture capitalist onboard during venture creation. This added support is a major selling point for venture capitalists but such help may not always be needed or appreciated but often follows inevitably with the VC investment. (Bains 2008) Of course, the extent of help that a VC can offer differs between firms and investment opportunities. In some cases a more hands-off approach is used for example when the existing management already have significant start-up experience. However, for the new ventures of interest for the research of this thesis it is assumed that a new venture start-up, in particularly academic spinouts, is in demand for the guidance that active, hands-on, venture capital investors could be able to provide.

3.2 The process of establishing with venture capital

3.2.1 Raising money and valuating a company

A company seeking to get an investment by venture capitalists needs to offer the venture capitalist shares in the company for taking part in the ownership. As a result, new shares, or stock, are issued in the company in order to be sold to the investor. Since new shares are issued and not sold off, all of the cash goes to the company itself and not to its owners.(Bains 2008)

The big question is how many shares must be issued by the company in order to receive a specific amount of cash. The answer is twofold. First and obvious, it depends on how big fraction of the company those shares represent which is minor technical issue. Secondly and more complex is the number of shares to be issued which in turn depends on the valuation of the company. (Bains 2008)

Valuating a company and determining its future value is a complex matter and difficult enough for well established companies. A company’s valuation depends on its current assets and expected future assets, including future revenue. Because of this the task of valuation becomes immensely more difficult when dealing with a company that merely has a research programme and some patents. Determining the expected future value of such a company is therefore almost impossible and takes a significant amount of time. (Bains 2008) One must keep in mind that in the end, the value of a company is what a prospective buyer is ready to pay. It is exactly for that reason the valuation process is crucial for the venture capital investor as it sometime in the future will sell off its shares in the invested company.

Because of the valuation process costly and time consuming character, it is understandable this is something that investors try to avoid doing continuously and therefore prefer to make investments at distinct times.(Bains 2008) There are of course other reasons for this as well, the complex investment process being one of them, but for the simplicity of this study it is not something I will delve into further although it is of general interest to this study. In areas where the number of investors is limited the preference for conducting investments at distinct times could potentially pose an obstacle for entrepreneurs seeking financing locally.

3.2.2 **Investment rounds**

Although a company has received one initial investment, further investments are often required during the company's development. Investments are often cyclical with a 'unit' of investment starting with the company asking for more cash resulting in a new process of seeking investors, negotiating terms including valuation and closing legal papers.(Bains 2008) Each investment round is performed in accordance with the stage of the company.

Typically investment rounds in any single company are made up by a syndicate of investors. A syndicate of investors simply refers to an investment made by more than one investor and the prime reason for syndicating deals is to reduce the investors' mutual risk. In other words, investors act together in order to share the total risk involved. (Bains 2008)

When syndicating a deal, one of the investors in the syndicate acts as a lead investor taking on the costs for drafting legal paperwork and performing due diligence in order to investigate the potential investments technical, commercial and financial fitness. Such costs however are usually reimbursed once the investment has been made. (Bains 2008)

Investment rounds may differ somewhat with each having it specific traits and characteristics. However, in order to keep things simple that is something that is excluded from this thesis.

3.3 Risk and returns

Equity capital usually provides a stake in the ownership of a business and therefore the investment is rewarded by dividends from profits or a capital gain when shares are sold. Equity capital investments do not continually drain a company of its cash flow such as loans that require interest and capital repayment, but instead only give a return when the business generates a surplus. However in reality venture capital investments in the UK is usually combined with some loan element.(Stokes & Wilson 2006) Since this study focus on acquiring equity capital from venture capital institutions, a further explanation on the sector follows below.

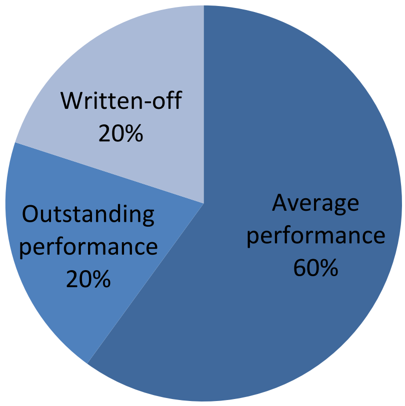

Figure 4: Typical performance of investments

Estimations by Stokes and Wilson, 2006, show that two out of every ten investments made will be completely written-off. Six of these ten investments will perform averagely and at best, two investments will outperform and compensate for the other investments' poor performance. Since venture capital investments takes a stake in the ownership of a business and the investments venture capitalist companies engage in are typically of very high risk, certain requirements on returns are prevalent in the industry. (Stokes & Wilson 2006) Typically, the investments have very high rates of return targets. Commonly, these targets vary from 25-60 per cent depending on risk involved. The investment itself also varies depending on the particular investment but usually involves a combination of equity shares, preference shares and loans. Typically the level of share ownership is less than 50 per cent but often within an interval of 30-40 per cent together with a seat on the board of directors. (Stokes & Wilson 2006) In long distance investments this could constitute an issue as it will take more of an effort to actively take part in the board and steer the company in desired course of action.

Venture capitalists aim at reducing their risk in three ways. First of all they try to know the marketplace as well as possible through due diligence and industry or deal-type specialization. Due diligence is the process of when a venture capital carefully reviews and analyse a particular investment opportunity before actually deciding to invest in the target company. (Shanley 2004) Secondly, venture capitalists try to gather the best possible management team for the opportunity in order to conduct more due diligence and selection or rejection of deals. The third way of reducing risk is focusing on damage control, making sure that the legal terms between and the venture capitalist favour the investor rather than the management. (Bloomfield 2008)

3.3.1 The exit

Where does the long term incentive lie for venture capitalists to invest? Venture capital firms' objective of investing is to achieve a high return on its stake in a company. The capital gain that can be made by a venture capital investor is usually through selling off equity rather than through dividend income.(Deakins & Freel 2003)

An exit is usually achieved either by performing an initial public offering (IPO) of a company which involves floatation of the company on stock markets where shares can be traded freely. Another option for a venture capital investor to exit its investment is by, together with all other shareholders in the company, selling it out to another company.(Deakins & Freel 2003) At the moment of writing, making exits through performing an IPO is considered as becoming more rare and difficult. This is especially the case for biotech firms which have a considerable long way to the market and may not even have a product ready at the time of an exit. Instead, such companies tend to be sold to other companies for taking research further or gaining long term benefits related to its core business.

3.4 Management perspectives of venture capitalists

Although potent technology is a necessity for investing in companies, venture capitalists state that management is the single biggest factor in determining whether to invest in ventures or not. Hence, after screening business opportunities fit with the venture capitalists investment criteria, the management quality and experience come in question. (Bains 2008) For start-up ventures this can be troublesome for most ventures besides those that run by serial entrepreneurs which have a proven track record of taking new ventures to the market.

In analysis conducted for identifying what venture capitalists thought were successful versus unsuccessful ventures, in a high-tech context venture capitalists identified “a protected product that can be brought to market and a management team capable of the sustained effort needed to bring it to market as the primary distinguishing factors”.(Bains 2008)

3.5 Changing nature of Venture capital

Venture capital has in recent years been growing in interest amongst financial institutions. The asset class popularity has driven the venture capital funds to have control over an increasing amount of money under management. As the pool of money has increased so has the minimum and average investment size. In other words, venture capital firms have increased their emphasis on later stage investments in already well established businesses which have larger capital requirements than start-ups. (Landström 2007) By changing investment focus from small volatile and risky investments, the deals have primarily been aimed towards large investments with more secure return on investments. In other words, the finance gap could be increasing in the field of venture risk capital as venture capital is shedding away from early-stage deals.

Another apparent trend in the venture capital industry is the shift in knowledge amongst investors. Previously, venture capital investors have primarily been characterised as generalists investing over a span of sectors. Nowadays, more and more venture capital investors focus on specific industry sectors. There is a trend for specialisation amongst venture capital firms’ competence.(Landström 2007) Whether this may address the earlier mentioned knowledge gap is unknown but is probably for the better on the overall since investors have a better understanding of the technology they are investing in. Later in the thesis, the specialisation of venture capital firms will be further addressed in terms of maturity of venture capital industry in specific regions.

Both trends explained above are expected to have geographical consequences on the investment patterns of venture capital firms. Notably, the importance of local investing is expected to weaken. (Landström 2007) For example, as deals grow and later stage investments are targeted, the investment perspective is inevitable lifted from the local to the wider surrounding word. The reason is simple; there may not be as many large late stage investment opportunities on the local arena as on the wider market. Regarding perspectives on competence, the reasoning is somewhat different. As investors gain expertise in their field they ought to be better able to invest on a technology basis rather than on personal levels. Perhaps they should therefore be better in determining the potential of opportunities abroad.

Hopefully, the personal level and networked level of investing could be somewhat exchanged for a better judgement on technology and its potential in a new venture.

3.6 The equity gap

The equity gap is central to this study although it may not always be apparent. The concept of a 'gap' refers to the difficulty of obtaining small sums of equity capital, or the difficulties which some businesses have in obtaining bank finance.(Storey 1998) To large extent it relates to an interval of funding requirements that is particularly hard to seek money for as there is a lack of market players willing to perform investments in the range. Of course, it is not the interval itself that is the problem but rather the risks involved with particular start-ups and a limited number of financiers in that funding range.

The terminology for the 'gap' can be somewhat confusing as the word 'gap' is mostly being used by non-economists. Economists on the other hand prefer to relate to the 'gap' in the terms of market failure or credit rationing.(Storey 1998) In this study I have chosen to use the term 'gap' as it has been the most prevalent and established terminology for relating to the phenomena as explained below.

The equity gap can be explained as where the funding requirements of a company are greater than those that small scale providers of finance can offer but still not great enough to be considered by the large scale providers of financing. (Lawton 2002) In 2004, the Bank of England outlined that the main challenge in the future of financing small firms is to accessing small amounts of risk capital, particularly in early-stage businesses.(Stokes & Wilson 2006)

The gap is not easily distinguished since it can be difficult to determine in which cases the market for finance is working well. For example when is the market behaving correctly so that good projects are being accepted and bad projects are rejected, and when are there occasions of market failure where either decision are imperfect and/or insufficient funding are provided to finance the small business sector.(Storey 1998) The case is seldom straight forward and who is to judge whether the market is behaving incorrectly or reasonable? There are a number of studies available on the topic, comparing rejected versus accepted investments, but it is not something that will be further explored in this study.

The equity gap exists due to two principle sources consisting of:

1. The finance gap
2. The knowledge gap.

In the finance gap, risks of making lower end investments are regarded as too high relative the rate of return from an investment. The result of the finance gap is that investors chose to invest in larger deals with safer returns rather than in smaller deals with higher transaction costs. (Butler 2006)

The knowledge gap on the other hand refers to when investors are unsure about potential benefits of making smaller scale investments. This is due to institutional failure that prevents them from communicating effectively. The knowledge gap tends to affect some sectors more than others and especially technology based ones.(Butler 2006)

Since the late 1970s investments have gone towards larger and larger deals and hence away from small and developing businesses. The average deal generally increases although activity swells and subsides as the market fluctuates through periodic changes. With this in mind it is declared that the equity gap probably will not go away, it will always be difficult for a small and developing business to receive funding from financiers.(Bloomfield 2008) Today in the UK, the equity gap is considered to be in the £250,000-£1,000,000 range. (Mason & Harrison 2003) That is to put in relation to the Swedish equity gap which is perceived to be in the range of X to Y million SEK.

As Bain puts it regarding the equity gap and venture capital in the UK, there's not a gap but a canyon which to a large extent can be blamed or labelled as venture capital. The reason is that venture capital firms are simply reluctant to invest in new companies being "too early".(Bains 2008) This reluctance for investing in early stage start-ups clearly raises the question whether it really is possible to go abroad for finding investors in the UK. Perhaps the investors are too preoccupied with the number of domestic start-ups and although they always will be interested in the shining stars of new start-ups, it would not benefit the broad spectrum of start-ups coming in from abroad to seek venture capital investors.

Regarding business angels covering the equity gap: In the UK, a survey suggest that three-quarters of business angels make investments of less than £50,000 and 40 per cent averaged less than £20,000 per investment.(Stokes & Wilson 2006)

Although the equity gap has been extensively covered in academic writings, there is not much information on how it can be circumvented for the individual firm. There is little question about that there is a real equity gap that composes a problem for new ventures but how can the pitfall be avoided? One option could be to look for funding and investments elsewhere than in the close proximity where it may be relatively hard to get investments from a limited number of venture capital firms. Also, as national governance differs between countries it is likely that the venture capital industry will differ as well. If there is a difference in the funding environment, it may even be so that the equity gap differs in both size and extent. In other words, can financing be found elsewhere, where the equity gap may be different or at least where different players are active in the market?

4 National venture capital markets

4.1 Venture capital in Sweden

The venture capital in Sweden is generally considered as a relatively young industry although it has grown significantly and showed a more mature character in the last twenty years. A large part of the growth of Swedish venture capital can be related to the IT-boom during the mid to late 1990's. During this time, funding from venture capital firms in Sweden nearly grew by incredible 2000%.(Lawton 2002) It should be kept in mind however that such incredible growth rate were likely made from small levels and hence the impressive growth.

According Ekström, CEO at Olink, investments in high tech companies were pioneering in the mid 90s. During the time it was relatively easy to raise capital for start ups with a significant amount of hype driving the market and the investments being performed. Of course many venture capital companies got burned with the IT-crisis in 2000/2001 and with that the willingness for taking risks quickly declined.

In the 1990s, the Swedish venture capital industry developed to incorporate a large number of firms both specialised and active in early phase investments. In particular IT and Biomedicine (biotechnology and medical technology) were the preferred areas for investments. (Çetindamar 2003)

In 1998 it was concluded that the Swedish venture capital industry was strongly oriented towards later stages. As in many European countries, the emphasis lay towards management buy-outs.(Çetindamar 2003) Today early stage investments (seed and start-up) amounted to a total number of 86 initial investments, corresponding to about SEK 786 million.(Svenska Riskkapitalföreningen 2009)

In research performed by Çetindamar (2003) it is pointed out that studies performed in 1999 concluded that the Swedish venture capital industry had not yet reached a stage where it could be considered as experienced although it could be considered to be in the process of becoming experienced. A reason for the industry not yet being regarded as experienced at the time was that many venture capital companies, which were founded in the 1990s (1994-1998 in particular), had not yet exited their early-stage investments yet. Hence, they could well be in the learning period of building competence to be used for future investments. Çetindamar points out that it "can be expected that competence must be accumulated over a couple of investment phases before a significant learning can take place". He concludes that accumulating enough experience and building further competence is likely to take a couple of investment phases. It is further argued that since a majority of Swedish venture capital firms were established in the mid-1990s, it is likely to take at least until 2010 before the Swedish venture capital industry starts to mature. (Çetindamar 2003) One however, should be aware of that this has likely changed and therefore the exact state of Swedish venture capital industry cannot simply be referred back to this statement.

In reference to Çetindamar's notes on the Swedish venture capital industry, it has to be added that his findings were related to parallel reports on the industry. For example, there are some significant differences in the reports from NUTEK (1999) and Industriförbundet (1999) can be compared to Çetindamar's findings. For instance, both concurrent reports did have significantly much lower estimations on size, early stage investments and specialisation in IT and biomedicine in the Swedish venture capital industry. However, of greatest importance were that all reports agreed on that there was a lack of competence in the industry.(Çetindamar 2003)

It should be added though that there are other significant voices in the industry and in the academics being of different opinions than those of Çetindamar. For example are there voices both highlighting the Swedish venture capital industry's significant age, tracing back to governmental organisations in the 1970's, as well as its specialised character with some number of specialised firms. Still, it is considered as relatively hard to raise private venture capital, also globally. According to Santurio at Uppsala University Innovation AB, the Swedish market is so small that there are few players that have a focus on small high tech start ups or competence to do so.

In both interviews and literature, it has been pointed out that Swedish venture capitalists on the overall are generalists rather than specialists which may be a result of Sweden being a small market. Because of the limited market size, venture capitalist firms have difficulties in achieving a critical mass of biotech companies in the investment portfolio. As a result, it is not possible to motivate the employment of specialists focusing on particular investment fields. Due to this lack of speciality expertise, investments are commonly conducted by determining potential based on personal relations or past track-records. Although this is vital for being successful, a more thorough knowledge is often required in order to accurately determine a technology's potential for commercial success.

4.2 Venture capital in the UK

The venture capital industry in the UK is estimated to be the leading market for venture capital investments in Europe. UK accounts for over 50% of the European venture capital market and is second in size in the world only to the United States which leads by some distance.(Arundale 2007) In total there are a large number of venture capital firms active on the market. Currently, the number is estimated to over 250 companies.(Arundale 2010) These firms obtain investment funds from several sources but usually include pension's funds, insurance companies, investments trusts, regional development agencies and private individuals.(Stokes & Wilson 2006)

As a result of the dotcom boom in the early 2000's, three major changes to funds have occurred. First of all, smaller funds have often disappeared and bigger funds have consolidated. Secondly, the number of active investors has declined rapidly with first-hand fund-raising by new investment managers diminishing.(Bloomfield 2008)

Bloomfield further estimates that there are about ten venture capital funds that position themselves in the front rank nationally in the UK. This simply means that these ten are the prime funds and market players. Following these is a large number of about 20-30 that position themselves in second rank which still has a significant contribution to the industry.(Bloomfield 2008) Of course there are other players as well, but these are of prime focus since one can assume that it is these players that have the resources to invest abroad and are of particular interest for ventures coming in from other countries.

In the UK, 71% of venture capital firms have located their head office to the greater London area.(Landström 2007) Accordingly, the investments performed on the domestic market are distributed relatively unevenly. For early stage investments, London and the South East dominate investment patterns.(Landström 2007)

Regarding early stage investments in the UK, the number of investments totalled £359 million in 2008. The number of companies receiving investments in the start-up stage was 455 companies which represents a decrease by 47 investments from 2007. However, only 180 companies were invested in for the start-up phase while a majority of investments (255) were made into other early stage deals. In addition, only 65 investments were made into the seed stage.(PriceWaterhouseCoopers 2009)

UK venture capital firms typically make investments of over £2 million in businesses with high-growth potential. This is to put in contrast with business angels who individually invest between £10,000 and £250,000 and syndicates (groups) where investments may be up to, and sometimes exceed, £750,000.(UK Trade and Investment (UKTI) 2009) According to Stokes and Wilson, 2006, the average investment size was then reported to be £4 million.(Stokes & Wilson 2006) Due to the formal venture capital industry's dependency on investing large sums into single businesses, venture capital is virtually unavailable or irrelevant for the vast bulk of start-ups or SME's in the UK.(Storey 1998)

In 2003, 46.2% of all investments made by UK venture capital firms were made abroad. A very high number when compared to the overall level in the whole of Europe, where only 28.8% of the invested amounts were made outside the home country. (Manigart et al. 2006) In 2008, UK venture capital invested abroad corresponded to 116 early stage companies (seed, start-up and other early stage). These investments amounted to £270 million but only represent 3% of the total amount invested abroad by UK venture capital.(PriceWaterhouseCoopers 2009) One must keep in mind that the small portion of the total amount invested relates to early stage investments smaller capital requirements.

5 Geographical structure of venture capital

This chapter will emphasise the strong geographical effects that characterise venture capital investing. Research points out that these effects to a great extent contradict the economical concept of perfectly mobile capital markets. Although venture capital firms do raise their investment funds from anywhere, their investment pattern has strong geographical constraints.

Çetindamar (2003) mentions that the venture capital industry appears to be largely nationally structured and do not seem to be affected by international competition to the same extent as for example the manufacturing industry. The lack of international competition is mostly negative for the individual entrepreneur.(Çetindamar 2003) Most apparent, although a limited number of venture capitalists make the industry easily identifiable, the competition for establishing with one may be very hard as they are limited in their number of investments. Also, although a diverse and large venture capital industry is present, it may be inefficient due to a lack of adequate competence.(Çetindamar 2003) In other words, despite the industry being both large and diversified, it says nothing about the competence of the industry.

The existence of a diverse set of specialised venture capital firms covering early stage financing is a key dimension in analysing the maturity of a particular venture capital industry. For being a mature market, both specialised as well as diversified venture capitalist firms needs to be present.

Venture capital firms which are active in early stage financing usually takes on great amounts of technical and product risks due to their investment focus. As a consequence, such venture capitalist firms should be more specialised with a more narrow industry focus and are likely to be less diversified than venture capitalist firms involved in later stage deals.(Çetindamar 2003)

As long as the venture capital industry is in its immature stages, new technology based firms will face growth restrictions. However, there are compensation mechanisms that somewhat can offset the growth restrictions imposed by the lack of a mature industry. Such mechanisms include acquisitions made by large firms and government participation in the capital market. (Çetindamar 2003)

Typically, venture capital firms are clustered in a small number of cities with most being in either financial centres or in high-tech regions. Venture capital firms' concentration to financial centres reflects the firms' origins as offshoots of other financial institutions, notably banks. This can be advantageous as both location and origin provide access to pools of knowledge and expertise that are required for finding deals, organise investments and support portfolio companies. Examples of such are not only recruitment possibilities but also access to other financiers, entrepreneurs, legal, accounting and consultancy firms and head hunters during the investment process.(Landström 2007)

In addition, venture capital investing is characterised by spatial biases, favouring investments towards business close to where the venture capitalists are situated. Furthermore, venture capitalists located to high-tech clusters tend to restrict their investing to that particular cluster.(Landström 2007)

So how come that although the location and clustering of venture capital offices not necessarily require them to invest locally, venture capitalists tend to invest in their close proximity? Their money could easily be invested in distant regions so what is restricting those investments? According to some researchers, this effect arises due to the absence of publicly available information on new and young businesses. (Landström 2007)

As venture capitalists seek to overcome uncertainty about their potential investments unproven business models, untested management teams, new technologies and embryonic markets, they seek information sharing with other players in the industry such as other investors, accountants and consultants. The information sharing is conducted on a personal level and build on mutual trust that has been earned over repeated interaction. This is not easily conducted over distance and relying on personal and professional contacts is apparent in every stage in the investment process, from deal flow generation and evaluation to pos-investment. Consequently, as information about businesses and start-ups in distant locations is less available it makes those kinds of investments more risky for the venture capitalist. Investing locally is therefore one way in which venture capitalists can reduce their uncertainty and thereby minimizing any risk taken when investing.(Landström 2007)

5.1 Deal flow aspects

Most venture capitalists receive extensive amounts of business plans from ventures seeking financing. Because of the massive workload associated with reviewing submitted business plans venture capitalists need to develop systems for working efficiently in order to quickly identify and focus on those business plans with the best possibility for succeeding. (Landström 2007)

Prospective deals have two sources; those who come in cold from entrepreneurs without references and those who are hot and are referred by trusted players in the venture capitalists networks, e.g. law firms, accountancy firms, venture capitalists and other entrepreneurs. Normally, venture capitalists are unable to rely on the information provided among cold sources as these simply are stated by the entrepreneur. Instead they prefer to rely on their networks which are usually local in characteristics. These hot leads are already screened for relevance and quality. One has to come with a very compelling argument for a venture capitalist to become enthusiastic without any previous reference. Having a referral that puts the referrals reputation on the line is regarded as a much safer bet for a venture capitalist.(Landström 2007)

5.2 Deal evaluation

As previously noted, the actual outcome of initial screening is a small number of opportunities that the investor believes have potential. As such, these undergo a careful evaluation in which the venture capitalists extensive contacts play a key role. This network is used for researching the background of the entrepreneurs, the viability of the market, present competition or on the horizon and protection of the intellectual property. Emphasis is placed on the people involved in the venture. Questions such as what they have done in the past, credibility and right integrity and ethics arise, in particular in those situations where investors believe in the technology but there is no current industry or market. In those situations, the venture capitalists' choice to invest is to a large extent dependent on the trust to the persons running the business. It is more or less a betting choice and once again, the venture's proximity and local people play an important role for minimizing risk. It is both easier and quicker for a venture capitalist to check an entrepreneurs background if he or she is local. Limiting investments to nearby firms produce better access to entrepreneur's references which easily can be double-checked by own personal connections and knowledge.(Landström 2007)

5.3 Post-investment relationships

Once an investment is made, the local focus increases in importance as the venture capitalists not only provide finance but also get involved in the company. For safeguarding the investment, venture capitalists monitor the investee companies usually by taking a seat on the board of directors and setting goals for the companies to meet. They also support their portfolio companies by providing advice and mentoring with the ambition of enhancing the investee companies performance. In some cases, venture capitalists may also play a role in the management of the company. This may especially prove beneficial in the cases of scientist-led young technology businesses. Supporting and monitoring investments in this kind of way is one of the important parts in managing the risk involved. Hence, being located close to the investment is advantageous as these activities account for a significant proportion of a venture capitalists time. (Landström 2007)

Although many forms of support do not necessarily require close contact there will be occasions when face-to-face interaction is necessary. Visiting non-local firms will not only incur high costs for each visit but the geographical proximity affects both the level and quality of support that businesses are able to obtain from their venture capital investors.(Landström 2007) Three major arguments are used by Mason regarding why the level and quality of support and advice increases with local proximity:

1. Local proximity allows the venture capitalist to work more closely with their investee companies in their support and advisory roles. (Landström 2007)

2. Venture capitalists numerous contacts in and deep knowledge of particular industries provides an important source of referrals and expertise which is a major value-added contribution of the venture capitalist. This kind of social network is more easily tapped into if the investee business is located close to the venture capital investor. (Landström 2007)

3. Third and a more soft argument is that unplanned encounters such as occasionally meeting at restaurants or coffee shops or meeting at presentations or seminars all happen routinely. (Landström 2007) One may question the importance of such occasional meetings as they are so random. It can be said however that the possibilities for such meeting will be pretty much nonexistent if the investor and entrepreneur are located to distant geographical areas.

Mason sums up these three factors as “it is precisely because venture capital is more than just the provision of capital that geographical proximity is important”. In the effort of minimizing risk and uncertainty venture capitalist is heavily reliant on their network of contacts to source deals, evaluate these and provide assistance in a timely manner to these and monitor their performance. Since all of these activities become more difficult over long distances, local investing is favoured. (Landström 2007)

5.4 Venture capital as a location factor

Following the argument as outlined above, there is a strong emphasis on local investing among venture capitalist firms. This tendency creates an attraction for firms which are seeking to raise finance but are established in other regions where availability of venture capital is lacking. Mason illustrates this by relating to Zook (2002; 2005) who observed that the importance of obtaining finance in combination with its limited mobility was a major factor in encouraging companies to move to the San Francisco area during the emergence of the internet industry.(Landström 2007)

Venture capitalists in the area that understood the emerging internet technology and were in touch with it on a regular basis had a greater tendency to invest than those venture capitalists that were established elsewhere. Venture capitalist firms established elsewhere did in general not understand the internet phenomena and were therefore more likely to reject proposals. This created a great incitement for early internet businesses to relocate to the San Francisco bay area where venture capital was more easily accessible but constrained by investing locally.(Landström 2007) Although this is negative from a deal flow perspective, the outcome may have been very beneficial for those entrepreneurs who sought financing locally, got rejected and instead approached the silicon valley venture capitalists instead. By doing so, they gained investors who could relate to the technology and hopefully provide a better guidance and support than those local venture capitalists which rejected any proposals.

In the case of Swedish life science and British venture capital however, it may not be appropriate to judge whether Swedish venture capitalists in general lack an understanding of the investment opportunities in comparison with their British counterparts. What one could look at however, is the formal competence of the people working at venture capitalists in both countries. It is highly doubtful however whether that would provide a good measurement on if it would be more beneficial for Swedish entrepreneurs to approach British venture capital rather than local Swedish investors.

5.5 Demand-side factors

The presence or absence of or rather the geographical concentration of venture capital investing, influence the demand side of venture capital in terms of knowledge and awareness of itself.(Landström 2007) In other words, the awareness, knowledge and learning about venture capital vary with the concentration of venture capital. This not only relates to entrepreneurs seeking finance but to all intermediaries in related and affected areas, e.g. accountants, bankers, lawyers and advisers. All these players will have a greater understanding of the role and benefits of venture capital. Moreover and perhaps more important they will understand what types of deals venture capitalists will consider and how the process of negotiating and structuring investments will be carried out. Given previous arguments the connections that these kinds of intermediaries have with venture capitalists is valuable for referring entrepreneurs for funding as they will be given a more serious consideration. (Landström 2007)

Overall, the demand for venture capital increases in locations where venture capital is already present. This is a strong mutually reinforcing process as venture capitalists emerge and develop where high level of innovative SMEs are established. This in turn stimulates and expands the local venture capital market which then contributes to additional growth of local SMEs. (Landström 2007)

In areas where venture capital firms are few or non-existent, the relationship is different. Knowledge amongst entrepreneurs and intermediaries will be weak and incomplete about venture capital, thus depressing the overall demand for venture capital. Connections to venture capital firms will be few and intermediaries will be less competent in advising clients on how to reach out to venture capitalists and become ‘investable’. (Landström 2007) There is simply not enough knowledge of or connections to venture capital to thoroughly appreciate the need of or benefits from venture capital funding.

5.6 Long distance investing

With all talk about the local character of the venture capital industry, is there any possibilities for long distance investing, which in the end this thesis primarily is about? Of course, Mason reasons that it is important to not only appreciate that venture capital emphasise local investments but also recognise the occurrence of long distance investing.

It is worth noting though that long distance investing tends to reinforce clustering of investments rather than disperse them. The reason is relatively straightforward since long distance investing flows to areas with already high concentrations of high tech businesses. In previous research it has been observed that venture capitalist firms established in financial centres make most of their investments in distant high tech regions. This can be put in contrast to venture capitalist firms established in high tech regions who rather invest locally in the region they are established in.(Landström 2007) The result is an increased focus on high tech regions as both local and distant investors make their investments in these regions.

The cause behind this tendency of investing into high tech regions is venture capitalists dependency on syndicating deals for their investments. Non-local venture capitalist firms typically syndicate deals, co-invest, with local investors established in or close to high tech regions. The syndication process arises because young growing high technology business often need several rounds of investments, with each round involving large amounts of money, before becoming successful. Since venture capitalists are risk averse they try to keep their portfolio diversified and is therefore limited in the amounts of money and number of investment rounds they can take part in for one single company. Instead, in order to raise additional finance, they syndicate the deals with other venture capitalist firms in order to keep the investee financed.(Landström 2007)

According to previous presented theories, the investee benefit from additional venture capital investor by gaining access to additional networks and competence. Something that may be crucial to the investee as the current investor may be better at providing guidance in the early growth phases whereas other venture capitalists may be better at providing support during the mature business development. In later investment rounds, since the investee already has a local lead investor, distance is not of importance when syndicating deals. Previous studies is also claimed to see an increased importance for syndicating deals in longer established venture capital firms. (Landström 2007)

5.7 Cross border venture capital

In relation to the overall research on venture capital, cross-border investments conducted by venture capitalists are a much neglected area for research despite increasing in importance. Cross-border venture capitalists are defined as venture capitalist investors being foreign to the new venture it invests in.(Mäkelä & Maula 2005)

In particular have fast growing global ventures in small open economies, such as Sweden, attracted investments from venture capitalists abroad in order to support their internationalization process. (Mäkelä & Maula 2005) This raises the important question on how financing from abroad is found and attracted. Are domestic start-up companies passively waiting on being approached by foreign venture capitalists or are these companies actively looking for funding by going abroad and actively pursue investments?

In the research conducted my Mäkelä and Maula (2005) a number of propositions were founded based on their findings. One of the main findings was that at best, a cross-border investor may powerfully legitimize the investee on foreign markets. But despite certain advantages there are also costs associated with being invested in by a venture capitalist investor abroad. One of the most notable disadvantages includes the risk of being pushed into 'incorrect' markets by the foreign investor. In these cases, markets are targeted which simply put are not optimal for achieving substantial growth for the investee.(Mäkelä & Maula 2005) Perhaps this implies that the particular investee needs to perform its homework before just going with 'any' foreign investor. Again, this emphasise the importance of not only looking for money when searching for an investor. Rather, there should be a good match in terms of competence, work processes and objectives.

It has to be noted that not all research points towards a positive relationship between SME's being funded by venture capital and their internationalisation intensity. In a study performed by Joseph A LiPuma (2006), 1,348 young technology firms were examined on how their source of funding had an impact on their exports. The study found a negative relationship between firms' internationalisation intensity and their receipt of venture capital.(LiPuma 2006) However, as the study focused on technology SME's in general it is difficult to say whether the results are transferrable to more specifically constrained populations of companies such as biotech firms or to companies without origin in the United States. Another question that should be added regarding the research by LiPuma is what types and geographical origins the investors had. The study does not reveal whether cross-border investors had a greater impact on exports than domestic venture capitalist investors.

6 Interview results

6.1 Attractiveness of Swedish life science

Several overall factors lift Sweden as an attractive investment market for the interviewees at British venture capitals. All interviewees for example emphasized that Sweden certainly is within scope for their investment possibilities, something that was mentioned as definitely not being the case for all European countries. In addition, Sweden's barriers of entry for investing are relatively low in terms of cultural, language and physical distance.

More important for the attractiveness however is the quality of research stemming from any country. Again, Sweden is perceived as very positive in this aspect with both quality research and a considerable management pool. Sweden's good quality research and management pool of people which is perceived to benefit from large pharmaceuticals such as Astra-Zeneca. Interviewees conclude that the big pharmaceutical companies provides a good base for building quality management pools which are able to start-up and run successful businesses.

There are issues though; two of the interviewed venture capitalist expressed concern over the recently announced shutdowns of big pharmaceuticals may have a long term effect on the management pool. One of the interviewees reasoned that the fewer the people with good backgrounds in pharmaceuticals there will be less people qualified for taking position in the senior management of biotech companies. Closures of pharmaceuticals detract the ecosystem of relevant competence.

When comparing the Swedish management pool with the United States, the picture of what is good management somewhat changes. US counterparts for example are seen as more competent due to its large share and number of serial entrepreneurs. The willingness for taking on new entrepreneurial challenges is simply greater in the US than in Europe and in Scandinavia. Here, people tend to retire after making a successful business. Hence, the competence is not put to further use at other companies.

"Obviously we do see good companies from here as well but on the overall and across the border, the quality of the management teams that we see in the US and here is not very good in comparison with the US ones", Interview with Lünneborg, N., 2010

In regards to the management competence, it is also added that a challenge with Swedish companies is its high dependence on academic scientists involved in the companies. Although they may be perfectly fine as scientists these do usually not have the ability to run a company or "sell" its story. Although the investment should be about the technology, in reality it is also about to explain and sell the business idea. There are a limited number of chances to meet with investors and potential partners which makes these skills even more important. Alternatively, it could therefore be of interest to connect with an intermediary for initiating meetings with venture capital firms abroad. By doing so a company could increase its potential pool of investors and thus chances of finding appropriate investors which perhaps will be located away from the local uptake region.

6.2 Limitations on investment scope

Although the general attractiveness of Swedish life science is good, it is very much limited in geographical scope. From the interviewees at venture capitalist firms, it can be concluded that only a few specific regions are highlighted as interesting regions for potential investments.

Regions that were mentioned repeatedly in interviews as regions of interest include the regions of the Stockholm area, Lund and Uppsala. In terms of the regional interest of Stockholm, Karolinska Institute was considered as key since it is perceived as a quality research facility and with good contacts to venture capitalist firms abroad.

In contrast to the attractive areas it was also outspokenly so that peripheral areas are of very little interest to the interviewed venture capitalists. One interviewee provided an example where representatives from Umeå had presented the area as up and coming to the interviewed venture capital firm. Their arguments were largely disregarded as the interviewee found it highly doubtful that the area would be of any major future interest for the venture capital company in question. One of the reasons for the venture capital company to so quickly disregard the area mostly related to practical issues in terms of potential recruiting issues. In other words, the local management pool is regarded as to small or that it would prove hard to attract key competence from other management pools to the region in question. For such reasons, the venture capitalist would like to see the company relocating simply because it could prove difficult to recruit if any changes to the investment company's management need to be made for any reason.

The performed interviews confirm the behaviour of venture capitalists tendency to invest in established regions and hence reinforce clustering. In addition, as outlined in Landström (2007), the venture capital investors stating this kind of tendency are all large investors established in the financial centre which London is. Of course an explanation for the behaviour is in the venture capitalists expression to rely on local investors to syndicate deals with. The real question is whether it is possible to have a cross-border venture investor to act as lead investor on a foreign arena.

This self reinforcing process of clustering could have significantly negative impact for the entrepreneurs. For instance, is it possible for an intermediary to promote investment opportunities located away from clusters and regional innovation areas? It is doubtful whether an intermediary could succeed in attracting foreign venture capital investors to consider firms which are located off clusters which have no local investor.

In addition to the limitation on investment scope in Sweden, one interviewee added that they are unlikely to act as a lead investor or invest in early-stage investments in academic spinouts as the investment would just take too much time and effort. For just that reason it was added that it makes sense to invest close to home rather than be forced to travel or relocate.

6.3 Contact with potential investments

6.3.1 Discovery of investment possibilities

It is outspokenly so that any venture capitalist tries to be as proactive as possible in finding investment opportunities. Basically, three main avenues are mentioned for finding companies to invest in. Either the company itself gets in touch with the venture capitalist directly, the venture capitalist itself finds the investment or through introductions by other venture capitalists. Some of this work includes searching databases on the regions the investor has interest in.

Closely related to all avenues are conferences which are related to both partnering pitches as well as for networking. It is common for venture capitalists to find out about potential investments through the buzz on such events. This is particularly apparent when a partner of a venture capitalist attends conferences. Often having significant work experience with an established network and in some cases a well known name, it is very common for people to show interest in regards to interesting companies and investment opportunities.

In some cases the venture capitalist can benefit from having expatriate employees. At Apposite Capital for example, the interviewed person were originally from Denmark which gave her a comparative advantage when finding investments in the Scandinavian countries on the overall but of course more specifically so in Denmark. However, there are firms that go further and place one or two employees abroad in the countries and regions of interest for covering for example Sweden and Norway or Finland and Sweden etc.

In relation the local venture capitalists, all interviewed UK based venture capitalists emphasize their networks and how they are well connected in Sweden. At Apposite Capital for example, it is mentioned that they often meet with Swedish venture capitalists, two to three times a year. Although it was also added that all relations always can be improved, these connections help in that companies get to know what the UK venture capitalist is looking for and hence get contacted regarding these types of deals.

Intermediaries, although they exist, are not regarded as a common, or frankly, desired route for getting in contact with investment possibilities. As one investor puts it, “the good companies tend to go directly [to the venture capitalist] without wasting money on intermediaries”. However, an intermediary may prove more beneficial if the venture capitalist would be on a more active lookout for deals which not necessarily comes through other local investors with interest in the companies presented.

6.3.2 The role of local investors

All interviewed venture capitalists conclude that the involvement of local domestic venture capitalists on the foreign market has a very important function in relation to venture capitalists from abroad. It comes not as a surprise and can easily be determined from reading theory on the subject of venture capital. The pattern is unmistakably apparent in the interviews conducted and most reasoning regarding venture capitalists foreign investments ends up in the importance of having local co-investors onboard for reaching foreign venture capitalists.

Although no venture capitalist would disregard any potential investments that had not come through one of the local venture capitalists in Sweden, one of the first questions that will be asked is what the local investors thought about the company. No matter how interesting a company might be, the UK based investor would be questioning why the local Swedish venture capitalists, which that they are familiar with, why had they not seen the company as worth investing in.

This dependency on networks and referencing can truly be annoying for companies seeking investments. A firm seeking venture capital directly on foreign markets may find it difficult without firs being invested in, and quality checked, by a local venture capitalist firm. In other words, there is somewhat of a catch22 moment and for the entrepreneur, the world of the venture capital can be perceived as very small and interconnected. References by local venture capitalists are therefore highly important as it gives credibility for reaching investors abroad and syndicating investment deals.

On the other hand, although venture capitalists point out the importance of having local venture capitalists that can provide credibility they can still see why companies look for investors abroad directly. An argument perceived as somewhat of a paradox. If venture capitalists see the value for entrepreneur seeking investments abroad, why don’t they appreciate that there are opportunities to invest in? The reason may be explained by venture capitalists being risk averse and hence reluctant to take on unknown, untested companies seeking to approach investors abroad directly. The comfort of having a local co-investor is likely to be of such importance that alternative investment routes suffer.

Of course domestic investors established locally on the market play a vital role in how venture capitalists become aware and invest in Swedish life science. In those cases where networks to Sweden have been mentioned in interviews there are only a few Swedish venture capitalists that are reoccurring in discussions. For example are Health Cap, Scandinavian Life Science, Investor Equity Group, SEB and Karolinska Development few of those companies that most often are referred to. Apart from them, very few or none other Swedish venture capitalist was mentioned. However, one investor at Apposite Capital nuances the discussion with "I don't say we necessarily have a full view of all different companies in all regions but we have quite a few different avenues".

One such avenue is industry associations which can give recommendations on interesting members or other companies that are in the buzz. Lüneborg at Apposite Capital explains that they are familiar with for example SwedenBio. However, such industry associations which although do a good job, is better at introducing start-up companies that are not yet known to the venture capitalist but too early in the development. Such companies are good to have on the overall radar but needs further development before being investable.

In terms of collaborating with intermediaries for reaching unknown investment opportunities, both Lüneborg and Pasteur concur on that it would be desirable to occasionally be presented with a list of companies from Swedish life science. Such a list of companies would constitute of companies being early stage but has developed somewhat from the very initial stages. Ideally, the companies listed would have been established for 3-4 years and expected to be looking for funding within 1-2 years.

6.4 Handling of geographical distance to investment

Another dilemma when seeking venture capital from abroad is that venture capitalists established abroad like to see other foreign investors already being onboard in a potential investment. Although it is not perceived as a strict no-go condition, it is desirable in order to avoid small cultural clubs of investment-investor relationships which in the long run could pose a communication problem for the foreign investor. Too often UK venture capitalists experience their foreign investments as small regional or cultural clubs in which all people involved have a local educational and professional background. The phenomenon of highly local companies with solely local investors is mentioned as particularly prevalent in smaller countries such as Sweden and Denmark.

The concern with companies being a cultural or local club is twofold. The First issue of cultural clubs is that when there is only one investor being an outsider, the outsider will be the last one to receive news and the last one to contact regarding any enquiries. The second concern is that the network will be highly limited to the region which is considered as a disadvantage from a research and commercial perspective. A related issue that may arise is that the company team inflates their expertise perception. A company may be experts in their field in their local cluster, perhaps since no one else is doing the same thing. On a global scale however, they may still be performing well and even be among the top 10 research teams but they may not be as good as they think they are.

With these issues in mind, the interviewed venture capitalists much would like to see and demand that at least parts of the management have significant working experience from abroad. As one the interviewees put it, it does not matter if all people are from one single country as long as one person has worked abroad ten years abroad in for example the United States.

6.5 Offer and value added by British venture capital investors

At Abingworth and MVM Capital it is explained that each of the venture capital companies very much consider themselves as early-stage investors, investing in all stages from early academic start-ups to public companies. Both companies however, although more so at MVM Capital, used to have a greater focus on early-stage investments whereas they have now become increasingly interested in mature investments. As their funds has grown in recent years, so has their initial investments. Hence, with the larger investment amounts many companies do not qualify for the sizeable investment.

Although the venture capitalist industry is generally perceived as a good source of competence, in addition to the money it can provide, there are many companies looking for investments that not fully realise this potential. The picture is confirmed at Abingworth which describe that many investees only look for money and do not appreciate the full competence that a venture capitalist can offer. Often, companies looking for investors look for solely the cash when it really should look for the extensive offering besides any money provided. For example, at Abingworth there is large number of people which have an operational or scientific background. In quite a few cases they therefore have the possibility to run early stage start-up companies for the first few years before the company really takes off. Even though this is a service that they often provide, there are few companies that actually look for such competence even if they may benefit from it in the end.

According to the interviews performed with British venture capital investors, they seem to consider themselves to have a more international perspective than their Swedish counterparts and in addition act as a bridge to the US and the global market.

In comparison with the American counterparts however, the British investors have some difficulty in comparing themselves in terms of competence and offering with the American venture capital firms. Instead, it is articulated that a potential reason for going with a British investor often comes down to practicalities as American investors are established too far away physically. The perception of the European venture capital industry compared to the American is that there is much more competition regarding the potential opportunities over in the states than there is in Europe.

7 Discussions

7.1 Maturity of UK venture capital

When studying the British venture capital industry and with the interviews performed in mind, it stands clear that the venture capital industry in the UK can be considered as mature in its lifecycle. For example, there are a large number of specialized venture capital firms which are focusing on one or a few investment areas.

Çetindamar reasons that in order for a venture capital industry to be considered as mature, it needs to encompass venture capital firms that are specialised or willing to invest early stage. However, in interviews several people pointed out that although they considered themselves as early stage investors, or that they had been investing in the early stage, there is a move away from performing investments in the early stage. This contradicts Çetindamars argument and can be derived to the increasing pool of money that venture capital firms are able to pool into.

As the venture capital firms themselves grow their pool of money, so are their investments. It simply would not make sense to invest the same kind of money as previously but just spread these investments out on a larger number of opportunities. This is a paradox as this would be desirable from a risk managing perspective but would not be possible from a control perspective. As the venture capital firms in this study all emphasise their active involvement in their invested firms they simply cannot grow their investment base without significantly alter their organisation. In other words it is too cumbersome and expensive in terms of overhead to manage a large number of investments. In the end, the active monitoring and control would only be dealt with briefly, thus increasing the risk involved.

On the other hand, what is active investing? A number of the interviewed venture capital firms outspokenly said they would not chose to be a lead investor in foreign countries due to not being able to properly monitor and control their investments. Hence, they are dependent on syndicated deals, preferably with a local investor. Perhaps it would be desirable to catch the UK venture capitalists attention in order to expand the equity base and its advice from time to time. However, it may not be desirable to reach out to UK investors for catching their interest and active management in a particular foreign company.

7.2 Deal evaluation

In the deal evaluation process it stands clear that the interviewed venture capitalist firms behave in accordance with Mason's arguments in Landström (2007). The active search for firms is somewhat limited geographically. The venture capitalist firms in the UK are somewhat constrained to find and lead investing in companies established in the UK. However, there are examples of firms that have one or two employees based in the Scandinavian countries for finding and selecting possible investments abroad. In such cases where there already are local employees scanning the local markets, there might be difficult for arguing to use intermediaries as there already are just as strong or stronger connections to the market. For an intermediary function between investor and investee, such functions ought to focus on venture capitalist firms that do not have local employees.

7.3 Location factor

When discussing the hypothetical case of a firm established in the north of Sweden, outside any well known life science cluster, it was outspokenly so that it is likely to be disregarded.

However, if it was a compelling business with the willingness of relocating, the case could be different. Accordingly, venture capital as a location factor could be of interest for the individual firm trying to enhance its chances for receiving venture capital backing. This comes with some issues though which makes the work of an intermediary somewhat complicated. Of course, for the individual firm that requires financial backing and is willing to relocate it provides a good opportunity for developing the business. Also, if we consider the European market as one and aim at improving its competitiveness in relation to other worldwide markets it can be considered as advantageous for relocating a particular firm from Sweden to the UK for either finding capital or because it has already been invested in by a British investor. Whether this should be encouraged or not by an intermediary who is promoting the Swedish regional area is questionable. No matter if we look at Sweden as a national market or part of the EU market, the role of an intermediary such as the Swedish Trade Council is to promote businesses and their growth which are beneficial to the regional area of Sweden. Relocating a start up business and removing its direct connections to Sweden may not be the primary aim for a partly state owned trade facilitating organisation. Of course, in the long run, the relocation may have beneficial aspects to the region of Sweden, especially if seen as a part of the European community, but it is uncertain whether it could be promoted by the mission in promoting growth in Swedish business located to Sweden.

7.4 Long distance investing

As explained in interviews, venture capitalist firms prefer to invest into already established regions or clusters which are related to the field of the investment. The picture confirms the established perception as described in Landström (2007). Most investments conducted by venture capitalists established in financial regions, such as London, are usually performed in distant high tech regions. The venture capital firms in the London area are no exception with most talk of the investments being directed to clusters in the UK but also sometimes abroad.

The venture capitalist firms did also refer as to being dependent on local venture capitalists to co-invest with. Although it was never strictly related to any particular high tech clusters, the same venture capitalist firms in Sweden were mentioned over and over again. One may suspect this has an effect on the geographical pattern of the conducted investments. The venture capital investors from abroad in the UK are likely to strengthen the investment patterns conducted by a few local players in Sweden.

The question that is raised is whether an intermediary could change the behaviour of venture capitalists tendency to reinforce local clusters through their investment patterns. Could an intermediary objectively lift regions of particular interest and present companies in these regions towards venture capital investors established in a financial centre such as London? Perhaps, but it is likely to prove very difficult not just due to the investors concern regarding management pools, recruitment and logistics but also whether an intermediary could present peripheral companies without suffer in terms of trustworthiness and respect.

7.5 Interest for Swedish start-ups in British Venture Capital

In literature it is stated that Swedish venture capitalist firms largely invest based on personal relations and referrals by people they have connections to - a statement which is confirmed by Edstrom, CEO at O-link. This argument goes well a majority of interviews indicating that firms coming in to investors based on referrals have better possibilities for receiving funding. Because of this tendency and the relative hardship of finding investors without any good connections to the local venture capital industry, it could be of interest to further reach out to investors based abroad. Accordingly, UK based venture capital firms could be of particular interest when looking for investors abroad due to their relatively long experience in relation to remaining Europe.

In addition, it is stated that the Swedish venture capital industry is too small to sustain employment of the necessary amount of specialists in for example the biotech area. Few firms reach the critical mass of biotech investments that is necessary for actually employing persons working full time in such a narrow field of interest. Although not examined it is not unreasonable to believe that this may have a further strengthening effect on the importance of relying on referrals for investment pitches. If that is the case, it further emphasizes the importance for start-up companies to widen their perspective when looking for investors and not rely on the ones available with local proximity.

7.6 Difficulties in attracting venture capital from the UK

One reason for this can be as the funds grow with larger venture capital companies so are administration costs. Therefore, larger venture capital companies often chose to do fewer but larger investments instead of many small investments which would increase costs associated with administrating portfolio and funds. With this in mind it stands clear that the larger venture capitalists that go abroad are often not an option for the smaller biotech start-ups that are in focus for this report. It pose somewhat as a catch 22 where the large investors focus on bigger investments where the smaller investors in the UK focus on specific regions within the UK. It is somewhat a generalised picture that needs further research but at this stage of research the situation is leaning towards negative for small start-ups seeking investors in the UK.

It is interesting to see that the UK based venture capital investors hesitates to invest in foreign companies without having a local investor already invested in the company. The situation is similar to the one domestically in the UK where smaller venture capital investors are established close to the opportunities in for example Cambridge and invests locally.

Much of the characteristics and perceptions mentioned are most likely attributes that are desirable or less positive but nothing is black or white and most things are just things to keep in mind for a good mix.

8 Conclusions and recommendations

8.1 Attractiveness of UK venture capital

After performing a thorough literature review as well as complementing these studies with interviews, it can be concluded that British venture capital is of great interest for start-up companies. The sheer number of companies in the industry together with a high degree of specialisation provides venture capital with expertise and funds available to a great number of start-up firms. In addition, UK venture capital investors can be said to be used to investing abroad which is highly beneficial. However, with the UK being a larger market and acting as a springboard to European mainland from non-EU companies is likely to pose a great share of competition for reaching UK venture capital.

The conclusion is somewhat ambiguous as there is little doubt that UK venture capital is highly desirable but perhaps not as easily attainable or just as difficult to establish with as local venture capitalists. If this is the case, then perhaps an intermediary does have a role to fill and would be desirable to go through for reaching the UK pool of venture capital.

8.2 Role for intermediaries

I think the result of this preliminary study is basically twofold regarding the usage of intermediaries for reaching venture capital. There is without a doubt both short term benefits and long term issues related to whether an intermediary, such as the Swedish Trade Council, can take on a active role in facilitating Swedish companies to get invested in by UK investors.

In a short term perspective there is little doubt that intermediaries has a role to fill and which some venture capital firms has expressed an interest in. Although all interviewees said they certainly had their eyes on Sweden's biotech and life science clusters from the start, a few of them also added that they in no way have a complete perspective or that they know all firms of potential interest in Sweden. In that respect, an intermediary could be of assistance in presenting potential investment opportunities by mapping out the industry and compile a list of companies to be presented. Venture capitalist firms of interest could then select those businesses which are off to be further investigated and presented. A forum would then be set-up, inviting selected companies and letting them present investment pitches towards a group of venture capitalists. Although this is a desirable setup from the perspective of venture capitalists, it much resembles already established investment pitch roundtables at other forums and exhibitions. An example of such is the Anglo Nordic Biotech Conference in which the Swedish Trade Council already plays a part. In other words, setting up a similar forum is likely to prove counterproductive and harming the Anglo Nordic Biotech Conference which already is an established arena for presenting towards investors.

However, let's say a format of presenting investing opportunities is performed in a way that is of interest to venture capitalists firms without affecting the Anglo Nordic Biotech Conference, other issues are bound to arise. In a long term perspective the role of the Swedish Trade Council gets both more complex and ambiguous. Having performed and presented venture capital firms with a list of interesting companies as explained above the relationship with venture capital firms will be enhanced with the result, if the collaboration is successful, of a better mutual trust. Having presented companies to a venture capitalist firm in the past will make the process more difficult in the future. No longer will a long-list of unknown companies be easy to find and be ready to present for a venture capitalist to examine further. Instead, a majority of prospects will be known and those that are new on the short list to be presented to a venture capitalist need to be of high quality in order for the Swedish Trade Council to continue to be perceived as a trustworthy partner to the venture capitalist firm.

It seems that a number of questions arise that may not be appropriate for the Swedish Trade Council to address. For example, how can the Swedish Trade Council continue to promote Swedish start-ups for venture capitalists without risking of risking its trustworthiness towards these players? With the short term and long term problems in mind it stands clear that one has to delve deeper into the venture capital industry in order to find other setups that could be of interest in presenting companies to venture capitalist firms. As it is for now, the most obvious setup is to take a more active role in pitching companies from Sweden towards venture capitalist firms within the Anglo Nordic Biotech Conference setup

8.3 Potential business framework for intermediary work

If an organisation such as the Swedish Trade Council would take on an intermediary role in facilitating investee and venture capital relations, what would be a good business model for doing that? For answering that question one must keep in mind that we are dealing with companies looking for funding and not necessarily in a position to spend a great lot of money. Although a trade facilitating body as the STC in no means is to maximize profit but rather promote Swedish businesses, there is need to have some sort of business model in place for creating a sustainable position with potential for long term work towards Swedish start-ups and venture capitalists in the UK. In other words, there need to be some sort of financing in place for conducting intermediary tasks.

What could be of particular interest is to setup investment pitch roundtables involving both UK venture capital firms as well as local Swedish investors. The thought of doing so is to encourage networking since many of the interviewees emphasise the importance of referrals and syndicated deals. On the other hand, venture capital firms may be reluctant to fund such forums as they already consider having good relationships with these market players.

Another channel of interest could be to work with an incubator which itself has done due diligence of the companies it has interest in. The intermediary would then be able to present and lobby for particular incubators and their collective of companies.

A difficult question however is the exact funding structure for setting up a facilitating forum for investment pitches towards UK venture capital. After performing this study I must come to the conclusion that it is rather too early to tell exact how the financing could be structured. Instead it is a question that should be further evaluated in discussions with venture capitalists if plans for taking an intermediary role would develop.

8.4 Suggestions for future research

As previously noted this study is somewhat focused around the supply side of venture capital. Although it is of great interest I believe complementing the study by looking at the demand side of venture capital would be highly beneficial. It is however a much more fragmented and not as easily distinguished segment which therefore may not be appropriate for a mere master thesis. Even in the established literature, researchers have a strong bias towards the supply side rather than the demand of venture capital.

Another potential area of interest could be to study the role of incubators and their relationships with investors. How are incubators handling relationships with investors from abroad and are incubators perhaps bridging access to foreign venture capital?

An area also related to this study but not covered explicitly are conferences and forums for networking and investment pitches. One could look into the success rate of these forums for investments. How many companies actually get invested in at these kinds of events?

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