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# Swedish hedge funds

An analysis of the Swedish hedge funds' investment strategies and risks associated with hedge funds

Bachelor's thesis within Finance

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JÖNKÖPING INTERNATIONAL BUSINESS SCHOOL
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# Svenska hedgefonder

## En analys av de svenska hedgefondernas investeringsstrategier och risker associerade med hedgefonder

Filosofie kandidatuppsats inom finansiering

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## Bachelor's Thesis in Finance

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| **Title:** | **Swedish hedge funds** |
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# Abstract

### Background

Out of the different fund categories hedge funds have had the highest development in Sweden since 1994. Swedish investors' interest in hedge funds doubled from 2005 to 2006. Hedge funds are said to be an investment with a low risk and not being dependent upon business cycle movements. Historically there have been high initial investments, most often over 100 000 SEK, required to invest in hedge funds. This has started to shift towards lower initial investments. This is a reason why hedge funds start to become interesting to private investors and not only to institutional, and wealthy private investors.

### Purpose

The purpose of this thesis is to explore what different investment strategies and sub strategies that are used within Swedish hedge funds. Also specific risks and risk measurements, depending on investment strategy, will be investigated and compared.

### Method

In order to meet the purpose of this thesis a qualitative approach has been used. A questionnaire, with both closed and open-end questions, was sent to 13 hedge fund managers operating in the Swedish hedge fund market. Afterwards, four semi-structured interviews were conducted. Two of the interviewees are hedge fund managers who also answered the questionnaire. The others were with a person who is a hedge fund analyst and a person working at the Swedish Financial Supervisory Authority (SFSA).

### Conclusion

Out of the five different investment strategies investigated the two most widely used in Swedish hedge funds are funds of hedge funds and equity hedge. The sub strategies that are used within the Swedish hedge fund market are those with a focus on low risk.

Within Swedish hedge funds there are some specific risks and risk measurements that are useful. Sharpe ratio is best used to compare similar funds. Standard deviation is useful to evaluate each specific hedge fund. How much leverage capital that can be used is decided by SFSA. Yet, the risks depend on the hedge fund manager rather than the investment strategy used. This, due to the fact that the hedge fund managers have an own interest in the hedge fund.

## Kandidatuppsats inom Finansiering


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| **Titel:** | **Svenska hedgefonder** |
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# Sammanfattning


### Bakgrund

Av de olika fondkategorierna har hedgefonder haft den främsta utvecklingen i Sverige sedan 1994. Svenska investerares intresse i hedgefonder fördubblades från 2005 till 2006. Hedgefonder ämnar vara en investering med låg risk och oberoende av förändringar i konjunkturen. Historiskt sett har den obligatoriska initiala investeringen varit över 100 000 SEK, bara för att få investera i hedgefonderna. Numera har det börjat ändras till lägre initiala investeringar. Det är en anledning till varför hedgefonder börjar bli mer intressanta för privata investerare och inte bara för institutionella och förmögna privatpersoner.

### Syfte

Syftet med den här uppsatsen är att undersöka vilka olika investeringsstrategier och understrategier som används inom svenska hedgefonder. Även specifika risker och riskmått, beroende på investeringsstrategi, kommer undersökas och jämföras.

### Metod

För att besvara syftet med den här uppsatsen har en kvalitativ forskningsmetod använts. Ett frågeformulär, med både öppna och stängda frågor, sändes till 13 hedgefondförvaltare som arbetar på den svenska marknaden. Efter frågeformuläret genomfördes fyra semistrukturerade intervjuer. Två av de intervjuade var hedgefondförvaltare som även svarade på frågeformuläret. De andra intervjuerna var med en person som arbetar som hedgefondanalytiker och en person som arbetar på Finansinspektionen (FI).

### Slutsats

Av de fem olika strategierna som undersöktes var de två mest använda hedgefondstrategierna på den svenska marknaden fond-i-hedge-fond och aktie hedge. Understrategierna som används på den svenska hedgefondmarknaden är de med fokus på låg risk.

Bland de svenska hedgefonderna finns några specifika risker och riskmått som är användbara. Sharpekvot används bäst för att jämföra liknande fonder. Standardavvikelse passar för att utvärdera varje specifik hedgefond. Hur mycket lånat kapital som får användas bestäms av FI. En viktig slutsats är att risken beror på fondförvaltaren snarare än vilken investeringsstrategi som används. Detta eftersom hedgefondförvaltarna har ett eget intresse i fonden.

# Special thanks to:


The respondents of our questionnaire:

Christer Andersson at Systematiska Fonder JPA AB

Henrik Dahlgren at SEB Investment Management AB

Mats Gustafsson at Lannebo Fonder

Pia Haak at Swedbank Robur AB

Björn Jonsson at Banco Fonder AB

Roger Lindroos at Nordea Fonder AB

Georg Norberg at Erik Penser Fonder AB

Per Sommerlou at HQ Fonder Sverige AB

The interviewees:

Christer Andersson at Systematiska Fonder JPA AB

Erik Eidolf, author of Hedgefonder

Roger Lindroos at Nordea Fonder AB

Oskar Ode, and Mattias Olander at Finansinspektionen

Our tutor:

Jan-Olof Müller, Lecturer at Jönköping International Business School

Our contact person at Risk and Portfolio Management

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# 1 Introduction

*This chapter gives an introduction to this thesis. A general background of the subject is followed by a problem discussion, which leads to the research questions. The research questions are followed by the purpose of this thesis.*

## 1.1 Background

The Swedish bond market was founded in 1863 and has until the end of 2006 developed to a total of 1251 funds with a total value of 1 527 825 MSEK. The development was strongest between 1970 and 2000. In 2006, 77 per cent of the Swedish population was investing in funds, excluding governmental pension funds (Fondbolagens förening, 2006a).

The funds are split into the four categories; mutual funds, multistrategy funds, fixed income funds and hedge funds. The last of those, hedge funds, has had the highest development of all funds in Sweden since the introduction in 1994. In the end of 2004 there were 50 hedge funds and in the end of 2006 that number had risen to 59, indicating the development of hedge funds (Fondbolagens förening, 2006b).

The main difference between hedge funds and traditional funds is that hedge fund managers are allowed to be more flexible when choosing their investments. More investment tools and techniques are available for hedge fund managers (Wolfinger, 2005). Hedge funds can also contain leverage capital to boost performance (Barker & Hui, 2003). According to Ineichen (2003) the development of the hedge funds are dependent on the knowledge of the hedge fund managers concerning the different financial instruments.

In 2006 the interest for hedge funds was twice as large as in 2005 and the Swedish population has never saved as much money in hedge funds as they did in 2006. The reason for this, is that the Swedish investors now are looking for funds with lower risk (Ekonominyheterna, 2006). Risk is also the most important factor when investors choose to invest in funds (Fondbolagens förening, 2006b). Hedge funds are a relatively low risk investment and are therefore a suitable investment alternative for investors who prefer lower risk in their investment (Ekonominyheterna, 2006).

The connection between low risk orientation and hedge funds is that hedge funds are said to give an absolute return and to be independent of business cycle movements (McCrary, 2002). Hedge fund managers have greater possibilities, than managers of traditional funds, to change investment strategies when the market changes. By doing this, it is possible to hedge against the movements and receive return independent of the market. For the Swedish population this is certainly interesting since the Swedish business cycle has been pointing upward for a while and there has been a growing anxiety in the stock market. Stefhan Klang, the CEO of Catella Funds, says that he believes in a growing interest in hedge funds and is not worried by the anxiety in the stock market since hedge funds have low exposure to the market (Åkesson, 2007).

Even though the interest in hedge funds seems to increase, it is still only one per cent of the Swedish investors, both private and institutional, that choose to invest in hedge funds (Fondbolagens förening, 2006b).

## 1.2 Problem discussion

To the Swedish private investors, hedge funds are relatively unknown. It is a finite group of Swedish investors, mostly institutional and wealthy private investors who invest in hedge funds. This since the hedge fund managers primarily aimed for this group of investors. Another preference could be that the minimum initial investment was more than 100 000 SEK and in some cases up to several million SEK. In recent years these preferences have started to change. Now the hedge funds have lower initial investment minimum and aims to attract private investors (Anderlind, Dotevall, Eidolf, Holm & Sommerlou, 2003).

Private investors, who do not belong to the finite group of investors of hedge funds, will turn to no risk or very low risk investments when the business cycle starts to fluctuate. This is where hedge funds have a great chance to attract investors (Åkesson, 2007).

Due to a lack of knowledge among the private investors of what hedge funds actually are, the authors of this thesis see the importance of exploring hedge funds. It is interesting to explore hedge funds and the connections between investment strategies and risks of Swedish hedge funds. This, to increase the knowledge of hedge funds and their investment strategies, and risks for the private investors not belonging to the finite group of investors in hedge funds.

In hedge funds the capital can be invested in a large amount of investment strategies and the different investment strategies can be combined in different ways. Because of this the authors of this thesis found the investment strategies to be the essential feature of hedge funds. Depending on which category the hedge funds fall within the risk factors differ according to Hedges (2005). Different investment strategies are associated with different risks, which make risk factors interesting to investigate. Swedish hedge funds are classified as special funds and regulated by the Swedish Financial Supervisory Authority (SFSA). Investment regulation and level of risk are the two factors that are regulated in all hedge funds in the Swedish market (Svensk författningssamling, 2004). This also makes these factors interesting to explore.

## 1.3 Research questions

- Which are the investment strategies used in Swedish hedge funds, and what sub strategies are used?
- What are the specific risks and risk measurements associated with Swedish hedge funds and each investment strategy?

## 1.4 Purpose

The purpose of this thesis is to explore what different investment strategies and sub strategies that are used within Swedish hedge funds. The authors of this thesis also aim to investigate and compare the specific risks and risk measurements of these hedge funds depending on the investment strategy used.

## 1.5 Definitions

- *Absolute return* – a positive return regardless of the fluctuating market (Anderlind et al. 2003). This by using an investment strategy that is expected to exhibit low or negative correlation with public equity or fixed income markets (Clifford, 2002).

- *Fund manager* – “the person or group who is responsible for investing funds on the behalf of the investment manager” (Lavinio, 1999 p. 160). In this thesis the fund manager is the person who is responsible for the design of the hedge fund’s investment strategies.

- *Investment strategy* – how the fund aims to make returns for investors. It includes; what it may or may not invest in, the investment it will use, and the maximum amount of leverage capital it may apply to its investment positions (Lavinio, 1999).

- *Swedish hedge fund* – in this thesis Swedish hedge funds are defined to be the hedge funds offered in SEK and regulated by the Swedish Financial Supervisory Authority (SFSA).

- *Sub strategy* – while investment strategy is a broad definition, sub strategy specifies the underlying investment strategies of the hedge funds investigated in this thesis.

## 1.6 Delimitation

The authors of this thesis only focus on hedge funds within the Swedish market with an initial investment of 0 to 10 000 SEK. Yet, it is possible to invest a larger amount in each of these hedge funds. These hedge funds are identified to be of special interest to the private investors. The reason why these hedge funds were selected was that the authors of this thesis found it realistic for private persons to invest in these hedge funds because of the low minimum initial investment. This is a delimitation since conclusions cannot be drawn on the entire Swedish hedge fund market through the research of this thesis.

# 2 Method

*This chapter motivates the research philosophies, and research approach used. It also describes how the data needed in order to fulfill the purpose was collected. Last, a motivation of the theories used is presented.*

## 2.1 Research design

This section will in detail describe how the authors of this thesis achieved the research objectives and in a general way include an explanation of how the researchers carried out the thesis. Figure 2:1 gives an overview of how the different *research philosophies*, *research approaches*, *research strategies*, and *data collection methods* described below are related.

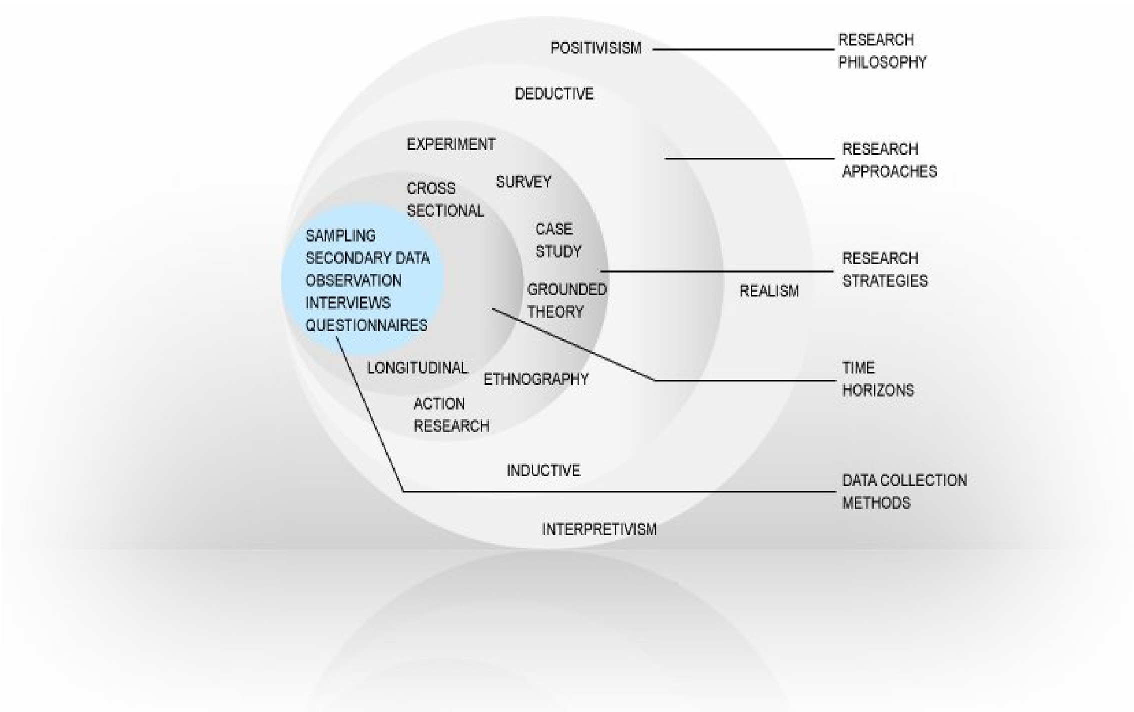


Figure 2:1 – The research process ”onion”.

Cited in Saunders, Lewis and Thornhill, 2003, p. 83

### 2.1.1 Research philosophy

The research philosophy is dependent upon the development and judgment of knowledge. Realism, positivism and interpretivism are the views about the research process that dominates the literature. The belief that reality exists and is independent of human thoughts and beliefs is *realism* based upon. *Positivism* emphasizes on a highly structured methodology to simplify reproduction and quantifiable observations that lend themselves to statistical analysis. According to *interpretivism* the world is complex and business situations are both complex and unique. Business situations are a function of a particular set of circumstances and individuals. It is unusual that a research question fit into only one of these three research philosophies. Instead it is usual that the different research philosophies are combined in different ways (Saunders et al. 2003).

The positivistic approach was fully neglected since neither statistical analysis nor highly structured data is used within this thesis. Instead the realistic and interpretivistic research philosophies are used in this thesis. There were parts of the research questions that were looked upon from the realistic view, e.g. the situation with the Sharpe ratio. The Sharpe ratio is calculated using fund specific numbers that are pure reality. These are numbers that are “out there” and are dependent on e.g. how well the hedge fund performs. These numbers are known and reflect the reality. Implementing a realistic view is out from these arguments well suited for the parts of the thesis that deal with the risk measurements.

Using the interpretivistic research philosophy was most useful describing e.g. how the hedge fund managers exactly pursued their investment strategies. No managers have exactly the same investment strategies, financial instruments, or capital invested in each instrument. The different hedge funds investigated differ from each other in many different ways, since they are compounded by different hedge fund managers. They are also regulated differently by the SFSA. This implies, as described by Saunders et al. (2003), that business situations are unique and complex. The parts of this thesis that explore the investment strategies lead to an interpretivistic research.

### 2.1.2 Research approach

There are two different approaches when conducting research; deductive, and inductive. Using the *deductive* approach, the researcher develops a hypothesis in order to design a research strategy to test the hypothesis against a theory. *Inductive* approach strives to collect the data and develop a theory from the result of the data analysis. Deductive approach owes more to positivism while the inductive approach to interpretivism (Saunders et al. 2003). In this thesis the investment strategies used within different hedge funds are explored. Therefore qualitative data was collected in order to answer the research questions. An inductive research approach was used throughout the thesis.

Saunders et al. (2003) also states that it is important to understand the nature of the problem and make sense of the collected data by analyzing it. Research using the inductive approach would be particularly concerned with the context in which events take place. The study of a small sample might be more appropriate than a large number as with deductive approach (Saunders et al. 2003). This was also an argument why an inductive research approach was used since the sample investigated was small.

In Figure 2:2 it can be seen that a less structured procedural approach is more related to an inductive research approach. Some of the questions in the questionnaire were open-end questions and the questionnaire was designed so that the respondents were encouraged to answer the questions with their own words. All questions in the interviews were open-end questions and the authors of this thesis encouraged the interviewees to explain the answers in detail. This to gather as much information as possible about hedge funds.

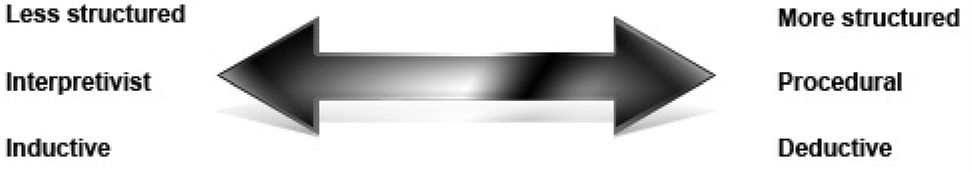


Figure 2:2 – Dimensions of qualitative analysis

Cited in Saunders et al. 2003, p. 380

## 2.2 Data collection method

This second part of the method chapter gives an overview of the specific method chosen, and motivation of choices. It goes much more into detail about how the specific data needed, in order to answer the research questions, was collected and what sample that was used.

### 2.2.1 Information gathering

Most of the literature used was found at Jönköping University Library, such as books and articles. Searches in the library's search engines Julia and Metalib resulted in several hits where relevant information for this thesis was found. Databases like J-Stor, and Fondbörsen provided specific articles about fund markets and hedge funds. Articles about hedge funds and numerical data were found on web-sites such as di.se, morningstar.se and ekonominyheterna.se.

Gathering information the authors of this thesis realized that the literature about hedge funds was written for different purposes. Some are written to inform generally, and others aim to give a deeper understanding in the subject. Differences may appear, since some of the authors in the frame of reference have worked with hedge funds and others conduct research about the topic. These kinds of literature were combined to get an impartial view.

### 2.2.2 Primary and secondary data

Primary data refers to data collected specifically for a particular research and secondary data refers to data originally collected for another purpose (Saunders et al. 2003).

Secondary data was used to get a pre-understanding of the subject and in the identification and description of relevant models for this thesis. The empirical part was built upon both primary and secondary data. It was not possible to find all relevant facts and data without collecting primary data from each hedge fund manager, and through four interviews. Secondary data from the different financial institutions' web-sites was also used to find further information and data about the hedge funds investigated.

### 2.2.3 Motivation of qualitative data collection

Qualitative data collection is based on meanings expressed through words. The collection results in non-standardized data requiring classification into categories. This method is suitable for interviews with non-standardized questions (Saunders et al. 2003).

Quantitative data collection refers to all kind of data and can be a product of all research strategies. In a quantitative research data is collected in forms of surveys or questionnaires. The data collected needs to be analyzed and interpreted to be useful. Quantitative research is presented in tables and diagrams, which show the frequency of occurrence. Quantitative data collection takes some kind of statistical analysis and a large sample (Saunders et al. 2003).

To collect primary data specifically about each hedge fund in the sample it was suitable to send a questionnaire to the hedge fund managers. At a first look this can be thought of as using a quantitative method. Yet, as explained more in depth later on, some of the questions in the questionnaire were open-end questions indicating a qualitative research. The questions that were closed-end had the characteristics of comparability rather than statistical analysis. The sample was too small to use quantitative data collection (Aczel, 2002). When using secondary data the information could not be found in a standardized way since it is hard to find similar information about each hedge fund investigated. This since the financial institutions do not present comparable information on their web-sites.

The collection of qualitative data was identified as necessity to understand the hedge funds investment strategies better. To receive more detailed information four interviews were done in a non-standardized way. Since all questions were open-end questions, qualitative data was collected from these interviews.

### 2.2.4 Sample

When conducting research it is impractical, time consuming, and costly to include the entire population. Therefore, the population is divided into samples which mean that the collected information is more detailed (Aczel, 2002).

The web-site morningstar.se was used to select the sample for this research. It was possible to select funds per category and then find general information about each hedge fund and compare the hedge funds. On this web-site all hedge funds that were suitable for this research were found by looking at minimum initial investment of each fund. This resulted in 13 hedge funds provided by banks and other financial institutions, see Table 2:1.

| Fund | Minimum initial investment (SEK) | Hedge Fund manager |
|---|---:|---:|
| AMDT Hedge | 10 000 [a] | Christer Andersson |
| Banco Hedge | 4 000 [a] | Björn Jonsson |
| Catella Hedgefond | 0 [a] | Ulf Strömsten |
| Erik Penser Hedgefond | 5 000 [a] | Georg Norberg |
| HQ Global Hedge | 10 000 [a] | Per Sommerlou |
| HQ Nordic Hedge | 10 000 [a] | Per Sommerlou |
| HQ Solid | 10 000 [a] | Per Sommerlou |
| Lannebo Alpha | 5 000 [a] | Mats Gustafsson |
| Nordea All Hedge Fund | 100 [a] | Roger Lindroos |
| Nordea European Equity Hedge Fund | 100 [a] | Mats Hellström |
| Nordea Nordic Equity Hedge Fund | 100 [a] | Per Martinelle |
| SEB Multihedge | 10 000 [a] | Henrik Dahlgren |
| Swedbank Robur Access Hedge | 10 000 [a] | Pia Haak |

[a] Morningstar (2007i)

Table 2:1 – Hedge funds investigated

### 2.2.5 Questionnaire

In this thesis the survey had the form of a questionnaire with all questions in a predetermined order. According to Saunders et al. (2003) this is a research strategy that involves a structured collection of data from an adequate population. The questionnaire was sent by e-mail to allow the hedge fund managers, also referred to as the respondents, to decide when to answer it. The hedge fund managers were chosen since they are responsible for the design of investment strategies and have knowledge about the specific hedge funds they manage.

The respondents were contacted, by telephone, in advance to ensure that all were willing to answer the questionnaire. This questionnaire was important since it made it possible to gather information that could not be found in secondary data for all hedge funds investigated. To get a high response rate the authors of this thesis found it important to ask few questions. The design of the questions and the length of the questionnaire was carefully considered. This since some of the respondents argued that they would not be willing to answer the questionnaire if it would take too long time, since they have a high work load.

The fund managers expressed that they were not willing to discuss their investment strategies in depth. This, since they did not want to share their specific investment strategy to others who can take advantage of that information. Therefore, it was important that no sensitive questions about investment strategies were asked. On the same time as much information as possible needed to be gathered about the investment strategies. Another sensitive subject would have been to ask for specific amounts that the fund managers invest in the hedge funds. The authors of this thesis only needed to know *if* the hedge fund managers invested own money in the hedge fund. This, was used to analyze if the principal and agents have a common interest in the performance of the hedge fund.

When designing the questionnaire a person working at Risk and Portfolio Management was contacted. This since he works with hedge funds on a daily basis. He will be referred to as *the contact person* throughout the thesis. Neither the contact person nor the company he works for was part of the sample. The contact person was consulted to secure that the model used for explaining hedge fund investment strategies was relevant and applicable in Sweden. This was a rewarding way to design the questionnaire, since the consultation led to the use of a correct model for investment strategies. The quality was also increased by looking at how questions were designed and formulated in a questionnaire in Anson (2002). That questionnaire have been sent to hedge fund managers earlier in order to receive similar information as in this research.

The questionnaire included *nine different questions*, see Appendix 1. It was conducted in English, since many terms associated with hedge funds were hard to translate into Swedish. The first question was a *ranking question* in which the participant was asked to rank the three most frequently used investment strategies out of five different investment strategies (Saunders et al. 2003). The researchers had to take into account that the respondents may only use one investment strategy. This type of question was used as a recommendation from the contact person.

Question 2-4 were *open-end questions*, which allow the respondents to answer in their own way. Such questions are often used in in-depth and semi-structured interviews. These answers are harder to analyze since the answers can vary widely. However, they are useful for researchers who are unsure of the response (Saunders et al. 2003). These questions were important since they provided a better understanding of how hedge fund managers work with investment strategies.

Questions 5-9 were all closed-end questions. Question 6, 8, and 9 were *quantity questions*. Here the respondents were asked to give the amount of a characteristic. Question 5 and 7 were *category questions*, in which the respondents were asked to choose one of the alternatives given. In such questions it is important that all possible alternatives are included so the respondent's answer could only fit into one category (Saunders et al. 2003).

### 2.2.6 Telephone interviews

It is important to analyze the problem and aim in order to realize exactly what information that is needed from an interview. Also, the right person need to be interviewed in order to get the right information (Ghauri & Grønhaug, 2005).

When writing down the questions it is important to make sure that the interviewee can and is willing to answer the questions trustworthy. The questions should not be too sensitive neither when it comes to personal information nor information that can violate the company's success. A simple and understandable language should be used. The questions should not be asked in a leading or directive manner (Ghauri & Grønhaug, 2005).

The time needed for the interview should be estimated before contacting the interviewees to make sure that they are willing to participate. It is not unusual that the interviewees are short of time. This makes it even more important to give them a clear view of the research question and why it is important that all interviewees take part (Ghauri & Grønhaug, 2005).

The researchers should set aside time to write down the important points from the interview together with notes on the practical details as soon as possible after the interview. This will be helpful later on when writing the report and also if the interviewee need to be contacted again. If the interview was not recorded a complete, descriptive report of the interview should be written down at this time. This since important information may be left out and the interviews may be mixed up (Ghauri & Grønhaug, 2005).

Before the interviews took place the interviewees were contacted to make sure that they were willing to participate. At this time they were introduced to the subject of this thesis and a time for an interview was booked. The interviews were not recorded, so out of notes during the interviews, complete descriptive reports were written down straight after the interviews. Both the authors of this thesis and the interviewees are Swedish. Therefore, the interviews were conducted in Swedish to minimize misunderstandings due to language difficulties.

The authors of this thesis did four telephone interviews. The first was done with Oskar Ode and Mattias Olander who work at the SFSA. Next Erik Eidolf, working as an analyst at Harcourt Investment Consulting, was interviewed. He has written the book *"Hedgefonder"* together with Per Sommerlou, the manager for all HQs' hedge funds, and three other authors. Last, Roger Lindroos, the hedge fund managers of Nordea All Hedge Fund, and Christer Andersson, the hedge fund manager of AMDT Hedge, were interviewed. These interviewees were chosen since they all have different background and knowledge of hedge funds.

Some of the questions to the hedge fund analyst and the hedge fund managers were identical. Otherwise, the interview questions were formulated differently for the interviewees in order to achieve as objective information as possible from people involved in hedge funds in different ways. The authors of this thesis formulated open-end questions to encourage the interviewees to answer with their own words.

The questions to SFSA, see Appendix 2, were about regulations within the Swedish hedge fund market. E. Eidolf was asked questions that were used to check whether the literature was applicable to the Swedish hedge funds, see Appendix 3. Also, more specific questions about investment strategies and risks was included in this interview.

C. Andersson, and R. Lindroos were asked questions related to the questionnaire, see Appendix 4. They were also asked questions about investment strategies and risks in detail. It was interesting to find out how they, as respondents of the questionnaire, understood these questions.

## 2.3 Validity and reliability

*Validity* and *reliability* are two key concepts when writing a thesis. Validity is the measuring process that is free from systematic and random errors while reliability is only free from random errors (Björk & Räisänen, 2003). Validity is concerned with if the findings are about what they appear to be about. Reliability is the degree to which the data collection method will yield consistent findings (Saunders et al. 2003).

The design of the questions and the structure of the questionnaire are important to get high validity and reliability. If the questions can give truthful data it is valid. To be reliable the questions should give the same answer independent of who the respondent is and when the questions are asked. It is important that the respondent understand the questions in the right way and that the researcher understand the answers in the right way (Saunders et al. 2003).

As written before the questionnaire was short and easy to answer in order to get a high response rate. To make sure that the questions are understood in the right way, much effort was put into formulating the questions. The questionnaire was discussed with the tutor and with the contact person before it was sent, to increase the validity and reliability, through a higher quality of the questions.

Contacting the fund managers by telephone before sending the questionnaires is something that not only raised the response rate it also raised the validity. When the respondents received the questionnaire they knew what it was about and how long time it would take to answer it. The answers were checked through the use of secondary data when possible. This to compare whether there were any differences between primary and secondary data. The authors of this thesis believe that primary data is more reliable since the respondents manage the hedge funds and have in-depth knowledge about the hedge funds and their investment strategies.

Especially the interviews with E. Eidolf, C. Andersson, and R. Lindroos increased the validity. This, since the questions asked to these interviewees were about hedge fund investment strategies in depth. The questions also covered risk measures, motivation of hedge fund managers, and investors interest in hedge funds.

The interview with SFSA, on the other hand, was more related to the regulation of Swedish hedge funds. This also increased the validity, since all hedge funds investigated are regulated by SFSA. On the other hand the reliability and validity was decreased due to the fact that the interviews were not recorded. This is a drawback since the answers could not be cited, which would have increased the impression of well conducted interviews (Saunders et al. 2003).

## 2.4 Discussion of method used

There was a large advantage of using internet sources for hedge funds since this information is often more up to date on the internet. There was also a drawback using internet sources since internet sources are not always as reliable as text books, which would be the alternative. Internet sources were also used since hedge funds' day-to-day movements are not of book-keeping characteristics. There are no text books including these specific numbers about hedge funds, since the numbers would be out of date far before the book is printed. The use of internet sources for information that needed to be up to date together with the use of text books for information that did not have to be up to date increased the trustworthiness of this thesis making accurate use of resources.

The authors of this thesis found Harcourt Investment Consulting to be a reliable source. This since it is a leading actor in providing hedge fund solutions for international institutions (Harcourt Investment Consulting, 2007a).

Morningstar.se publishes reliable and easily accessible information of a wide range of funds. It is reliable because it uses the information collected directly from the financial institutions, which provides the hedge funds (Morningstar, 2007a). The authors of this thesis were recommended to use morningstar.se by SFSA , who were not able to give any data themselves (O. Ode, personal communication, 2007-03-13).

An advantage with secondary data is that it saves resource requirements, in particular through saving the time and money of the researcher. Yet, secondary data is usually collected for another purpose and may not fit the specific purpose of the thesis. It is also hard to ensure the quality of the secondary data. Therefore, it is important to check the source of secondary data. Primary data is collected for the particular research Yet, it is too time consuming and costly to collect primary data for the entire research (Saunders et al. 2003).

Even though the questionnaire was e-mailed four times only 8 of the 13 questionnaires were answered. The authors of this thesis realized that the primary and secondary data differed in some of the questions. However, primary data can be assumed to be more trustworthy since it comes directly from the fund managers working with the hedge funds. Also it was gathered for this specific research.

An advantage when sending a questionnaire through e-mail is that the researchers can be confident that the right person has responded. A disadvantage with this type of contact is that the response rate within organizations is likely to be 30 per cent (Saunders et al. 2003). The authors of this thesis called the respondents in advance to make sure that they were willing to answer the questionnaire and also to check that it was sent to the right person. Therefore, it was reasonable to assume that the right persons answered, since the respondents e-mail address was given during the first telephone contact. This, especially since Saunders et al. (2003) state that e-mails secure that the right person answers. The response rate was 61,5 per cent, which is far above 30 per cent. It is supposed that the response rate increased since the respondents were contacted in advance.

The answers from the hedge fund managers differed. Some gave more detailed answers than others. This led to difficulties when comparing and analyzing the answers. The answers were complemented with secondary data. It is rational to believe that some of the questions were not perfectly formulated. This also since the characteristics of the answers differed about what risk measurements that are used by the different hedge fund managers. Yet, this may also be dependent upon the fact that all hedge fund managers do not measure e.g. risk in the same way. Another reason for the different answers could be the fact that the questionnaire was written in English. This implied that the questions and answers could be understood in different ways due to different levels of language skills.

A telephone interview usually save both time and money compared to a face-to-face interview. This especially if the interviewee is in another location than the researchers. Telephone interviews will also make it easier to find a time that works for both parts. In face-to-face interviews there is the advantage of seeing the other person's body language and facial expressions (Saunders et al. 2003). The advantages of telephone interviews were seen as more valuable than the disadvantages of face-to-face interviews. This since the interviews may have been missed out from this thesis if they would not have been done by telephone. In order to achieve as much information as possible the interviews were done in Swedish. This led to an increased understanding in the subject. However, information may have disappeared, or been translated into English in an incorrect way. This could be a drawback of the fact that the interviews was conducted in Swedish. On the other hand, if the interviews would have been conducted in English the answers could have been shorter leaving out information as the respondents are Swedish.

## 2.5 Motivation and usage of theories

The authors of this thesis recognize that it is essential to have basic knowledge about hedge funds to understand why investment strategies and risks of investment strategies are interesting topics. Therefore, the frame of reference starts with a description of hedge funds.

Most of the literature about hedge funds is written in English. The contact person ensured that the theories and information chosen was relevant and applicable for Swedish hedge funds. The authors of this thesis identified that the literature was written in English and about hedge funds within the US market. Since this thesis only includes Swedish hedge funds, fact that is only applicable in the US market was excluded.

The authors of this thesis have chosen to describe the investment strategies included in the model of Hedges (2005), see appendix 5, since all these are the most common used investment strategies in hedge funds, according to the contact person. According to him all hedge funds in the sample could identify themselves using at least one investment strategy included in this model. In order to explain the investment strategies shown in Hedge's table facts from Hedges (2005), McCrary (2002), Anderlind et al. (2003), Ineichen (2003), and fact sheets published by Harcourt Investment Consulting were used.

An advantage with the model described by Hedges (2005) is that hedge fund investment strategies are compared. Traditional funds are not included in the model. This makes the outcome different. When hedge funds are compared with traditional funds all hedge funds are seen as low risk investments. Yet, hedge fund investment strategies are related to different levels of risk, as can be seen in section 3.2 (Hedges, 2005). According to the questionnaire the event driven investment strategy, and relative value/market neutral investment strategy are not widely used within Swedish hedge funds. Therefore, the risks of these investment strategies are excluded from section 3.3.

The Sharpe ratio was used to compare with the return of each hedge fund investigated. This since the fund is assumed to perform better, the higher the Sharpe ratio is (Lhabitant, 2004). The standard deviation was used to compare the risk between the different hedge funds investigated. Both the Sharpe ratio and standard deviation was collected directly from the hedge fund managers.

Also the Principal agent theory was used to analyze the fund managers' interest in the hedge funds. This by looking at the performance fee for each hedge fund and whether the hedge fund managers invest their own money in the hedge funds.

Hedge funds are treated as special funds in Sweden. These are regulated by SFSA, which made it important to include regulation concerning hedge funds to understand Swedish hedge funds and not just hedge funds in general.

# 3 Frame of reference

*This chapter starts by a description of hedge funds followed by the different investment strategies in hedge funds and specific risks associated with these investment strategies. Then, some risk measurements, the principal agent theory, and regulations by SFSA are described.*

## 3.1 Hedge funds

To the general public in Sweden, hedge funds are relatively unknown since this kind of funds often requires a high minimum initial investment most often over 100 000 SEK. Hedge funds have a different fee structure compared to traditional funds (Anderlind et al. 2003). Hedge funds often have a low administration fee. This is usually between 1 and 2 per cent of the invested capital. *Performance fee* is special for hedge funds. This is based upon the yield of the hedge fund. Normally it is around 20 per cent (McCrary, 2002).

Hedge fund managers often have *own money invested* in the fund. Therefore, they share the same interest with the investors in the hedge fund's performance (Ineichen, 2003). Most of the hedge funds' goal is to generate an *absolute return*. The hedge funds have a greater toolbox to operate with than traditional funds in order to perform well in a downward sloping market (Anderlind et al. 2003). Differences between traditional funds and hedge funds can be seen in Figure 3:1.

| | Traditional | Hedge funds |
|---|---|---|
| Performance objectives | Relative returns | Absolute returns |
| Investment vehicles | Stocks, bonds, casj | All asset classes/vehicles |
| Investment stategies | Limited | Wide range |
| Regulation structures | Regulated | Largely unregulated |
| Performance drivers | Asset class and market *correlation* | Fund manager skill |
| Fees | Management free only, *rarely performance incentive* | Management fee plus *Performance incentive fee* |
| Liquidity | Unrestricted, often daily | Restricted |

Figure 3:1 – Traditional versus hedge funds

Cited in Hedges, 2005, p. 3

Hedge funds are more flexible than traditional funds when it comes to the use of different investment strategies. Within hedge funds it is possible to use short selling, leverage capital, derivatives and high concentrated investment positions to enhance returns or reduce systematic risk (Ackermann, McEnally & Ravenscraft, 1999). *Systematic risk* is also called *market risk*. It is attributable to market wide risk sources and arises due to macroeconomic factors. This risk cannot be managed through diversification among different business sectors. *Nonsystematic risk*, on the other hand, is firm specific risks that can be eliminated by diversification (Bodie, Kane, Marcus, Perrakis, & Ryan, 2005).

Hedge funds can try to time the market. This, by moving quickly across the different investment strategies (Ackermann et al. 1999). A hedge fund is free to operate in different markets and utilize investments and investment strategies with variable long/short exposure and diverse degrees of *leverage*. The use of leverage diverges greatly in different hedge funds (Ineichen, 2003). Leverage capital makes it easier for the fund manager to make larger investments and make larger profits (Hedges, 2005).

Since hedge funds have different approaches and investment strategies, there are three possible explanations for their high yield. First, it is possible to exploit price inefficiencies that exist, particularly in foreign markets. Second, hedge fund managers have superior skills and the incentive fee structure of hedge funds entice managers to work hard. Finally, the high return earned by hedge funds may reflect the large risk of hedge funds. Hedge fund returns would maybe no longer appear to be unusually high if the risk were accounted properly (Edwards, 1999).

Hedge fund investment strategies can be referred to as skill-based strategies or *absolute return strategies*. These investment strategies intend to yield a particular return which is associated with the skill of the hedge fund manager. It is important for the hedge fund manager to control the size of the hedge fund in relation to his capacity to implement an investment strategy (Ineichen, 2003).

## 3.2 Investment strategies in hedge funds

The table in Appendix 5 was used when evaluating what different investment strategies to include. This model is presented by James Hedges (2005) in his book *Hedges on Hedge Funds: How to Successfully Analyze and Select an Investment*. Hedges (2005) describes the hedge fund investment strategies and how those investment strategies' characteristics can be interpreted parallel to other hedge funds. Hedges (2005) presents the sub strategies, related to each hedge fund described below, in the tables in Appendix 5. He also shows what risk, volatility, leverage and return attribution are associated with each of these investment strategies (Hedges, 2005).

The *risk* for each investment strategy range from low to high, see Appendix 5. These levels of risk are overall and generalized risk for the category. The risks also differ within the different sub strategies. Relative value/market neutral and fund of hedge funds are seen as low risk investment strategies. Event driven has a medium risk, equity hedge is medium to high, and last come global macro with a high risk compared to other investment strategies (Hedges, 2005).

*Volatility* also vary from low to high depending on investment strategy. According to Appendix 5 the volatility is low for Relative value/market neutral and event driven investment strategy. Fund of hedge fund investment strategies have a low to moderate volatility, which can vary according to ratio of funds and investment strategy. The volatility of equity hedge is medium to high and for global macro it is very high (Hedges, 2005).

The average range of *leverage capital* is measured more specific. For event driven, and equity hedge it is low, actually 2:1 or less. For fund of hedge funds it is low to moderate. The leverage capital in global macro investment strategies vary from 2:1 to 5:1. For relative value/market neutral it is high, 3:1-5:1 (Hedges, 2005).

### 3.2.1 Equity hedge strategy

In *equity hedge investment strategy* there are two sub strategies; short selling and long/short (Hedges, 2005). *Short selling* is a way for investors to profit from an expected decline in a stock price (Bodie et al. 2005). This means that short selling managers can take bets on a market downturn. Short selling is based on the sale of securities that are believed to be overvalued from either a technical or a fundamental viewpoint (Hedges, 2005).

By using short sell the investor borrows a share of stock from a broker and sells the share. Later, the short-seller has to repurchase the same share of stock in order to replace it. This is called covering the short position. The investor expects the stock price to fall in order to repurchase at a lower price than it initially sold for (Bodie et al. 2005). Short sellers focus on situations where they believe that stock prices are being supported by unrealistic expectations. Most profitable investments result from misleading accounting practices (Hedges, 2005).

*Long/short* is the largest single approach to hedge fund investment. The strategy invests in equity and/or bond markets with a combination of long investments with short sales. Therefore, it is possible to reduce market exposure and isolate the performance of the asset as a whole. Investing in both long and short and adjust the ratio of the long and short positions to capitalize on market trends is one feature of hedged equity funds. To hedge or to enhance returns by providing additional leverage options, futures and derivative securities can be used. Long/short can also be categorized by geography or sector due to the particularities of either certain geographies or industry sectors (Hedges, 2005).

Mostly the focus with equity long/short strategy is to evaluate the value of companies and compare it with the stock price of the company's shares. After the evaluation the hedge fund managers take long (buy) and short (sell) positions in stocks that the manager estimates as under- respective overvalued (Anderlind et al. 2003).

### 3.2.2 Relative value/market neutral strategy

This investment strategy emphasizes on identifying mispricings in financial markets (Ineichen, 2003). *Relative value/market neutral* have three sub strategies; convertible arbitrage, fixed-income arbitrage, and equity market-neutral (Hedges, 2005). The first, *convertible arbitrage*, intend to exploit market inefficiencies in the convertibles market by hedging equity, duration and credit risk. The convertible securities are generally convertible bonds, warrants, or convertible preferred shares. These are frequently exchangeable into the common stock of the company issuing the convertible security. The managers attempt to buy undervalued financial instruments that are convertible into equity and then hedge out the market risks (Ineichen, 2003).

The second sub strategy within relative value/market neutral is *fixed income arbitrage*. This strategy takes long and short positions in bonds and other interest rate sensitive securities (Hedges, 2005). Fixed income arbitrage has a limited number of actors since it requires a large capital base, costly infrastructure, large credit lines, a good professional network and track record (Harcourt Investment Consulting, 2007c). This strategy has proven to be profitable but unpredictable (Hedges, 2005). The complexity arises from the many variables that influence the price of interest rate securities. Along with the development and increased depth of the derivatives market, fixed income arbitrage has evolved (Harcourt Investment Consulting, 2007c).

The third, *equity market-neutral*, invest in a range of equity and equity-derivative securities. This sub strategy use complicated quantitatively intensive models which are designed to hedge away nearly all market risk (Hedges, 2005).

### 3.2.3 Event driven strategy

By using the *event driven investment strategy* the managers look at corporate transactions such as mergers, acquisitions, and divestments. The fund managers try to hedge themselves for worst-case scenarios. Usually the fund manager takes a long position in the stock of the target company and a short position in the stocks of the acquiring company (Harcourt Investment Consulting, 2007b).

Within the event driven equity investment strategy there are three sub strategies; merger arbitrage, distressed securities, and special situations. *Merger arbitrage* takes long position in the stock of a company being acquired in a merger, leverage buyout, or takeover while taking a short position in the stock acquiring company. This sub strategy can result in a great loss if the takeover fails. The risk of a loss is often reduced by avoiding hostile takeovers and only investing in deals that are announced (Hedges, 2005).

*Distressed securities* invest long and short in the securities of companies going bankrupt or companies reorganizing. Here the hedge funds managers' focus lies on good companies with bad balance sheets. Overleveraged companies which are incapable to cover their debt burden become oversold as institutional bondholders liquidate their holdings. The sub strategy is commonly viewed as a risky investment and volatility varies with the investment strategies and the securities held (Hedges, 2005).

*Special situations* focus on a significant position in the equity of a firm. The managers tend to focus on situations such as; emerging market debt, depressed stock, impending mergers/acquisitions, reorganizations, and emerging bad news that may temporarily devalue stock prices (Hedges, 2005).

### 3.2.4 Global macro strategy

Working with the *global macro investment strategy* is working with macroeconomic theory and macroeconomic instruments. This, to measure expected market movements and to draw advantages of investing in these markets. This investment strategy is common in a lot of the hedge funds where the hedge fund managers have a lot of macroeconomic experience or conducts a lot of macroeconomic research (Harcourt Investment Consulting, 2007d). This investment strategy has been one of the most widely used hedge fund styles (McCrary, 2002). It represents the purest form of a top-down approach to hedge fund investment strategies (Hedges, 2005).

Using this investment strategy the funds can invest in stocks, bonds, currencies, and commodities (McCrary, 2002). Hedge fund managers using a global macro investment strategy speculate on changes in countries' economic policies and shifts in currency and interest rates via derivatives and the use of leverage (Hedges, 2005).

The hedge funds can have long and short positions in a variety of assets. Yet, these positions may not be designed to hedge each other. Investments are done in liquid, efficient markets. Most investments profit from making directional bets in the bond-, stock-, and currency markets (McCrary, 2002).

Global macro investment strategies are among the most volatile investment strategies of hedge funds and have been more correlated to stock and bond returns than other investment strategies. Yet, the correlation is still low enough to make these hedge funds usable in a conventional stock/bond portfolio and is seen as a way of increasing the overall return on a conventional portfolio (McCrary, 2002). Hedge fund managers using this investment strategy strive to maximize the potential return and minimize potential losses. Sometimes this investment strategy is used to take advantages of artificial imbalances in the marketplace brought on by central bank activities. Timing is very important when this investment strategy is used (Hedges, 2005).

### 3.2.5 Fund of hedge funds strategy

In Sweden fund of hedge funds have been more frequently used over the years (Anderlind et al. 2003). Fund of hedge funds are hedge funds which invest in other hedge funds instead of making direct investments (McCrary, 2002). There are two sub strategies within fund of hedge funds. These are strategy specific and sector specific (Hedges, 2005).

This kind of funds offers several advantages over a direct investment in hedge fund assets. Minimum investment is often smaller in fund of hedge funds than hedge funds using the other investment strategies. The fee can be negotiated by the hedge fund manager so the investor do not need to pay fees both for the fund of hedge funds and the funds invested in. The hedge fund manager may also be able to invest in funds that are closed for investments, since they have already invested in these funds. By using this kind of fund the risk of the investment can be reduced without lowering the return. Investors have the resources to create diversification by splitting their investments between multiple funds but the minimum investment levels can make this impractical (McCrary, 2002).

Managers of fund of hedge funds have knowledge about the different investment strategies and make research before investing in the different funds. Usually they invest in many different funds in order to lower the risk and benefit from diversification (McCrary, 2004).

In order to select the best hedge funds and maximize the return the hedge fund managers have to decide which hedge fund investment strategies that have the best prerequisite on the future market (Anderlind et al. 2003).

## 3.3 Risks associated with hedge fund investment strategies

### 3.3.1 Equity hedge risks

*Long sustained bull markets* is a risk associated with short sell (Harcourt Investment Consulting, 2007e). This since a bull market is an upward sloping market and short sell is used when the investors believe that the marked is downward sloping (Bodie et al. 2005). *Large players in the stock market* can increase the stock price and force short sellers to close their positions and realize large losses. *Long and short positions behave different* (Harcourt Investment Consulting, 2007e). This, since these are different kinds of investment strategies (Bodie et al. 2005).

One disadvantage with short selling is that *in the long run the stock market index always increases*, which makes short sell more risky than long sell. Another drawback is that it can be *hard to find a lender of the stock*, and it may be associated with high costs. It is also not unusual that there are *restrictions for short selling* set by the manager or guidelines drawn by the company (Anderlind et al. 2003). The *loss due to short sell cannot be unlimited*, compared to long sell where the stock price can only depreciate to zero (Anderlind et al. 2003). Bodie et al. (2005) also explains the risk with short selling. Consider the scenario of buying 1 stock at 100 SEK. The risk here is losing the total 100 SEK equal to 100 percent. Short selling or borrowing 1 stock worth 100 SEK the value of that stock can be 300 SEK when selling. The risk here is losing 200 SEK equal to 200 percent of initial investment (Luenberger, 1998).

### 3.3.2 Global macro risks

Some risks linked to the global macro investment strategy is directional bets, leverage, and timing (Harcourt Investment Consulting, 2007d). *Directional bets* is associated with expected changes in the market. The stock market is a leading economic indicator, which means that the stock market moves before the rest of the economy. Therefore, directional bets need to be taken before the market changes. *Timing* is another important risk. The investment in the markets increases if one forecasts that the market will outperform. These assets needs to be allocated in time (Bodie et al. 2005).

### 3.3.3 Fund of hedge funds risks

One risk associated with fund of hedge funds is that it yields mediocre results. Neither resulting in top nor bottom returns, since the manager invest in other hedge funds. Since the hedge fund managers have to invest in different hedge funds the return is an average of the return of the hedge funds invested in (Anderlind et al. 2003). The hedge fund manager must have a lot of knowledge about different investment strategies to be able to allocate the most profitable hedge funds. As a group these funds tend to follow investment trends in the market. Therefore, investment strategies that have recently performed poorly compared to other investment strategies tend to be underweighted (McCrary, 2004).

## 3.4 Risk measurements

### 3.4.1 Sharpe ratio

In 1966 William Sharpe developed the Noble Prize-winning risk adjusted performance measure called the Sharpe ratio. The Sharpe ratio measures the amount of “excess return per unit of volatility” provided by the hedge fund (Sharpe, 1966). This means that the Sharpe ratio is “the market price of risk” i.e. return delivered per unit of risk (Lhabitant, 2004).

The actual meaning comparing Sharpe ratios is that the higher ratio the better the fund (Lhabitant, 2004). Anson (2002) argues that the Sharpe ratio is best used when comparing different funds and can be biased when not used in the right way. Comparisons of funds that operate in different markets that are independent of one another most often lead to bias when it comes to Sharpe ratios (Anson, 2002).

### 3.4.2 Standard deviation

When talking about volatility and hedge funds the most widely used term is *standard deviation*. The risk for an investor increases with the funds standard deviation. Ranking funds by standard deviation and means of average returns give meaningful results. Standard deviation is best used as a comparison measure between different hedge funds operating in the same markets (Lavinio, 1999).

Standard deviation is used as a statistical measurement. It shows the dispersion of a fund’s average return over a specific period of time. The higher the standard deviation, the wider is the dispersion of past returns. This also indicates a greater historical volatility. The measurement is not used to indicate the performance of the fund. Instead it shows the volatility of its returns over time (Hedges, 2005).

## 3.5 Principal agent theory

The *principal agent theory* is a model created within financial economics to describe the various mechanisms that "solves" the agency problems. These problems are created by separation of ownership and control by ensuring managerial devotion (Pettigrew, Thomas & Whittington, 2002). As described the agency theory addresses the problem of how to ensure that managers (agents) act in the best interest of owners (principals) (Cuncliff & Hatch, 2006).

The purpose of control is used to ensure that managers act in the best interest of the owners. This is controlled through output and behavior of the managers. According to the principal agent theory it is important to establish a contract between the principals and agents. The principals should be able to obtain information to guarantee that the agents meet the contractual obligations and serve the interests of the principals. When the agents fulfill the demands of the contract they are rewarded (Cuncliff & Hatch, 2006).

## 3.6 The Swedish Financial Supervisory Authority (SFSA)

In Sweden hedge funds are treated and referred to as "*special funds*" and are therefore more regulated by SFSA than traditional funds (Anderlind et al. 2003). The concept of special funds refers to the fact that hedge funds use different kinds of financial instruments. SFSA is a public authority that supervises and monitors Swedish companies operating in financial markets (Finansinspektionen, 2006).

Financial operations are regulated by law and ordinances according to the Swedish law, EU rules and regulations and international rules and regulations (Finansinspektionen, 2007b).

In the *Swedish law (2004:46) about special funds* , cited in Swedish in Appendix 6, it is written;

"The 5$^{th}$ chapter – Administration of securities

23 § the financial institutions are not allowed to:

1. grant leverage,
2. stand surety, or
3. sell bonds, money market instruments, derivatives, and fund shares which do not belong to the fund.

The financial institution may in spite of the first point use short-term loans corresponding to 10 per cent of the fund's full value (Free translation)."

Cited in Svensk författningssamling (2004) pp. 21-22

"The 6$^{th}$ chapter – Administration of special funds

Investment regulations
2 § SFSA shall by the granting of the fund regulations of a special fund test if the fund has a reasonable spread of investments with the regards to the demands that should be requested on differentiation. For the administration of capital in a special fund the regula-

tions in the 5th chap. are applicable to the extent that no exceptions are granted by SFSA. Derivatives may have other underlying assets than those in the 5th chap. 12 § if the instruments are objects of trade in any financial market and not resulting in an obligation to deliver or receive the underlying asset (Free translation).

Level of risk
3 § A financial institution must for every special fund calculate and to SFSA submit the level of risk in the fund (Free translation)."

Cited in Svensk författningssamling (2004) p. 22

# 4 Empirical findings

*This chapter presents the empirical findings according to a Swedish perspective on hedge funds. It starts with the investment strategies used in hedge funds, followed by specific risks associated with these investment strategies. Next, data on risk measurements are presented followed by data that increase the motivation of the hedge fund managers.*

## 4.1 Investment strategies used in Swedish hedge funds

The answers to question 1, see Appendix 1, regarding investment strategies is illustrated in Table 4:1. Six of the hedge funds only use one of the five different investment strategies, of which four use the fund of hedge fund investment strategy and two use equity hedge. Banco Hedge and Lannebo Alpha also use equity hedge, yet together with other investment strategies. In Banco Hedge global macro is the most used investment strategy, while equity hedge comes on the second place. Banco Hedge use a third investment strategy too, this is relative value/market neutral. Relative value is the second most used investment strategy within Lannebo Alpha.

| Fund | Most used investment strategy | Second most used investment strategy | Third most used investment strategy |
|---|---|---|---|
| AMDT Hedge | Equity hedge [a] | | |
| Banco Hedge | Global macro [b] | Equity hedge [b] | Relative value/ market neutral [b] |
| Erik Penser Hedgefond | Equity hedge [c] | | |
| HQ Solid | Fund of hedge funds [d] | | |
| Lannebo Alpha | Equity hedge [e] | Relative value [e] | |
| Nordea All Hedge Fund | Fund of hedge funds [f] | | |
| SEB Multihedge | Fund of hedge funds [g] | | |
| Swedbank Robur Access Hedge | Fund of hedge funds [h] | | |

[a] C. Andersson (personal communication, 2007-04-20)
[b] B. Jonsson (personal communication, 2007-04-20)
[c] G. Norberg (personal communication, 2007-05-02)
[d] P. Sommerlou (personal communication, 2007-04-20)
[e] M. Gustafsson (personal communication, 2007-04-20)
[f] R. Lindroos (personal communication, 2007-05-02)
[g] H. Dahlgren (personal communication, 2007-05-07)
[h] P. Haak (personal communication, 2007-04-21)

Table 4:1 – Investment strategies according to primary data

When using secondary data the authors of this thesis decided to only include the most used investment strategy, see Table 4:2. Catella Hedgefond use relative value/market neutral. HQ Global Hedge and HQ Nordic Hedge use the fund of hedge funds investment strategy. Last Nordea European Hedge Fund and Nordea Nordic Equity Hedge Fund are similar to each other. Both use equity hedge, yet in different markets. One operates in the Nordic market and the other in the European market.

| Fund | Most used investment strategy |
|---|---|
| Catella Hedgefond | Relative value/market neutral [a] |
| HQ Global Hedge | Fund of hedge funds [b] |
| HQ Nordic Hedge | Fund of hedge funds [b] |
| Nordea European Equity Hedge Fund | Equity hedge [c] |
| Nordea Nordic Equity Hedge Fund | Equity hedge [d] |

[a] Catella Kapitalförvaltning (2007b)
[b] HQ Fonder (2007e)
[c] Nordea (2007b)
[d] Nordea (2007c)

Table 4:2 – Investment strategies according to secondary data

SFSA does not have any legal aspects to consider concerning the hedge funds and limitations on how many investment strategies that can be used in each hedge fund. Instead SFSA tries to monitor the hedge fund so that the number of investment strategies is not too large. Diversification and risk management of the hedge fund should not be affected (M. Olander, personal communication, 2007-05-16).

The choice of investment strategy is dependent upon hedge fund manager. Fund of hedge funds strives to lower the risk while retaining the yield. The choice is more dependent upon the strengths of the hedge fund managers than the demand of the customers (E. Eidolf, personal communication, 2007-05-16).

### 4.1.1 Data on equity hedge strategy

Equity hedge is the most established and used Swedish hedge fund investment strategy. It is used when over-, and undervalued companies are found. Money is borrowed in order to buy overvalued stocks. When these are returned money is earned. Long/short equity hedge is used in this investment strategy. This investment strategy differs a lot among different hedge fund managers who measure beta values. It differs depending upon the hedge fund managers' ability to adjust the portfolio or find overvalued stocks (E. Eidolf, personal communication, 2007-05-16). Equity hedge is associated with long as well as short positions. This investment strategy is not at all correlated with the stock index (C. Andersson, personal communication, 2007-05-21). According to Lindroos this investment strategy is used within approximately 80 per cent of the Swedish hedge funds. A hedge fund manager using this investment strategy takes long positions in some stocks and short positions in others (R. Lindroos, personal communication, 2007-05-22).

*AMDT Hedge* only invests in OMXS30 futures. OMX Index reflects the total price changes within the 30 stocks with the highest turnover at Stockholm's stock exchange (Finansinspektionen, 2007a). A systematic approach is used and the volatility in the market is most important when making the decision of where to invest (C. Andersson, personal communication, 2007-04-20). This hedge fund use both short selling and long/short, which make it possible to have a low correlation with OMX. The fund is not dependent on an appreciating stock exchange. In AMDT Hedge the volatility of OMX is important. Futures are bought and sold due to increased volatility in OMX-index (Systematiska fonder, 2007).

*Erik Penser Hedgefond* use conservative long/short equity. 50 per cent of the capital is invested in T-bills, 40 per cent in the Nordic stock markets, and 10 per cent in corporate bonds (G. Norberg, personal communication, 2007-05-02). A T-bill is a short-term investment. These are issued by different levels of government and sold at a discount (Siklos, 2006). This hedge fund strives to avoid depreciations, rather than maximize its capital during appreciations of the market. The capital of this fund can be invested in bonds, derivatives, money market instruments, fund shares, and accounts in credit institutions (Erik Penser Fonder, 2007a).

*Lannebo Alpha* invests in stocks, derivatives, fixed income and bonds. The focus is on investments in stocks in the Nordic region, primarily Sweden. The fund has a biased towards small and mid caps as the responsible has a ten year experience of this investment area. The investment strategy descends from Lannebo Fonders investment philosophy. All investment decisions are based on perceived valuations. Hence, long positions are taken in stocks that are perceived as undervalued and vice versa (M. Gustafsson, personal communication, 2007-04-20). Investments can be done in derivatives, fund shares, and accounts in credit institutions (Lannebo fonder, 2007).

*Nordea European Equity Hedge Fund* mostly invests in European stocks and derivatives such as options and futures. It also invests in securities, and other funds (Nordea, 2007b).

*Nordea Nordic Equity Hedge Fund* mostly invests in Nordic stocks and derivatives such as options and futures. It also invests in securities, and other funds (Nordea, 2007c).

### 4.1.2 Data on relative value/market neutral strategy

Relative value/market neutral is one investment strategy group with many parts. Stocks and interest rates can be split up into different sections of this investment strategy (E. Eidolf, personal communication, 2007-05-16). This investment strategy is hard to describe. If a hedge fund manager use this investment strategy he go long in one stock and short in the stock of a competing company (C. Andersson, personal communication, 2007-05-21). Using this investment strategy the hedge fund managers invest in stocks specific companies. Therefore no market risk is associated with this investment strategy. This investment strategy is uncorrelated with the stock exchange (R. Lindroos, personal communication, 2007-05-22).

*Catella Hedgefond* invests in bonds, fund shares, money market instruments, and derivatives. The focus lies on financial instruments quoted in stock markets or authorized market places or other regulated markets open for regular commerce (Catella Kapitalförvaltning, 2007a).

### 4.1.3 Data on event driven strategy

This investment strategy is more widely used internationally than in Sweden. Only one of all the hedge funds in Sweden use event driven investment strategy. Event driven investment strategy focuses on company specific events, and acquisition arbitrage. Money is earned through special events such as; company buy-outs, takeovers, mergers, and acquisitions (E. Eidolf, personal communication, 2007-05-16). A hedge fund manager using this hedge fund investment strategy looks for special events and new information about different companies. This fund invests in stocks (C. Andersson, personal communication, 2007-05-21). The hedge fund manager looks search for different types of company situation. One important event is when one company acquires another company (R. Lindroos, personal communication, 2007-05-22).

Eidolf also explained that the event driven investment strategy is more often used in larger countries such as the US. This since the focus on events demands liquidity. Therefore, this investment strategy is more common where the largest actors are found, which is not in Sweden (E. Eidolf, personal communication, 2007-05-15).

### 4.1.4 Data on global macro strategy

Global macro is the broadest definition. Money is earned through macroeconomic measures and tools (E. Eidolf, personal communication, 2007-05-16). This investment strategy is used to find imbalances in the global macro economy. The hedge fund manager use arbitrage strategies within this market (C. Andersson, personal communication, 2007-05-21). This investment strategy was used in the first hedge fund founded. The hedge fund manager looks at the global economy to find the best opportunities. When large events in the global economy are realized the capital can be invested in all different financial instruments, such as stocks, and currencies (R. Lindroos, personal communication, 2007-05-22).

*Banco Hedge* is a global macro hedge fund that uses the five alpha sources (B. Jonsson, personal communication, 2007-04-20). This means the fund manager works within five different areas in order to create, and measure five different alphas (B. Jonsson, personal communication, 2007-04-20). Market exposure is the most important alpha source. The other four are relative value global markets and sectors, long/short Nordic big cap, long Swedish small cap versus Swedish equity index, and fixed income (B. Jonsson, personal communication, 2007-04-20). The capital of this fund can be invested in bonds, money market instruments, fund shares, derivatives, and accounts in credit institutions (Banco Fonder, 2007).

### 4.1.5 Data on fund of hedge funds strategy

It is usual that the investments within fund of hedge funds are outsourced. The hedge fund manager tries to find the right fund and the best mix of investment strategies for the funds within the portfolio (E. Eidolf, personal communication, 2007-05-16). A hedge fund manager using this investment strategy invests in other hedge funds (C. Andersson, personal communication, 2007-05-21). A hedge fund in which this investment strategy is used suits an investor who are unable to evaluate the different investment strategies. A smaller amount of capital can be invested in this type of hedge fund.

*HQ Global Hedge* is a fund of hedge funds with a global focus. The fund’s capital must be invested in at least ten different funds. Not more than 20 per cent of the capital can be invested in each fund (HQ Fonder, 2007e).

*HQ Nordic Hedge* is a fund of hedge funds with a Nordic focus. The fund’s capital must be invested in at least five different funds. Not more than 25 per cent of the capital can be invested in each fund (HQ Fonder, 2007e).

*HQ Solid* is an alternative to all market and fixed income funds. It is a fund of hedge funds attempt to select high quality hedge funds globally. This fund diversifies its investments across classes, markets, investment strategies, and funds. The risk profile can be compared with the risks of bonds. This fund strives to seek low volatility, (P. Sommerlou, personal communication, 2007-04-20). The capital of the fund must be invested in at least five different funds. Not more than 30 per cent of the capital can be invested in each fund. Derivatives can only be used to make the administration more effective (HQ Fonder, 2007e).

*Nordea All Hedge Fund* is a fund of hedge funds with a well diversified investment strategy and a focus on low drawdown risk (R. Lindroos, personal communication, 2007-05-02). The fund's capital must be invested in at least five different funds. Not more than 50 per cent of the capital can be invested in each fund. The fund can also invest directly in securities and use derivatives (Nordea, 2007a).

*SEB Multihedge* is a market independent multistrategy fund of hedge funds. There are no directional equity long/short positions in the fund. Investment strategies are merger arbitrage, distressed debt, special situations, event driven multistrategy, fixed income arbitrage, convertible arbitrage, credit/high yield, capital structure, statistical arbitrage, and multistrategy (H. Dahlgren, personal communication, 2007-05-07). The fund's capital must be invested in at least four different funds. Not more than 30 per cent of the capital can be invested in each fund (SEB Fonder, 2006).

*Swedbank Robur Access Hedge* is a fund of hedge funds that is well diversified. At the moment most of the capital is invested in funds that use event driven and long/short equity investment strategies (P. Haak, personal communication, 2007-04-21). Options, futures, and other derivatives are only used to protect the downside loss due to currency changes. The fund's capital must be invested in at least ten different funds. Not more than 50 per cent of the capital can be invested in each fund (Swedbank Robur, 2007b).

## 4.2 Risks in investment strategies

Most of the factors that lead to changes in investment strategies are specific risks, according to the questionnaire. Information about circumstances that lead to changes in investment strategies could not be found in secondary data. Therefore, only the hedge funds where primary data was received is included in this section. The investment strategies relative value/market neutral, and event driven are not widely used in the Swedish market according to E. Eidolf (personal communication, 2007-05-16). Therefore, these investment strategies are excluded from this section. According to R. Lindroos (personal communication, 2007-05-22) the differences between risks within hedge funds are dependent upon hedge fund manager rather than investment strategy.

### 4.2.1 Data on equity hedge risks

C. Andersson (personal communication, 2007-05-21) associate leverage capital to be the main risk when using equity hedge investment strategy. Other risks associated with this investment strategy are specific risks and to some extent market risk (R. Lindroos, personal communication, 2007-05-22). However, changes in volatility is the main factor that leads to changes in investment strategy in AMDT hedge (C. Andersson, personal communication, 2007-04-20). No changes have been done in investment strategies so far in Erik Penser Hedgefond. The same process has been used during the last five years (G. Norberg, personal communication, 2007-05-02) Lannebo Alpha is managed in a similar way as the financial institution's long-only funds. It is not likely that investment strategies are changed in this hedge fund. Yet, the hedging and short-sell strategies may change (M. Gustafsson, personal communication, 2007-04-20).

### 4.2.2 Data on global macro risks

According to C. Andersson (personal communication, 2007-05-21) market risk is essential to evaluate when a global macro investment strategy is used. Global macro is used to invest in all financial instruments. Therefore, many different risks are associated with this investment strategy (R. Lindroos, personal communication, 2007-05-22). Banco Hedge focuses on risk aversion. The parameters that lead to changes in investment strategies for Banco Hedge are macroeconomic outlook, and valuation of stock and bond markets (B. Jonsson, personal communication, 2007-04-20).

### 4.2.3 Data on fund of hedge funds risks

When using a fund of hedge funds investment strategy there is a leverage risk, even though this is dependent upon the each specific hedge fund. Credit risk is also an important factor here if the other part is not able to pay a loan (C. Andersson, personal communication, 2007-05-21). When using a fund of hedge funds investment strategy the risk is dependent upon which investment strategy that is used in the hedge funds invested in (R Lindroos, personal communication, 2007-05-22). HQ Solid does not make any structural changes. Yet, an ongoing process is used to allocate money to the best investment strategies currently from a risk/reward perspective (P. Sommerlou, personal communication, 2007-04-20). Nordea All Hedge Fund does not change in investment strategies (R. Lindroos, personal communication, 2007-05-02). Interest rate movements, corporate activity, corporate defaults, and new issuance of convertibles are factors that lead to changes in investment strategies within SEB Multihedge (H. Dahlgren, personal communication, 2007-05-07). Swedbank Robur Access Hedge also looks at interest rates. Yet, this hedge fund is outsourced to AUDA in New York, so fixed income investment strategy might be more interesting if the interest rate in the US decreases (P. Haak, personal communication, 2007-04-21).

## 4.3 Risk measurement data

"*Risk according to hedge fund manager*", "*Sharpe ratio*", "*standard deviation*", and "*leverage capital*" for all hedge funds investigated can be seen in Table 4:3, and Table 4:4. SFSA demands that the fund manager at any time can submit up to date measures about risk characteristics of the hedge fund. SFSA discuss with the hedge fund manager, and the financial institution in the early application phase. This to increase the risk awareness and discuss how to achieve a granted level of risk awareness (M. Olander, personal communication, 2007-05-16).

According to secondary data the leverage capital for Swedbank Robur Access Hedge can be 15 per cent (Swedbank Robur, 2007b). B. Jonsson (personal communication, 2007-04-20) wrote that the leverage capital for Banco Hedge can be 150 per cent. However, the percentage according to secondary data is 50 (Banco Fonder 2007). It is reasonable to assume that the formulation of the question made it easy to misunderstand, which lead to the use of 50 per cent instead of 150 per cent. According to G. Norberg (personal communication, 2007-05-02) there is a possibility to use leverage capital within Erik Penser Hedgefond, which has not been used. 50 per cent of this funds capital can be leverage capital (Erik Penser Fonder, 2007b). According to secondary data SEB Multihedge is allowed to use leverage capital of 50 per cent (SEB Fonder, 2006).

| Fund | Risk according to hedge fund manager | Sharpe ratio | Standard deviation in % | Leverage capital in % |
|---|---|---|---|---|
| AMDT Hedge | Low[a] | 1.05[a] | 7.70[a] | 60[a] |
| Banco Hedge | Low[b] | 1.10[b] | 4.40[b] | 50[b] |
| Erik Penser Hedgefond | Low[c] | 1.58[c] | 5.00[c] | 0[c] |
| HQ Solid | Low[d] | 1.32[d] | 3.58[d] | 0[d] |
| Lannebo Alpha | Low[e] | 1.50[e] | 5.00[e] | 150-250[e] |
| Nordea All Hedge Fund | Low[f] | -[1f] | 3-5[f] | 100[f] |
| SEB Multihedge | Low[g] | 1.26[g] | 2.16[g] | 10[g] |
| Swedbank Robur Access Hedge | Low[h] | 1.1[h] | 4.70[h] | 0[h] |

[a] C. Andersson (personal communication, 2007-04-20)
[b] B. Jonsson (personal communication, 2007-04-20)
[c] G. Norberg (personal communication, 2007-05-02)
[d] P. Sommerlou (personal communication, 2007-04-20)
[e] M. Gustafsson (personal communication, 2007-04-20)
[f] R. Lindroos (personal communication, 2007-05-02)
[g] H. Dahlgren (personal communication, 2007-05-07)
[h] P. Haak (personal communication, 2007-04-21)

Table 4:3 – Risk factors according to primary data

[1] Too short track record.

| Fund | Sharpe ratio | Standard deviation in % | Leverage capital |
|---|---|---|---|
| Catella Hedgefond | 2.64 [a] | 2.95 [a] | 50 [b] |
| HQ Global Hedge | 0.80 [c] | 4.28 [c] | 0 [d] |
| HQ Nordic Hedge | 1.34 [e] | 3.14 [e] | 0 [f] |
| Nordea European Equity Hedge Fund | 1.06 [g] | 2.42 [g] | 100 [h] |
| Nordea Nordic Equity Hedge Fund | -[2] [i] | -[2] [i] | 100 [j] |

[a] Morningstar (2007d)
[b] Catella Kapitalförvaltning. (2007b)
[c] HQ Fonder (2007a)
[d] HQ Fonder (2007c).
[e] HQ Fonder (2007b)
[f] HQ Fonder (2007d)
[g] Morningstar (2007g)
[h] Nordea (2007d)
[i] Morningstar (2007h)
[j] Nordea (2007e)

Table 4:4 – Risk factors according to secondary data

As can be seen in Table 4:3 all managers state that the hedge fund they manage are low risk investments. In table 4:5 it can be seen how E. Eidolf, C. Andersson, and R. Lindroos rank the level of risk depending upon investment strategy used in a hedge fund. However both Eidolf and Andersson stated that the risk is dependent upon the hedge fund manager rather than investment strategy (E. Eidolf, personal communication, 2007-05-16; C. Andersson, personal communication, 2007-05-21; and R. Lindroos, personal communication, 2005-05-22).

[2] Too short track record

| Investment strategy | Risk according to Eidolf | Risk according to Andersson | Risk according to Lindroos |
|---|---|---|---|
| Equity hedge | Medium [a] | Low/medium [b] | High [c] |
| Relative value/market neutral | Low[a] | - | Low [c] |
| Event driven | Medium to high [a] | High [b] | Medium [c] |
| Global macro | Medium to high. Yet closer to high [a] | Medium [b] | Relatively high [c] |
| Fund of hedge funds | Low [a] | Lowest [b] | Low to medium [c] |

[a] E. Eidolf (personal communication, 2007-05-16)
[b] C. Andersson (personal communication, 2007-05-21)
[c] R. Lindroos (personal communication, 2007-05-22)

Table 4:5 – Risk depending on investment strategy

When it comes to risk awareness there are two aspects in the financial institution that SFSA looks at. These are the routines and instructions concerning risk and how much overall effort that is put in to keep up risk awareness (M. Olander, personal communication, 2007-05-16).

### 4.3.1 Sharpe ratio

The Sharpe ratio is dependent upon hedge fund manager rather than investment strategy. For fund of hedge funds it should be close to 4 and global macro around 8. All hedge funds investigated aims at a Sharpe ratio higher than 1. All the hedge funds manage to reach a Sharpe ratio of 1 (E Eidolf, personal communication, 2007-05-16). A Sharpe ratio over 1.5 is good (C. Andersson, personal communication, 2007-05-21). According to Lindroos a Sharpe ratio below 1 is low. If it is above 1 it is acceptable (R. Lindroos, personal communication, 2007-05-22). The Sharpe ratio is interesting, yet it is only a small part in an investment decision. The measurement is more important for institutions than for private fund investors since private investors are not used to this measurement. However, this measurement is not of crucial importance on its own. Rather it should be used to compare the performance of each specific fund. The Sharpe ratio is more correlated with the stock exchange in an upward sloping market (C. Andersson, personal communication, 2007-05-21). The Sharpe ratio is more applicable on traditional funds than hedge funds. Yield is more important than Sharpe ratio when making an investment decision (R. Lindroos, personal communication, 2007-05-22).

The Sharpe ratio range from 0.8 to 2.64 within the hedge funds investigated, see Table 4:3 and Table 4:4. The Sharpe ratio range from 1.05 to 1.50 for the hedge funds using an equity hedge investment strategy. For the hedge funds using a fund of hedge funds investment strategy the Sharpe ratio range from 0.8 to 1.34. The Sharpe ratio will be used to compare with the performance of the hedge fund, see Appendix 7.

### 4.3.2 Standard deviation

Standard deviation is fund specific, and dependent upon the hedge fund manager rather than investment strategy (E Eidolf, personal communication, 2007-05-16). C. Andersson agrees with this statement. He also argued that the standard deviation is high when it is above 15 and low when it is 9 or lower (C. Andersson, personal communication, 2007-05-21).

For the hedge funds investigated the standard deviation range from 2.16 to 7.70, see Table 4:3, and Table 4:4. For the five hedge funds using an equity hedge investment strategy the standard deviation differ from 2.42 to 7.70. The standard deviation range from 2.16 to 5 for the hedge funds using a fund of hedge funds investment strategy.

AMDT Hedge does not have any upper barriers on allowed volatility (C. Andersson, 2007-04-20). The total risk in terms of standard deviation should not exceed 10 per cent for HQ Nordic Hedge Fund, 8 per cent for HQ Global Hedge Fund, and 6 per cent for HQ Solid (HQ Fonder, 2007e).

Nordea All Hedge Fund targets an upper barrier of risk of 10 per cent (R. Lindroos, personal communication, 2007-05-02). For Nordea European Equity Hedge Fund the volatility usually lies within the interval 2 to 7 per cent (Nordea, 2007d) while the interval for Nordea Nordic Equity Hedge Fund is 2 to 12 per cent (Nordea, 2007e).

SEB Multihedge strives to have an annual average return 4-6% over Stibor with volatility around 3% (H. Dahlgren, personal communication, 2007-05-07). Swedbank Robur Access Hedge should be in line with a long fixed income fund (P. Haak, personal communication, 2007-04-21). The total risk of the fund ought to be in the interval 2 to 10 per cent (Swedbank Robur, 2007b).

### 4.3.3 Leverage capital

Leverage capital is dependent upon the specific hedge fund rather than investment strategy (C. Andersson, personal communication, 2007-05-21). The leverage capital for the hedge funds investigated range from 0 to 250 per cent, see Table 4:3, and Table 4:4. The equity hedge funds investigated has a leverage capital of 60 to 250. For the hedge funds using a fund of hedge funds investment strategy the leverage capital vary from 0 to 100.

SFSA do not regulate the amount of permitted leveraged capital to a large extent. According to O. Ode most of the hedge funds investigated in this thesis have been granted to use 400 to 600 per cent in leverage capital. Yet, he does not believe that any hedge fund manager investigated use as much as 400-600 per cent in leverage capital, rather they see it as an option (O. Ode, personal communication, 2007-05-16).

The hedge funds that have been granted exceptions from the first point in the 5$^{th}$ chapter, 23§ (see section 3:5) are allowed to use leveraged capital. The amount is decided by SFSA for each specific fund. The hedge funds with zero leveraged capital have not been granted exceptions from the first point in this paragraph (Svensk författningssamling, 2004).

## 4.4 Hedge fund managers' principal interest in hedge funds

Direct investments in the hedge fund and result based salaries are the two factors that increase the motivation of the hedge fund manager (C. Andersson, personal communication, 2007-05-21). It is argued that a hedge fund manager who invest own money in the hedge fund is more motivated in the performance of the hedge fund. This person shares the interest with the other investors (R. Lindroos, personal communication, 2007-05-22).

According to the questionnaire most of the hedge fund managers are investing their own money in the hedge fund, or are at least planning to invest, see Table 4:6. Out of the eight respondents six invest now and two plan to invest. Since the authors of this thesis do not know whether the hedge fund managers who did not respond to the questionnaire invest or not these hedge funds are excluded from the table. This information is not possible to collect from secondary data.

| Fund | Hedge fund managers' investments |
|---|---|
| AMDT Hedge | Plan to invest [a] |
| Banco Hedge | Invest now [b] |
| Erik Penser Hedgefond | Invest now [c] |
| HQ Solid | Invest now [d] |
| Lannebo Alpha | Invest now [e] |
| Nordea All Hedge Fund | Invest now [f] |
| SEB Multihedge | Invest now [g] |
| Swedbank Robur Access Hedge | Plan to invest [h] |

[a] C. Andersson (personal communication, 2007-04-20)
[b] B. Jonsson (personal communication, 2007-04-20)
[c] G. Norberg (personal communication, 2007-05-02)
[d] P. Sommerlou (personal communication, 2007-04-20)
[e] M. Gustafsson (personal communication, 2007-04-20)
[f] R. Lindroos (personal communication, 2007-05-02)
[g] H. Dahlgren (personal communication, 2007-05-07)
[h] P. Haak (personal communication, 2007-04-21)

Table 4:6 – Fund managers' investments according to primary data

There is no regulation whether hedge fund managers or financial institutions should invest their own money in the hedge funds. M. Olander believes that it is usual that hedge fund managers invest own money. According to SFSA it is important to inform the investors of the hedge funds whether the hedge fund managers invest their own money or not. If they invest, they should continuously inform investors about every transaction they do (M. Olander, personal communication, 2007-05-15). *Swedbank Robur Access Hedge* are only allowed to invest in other hedge funds where the fund manager invest own money (Swedbank Robur, 2007b).

All the different hedge funds investigated include a fee that is based on annual result according to secondary data, see Figure 4:7. All hedge funds have an annual result based fee, which is dependent on performance. This fee ranges from 10 to 20 per cent.

| Fund | Annual result based fee in % |
|---|---|
| AMDT Hedge | 20 [a] |
| Banco Hedge | 20 [b] |
| Catella Hedgefond | 20 [c] |
| Erik Penser Hedgefond | 20 [d] |
| HQ Global Hedge | 10 [e] |
| HQ Nordic Hedge | 10 [e] |
| HQ Solid | 10 [e] |
| Lannebo Alpha | 20 [f] |
| Nordea All Hedge Fund | 20 [g] |
| Nordea European Equity Hedge Fund | 20[h] |
| Nordea Nordic Equity Hedge Fund | 20 [i] |
| SEB Multihedge | 10 [j] |
| Swedbank Robur Access Hedge | 15 [k] |

[a] Morningstar (2007b)
[b] Morningstar (2007c)
[c] Morningstar (2007d)
[d] Morningstar (2007e)
[e] HQ Fonder (2007e)
[f] Morningstar (2007f)
[g] Nordea (2007a)
[h] Nordea (2007b)
[i] Nordea (2007c)
[j] SEB Fonder (2006)
[k] Swedbank Robur (2007a)

Table 4:7 – Result based fee according to secondary data

# 5 Analysis

*This chapter analyzes the theories about hedge funds with the Swedish perspective of hedge funds from the empirical data. The analysis is structured in the same way as the empirical findings to guide the reader.*

## 5.1 Investment strategies

The analyst and the two hedge fund managers interviewed were asked to describe how the investment strategies are used in the Swedish hedge fund market. Comparing these answers with the US literature it was found that the investment strategies are used in the same way in Sweden as in the US. Therefore the US literature was applicable to get an understanding of hedge funds and investment strategies used.

### 5.1.1 Equity hedge strategy analysis

Equity hedge investment strategy is the most established and used. In Sweden this investment strategy is said to be used by 80 per cent of the hedge fund managers. It is used within 5 of the 13 hedge funds investigated, which is only 38 per cent, and not as expected. The authors of this thesis believe that the reason for this is that only hedge funds with a low initial investment were included in the sample. Low initial investments are more frequent in funds of hedge funds which in turn are over represented within the hedge funds investigated.

Analyzing the different sub strategies within equity hedge, short selling and long/short, it was found that *AMDT Hedge* only invests in OMXS30 futures. It uses both short selling and long/short. Since this hedge fund can sell short it can have a low correlation with the stock exchange. *Erik Penser Hedgefond* uses a conservative long/short equity sub strategy and strives to avoid depreciations, rather than maximizing its capital during appreciations of the market. Because of this it avoids the disadvantage of short sell due to the fact that the stock market index always increases in the long run. To compare, Erik Penser Hedge fund does not operate in a specific part of the market as AMDT Hedge. Focusing more on avoiding loss during depreciating markets indicates that the hedge fund manager have a low risk focus. The low risk focus, in Erik Penser Hedge, is also indicated by not using the riskier short sell option.

*Lannebo Alpha* is composed of long/short equity and takes a long position when stocks are perceived to be undervalued and a short position when the stocks are supposed to be overvalued. Lannebo Alpha uses another sub strategy with investment focus on long/short equity and evaluates companies in order to compare them with the company's shares to find mispricings. In Lannebo Alpha the skill of the hedge fund manager to adjust the portfolio after mispricings is the most important factor when evaluating this hedge fund.

The last two hedge funds using equity hedge are *Nordea European Equity Hedge* and *Nordea Nordic Equity Hedge*. Since the authors of this thesis did not get any answers from the fund managers of these hedge funds it is hard to analyze whether short selling or long/short sub strategy is used.

About the equity hedge funds as a group the authors of this thesis recognized that the investment strategy is the same but the sub strategies are completely different among the hedge funds. As presented these hedge funds use the same investment strategy but looking deeper in these hedge funds the authors recognized that all hedge fund managers have completely different focus.

### 5.1.2 Relative value/market driven strategy analysis

*Catella Hedgefond* is the hedge fund using relative value/market neutral. The fund invests in bonds, fund shares, money market instruments, and derivatives. This is in line with *fixed income arbitrage* sub strategy, which is not widely used. Hedges (2005) described it as a profitable but unpredictable and complex investment strategy. Catella Hedgefond was the hedge fund that was most profitable which is aligned with the statement about the fixed income arbitrage sub strategy being profitable.

Why this investment strategy is not more often present could be due to the fact that it is explained as complicated. The Swedish hedge fund market is not so well exploited and knowledge of these complicated sub strategies may not be as high as needed leading to a less frequent use. It could also be because this investment strategy tries to be neutral against the stock exchange and hedge out the market risk.

### 5.1.3 Event driven strategy analysis

Event driven investment strategy is not used within any of the hedge funds investigated. The authors of this thesis assume that this is due to the fact that Swedish markets do not have as high liquidity or the same credit possibilities as international actors. As this investment strategy involves corporate mergers, acquisitions and divestments it is demanded to have these attributes in order to perceive the sub strategies. The sub strategies are *merger arbitrage, distressed securities* and *special situations* all being referred to as riskier sub strategies.

Another reason why this investment strategy is not present in this sample is identified to be that hedge fund managers need to seek new information about different companies before investing in the stocks of these companies. It demands a high international skill and language level, to be a part of the international debate and to have a well established international network. The authors of this thesis identify the lack of this internationalization of the hedge funds managers to make other investment strategies, which demands less internationalization, more attractive.

### 5.1.4 Global macro strategy analysis

*Banco Hedge* is the only hedge fund investigated that use the global macro investment strategy, which is contrary to McCrary's (2002) statement that it is the most widely used investment strategy. Reasons for this are identified to be that the literature is written for the US market where the use of this investment strategy could be higher. It is also identified that the book by McCrary is written in 2002 and the use of this investment strategy may have changed.

Banco Hedge uses several different sub strategies and invests in several different markets. It focuses on diversification through keeping track of market exposure, relative value global markets/sectors, long/short on the Nordic Big Cap, long small cap versus Swedish equity funds and fixed income. Looking at these focus parts one can recognize that it works on the global, Nordic and Swedish market. Global macro had the broadest definition of hedge fund investment strategies which is in line with what is explained about Banco Hedge.

The capital of this fund can be invested in bonds, money market instruments, fund shares, derivatives, and accounts in credit institutions which are a wide variety of investment alternatives. Therefore when using this investment strategy it is important that the hedge fund manager has knowledge about different investment strategies and financial instruments.

### 5.1.5 Fund of hedge funds strategy analysis

The fund of hedge funds investment strategy is the most widely used investment strategy within the hedge funds investigated. The interviewees argued that equity hedge is the most widely used investment strategy within Swedish hedge funds and according to the US literature global macro is the most used investment strategy. Reasons for this could be found firstly from what is said by McCrary (2002) that fund of hedge funds have lower fees and minimum investments. The fund of hedge funds had the lowest performance fees of the hedge funds investigated, which is equivalent with McCrary's statement. On the other hand, they had the highest minimum investments, which instead is contrary.

It is argued to depend upon the fact that the fee can be negotiated so the investors do not need to pay fees both for the fund of hedge fund and the funds invested in. It can also be argued to be the case because it attracts customers not knowing what category of funds to invest in. Therefore, the authors of this thesis assume that these customers are less informed and invest a smaller amount of capital.

All the fund of hedge funds investigated are diversified. HQ Solid, Nordea All Hedge Fund and SEB Multihedge use a multistrategy rather than the sub strategies; sector, and, strategy specific, associated within this investment strategy. This implies that they do not invest in funds focusing on a specific sector or a specific strategy. Instead they attempt to invest in funds with other strengths. *HQ Solid* seeks global hedge funds with high quality. This fund diversifies its investments across classes, markets, investment strategies, and funds, which implies that this hedge fund use both sector and strategy specific investments. *Nordea All Hedge Fund* is a fund of hedge funds with a well diversified investment strategy and a focus on low drawdown risk. *SEB Multihedge* is a market independent multistrategy fund of hedge fund that invests in other hedge funds with many different investment strategies, being diversified.

*Swedbank Robur Access Hedge* is a well diversified fund of hedge funds that invest in other funds with many different investment strategies. At the moment investments are done in hedge funds using event driven and long/short equity strategies. Therefore, this fund belongs to a strategy specific sub strategy. *HQ Global Hedge Fund*, and *HQ Nordic Hedge Fund* are sector specific hedge funds. The first one invests in global hedge funds while the second only invest in Nordic hedge funds. These funds are also strategy specific since both of them invest in stocks and derivatives within these markets.

There are regulations concerning how many different funds the different fund of hedge funds must be composed of and also the maximum amount of capital that can be invested in each fund. The composition range from 4 to 10 funds and the capital range from 20 to 50 per cent in each of these hedge funds. This is an implication of how the SFSA adjusts and forces the hedge fund managers to have diversification focus in order to lower the risk.

It is common that funds of hedge funds are outsourced as the case with Swedbank Robur Access Hedge and SEB Multihedge. This is identified to be the case since it is hard for hedge fund managers to have deep knowledge about several funds of hedge funds with different investment strategies and evaluate which to include in the portfolio.

## 5.2 Analysis of risks in investment strategies

The hedge fund managers identified other risks to each investment strategy than the risks described in the frame of reference. As there can be no generalization of risks between hedge funds using the same investment strategy this may be due to the fact that the risks are more dependent on the hedge fund manager than the investment strategy used. It is important to notice that most of the risks in the frame of reference were found in US literature, leading to a bias between how hedge fund risks and investment strategies are associated in different parts of the world.

SFSA demands that the hedge fund managers provide risk information regularly, both to SFSA and the investors. The authors of this thesis identifies that the hedge fund managers have a high risk awareness, which is reflected in the low risk of funds of hedge funds.

### 5.2.1 Equity hedge risk analysis

The main factor that leads to changes in investment strategy within *AMDT Hedge* is changes in volatility. This is in line with Hedge's (2005) statement that volatility is medium to high for the equity hedge investment strategy. *Erik Penser Hedgefond* does not change investment strategy. *Lannebo Alpha* may change their hedging and short selling. The authors of this thesis believe that this should be the case for all equity hedge funds since it is not profitable to sell short in long sustained bull markets. Then the hedge fund managers have to go long instead and vice versa. Yet, AMDT Hedge is the only hedge fund where short selling is actively used and the only hedge fund investigated that has had a negative return during 2007. Long/short is hedged, since the hedge fund manager goes both long and short. If the short selling investment strategy is used the investments are not hedged by long sell. This may be linked to the fact that AMDT Hedge had the worst performance. This hedge fund should instead take into account that long and short positions behave different avoiding short sell risk of long sustained bull markets.

Another reason to the fact that AMDT Hedge has had a negative return could be that the stock market always increase in the long run, which makes the short selling more risky than long/short. Erik Penser Hedgefond and Lannebo Alpha only use long/short while AMDT Hedge use both these sub strategies. AMDT Hedge also had the highest standard deviation out of these three hedge funds, which is also in line with the use of short selling, being the riskier alternative of the sub strategies.

### 5.2.2 Global macro risk analysis

Many risks are associated with global macro investment strategy since it is the broadest definition. As the stock market moves before the rest of the economy this demands the use of directional bets. These directional bets need to be taken into action before the market moves. *Banco Hedge* evaluates the global stock and bond market in order to find a profitable investment instrument allocating where directional bets can be profitable. The risk of timing is managed by moving quickly across different asset categories. Market risk, which is associated with global macro investment strategy, cannot be managed through diversification implying that the hedge fund manager of Banco Hedge always has to have a high awareness of the direction of the market risk and the effect of the market risk on the portfolio.

### 5.2.3 Fund of hedge funds risk analysis

A hedge fund using the fund of hedge funds investment strategy invests in other hedge funds. The risks within this investment strategy are associated with the investment strategies used within the hedge funds invested in. According to Anderlind et al. (2003) fund of hedge funds yield mediocre results since the result is dependent upon the average return of the hedge funds invested in. This could make the funds of hedge funds less attractive to investors but that is not the case in the hedge funds investigated.

It is identified that the managers wanted to point out that this is a low risk investment strategy. All fund of hedge funds investigated have a standard deviation lower than 5. This confirms that the hedge fund managers do not only want to give the impression of low risk focus since all fund of hedge funds investigated do have a low risk. The low risk focus attracts investors who are insecure about which hedge fund to choose. It could be interpreted as these investors do not think it is worth the risk to invest capital on their own. They rather invest in fund of hedge funds were the capital is invested by the use of a hedge fund manager's skills and knowledge.

It is recognized that the hedge fund manager need to have a lot of knowledge about the different investment strategies in the hedge funds invested in. To find the best investment alternatives the hedge fund manager must be able to evaluate which investment strategy that is best at the specific time. A common risk here is that the hedge fund managers exclude hedge funds using certain investment strategies that have performed poorly recently. *HQ Solid* reduces this risk by using a risk/reward perspective regularly to allocate the best investment strategies at the specific time. This means that this hedge fund manager does not exclude the hedge funds that use investment strategies that have performed poorly recently.

## 5.3 Analysis of risk measurements

Neither of the interviewees classified the risks exactly as described by Hedges (2005), even though two of them were close. This is identified to be due to the fact that Hedges operates in the US market and the interviewees in the Swedish market. It is argued that the risk is dependent upon the hedge fund manager rather than investment strategies used. The authors of this thesis believe that this is another reason why the interviewees classified the level of risk for the various investment strategies different from each other and different from Hedges (2005). This indicates that the risk factors are not the same in the Swedish market as in the US market. Therefore emphasis will be put into the outcomes of the interviews rather than the literature.

### 5.3.1 Sharpe ratio

It is believed that all hedge funds investigated strives to, and manages to, reach a Sharpe ratio of 1. A Sharpe ratio over 1.5 is good. If it is below 1 it is low, while a Sharpe ratio above 1 is acceptable. According to the research done in this thesis *HQ Global Hedge* is the only hedge fund that has a Sharpe ratio below 1.

It is said that a higher Sharpe ratio means a higher yield. *Catella Hedgefond* had both the highest Sharpe ratio and the highest return. HQ Global Hedge had the lowest Sharpe ratio but not the lowest return. *AMDT Hedge* has had the lowest return during 2007, which was negative. The Sharpe ratio is only a small part in an investment decision, and not of crucial important on its own. Yield is a more important factor in this decision. The Sharpe ratio should be used when comparing traditional funds rather than hedge funds. If it is used within hedge funds it should be used to compare each specific hedge fund, rather than to compare hedge funds with each other, which is contradictory to what was written by Anson (2002).

### 5.3.2 Standard deviation

The risk for an investor increases with the hedge fund's standard deviation, it is highest for *AMDT Hedge* and lowest for *SEB Multihedge*. This is interpreted as AMDT Hedge has the highest risk and SEB Multihedge has the lowest, looking at this risk measurement. It is important to notice that standard deviation should be used to evaluate hedge funds that operate in the same markets (Lavinio, 1999). The hedge funds investigated in this research operate in many different markets and use different investment strategies. Therefore it is hard to compare the hedge funds investigated by using standard deviation. The authors of this thesis recognizes that standard deviation in this case is best used to look at the hedge funds separately rather than comparing them as a group.

The standard deviation of a hedge fund is high if it is above 15 and low if it is below 9. AMDT Hedge had a standard deviation of 7.70, which is the highest within the hedge funds investigated, but still low. Therefore, all these hedge funds are classified to be low risk investments, which all respondents said when asked to state the risk. The only hedge funds investigated that allow a standard deviation above 9 are *Nordea Nordic Equity Hedge*, and *Swedbank Robur Access Hedge* indicating a strict focus on low risk amongst the hedge funds investigated. AMDT Hedge do not have any upper barriers indicating that the risk awareness could be lower than in other funds, which is also reflected in the negative return of -3.3.

Standard deviation is dependent upon the hedge fund manager rather than investment strategy which is also in line with other parts of this research. This since no generalizations can be made among the hedge funds when looking at standard deviation and investment strategies.

### 5.3.3 Leverage capital

According to Hedges (2005) the leverage capital differs dependent on investment strategy. It is lowest for event driven and equity hedge and highest for relative value/market neutral. This research showed that *Lannebo Alpha* which uses the equity hedge investment strategy has the significant highest per cent of allowed leverage capital. This implies that no generalizations can be drawn to state whether different investment strategies make use of different amounts of leverage capital. As stated by the interviewees the leverage capital is not dependent upon investment strategy but the hedge fund manager. This is confirmed by the fact that all other Swedish hedge funds investigated lies mixed within the interval of 0 to 100 per cent independent of investment strategy.

## 5.4 Hedge fund managers and investors shared interest

Most of the hedge fund managers have invested their own money in their hedge funds. This factor parallel with the performance based fee lead to an interest in the hedge funds' performance for the managers. Two of the interviewees also stated that the motivation increases due to own investment and performance based salary in the hedge funds. Therefore, the principal agent theory is applicable for the hedge funds investigated and shared interest leads to better performance of the hedge fund.

The agents provide information to the principals at the financial institutions web-sites. Using this information, the investors can check that the hedge fund managers work in the best interest of the principals. Also, agents are rewarded for the performance due to bonuses and the increase in own capital invested.

# 6 Conclusion

*The conclusion chapter is directly connected to the purpose. The analysis will be summarized in order to answer the research questions and fulfill the purpose of the thesis.*

*"The purpose of this thesis is to explore what different investment strategies and sub strategies that are used within Swedish hedge funds. The authors of this thesis also aim to investigate and compare the specific risks and risk measurements of these hedge funds depending on the investment strategy used."*

The 13 Swedish hedge funds, with an initial investment of 0 to 10 000 SEK, uses four of the five investment strategies investigated. Fund of hedge funds are used by 6 Swedish hedge funds, equity hedge by 5 and global macro and relative value/market neutral by 1 hedge fund each. Remarkable here is that the most frequently represented investment strategy is funds of hedge funds. The most frequently represented investment strategy was expected to be the equity hedge or the global macro investment strategy. The conclusion from these outcomes is not that equity hedge or global macro is underrepresented, rather the fund of hedge fund investment strategy is overrepresented. This research has shown that the funds of hedge funds are all focusing on diversification and low risk. In fund of hedge funds the choice of hedge fund investment strategy is decided by the hedge fund manager instead of the investors. The fund of hedge fund managers have large insight into the hedge fund market and know when to switch investment strategy, so the private investors do not need to evaluate the investment strategies themselves.

On the question about what sub strategies that are used there is an overall low risk focus and the sub strategies used are related to low risk. One example indicating this is the fact is that in the equity hedge strategy there is only one that has chosen to use the riskier short selling sub strategy. Another is that fund of hedge funds focus on multistrategies rather than sector or strategy specific, and diversification lowers the risk.

According to this research neither the specific risks nor the risk measurements are dependent upon what investment strategy that is used. Instead the risks are dependent upon the hedge fund manager.

Market risk and volatility are proven to be associated with the equity hedge investment strategy as well as with the global macro investment strategy. The specific risks associated with funds of hedge funds are defined from what hedge funds the fund of hedge funds invests in.

Applying different risk measurements to Swedish hedge funds it is important to notice that these measurements as well as the specific risks are not hedge fund specific but rather they are concluded to be hedge fund manager specific. The Sharpe ratio is concluded to be better comparing traditional funds than hedge funds. This since the Sharpe ratio only is a small part of an investment decision and better for comparison when the funds are operating in the same markets using similar investment strategies. This is not the case with the hedge funds investigated. Standard deviation is a measurement that can be used to evaluate each specific hedge fund. All hedge funds investigated had a low standard deviation. Leverage capital is used in 8 of the 13 hedge funds and is mixed unsystematically between all investment strategies. Due to the hedge fund managers interest in the hedge fund the risk is more dependent upon the hedge fund manager than the investment strategy, even though they need to follow the regulations by SFSA.

# 7 Discussion

*This chapter discusses the outcome of the research. It also includes some limitations of the study and suggestions for further research.*

Investment strategies are investigated by comparing the different financial instruments that are used within the investment strategies and sub strategies and how they are used. Research on the area of investment strategies is conducted, collecting primary data directly from the financial institution. The data can be both in quantitative and qualitative form. Quantitative data is most often used when conducting statistical analysis over time. Qualitative data is used when exploring the subject to get a deeper understanding.

The authors of this thesis compared Sharpe ratios, standard deviation, and return from different dates, which can be misleading for this research. Instead of including the Sharpe ratio and standard deviation in the questionnaire, these factors should have been taken from internet sources at the same time as the return of each hedge fund was collected. Standard deviation cannot be used to say whether the investment is good or bad. This, since it is each specific investor who has to decide if he wants to purchase an investment with high or low risk.

It is important to mention that no investment strategies were missed out from the questionnaire. Neither was the meaning of the investment strategies included hard to understand according to the two interviewees who also answered the questionnaire. If a hedge fund manager does not know what a specific hedge fund investment strategy means, he certainly does not use that strategy.

There are no significant differences between banks and financial institutions when it comes to Swedish hedge funds. The differences are connected to the skill and knowledge of the hedge fund manager. Hedge funds are dependent upon the managers motivation rather that if it is managed within a bank or a financial institution.

According to the answers to question 4, see Appendix 1, the potential customers were not only private investors. The hedge fund managers argued that hedge funds suit both small and large investors who are looking for an investment which is not correlated to the Swedish stock market. Also institutions/companies who want a well diversified product with low risk and do not want to compose it by themselves are potential investors for the hedge funds investigated. Therefore, the hedge funds investigated are still suitable for private investors, yet the hedge fund managers also aim at attracting institutional investors.

## 7.1 Further research

This research is conducted on the Swedish market which is only 1 per cent of the total hedge fund market. Therefore, the authors of this thesis suggest that a comparison of the Swedish and another market for hedge funds, e.g. the US, could be interesting when it comes to investment strategies and risk.

It is more than ten years since the first hedge fund was introduced in the Swedish market. There are in 2007, 59 hedge funds in the Swedish market. It would be interesting to investigate, in depth, how investment strategies changes over time and what factors that lead to changes.

## 7.2 Limitations

The last question in the questionnaire gave varied answers. Therefore, it is reasonable to assume that this question should have been asked more clearly in order to receive similar answers about risk measurements. Another limitation with the questionnaire is that the authors of this thesis should have asked the hedge fund managers to give a detailed description of the risks associated with the hedge funds. This would have been interesting to compare and analyze and also to draw conclusions from.

# References


Ackermann, C., McEnally, R., & Ravenscraft, D. (1999). The performance of Hedge Funds: Risk, Return, and Incentives. *The Journal of Finance*, 54(3), pp. 833-874

Aczel, A., D. (2002). *Complete Business Statistics*. NY: McGraw-Hill Irwin.

Anderlind, P., Dotevall, B., Eidolf, E., Holm, M., & Sommerlou, P. (2003). *Hedgefonder*. Sweden: Academia Adacta AB.

Anson, J. P. M.. (2002). *Handbook of alternative assets*. USA: John Wiley & Sons, Inc.

Banco Fonder. (2007, January 25). *Faktablad – Banco Hedge*. Retrieved 2007-05-15 from, http://www.banco.se/upload/files/shared/se/prospekt_forenklat/bancohedge.pdf

Barker, B., Hui, B. (2003). Hedge funds – the way forward? *Balance sheet*, 11(1), pp. 32-36

Björk, L., Räisänen, C. (2003). *Academic Writing- A University Writing Course*. (3rd edn). Lund: Studentlitteratur.

Bodie, Z., Kane, A., Marcus, A. J, Perrakis, S., Ryan, P. J. (2005). *Investments*. (5th edn). Canada: McGraw-Hill Ryerson.

Catella Kapitalförvaltning. (2007a, February 15). *Faktablad – Catella Hedgefond*. Retrieved 2007-05-15 from, http://www.catellakapitalforvaltning.se/fund.asp?guid=17241600-BBC3-4C93-9B18-3F343886D457&item=3F784F07-1C68-490A-A0D8-DCE093F3CB49

Catella Kapitalförvaltning. (2007b). *Fondbestämmelser för Catella Hedgefond*. Retrieved 2007-05-25 from, http://www.catellakapitalforvaltning.se/fund.asp?guid=17241600-BBC3-4C93-9B18-3F343886D457&item=3F784F07-1C68-490A-A0D8-DCE093F3CB49

Clifford, S. W. (2002) “Absolute Return Strategies – A Useful Tool for Today’s Plan Sponsors” [online] (cited 13 April 2007) Retrieved from http://www.hcmltrust.com/pdf/Absolute%20return%20strategies.pdf

Cuncliff, A. L., Hatch, M.J. (2006). *Organization theory*. (2nd edn). New York: Oxford University Press Inc.

Edwards, F.R., (1999). Hedge Funds and the Collapse of Long-Term Capital Management. *The Journal of Economic Perspectives*, 13(2), pp. 189-210.

Ekonominyheterna. (2006, December 12). *Rekordintresse för hedgefonder*. Retrieved 2007-03-05, from http://ekonominyheterna.se/nyheter/2006/12/12/rekordstort-intresse-for-h/

Erik Penser Fonder. (2007a, February). *Faktablad – Erik Penser Hedgefond*. Retrieved 2007-05-15, from http://www.penserfonder.se/download/simplified/penser_hedge.pdf

Erik Penser Fonder. (2007b). *Fondbestämmelser – Erik Penser Hedgefond.* Retrieved 2007-04-03, from http://www.penserfonder.se/hedge.jsp#

Finansinspektionen. (2006, April 11). *Finansinspektionen – what we are and what we do.* Retrieved 2007-03-11, from http://www.fi.se/upload/90_English/20_Publications/20_Miscellanous/whoweare.pdf

Finansinspektionen. (2007a). *Ordbok*. Retrieved 2007-05-21, from http://www.fi.se/

Finansinspektionen. (2007b). *Regulations.* Retrieved 2007-03-11, from http://www.fi.se/Templates/Page____2737.aspx

Fondbolagens förening. (2006a, December 31). *Fondförmögenhet 2006-12-31*. Retrieved 2007-04-03, from http://www.fondbolagen.se/upload/fondformogenhet_2006_003.xls

Fondbolagens förening. (2006b, October 26). *Fondsparandet i Sverige 2006.* Retrieved 2007-04-30, from http://www.fondbolagen.se/upload/fondsparandet_i_sverige_2006.pdf

Ghauri, P., Grønhaug, K. (2005). *Research Methods in Business Studies – A Practical Guide* (3rd edn). England: Prentice Hall.

Harcourt Investment Consulting. (2007a). *About Harcourt.* Retrieved 2007-05-15, from http://www.harcourt.ch/abourt.asp

Harcourt Investment Consulting. (2007b). *Harcourt strategy sheet – Event driven strategy.* Retrieved 2007-04-06, from http://www.harcourt.ch/Investor_Relations/Hedge_Fundamentals/hcstrategies.asp

Harcourt Investment Consulting. (2007c). *Harcourt strategy sheet – Fixed income arbitrage.* Retrieved 2007-04-06, from http://www.harcourt.ch/Investor_Relations/Hedge_Fundamentals/hcstrategies.asp

Harcourt Investment Consulting. (2007d). *Harcourt strategy sheet – Global macro.* Retrieved 2007-04-06, from http://www.harcourt.ch/Investor_Relations/Hedge_Fundamentals/hcstrategies.asp

Harcourt Investment Consulting. (2007e). *Harcourt strategy sheet – Short-biased equity.* Retrieved 2007-04-06, from http://www.harcourt.ch/Investor_Relations/Hedge_Fundamentals/hcstrategies.asp

Hedges, J. R. (2005). *Hedges on Hedge Funds : How to Successfully Analyze and Select an Investment.* New Jersey: John Wiley & Sons.

HQ Fonder. (2007a). *Fondbestämmelser för HQ Global Hedge*. Retrieved 2007-04-03, from http://www.hq.se/upload/HQ%20Fonder/pdf/fondbest%C3%A4mmelser/fondbest%20global.pdf

HQ Fonder. (2007b). *Fondbestämmelser för HQ Nordic Hedge*. Retrieved 2007-04-03, from http://www.hq.se/upload/HQ%20Fonder/pdf/fondbest%C3%A4mmelser/fondbest%20nordic.pdf

HQ Fonder. (2007c). *HQ Bank – HQ Global*, Retrieved 2007-04-17, from http://hq.se/sv/HQ-Fonder/Vara-fonder/HQ-Global-Hedge

HQ Fonder. (2007d). *HQ Bank – HQ Nordic*, Retrieved 2007-04-17, from http://hq.se/sv/HQ-Fonder/Vara-fonder/HQ-Nordic-Hedge

HQ Fonder. (2007e). *Informationsbroschyr – HQ Global Hedge, HQ Nordic Hedge and HQ Solid*. Retrieved 2007-05-15, from http://www.hq.se/upload/HQ%20Fonder/pdf/informationsbroschyrer/info_nor.pdf

Ineichen, A. M., (2003). *Absolute Returns – The Risk and Opportunities of Hedge Fund Investing*. USA: John Wiley & Sons.

Lannebo Fonder. (2007, April). *Faktablad – Lannebo Alpha*. Retrieved 2007-05-15, from http://www.lannebofonder.se/upload/Faktablad/Faktablad_Alpha.pdf

Lavinio, S. (1999). *Hedge Fund Handbook*. USA: McGraw-Hill Professional Book Group.

Lhabitant, F., S. (2004). *Hedge Funds – Quantitative Insights*. GB: John Wiley & Son.

Luenberger, D.,G. (1998) *Investment Science*. New York: Oxford University Press Inc.

Morningstar. (2007a). About Us. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007b). *AMDT Hedge*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007c). *Banco Hedge*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007d). *Catella Hedgefond*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007e). *Erik Penser Hedgefond*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007f). *Lannebo Alpha*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007g). *Nordea European Equity Hedge Fund*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007h). *Nordea Nordic Equity Hedge Fund*. Retrieved 2007-04-03, from http://www.morningstar.se

Morningstar. (2007i). *Sök fond*. Retrieved 2007-03-14, from http://www.morningstar.se

Morningstar. (2007j). *Sök fond*. Retrieved 2007-05-16, from http://www.morningstar.se

McCrary, S. A. (2004). *Hedge Fund Course*. USA: John Wiley & Sons.

McCrary, S. A. (2002). *How to Create & Manage a Hedge Fund – A Professional's Guide*. USA: John Wiley & Sons.

Nordea. (2007a). *Faktablad – Nordea All Hedge Fund*. Retrieved 2007-05-15, from http://www.nordea.se/sitemod/upload/root/se_org/privat/tjanster/prodreg/fonder/resurs/faktablad/FB_Allhedge.pdf

Nordea. (2007b). *Faktablad – Nordea European Equity Hedge Fund*. Retrieved 2007-05-15, from http://www.nordea.se/sitemod/upload/root/se_org/privat/tjanster/prodreg/fonder/resurs/faktablad/FB-EuropeanEquityHedge.pdf

Nordea. (2007c). *Faktablad – Nordea Nordic Equity Hedge Fund*. Retrieved 2007-05-15, from http://www.nordea.se/sitemod/upload/root/se_org/privat/tjanster/prodreg/fonder/resurs/faktablad/fb-NoHedgeFund.pdf

Nordea. (2007d). *Fondbestämmelser för Nordea European Equity Hedge Fund*. Retrieved 2007-05-15, from http://www.nordea.se/sitemod/upload/root/se_org/privat/tjanster/prodreg/fonder/resurs/fondbestamelser/europeanhedge.pdf

Nordea. (2007e). *Fondbestämmelser för Nordea Nordic Equity Hedge Fund*. Retrieved 2007-05-15, from http://www.nordea.se/sitemod/upload/root/se_org/privat/tjanster/prodreg/fonder/resurs/fondbestamelser/nordichedge.pdf

Pettigrew, A., Thomas, H., & Whittington, R. (2002). *The Handbook of strategy and management*. (2nd edition). London: Sage Publications.

Saunders, M., Lewis, P., and Thornhill, A. (2003). *Research Methods for Business Students*. (3rd edn), GB: Prentice Hall.

SEB Fonder. (2006, April). *Informationsbroschyr – SEB Multihedge*. Retrieved 2007-05-15, from http://www.seb.se/pow/FMK/2500/informationsbroschyr/i_seb-mhedge.pdf

Sharpe F.W., (1966). Mutual Fund Performance. *Journal of Business*, January 1966, pp. 119-138

Siklos, P. L. (2006). Money, Banking & Financial Institutions – Canada in the Global Environment. (4th edn). Canada: McGraw-Hill Ryerson.

Svensk författningssamling. (2004, March 2). *Lag (2004:46) om investeringsfonder*. Retrieved 2007-05-01, from https://www5-infotorg-se.bibl.proxy.hj.se/rb/MainServlet

Swedbank Robur. (2007a). *Faktablad – Swedbank Robur Access Hedge*. Retrieved 2007-05-15, from http://www.robur.se/upload/pdf/faktablad/SV/AHE.pdf

Swedbank Robur. (2007b). *Fondbestämmelser för Swedbank Robur Access Hedge*. Retrieved 2007-05-15, from http://www.robur.se/upload/pdf/fondbest/SV/AHE.pdf

Systematiska fonder. (2007). *Produktbeskrivning – AMDT Hedge*. Retrieved 2007-05-15, from http://www.systematiska.se/pdf/produktbeskrivning.pdf

Åkesson, N. (2007-02-28). *Fondchef: Läge för hedgefonder*. Retrieved 2007-03-05, from http://www.di.se/Nyheter/

# Appendix 1 – Questionnaire

| |
|---|
| Name of Hedge Fund:<br>Fund manager:<br>Introduced in year- month: |

## Part 1 – Hedge Fund Strategies

QUESTION 1. What investment strategies do you today identify your hedge fund with, according to invested capital? You can choose 3 alternatives and write the most important first and the number of the second most important second and so on.

1. Relative value/market neutral 2. Event driven 3. Equity hedge

4. Global macro 5. Fund of hedge funds

Answer:

QUESTION 2. Describe more in detail the investment strategy of your hedge fund.

QUESTION 3. Describe the main parameters that might lead to changes in the investment strategy of your hedge fund?

QUESTION 4. Who, according to you, are the potential customers of this hedge fund?

## Part 2 – Capital and the Hedge Fund

QUESTION 5. Have you invested your own money in the hedge fund you manage? Mark the most appropriate answer with an X.

Never invested Used to invest Invest now Plan to invest

QUESTION 6. How much of the hedge funds capital can be borrowed capital? Write the answer *in percentage.*

## Part 3 – Risk

QUESTION 7. Where do you identify your hedge funds investment strategy when it comes to different investment strategies? Mark the most appropriate alternative with an X

Low risk Medium risk High risk

QUESTION 8. What is the last identified;

Sharpe ratio for the fund?

standard deviation for the hedge fund?

QUESTION 9. Do you have any upper barriers on allowed volatility of the hedge fund? If yes please write that in percentage.

In case of any complementary questions, it could be that we contact you again. If you do not want to be contacted please state that here:

You have now finished the questionnaire. Thank you for your participation!

# Appendix 2 – Interview with SFSA

## Part 1 – Investment strategies

1. How many investment strategies are used within the Swedish hedge funds on average?

2. How many investment strategies can be used in a hedge fund, as the most?

## Part 2 – Leverage capital

3. How much leverage capital is normally used within a hedge fund?

4. Within what interval can leverage capital be?

## Part 3 – Other questions

5. How would you describe risk with Swedish hedge funds?

6. Is it usual that the fund managers have to invest their own money? Why?

7. Are there any differences due to the fact that some hedge funds are managed by banks and others by other financial institutions?

# Appendix 3 – Interview with hedge fund analyst

## Part 1 – Investment strategies

1. How would you describe the different investment strategies, when looking at the Swedish market?

- Equity hedge
- Event driven
- Global macro
- Relative value / market neutral
- Fund of hedge funds

2. Which investment strategy is the most used in Sweden, according to you?
3. Are some of the investment strategies we used more or less used in the US / Sweden? Which?
4. What factors affect the choice of investment strategies? Why?

## Part 2. Risk

5. How do you look upon the difference when it comes to risk for the different investment strategies?
6. According to our research all hedge funds have a low risk. Does not the risk depend upon what investment strategy that is used? Which investment strategies are low, medium, and high risk?
7. What can be seen as a high / low standard deviation?
8. What can be seen as a high / low Sharpe ratio?
9. How is the Sharpe ratio used in the hedge fund market?

## Part 3 – Other questions

10. Are there any differences due to the fact that some hedge funds are managed by banks and others by other financial institutions?

# Appendix 4 – Interview with fund managers

## Part 1 – Motivation

1. Are you, as a hedge fund manager, more motivated due to the fact that you have invested your own money in the hedge fund you manage and earn a bonus due to the performance of the fund? How does this affect the hedge fund? Why?

## Part 2 – Investment strategies

2. How would you describe the different investment strategies?

- Equity hedge
- Event driven
- Global macro
- Relative value / market neutral
- Fund of hedge funds

3. Are there more investment strategies than those we have used in our research, including sub strategies? Which?
4. Are some of the investment strategies we used more or less used in the US / Sweden? Which?

## Part 3 – Risk

5. How do you look upon the difference when it comes to risk for the different investment strategies?
6. According to our research all hedge funds have a low risk. Does not the risk depend upon what investment strategy that is used? Which investment strategies are low, medium, and high risk?
7. What kind of risks do you associate with each investment strategy?
8. Where does standard deviation and Sharpe ratio usually lie for Swedish hedge funds?
9. What can be seen as a high / low standard deviation?
10. What can be seen as a high / low Sharpe ratio?
11. How is the Sharpe ratio used in the hedge fund market?

# Appendix 5 – James Hedges table

| Category | Substrategy | Risk | Volatility | Correlation |
|---|---|---|---|---|
| Relative Value/Market Neutral | Convertible arb<br>Fixed-income arb<br>Equity market neutral | Low | Low | Low |
| Event Driven | Merger arbitrage<br>Distressed securities<br>Special situations | Medium | Low | Low |
| Equity Hedge (L/S) | Long/short<br>Short selling | Medium to high | Medium to high | Variable |
| Global Macro (Tactical) | Global macro<br>Managed futures/CTAs<br>Emerging markets | High | Very high | No to negative |
| Fund of Hedge Funds | Strategy specific<br>Sector specific | Low | Low-moderate can vary according ro ratio of funds and strategy | Low |

Cited in Hedges (2005), p. 6

| Category | Substrategy | Focus | (Non)/ Directional | Return Attribution |
|---|---|---|---|---|
| Relative Value/Market Neutral | High 3:1 to 5:1 | Exploit pricing inefficences<br>Neutralize I/S positions<br>Minimize directional effects | Non | Consistence and diversification |
| Event Driven | Low 2:1 or less | Exploit unrealized value<br>Transaction and time-driven | Non | Increased adjustment of risk |
| Equity Hedge (L/S) | Low 2:1 or less | Combine L/S equity and bonds to reduce market exposure and isolate performance while managing portfolio risk | Directional | Enhancer<br>Risk reducer |
| Global Macro (Tactical) | Variable 2:1-5:1 | Opportunistic, aggressive posturing<br>Exploitation of macroeconomic trends | Directional | Enhancer<br>Risk reducer |
| Fund of Hedge Funds | Low-moderate | One-way speculation on future movements<br>Stock diversification and long terms stabilization of returns<br>Seeks presentation of capital in down markets while capturing alpha in up markets. | Non | Seek consistency and predictability |

Cited in Hedges (2005), p. 7

# Appendix 6 – Swedish law about special funds (2004:46)

” Lagen (2004:46) om investeringsfonder,

5 kap. Förvaltning av värdepappersfonder

23 § Fondbolaget får inte i fondverksamheten
1. ta upp eller bevilja penninglån,
2. gå i borgen, eller
3. sälja fondpapper, penningmarknadsinstrument, derivatinstrument eller fondandelar som inte ingår i fonden.
Fondbolaget får trots första stycket ta kortfristiga lån till ett belopp motsvarande högst 10 procent av fondens värde.”

Cited in Svensk författningssamling (2004) pp. 21-22

” Lagen (2004:46) om investeringsfonder,

6 kap. Förvaltning av specialfonder

Inlösen och förvärv av fondandelar

1 § Fondbestämmelserna för en specialfond får, under förutsättning av Finansinspektionens godkännande, innehålla begränsningar av möjligheten att förvärva fondandelar. Fonden måste vara öppen för inlösen av andelar minst en gång om året.

Placeringsbestämmelser

2 § Finansinspektionen skall vid godkännande av fondbestämmelserna för en specialfond pröva om fonden har en lämplig fördelning av placeringar med hänsyn till de krav som bör uppställas på riskspridning. För förvaltningen av medel i en specialfond gäller bestämmelserna i 5 kap. om inte Finansinspektionen har tillåtit ett undantag. Derivatinstrument får dock ha andra underliggande tillgångar än dem som anges i 5 kap. 12 §, om instrumenten är föremål för handel på någon finansiell marknad och inte medför en skyldighet att leverera eller ta emot den underliggande tillgången.

Risknivå

3 § Ett fondbolag skall för varje specialfond beräkna och till Finansinspektionen redovisa fondens risknivå.”

Cited in Svensk författningssamling (2004) p. 22

# Appendix 7 – Performance of the hedge funds

In the table below it can be seen how much return the hedge funds investigated have yielded between 1st of January 2007 and 16th of May 2007.

| Hedge fund | Yield 2007 |
|---|---:|
| AMDT Hedge Fund | -3.3 [a] |
| Banco Hedge Fund | 1.2 [a] |
| Catella Hedgefond | 4.6 [a] |
| Erik Penser Hedgefond | 1.6 [a] |
| HQ Global Hedge | 1.8 [a] |
| HQ Nordic Hedge | 0.8 [a] |
| HQ Solid | 1.9 [a] |
| Lannebo Alpha | 2.7 [a] |
| Nordea All Hedge Fund | 3.0 [a] |
| Nordea European Equity Hedge Fund | 0.4 [a] |
| Nordea Nordic Equity Hedge Fund | 2.6 [a] |
| SEB Multihedge | 2.8 [a] |
| Swedbank Robur Access Hedge | 2.3 [a] |
| Average | 1.7 |

[a] Morningstar (2007j)