

STOCKHOLM SCHOOL OF ECONOMICS
Department of Finance
Master Thesis in Finance
Spring 2010

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Presentation: June 16, 2010, 10.15
Venue: Stockholm School of Economics, Room 342
Discussants: Mårten Störtebecker och Gustaf Ärlestig

Insider Trading

Do Insiders from Large Investment Companies Earn a Higher Abnormal
Return than Other Insiders on the Swedish Stock Market?

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ABSTRACT

The purpose of this thesis is to analyze if insiders from large Swedish investment companies earn a higher abnormal return relative to other Swedish insiders when making insider trades. In this thesis are Industrivärden, Investor, Kinnevik, Latour, Lundbergs and Melker Schörling defined as large investment companies. We analyze transactions from the Swedish stock market during 2001-2009 by using an event study methodology, with an event window of six months. The study uses a sample of 29,080 insider transactions, where 2,430 of the transactions are made by insiders representing the large investment companies. The six month abnormal return has been calculated using both a value weighted and an equally weighted index. Our main findings are that large investment companies' insiders, relative to other insiders, have a statistically significant negative abnormal return of 3.69% on their buy transactions using a value weighted index. However, on their sell transactions, the large investment companies' insiders outperform the other insiders with a statistically significant abnormal return of 6.54% when using a value weighted index. We cannot conclude whether insiders from large investment companies on average are able to make any abnormal return or not relative to other insiders on a six month basis in our sample.

Acknowledgements: We would like to thank our tutor Mariassunta Giannetti for helpful guidance and inputs in the process of writing this thesis.

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1 Introduction

1.1 Background

Insider trading can be made in two different ways, legally or illegally. The public generally only see the headlines created by revealing of illegal insider trades. However, the legal insider transactions create an, perhaps even more, interesting universe for curious researchers and investors. When a person trades with stocks in a company in which she possesses private information she has a duty according to Swedish law to notify her transaction to Finansinspektionen (FI). FI is the authority which supervises and monitors the insider trading in Sweden.

When an insider buys stocks and the actual return is higher than the expected return, the transaction is said to have a positive abnormal return. If the insider sells her stocks and the actual return six months later is lower than the expected return, the abnormal return obviously becomes negative. However, a negative abnormal return after a sell transaction is positive for the insider, since she has avoided a theoretical loss by selling her stocks.

How well insiders predict the movements on the stock market and how the market reacts to those insider transactions are a thrilling area in finance. In this thesis we investigate the nature of insider trades made by insiders from large investment companies in Sweden relative to other insiders on the Swedish stock market. An investment company will in this thesis be defined as a public company which main purpose is to invest and own shares in other public companies.

To the best of our knowledge, this subject has not been investigated earlier.

1.2 Purpose

The large investment companies and their representatives have a special role in the Swedish business environment. There are reasons to believe that the persons in these groups do possess more information than the market and even more information than other insiders do. Such reasons are that they are a part of large professional networks and have a more broad knowledge of the economic climate. The purpose of this thesis is to investigate whether large investment companies' insiders create higher abnormal returns relative to the other insiders.

1.3 Research Question

Our research question is: do insiders from large investment companies earn a higher abnormal return than other insiders on the Swedish stock market?

To make it more distinct this main question is further developed into three sub questions;

- Are large investment companies' insiders able to make a higher abnormal return on their *buy* transactions relative to other insiders?
- Are large investment companies' insiders able to make a higher abnormal return on their *sell* transactions relative to other insiders?
- Are there a significant difference in abnormal returns between large investment companies' insiders and other insiders *on average*?

1.4 Thesis Outline

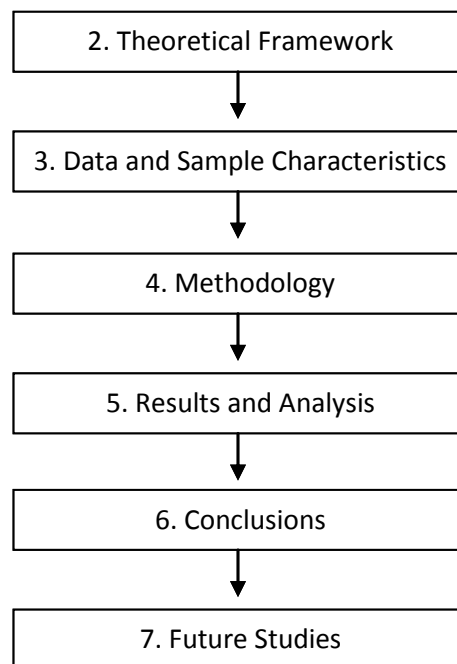


Figure 1. Description of Thesis Outline.

Chapter 2 presents the theoretical framework that is applicable to our research questions. Chapter 3 gives an overview of our data and its characteristics. The methodology and models that we are using in our thesis are presented in chapter 4. Chapter 5 presents our analysis of the empirical findings from our data. Furthermore, we present our final conclusions in chapter 6. Last but not least, we discuss possible future studies regarding the subject in chapter 7.

2 Theoretical Framework

2.1 Regulations

There are two major laws that concerns insider trading in Sweden, SFS 2005:377 and SFS 2000:1087. The most important parts of the laws are discussed below.

2.1.1 Insider Trading and Definition of an Insider

How a person is allowed to trade with stocks that she has non- public information about is regulated in SFS 2005:377. In accordance with this law a person that has non- public information about a firm is not allowed to trade with the company's stock until the information that she possesses is public or to the moment when the information is assumed to not have any influence on the company's stock price. Hence, an insider crime takes place when an insider uses the advantage of non- public information in order to trade with the firm's stock (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2005).

In order to define an insider we use SFS 2007:371¹ which defines an insider as;

1. A board member or an alternate member of the board in the company or the parent company.
2. President or a vice president in the company or in the parent company.
3. Accountant or a deputy accountant from the company or the parent company.
4. Partner from a general partnership which is the company's parent company. This does not apply if the representative from the general partnership is a limited partner.
5. Bearer of other leading position [...] if the position or the work task could result in access to non- public information which could affect the performance of the company's stock.
6. Possessor of paragraphs 1- 3 or other leading positions in a subsidiary, if the position or the work task could result in access to non- public information which could affect the performance of the company's stock.
7. Owner of at least 10% of the total market value of the company or 10% of the total numbers of voting rights. This is also applicable in the case that the person together with spouse and/or underage children or equivalent owns 10% of the share capital or the voting rights (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2007).

¹ SFS 2007:371 is a law which updated SFS 2000:1087 in 2007.

It is worth noticing the separation between a *primary insider* and a *secondary insider*. The first one is an insider that is classified under item 1- 6 above. However, item 7 states that there also exists secondary insiders, i.e. insiders that receives non- public information from the primary insider (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2000). In this thesis both primary and secondary insiders will be defined as insiders. Hence, we will not make a distinction between primary and secondary insiders.

2.1.2 Supervision

The supervising authority in Sweden which is responsible to make sure that companies follow the applicable regulations and laws regarding insider trading is FI. It is also FI's responsibility to supervise the Swedish stock market and if they suspect illegal insider activity they must turn over all the information to a prosecutor (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2005). The insider transactions are registered in a public register, which can be found on FI's homepage (Finansinspektionen, 2010). The register contains extensive information about each specific trade such as; who the insider is, the insider's position within the firm, date of transaction as well as her accumulated holdings etcetera.

2.1.3 Notifying Duty

All registered companies have an obligation to report who among their employees that have insider positions within the firm or its subsidiaries to FI. Moreover, each insider has a personal responsibility to report changes in their positions within five days after those changes have taken place. (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2000). In case a bank or an individual broker finds a trade as abnormal, they have to notify FI about this specific deal (Finansinspektionen, 2010).

2.1.4 Consequences of Breaking the Insider Trading Law

The legal consequences for a person that has been using non- public information for trading or manipulation of the market prices the punishment is a penalty fee and/or prison in minimum six months and at maximum four years. The potential profit from the trade will be seized (Regeringskansliet, Regeringskansliets Rättsdatabaser, 2005).

2.2 Efficient Market Hypothesis (EMH)

Current stock prices should fully reflect all the information available to the investors. Hence, stock prices should change if, and only if, any new information is made available to the market. In these cases the market should efficiently take this new information into account and quickly adjust the price of the stock (Fama, 1970).

Furthermore, Fama argues that there are some market conditions that might hinder or help the efficient adjustment of stock prices. Conditions that will make the market more efficient are; (i) no transactions cost in trading stocks, (ii) all available information is available to all market participants for free and (iii) all market participants agree on the implications of current information for the current price and distributions of future prices of each stock. In case that all three of the above statements are fulfilled, the current price of a stock fully reflects all available information (Fama, 1970).

It is common to distinguish among three versions of the efficient market hypothesis; the weak-, semi-strong- and strong form. The difference between these versions is the notion of what is meant by the term *all available information* (Bodie, Kane, & Marcus, 2008) and is further described below.

2.2.1 Weak- Form Efficiency

This version of the hypothesis states that stock prices already reflect all information that could be captured by examining market data such as; trading volumes, historical stock prices or interest rates. Since all such data are virtually costless available to all investors, the opportunity to make abnormal return by studying historical patterns will be fruitless. This because of the fact that this form of the hypothesis states that if such data ever conveyed trustworthy signals about future stock performance, all investors would already have exploited those signals (Bodie, Kane, & Marcus, 2008).

2.2.2 Semi- Strong Form Efficiency

The semi- strong efficiency asserts that all information that is public regarding the prospects of a company must already be reflected in the price of the stock. In addition to historical data, fundamental data on the company's quality of management, earnings forecasts, balance sheets composition, product line etcetera. As in the weak- form hypothesis, if such information is assumed to be available to all investors it should already be incorporated in stock prices (Bodie, Kane, & Marcus, 2008).

2.2.3 Strong- Form Efficiency

Finally, the strong- form version of the EMH hypothesis states that the market reflects all the information mentioned in the two other forms but also information available only to people that has more and better information compared to the market, in other words; company insiders. General consensus among academics is that this form of efficiency is too extreme. Few would argue against the fact that insiders have access to pertinent information long enough before public releases to enable them to make profit from trading on that information (Bodie, Kane, & Marcus, 2008).

2.3 Earlier Insider Trading Studies

The high interest for insider traders depends partly on their special status among all investors. The insider trader possesses, per definition, information that other financial players do not have.

The history of research in the insider trading field is relatively old. Then as now, one of the most basic questions is whether insiders really do earn an abnormally high return and whether they benefit from their private information. Most academics, such as Jaffe (1974), Finnerty (1976) and Seyhun (1998), have concluded that insiders do earn a substantially higher return than the market. What is perhaps more surprising is that outside investors also can earn an abnormal return by mimicking the insiders. This is a violation of the strong and semi- strong form of the efficient market hypothesis. There are also some researchers, for example Cheuk (2006) and Eckbo (1998), that have concluded the opposite; that insiders do not earn a significant abnormal return. Hansson & Hjelmgård found that it is not possible to mimic an insider and earn an abnormal return on the Swedish stock market (Hansson & Hjelmgård, 2002). These opposed articles are, however, more limited in their time and/or geographical analysis.

The nature of different transactions has also been investigated. The question here has been whether some insider transactions are more important and earn higher abnormal return than others. The answer seems to be yes; when an insider buys stocks the positive abnormal return is generally larger than the negative abnormal return after an insider sells her stocks (Seyhun, 1998) (Li & Nogeman, 2008). There is also a size effect in insider trading; larger transactions tend to generate a higher abnormal return than smaller ones (Seyhun, 1998).

On a direct firm level there are also some factors that determine how large the abnormal return is. Insiders in smaller companies create a higher abnormal return than insiders in larger companies (Jeng, Metrick, & Zeckhauser, 2003) (Seyhun, 1998). The same research and conclusions have been made on the Swedish market by Hjertstedt and Kinnander (2000). There have been two main explanations presented for this. Firstly, insiders in small companies are likely to have larger amount of private information than insiders in larger companies. Secondly, in general, small companies have a lower liquidity in the trading of its stocks (Jeng, Metrick, & Zeckhauser, 2003).

Li & Nogeman conducted investigations per industry sectors. Insiders in the oil and gas sector are those who earn the highest abnormal return while insiders in the banking industry earn the lowest abnormal return (Li & Nogeman, 2008).

There are also a number of papers from the accounting literature examining how insiders behave around different firm events. One paper finds out that insider trading provides superior information about future cash flows (Piotroski & Roulstone, 2005). Another research paper finds that insider trades can reveal information as much as two years ahead of significant accounting disclosures (Ke, Huddard, & Petroni, 2003).

Ravina and Sapienza show that the level of corporate governance within a firm has effects on insiders' possibilities to earn a higher abnormal return on their insider transactions. The abnormal return on insider transactions within the best corporate governance firms are low and indistinguishable from zero, while in the worst governed firms the insiders are able to earn large and significant abnormal returns. Furthermore, they conclude that insiders sitting in the audit committee earn a higher abnormal return than insiders belonging to other committees². The rationale behind this is according to Ravina and Sapienza that the members of the audit committee have better knowledge of the firm's financial statement. As a result it is likely to expect that the members of the audit committee have better performance results on their insider trading. The good trading performance of the members of the audit committee is consistent with the hypothesis that they acquire inside information while working in the audit committee (Ravina & Sapienza, 2009).

A study done by Jenter concludes that top managers have contrarian views on their firms' value relative to the market. Top managers' perceptions of fundamental value diverge systematically from the market valuations. The top managers, which also are insiders within the firm, seem to have unrealistically high expectations about their own company (Jenter, 2005).

We have not found any research that has studied insider transactions made by investment companies' insiders.

2.4 Swedish Investment Companies

Since the Swedish investment companies and its insiders has a central role in this thesis a short description of their history and their current ownership fraction relative to other listed firms are presented below.

² This is only true for what Ravina and Sapienza defines as an independent director. The definition of an independent director in the article is the following: "someone who has never worked at the company or any of its subsidiaries or consultants, is not related to any of the key employees, and does not/did not work for a major supplier or customer". It is reasonable to assume that a large fraction of the investment companies' insiders in our subsample goes under the definition of an independent director.

2.4.1 The Origin of the Swedish Investment Company Sector

A lot of coincidences created the economic crises in Sweden during the 1930's. One of the most significant occurrences that lead to the crisis was the fall of Ivar Krueger's business group. Krueger was a successful businessman who, through aggressive investments, had managed to build a global match and financial empire. In the end of 1920's Krueger's firm was the major global supplier of matches. Beside the large match production, Ivar Krueger also had issued a lot of credit bonds. However, with the start of the sharp stock market decline during 1929 his business empire started to fall apart. Krueger's company was in desperate need of capital and refinancing. Krueger managed to refinance his business through short- dated debt mainly issued by Swedish banks. The problems for his company became even more severe and in year 1932 the company's total debt, which were mainly issued by Swedish banks, amounted to 800 million SEK. The Swedish Central Bank had to step in and granted significant loans in order to save many Swedish banks which had borrowed Krueger a lot of money. The 12th of March 1932 Ivar Krueger committed suicide (Schön, 2007).

The collapse of Krueger's empire came to have a large influence on the owner structure in the Swedish business community. Krueger had through numerous acquisitions of stocks managed to create a substantial influence in many of the largest Swedish firms. When Krueger's companies went bankrupt the Swedish banks took over both their assets and liabilities. Large banks such as Svenska Handelsbanken and Stockholm Enskilda Bank now had significant holdings of stocks in large Swedish companies such as; LM Ericsson, SCA, Boliden, SKF etcetera. However, during this time, it was doubtful whether the banks were able to control the risks that came with the holding of those blocks of stocks. As a solution the banks established several investment companies which they transferred their stocks to. Hence they had separated the financial risk, which came with their holdings in other companies, from their operational business. During this time many investment companies were established, including Custos, AB Industrivärden, Providentia. It is fair to say that the Swedish economic environment with a relatively large amount of investment companies has its origin in the economic turmoil in the beginning of the 1930's (Schön, 2007).

2.4.2 The Investment Company Sector Today

As showed in Appendix 1 there are several investment companies noted on Stockholm Stock Exchange's large-, mid- or small cap lists today. All listed investment companies noted on those lists represent 5.2%³ of the total market value of large-, mid- or small cap on Stockholm Stock Exchange. We have focused on

³ All the numbers presented in this section is calculated with data from 21st April 2010.

six of the eight investment companies represented on large cap, reasons for this is further described under chapter 4.1.2. Those six investment companies represent 4.5% of the total market value of equity on the Stockholm Stock Exchange's large cap list. Furthermore, those six investment companies owns 4.0% of the total market value of large-, mid- or small cap lists. All the above stated figures are based on the market value of equity (Reuters, 2010).

Sweden is the country in Europe that makes the greatest use of the dual class share- system. In other words; for a relative large fraction of the large listed companies there is a separation between shareholders cash flow- and control rights. This separation seems to cause significant agency problems (Giannetti & Simonov, 2006). It has been shown that the costs of those agency problems are sizable and may reach up to 25% of the company's equity value (Cronqvist & Nilsson, 2003). It is reasonable to argue that investment companies' voting rights relative to all outstanding voting rights for large-, mid- or small cap companies on Stockholm Stock Exchange would most likely have been significant higher than the figures based on market value of equity. This since large investment companies, relative to other shareholders, tends to hold shares with high voting power.

3 Data and Sample Characteristics

3.1 Data

The insider trading data is received from FI and the stock returns and the value weighted returns are taken from Thomson DataStream Advance. The stocks included in our sample are all stocks on the OMX Stockholm Stock Exchange's large-, mid-, and small cap. The sample may suffer from a survivorship bias since Thomson DataStream Advance only holds currently listed companies. The period studied is 2001-2009. The members of the large investment companies are taken from each investment companies' annual report for each year. A person who is a member of the board of directors or a member of the board of executives in an investment company is assumed to be an investment company insider in our thesis. Those insiders are assumed to be connected to the specific investment company for the whole period, a full record of the persons are presented in Appendix 2. The composition of the boards and management teams are fairly constant from year to year.

In total, our sample consists of 29,080 insider transactions made in 290 different companies. These are only buy and sell transactions, all other types of transactions, such as equity issues, gifts etcetera, are disregarded. Out of these 29,080 transactions are 2,430 transactions made by members of large investment companies, further described under chapter 4.1.2. No other limitations are imposed on the sample.

3.2 Index Values

In order to estimate the expected return for every stock we have used the OMX Stockholm Benchmark Index (OMXSB) as a proxy for the value weighted market return (VW). The Index consists of the largest and most traded stocks from all the major sectors within the OMX Stockholm Stock Exchange. The weights of the constituent stocks is based on the market value adjusted by the free float, in other words; only the part of the share capital that is considered available for trading is taken into account when calculating the index. The index serves as a great indicator of the overall trend on OMX Stockholm Stock Exchange. Due to this, the OMXSB index is especially attractive for use as a comparative index for investors (OMX, 2010), hence is it a good proxy for the market portfolio. In Figure 2 below, is the development of the value weighted benchmark in our sample period presented.

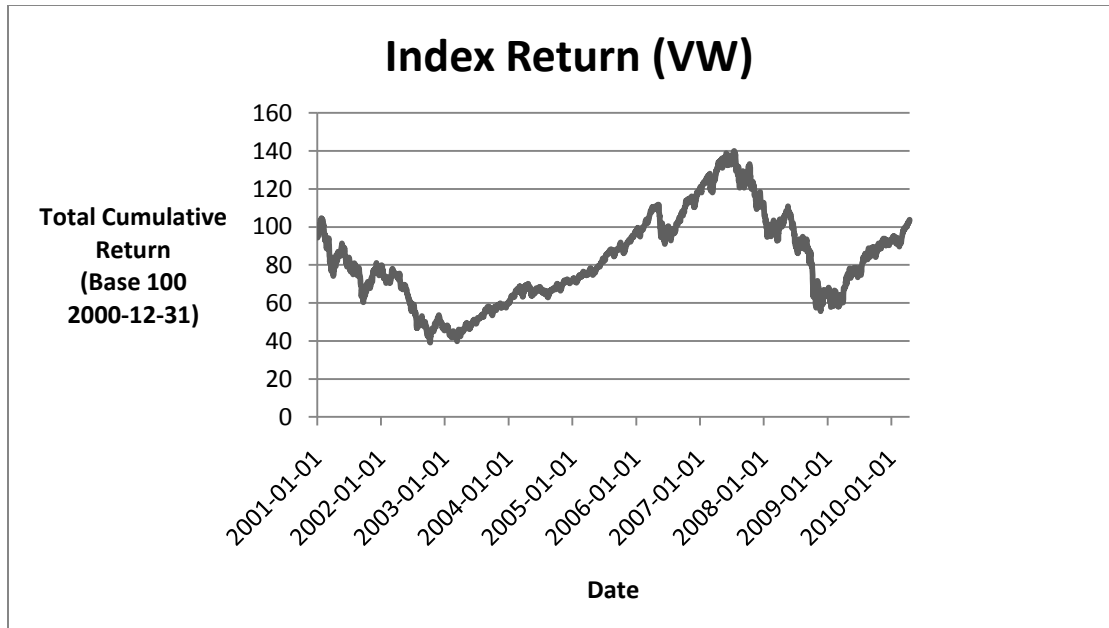


Figure 2. Accumulated Return Value Weighted Benchmark, 2000-12-31 Index=100 (Reuters, 2010).

The equally weighted (EW) benchmark is constructed from stock returns received in Thomson DataStream Advance. Those stock returns take reinvested payouts, equity issues as well as splits into account when calculating the returns for each stock. The equally weighted benchmark consists of all stocks on large-, mid- and small cap. Each company is given an equal weight, hence the market values disregarded in this index. Below, in Figure 3, is the development of the equally weighted benchmark in our sample presented.

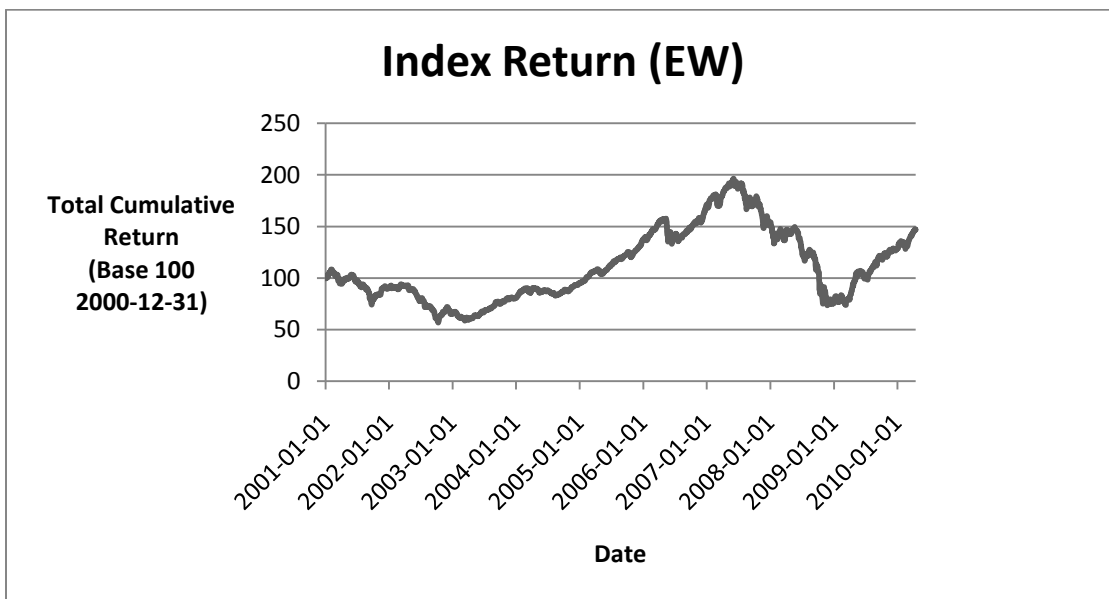


Figure 3. Accumulated Return Equally Weighted Benchmark, 2000-12-31 Index=100 (Self-processed).

4 Methodology

4.1 Selection of Companies and its Insiders

Below we define and discuss the selection criterions of the firms that we have chose to incorporate in our thesis.

4.1.1 Selection of Companies

We will do a limitation and just focus on insider transactions done in any of the companies within OMX Stockholm Stock Exchange's large-, mid- and small cap lists. Companies from smaller market lists, such as First North, Aktietorget, NGM Growth etcetera, are left out in our sample. The reason behind this decision is the fact that most private investors have a tendency to prefer investing in larger and more well- known companies. Furthermore, it is reasonable to argue that those companies within those lists, with more and larger transactions, a higher liquidity as well as a higher transparency, are more efficient compared to the smaller ones.

4.1.2 Selection of Investment Companies and its Insiders

Out of the 290 companies listed on OMX Stockholm Stock Exchange's large-, mid- and small cap are 22 investment companies, see Appendix 1. Due to the fact that a large fraction of the investment companies listed on mid- or small cap have business models⁴ which makes it complicated or in some cases almost impossible for a private investor to replicate their transactions we have put focus on the investment companies listed on OMX Stockholm Stock Exchange's large cap. Those firms have a higher tendency to invest in large listed Swedish companies and as a result their portfolios are easier to replicate for a private investor.

There are eight firms that are defined as investment companies listed on OMX Stockholm Stock Exchange's large cap list, see Appendix 1. Out of those eight companies we have decided to use six. These six firms are Industrivärden, Investor, Kinnevik, Latour, Lundbergs and Melker Schörling. Due to their holdings we have disregarded Hakon Invest and Ratios, which mainly invests in non listed companies. As a result their insiders are not insiders in public companies, except in their own investment company. The six investment companies mentioned above represent 77%⁵ of the total market value of equity of all the investment companies listed on OMX Stockholm Stock Exchange's large-, mid- and small cap lists. Insiders from those six investment companies will from this point and

⁴ Many of those investment companies have investments in non listed companies and/or investments abroad. Both those factors makes it harder for an investor to replicate their portfolios and it is not likely that our assumption regarding no or neglectful transactions cost will hold under those circumstances.

⁵ These calculations are made with data from 21st April 2010.

onwards be classified as investment companies' insiders. All other insiders in our sample will be classified as other insiders.

We are aware of the fact that a few insiders, we have recognized two; Stefan Person (Melker Schörling and H&M) and Carl- Henric Svanberg (Melker Schörling and Ericsson), are insiders in both an investment company and in a non investment company that is not a part of the investment company's holdings. However, we have decided to classify those persons as investment companies' insiders as well. Even though that this distort our value, we argue that since it is just a few persons this distortion is neglectful.

4.2 The Event Study

An event study has five basic steps (MacKinlay, 1997). Here follows a summary of those five steps:

1. Definition of an event. We investigate transactions made by insiders from investment companies in comparison to transactions made by other insiders. The event window is six months.
2. Selection Criterion. We choose to look at transactions made by insiders in firms listed on Stockholm Stock Exchange's large-, mid- and small cap lists.
3. Expected- and abnormal return. The expected return is the return we can expect if the event had not taken place, this is calculated with the market model. The abnormal return is the difference between the actual return and the expected return.
4. Define the testing framework. The thesis tests whether insiders from investment companies are able to create higher abnormal return on the insider transactions relative to other investors.
5. Define the statistical tests. The main statistical tests used will be t- tests and robustness tests. The robustness tests are done through fixed effect regressions.

4.3 Selected Events

In this section we classify the different sub- groups which we will test against each other in our regressions.

4.3.1 Buy and Sell for All Insider Transactions

Buy and sell transactions for all insiders are defined as every buy or sell- transaction registered to FI made by any insider on OMX Stockholm large-, mid- and small cap during our sample period 2001-2009.

4.3.2 Buy and Sell for All Investment Companies' Insiders

Defined as in chapter 4.3.1 except that only transactions made by persons listed in Appendix 2 are included. There is however no possibility in our data to separate between when these persons buy for themselves and when they buy in the name of other persons or legal entities.

4.3.3 Buy and Sell for All Other Insiders

This is all the transactions done as defined in chapter 4.3.1 less the transactions done by the investment companies' persons listed in Appendix 2.

4.4 Estimation- and Event Window

The estimation window is the period before the event when we estimate what the expected return would be if the event does not take place. To calculate this we will use the beta values described later. The beta values for each stock before each event are collected from Thomson DataStream Advance.

The event window is the period following directly after the event has taken place. The length of the event window is crucial in an event study. Given an efficient market, the estimation window could theoretically be just a few seconds after the event has taken place, because that is all the time the market needs to price the event. However, in insider trading, this is not true; the direct change is much smaller than the following month's abnormal return (Cohen, Malloy, & Pomorski, 2009) (Seyhun, 1998). This is called the momentum effect and is a violation of the EMH.

We will also use a fairly long estimation window of six months, or more specifically 183 calendar days. We acknowledge that there are other events happening during this time horizon that can affect our results. However, on average we do not think that these possible distortions may affect our conclusions. In fact, some researchers propose that six months is a too short event window. Cohen et. al. states that the abnormal return is increasing even after six months (Cohen, Malloy, & Pomorski, 2009). Besides that, it is not reasonable to argue that insiders perform both sell and buy transactions more often than twice a year. The assumed negligibly transaction costs, which is made in chapter 4.5.1, also becomes a more reasonable assumption in a longer time horizon.

However, all the 183 days abnormal return will be showed in figures. Further statistical tests will only be performed on the six month cumulative abnormal return.

4.5 Calculating and Interpretation of Returns

In order to retrieve our results for the study we have been conducting several estimations and calculations of our data. The formulas used to do our calculations as well as the interpretation of the returns are presented below.

4.5.1 Transaction Costs

Throughout the study the cost of trading has been ignored. There are two major reasons for this; firstly, the transaction cost varies significantly between different financial institutions. Secondly, the cost of trading is today neglectful and has, in general, hardly any impact on the results of trading.

4.5.2 Abnormal Returns

The abnormal return for stock i at time t has been calculated by the following formula (MacKinlay, 1997);

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

Formula 4.5.2.1 Abnormal Return

Where:

$AR_{i,t}$ = Abnormal return on stock i at time t

$R_{i,t}$ = Actual return on stock i at time t

$E(R_{i,t})$ = Expected return on stock i at time t

4.5.3 Actual Returns

The actual returns are collected from Thomson DataStream Advance by using an index named *Total Return Index*. This is an index that shows a theoretical growth in value of a stock over a period, assuming that dividends are re-invested to the closing price applicable on the ex-dividend date. Splits and new issues have also been taken into account. The actual returns are based on the following formulas;

$$R_{i,t} = \ln \left(R_{i,t-1} * \frac{P_{i,t}}{P_{i,t-1}} \right)$$

Formula 4.5.3.1 Return When t is not Ex-date for Dividend

Except when t = ex-date on dividend payment D , then;

$$R_{i,t} = \ln \left(R_{i,t-1} * \frac{P_{i,t} + D_{i,t}}{P_{i,t-1}} \right)$$

Formula 4.5.3.2 Return When t is Ex-date on Dividend Payment D

Where:

$R_{i,t}$ = Return on stock i at time t

$R_{i,t-1}$ = Return on stock i at time $t - 1$

$P_{i,t}$ = Price index on stock i at time t

$P_{i,t-1}$ = Price index on stock i at time $t - 1$

$D_{i,t}$ = Gross dividend payment on stock i associated with ex – date t .

4.5.4 Estimating Expected Normal Return

The estimation of normal returns is made in accordance with the market model (MacKinlay, 1997).

$$E(R_{i,t}) = \hat{\alpha}_i + \hat{\beta}_i R_{m,t}$$

Formula 4.5.4.1 Expected Return

Where:

$E(R_{i,t})$ = Expected return on stock i at time t

$\hat{\alpha}_i$ = Average abnormal return for stock i

$\hat{\beta}_i$ = The estimated covariance between the market and stock i

$R_{m,t}$ = Realized market return at time t

Average abnormal return for stock i , $\hat{\alpha}_i$, is calculated in the following way:

$$\hat{\alpha}_i = \hat{\mu}_i - \hat{\beta}_i \hat{\mu}_m$$

Formula 4.5.4.2 Estimated Alpha

Where:

$\hat{\alpha}_i$ = Average abnormal return for stock i

$\hat{\mu}_i$ = Estimated return for stock i

$\hat{\beta}_i$ = The estimated covariance between the market and stock i

$\hat{\mu}_m$ = Estimated market return

The stock return is estimated in the following way:

$$\hat{\mu}_i = \frac{1}{L_1} \sum_{t=T_0+1}^{T_1} R_{i,t}$$

Formula 4.5.4.3 Estimates of stock return

The market return is estimated in the following way:

$$\hat{\mu}_m = \frac{1}{L_1} \sum_{t=T_0+1}^{T_1} R_{m,t}$$

Formula 4.5.4.4 Estimates of market return

Where:

$\hat{\mu}_i$ = Estimated return for stock i

L_1 = Estimation window, 180 days

T_0 = Beginning of estimation window

T_1 = End of estimation window which is $T_0 + 180$ days

$R_{i,t}$ = Return for stock i at time t

$\hat{\mu}_m$ = Estimated market return

$R_{m,t}$ = Market return at time t

4.5.5 Variance Estimation

The variances need to be estimated to be able to make statistical inferences.

$$\hat{\sigma}_{\varepsilon_i}^2 = \frac{1}{L_1 - 2} \sum_{t=T_0+1}^{T_1} (R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t}))^2$$

Formula 4.5.5.1 Estimated variance

Where:

$\hat{\sigma}_{\varepsilon_i}^2$ = Estimated variance of the error term

L_1 = Estimation window, 180 days

T_0 = Beginning of estimation window

T_1 = End of estimation window which is $T_0 + 180$ days.

$R_{i,t}$ = Return for stock i at time t

$\hat{\alpha}_i$ = Estimate of alpha for stock i

$\hat{\beta}_i$ = The estimated covariance between the market and stock i

$R_{m,t}$ = Market return at time t

4.5.6 Average Variance Estimation

The following formula is used for calculating the average variance of the sample.

$$\overline{\sigma_{\varepsilon_i}^2} = Var(AR) = \frac{1}{N^2} \sum_{i=1}^N \widehat{\sigma_{\varepsilon_i}^2}$$

Formula 4.5.6.1 Average variance

$\overline{\sigma_{\varepsilon_i}^2}$ = Average variance of the error term

N = Number of observations

$\widehat{\sigma_{\varepsilon_i}^2}$ = Estimated variance of the error term

4.5.7 Cumulative Abnormal Return

The cumulative abnormal return is the sum of the abnormal returns for each trading day for stock i during the event window.

$$CAR_{i,T} = \sum_{t=0}^T AR_{i,t}$$

Formula 4.5.7.1 Cumulative Abnormal Return

Where:

$CAR_{i,T}$ = Cumulative abnormal return stock i in the event window T

$AR_{i,t}$ = Abnormal return stock i at time t

4.5.8 The J-statistic

The test statistic for the abnormal returns will be calculated in the following way.

$$J = \frac{\overline{CAR}}{\sqrt{\overline{\sigma_{\varepsilon_i}^2}}} \sim^a N(0,1)$$

Formula 4.5.8.1 Cumulative Abnormal Return

Where:

$J = \text{Test variable}$

$\overline{\sigma_{\varepsilon_i}^2} = \text{Average variance of the error term}$

$\overline{CAR} = \text{Average cumulative abnormal return}$

4.5.9 Interpretation of the Cumulative Abnormal Return

There are two major cases of how the cumulative abnormal return should be interpreted. Firstly, when an insider buys a stock and the cumulative abnormal return after six months becomes positive, the insider has obviously earned an abnormal return because the value of her stocks has gone up by more than expected. If this is the case we can conclude that insiders use their information advantage to earn abnormal return. If it is not the general case we will not be able to conclude whether insiders really have more information or if they only choose not to use it.

Secondly, when a sell transaction is made with negative cumulative abnormal returns, this is a proof of an information advantage. Because a negative abnormal return after a sell transaction is the same as avoiding a loss which is positive for the insider. A negative abnormal return after a sell transaction will therefore be a proof of the hypothesis that insiders possess private information and are using it to avoid losing money on their holdings.

4.6 Statistical Analysis

Below are the statistical tests that will be performed in this thesis defined and motivated.

4.6.1 Normality Tests

To be able to do the kind of statistical analysis that we will do on the data we need to assume that our sample is normally distributed. Therefore, we will first test whether the data sample is normally distributed. The test that will be performed is a Kolmogorov- Smirnov test (K-S test). This is a non-parametric test suitable for larger samples with more than 200 unique observations (Shorak & Wellner, 1986). The results will be presented as the probability (p- value) that the sample is not normally distributed. Given that the p- value is lower than 5% the sample will be accepted as a normally distributed sample. We will also perform a skewness test on the sample to see if the data has any skewness. This result will also be presented with a p- value which tells us the probability of making a wrong judgment about the distribution of our sample. If we got a p- value lower than 5% our sample will be assumed to be normally distributed.

4.6.2 t- tests

A number of Student's t- tests will be made testing different hypothesis on the cumulative abnormal returns. t- tests are only applicable if the sample is normally distributed. We will test our result on a 5% significance levels which corresponds to a t- value of 1.96 or -1.96. Hence any results with t- statistics above (below) a t- value of 1.96 (-1.96)⁶ will be considered to be significant in our thesis.

4.6.3 Pooled Regressions with Fixed Effects

There is a risk that our sample consist of time fixed effects, which may distort our results. Due to this we will perform a pooled regression with year fixed effects for both investment companies' insiders and for other insiders regarding this effect. When making a time fixed regression, all the years are given equal weights in the regression. Hence, the number of observations between different years does not affect the results.

The investment companies are also between themselves culturally and strategically different from each other, and what is perhaps even more important, the number of trades executed by members of each company varies a lot. Therefore, we want to test all the investment companies in our sample separately in a pooled regression to test the fixed effects between different companies. When making a firm fixed regression, all the firms is given equal weights in the regression. If all the fixed effects are proven to be weak, then it will strengthen the robustness of our results from the standard regressions.

⁶ Receiving t- statistics above 2.33 or below -2.33 corresponds to a 1% significance level.

5 Results and Analysis

5.1 Graphical Overview of the Transactions and Normality Tests

Below is a figure of the cumulative abnormal return, using the value weighted index, on investment companies' insiders' transactions presented. The cumulative abnormal return after a buy transaction is slightly positive during approximately the first 75 days; thereafter the cumulative abnormal return starting to decline and it ends up negative. The cumulative abnormal return for the sell transactions are steadily declining for the whole period of six months.

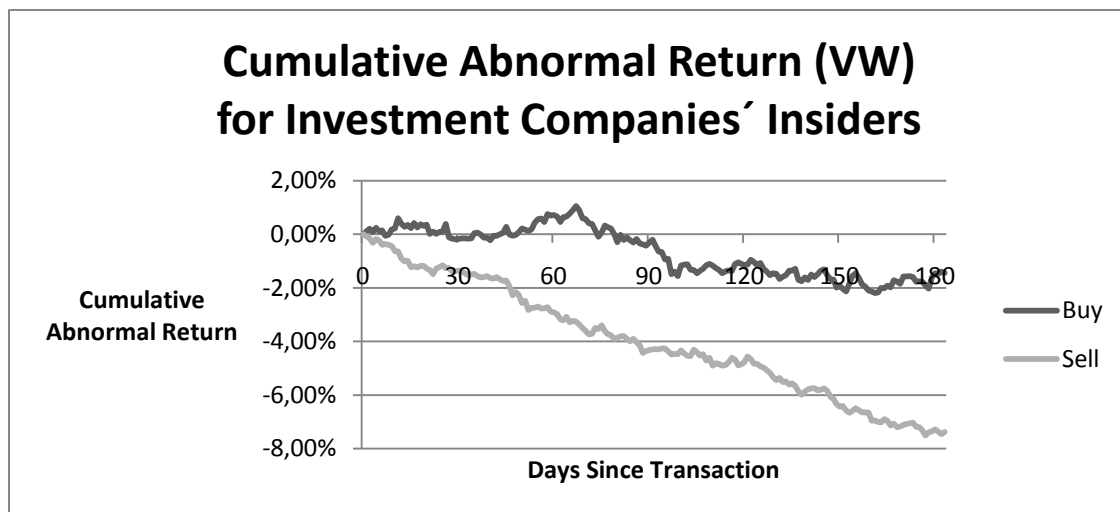


Figure 4. Cumulated Abnormal Return, Value Weighted, for Investment Companies' Insiders

The figure below shows other insiders' cumulative abnormal return, using the value weighted index. In this case the cumulative abnormal return after a buy transaction is positive the whole period. The sell transactions have a negative cumulative abnormal return during the whole period.

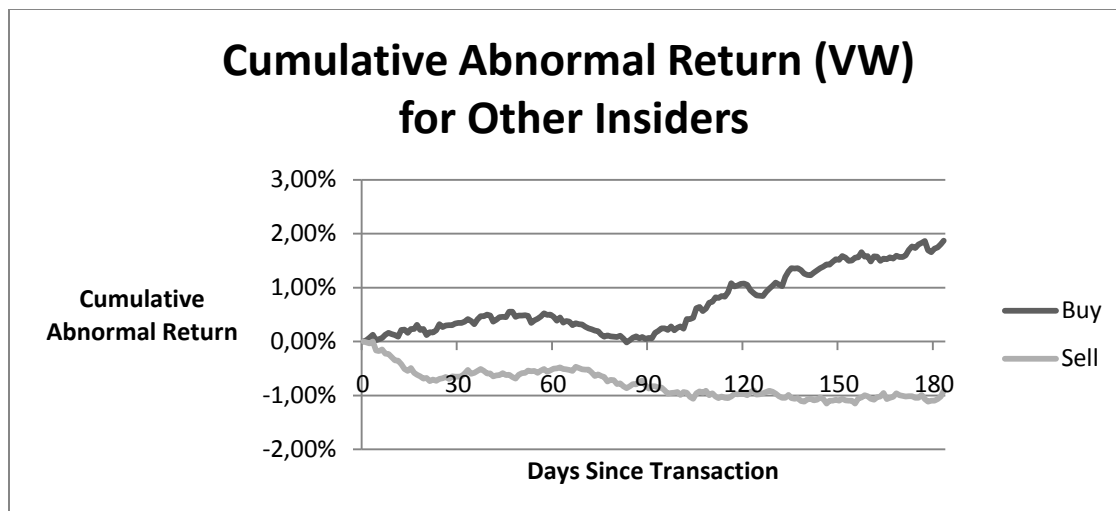


Figure 5. Cumulated Abnormal Return, Value Weighted, for Other Insiders

The cumulative abnormal return, using the equally weighted index, for investment companies insiders are showed below. Here we can observe a strong decline for both transaction types for almost the whole time period. It is also worth noticing that both the buy and sell transactions seems to have almost the same slope during the first five months.

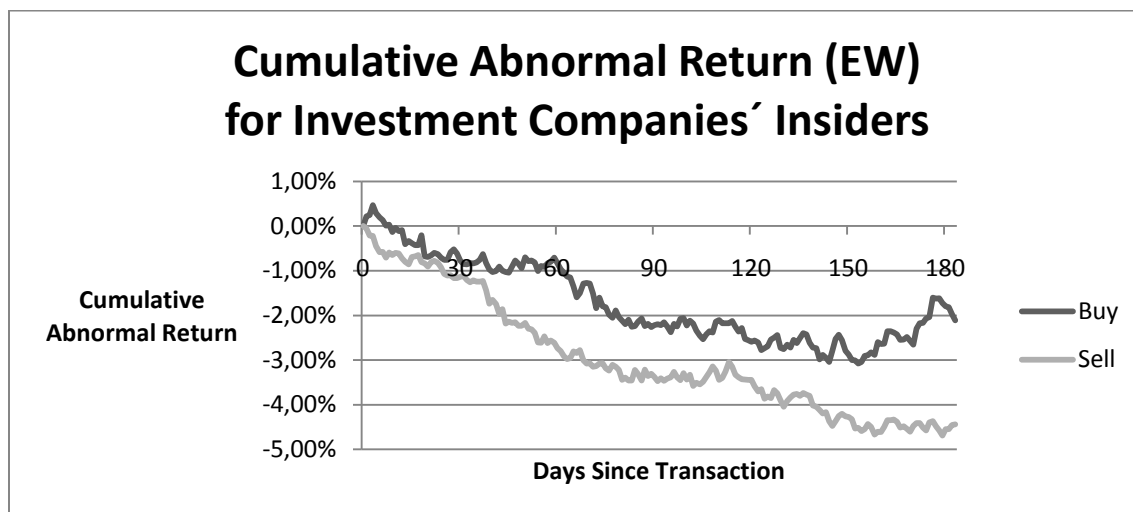


Figure 6. Cumulated Abnormal Return, Equally Weighted, for Investment Companies' Insiders

Below is a figure of the cumulative abnormal return presented for other insiders' transactions, using the equally weighted index. The cumulative abnormal return for buy transactions is actually negative for some time but ends up positive. The cumulative abnormal returns after sell transactions are strictly negative and relatively stable over time.

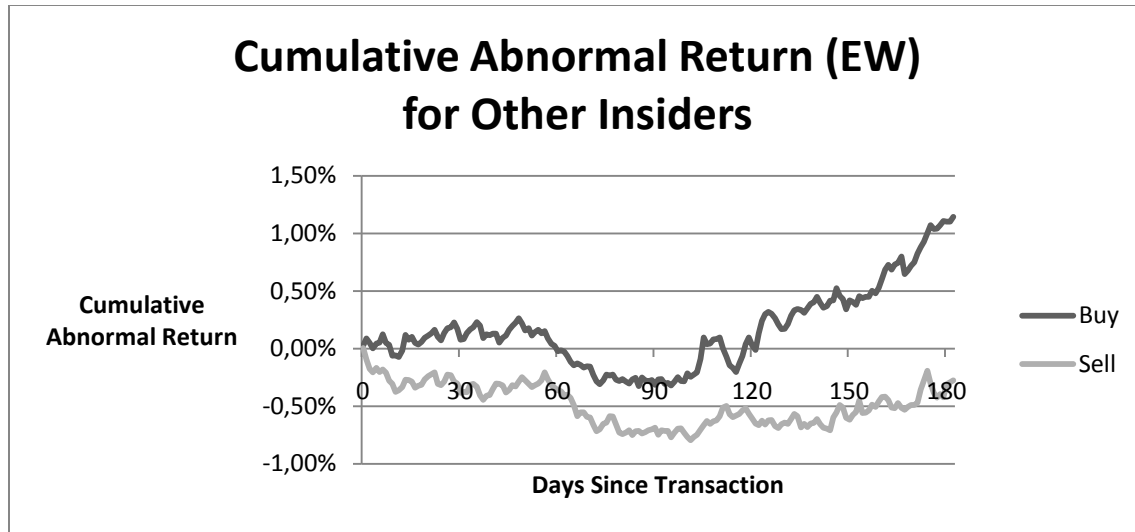


Figure 7. Cumulated Abnormal Return, Equally Weighted, for Other Insiders

5.1.1 Normality Tests

Table I. Normality Tests. Kolmogorov- Smirnov Test and Skewness Test of the Whole Sample.

Kolmogorov- Smirnov Test		
	Value Weighted	Equally Weighted
P- value	0.0000	0.000
Skewness Test		
	Value Weighted	Equally Weighted
z	18.036	17.607
P- value	0.000	0.000

The Kolmogorov- Smirnov test tells us the risk that the data is not normally distributed is less than 0.01%. Hence we conclude that the data is normally distributed. The skewness test tells us that the probability that the data have any skewness is lower than 0.01%. Due to this we can conclude that our data do not have any skewness.

5.2 Cumulative Abnormal Return for All Insider Transactions

Table II. Cumulative Abnormal Return and t- tests for All Transactions.

		Value Weighted		Equally Weighted	
	Number of Transactions	CAR	t- test	CAR	t- test
BUY	18630	1.71%	7.45	1.24%	4.31
SELL	10450	-1.83%	-6.01	-0.52%	-2.4

As showed, the average insider earns a significant cumulative abnormal return on both her sell and buys transactions for both benchmarks.

5.3 Cumulative Abnormal Return for Insiders

Table III. Cumulative Abnormal Return and t- tests for Investment Companies' Insiders Transactions.

	Number of Transactions	Value Weighted		Equally Weighted	
		CAR	t- test	CAR	t- test
BUY	1663	-1.58%	-1.56	-2.25%	-2.32
SELL	767	-7.63%	-10.74	-4.56%	-6.96

Insiders from investment companies earn a negative cumulative abnormal return on their buy transactions and a negative cumulative abnormal return on their sell transactions. All those transactions, except the cumulative abnormal return created on the buy transactions using the value weighted index, are statistically significant.

Table IV. Cumulative Abnormal Return and t- tests for Other Insiders Transactions.

	Number of Transactions	Value Weighted		Equally Weighted	
		CAR	t- test	CAR	t- test
BUY	16967	1.80%	4.66	1.13%	5.04
SELL	9683	-0.93%	-6.59	-0.22%	-0.54

The results for the other insiders are similar to the ones of all transactions since most of the transactions are made by non investment companies' insiders. However, the cumulative abnormal returns created on the sell transactions are not significant in the equally weighted case.

5.3.2 Differences in Cumulative Abnormal Return

Table V. Difference in Cumulative Abnormal Returns and t- tests Between Investment Companies' Insiders Transactions and Other Insiders Transactions.

	Value Weighted		Equally Weighted	
	Δ CAR	t- test	Δ CAR	t- test
BUY	-3.69%	3.15	-3.76%	3.42
SELL	-6.54%	8.13	-4.44%	5.84
All Transactions	-4.43%	8.73	-3.81%	6.89

As showed, investment companies' insiders' abnormal return relative to other insiders is significant for all the cases.

5.4 Cumulative Abnormal Return Including Fixed Effects

In this section we test the robustness of the regressions made above. The robustness of the regression results are tested both with time- and firm fixed effects.

5.4.1 Yearly Cumulative Abnormal Return for Investment Companies' Insiders with Time Fixed Effects

Table VI. Pooled Regressions with Yearly Time Fixed Effects and t- tests for Investment Companies' Insiders Transactions.

	Value Weighted		Equally Weighted	
	CAR	t- test	CAR	t- test
BUY	-1.37%	-4.73	-2.07%	-7.16
SELL	-3.76%	-6.66	-2.97%	-2.39

When controlling for time fixed effects we observe that the values are still significantly negative.

However, the differences between sell and buy transactions are smaller than in the standard regression presented in Table III.

Table VI. Pooled Regressions with Yearly Time Fixed Effects and t- tests for Other Insiders Transactions.

	Value Weighted		Equally Weighted	
	CAR	t- test	CAR	t- test
BUY	-1.41%	-11.35	1.23%	5.09
SELL	-0.63%	-1.60	-0.21%	-0.54

As showed above, the yearly fixed effects among the other insiders are weaker relative to the investment companies' insiders.

5.4.2 Yearly Cumulative Abnormal Return for Investment Companies' Insiders

Table VII. Year Specific Abnormal Returns and t- tests for Investment Companies' Insiders Transactions.

Year		Number of Transactions	Value Weighted		Equally Weighted	
			CAR	t- test	CAR	t- test
2001	BUY	79	6.92%	1.63	6.61%	1.68
	SELL	50	11.21%	4.27	11.52%	4.10
2002	BUY	110	4.79%	0.91	3.82%	0.86
	SELL	46	2.31%	0.68	4.01%	1.25
2003	BUY	133	0.62%	0.19	-7.69%	-2.50
	SELL	58	-4.83%	-2.32	-10.75%	-5.59
2004	BUY	93	-0.85%	-0.34	-2.34%	-0.99
	SELL	57	-0.01%	-0.01	-2.88%	-2.04
2005	BUY	115	-4.64%	-1.71	-7.62%	-2.78
	SELL	79	0.54%	0.37	-2.51%	-1.70
2006	BUY	239	-3.68%	-1.09	-1.89%	-0.62
	SELL	61	-4.60%	-4.71	-3.31%	-3.28
2007	BUY	263	2.15%	0.82	6.08%	2.19
	SELL	62	-0.27%	-0.22	2.08%	1.77
2008	BUY	599	-15.78%	-6.04	-11.95%	-5.00
	SELL	102	-19.24%	-13.24	-10.42%	-7.69
2009	BUY	32	-1.88%	-0.88	-3.66%	-1.67
	SELL	208	-18.99%	-3.06	-14.44%	-2.96

In the yearly regressions it becomes harder to reach significant values because of the relatively small sample in each year and transaction. What we can observe is that the abnormal return tends to vary from year to year.

Table VIII. Year Specific Abnormal Returns and t- tests for Other Insiders Transactions.

			Value Weighted		Equally Weighted	
Year		Number of Transactions	CAR	t- test	CAR	t- test
2001	BUY	1988	-2.81%	-1.83	-0.16%	-0.10
	SELL	764	2.87%	3.35	5.63%	6.69
2002	BUY	1867	-2.56%	-1.58	-0.95%	-0.61
	SELL	691	-7.54%	-10.15	-3.77%	-5.29
2003	BUY	1667	1.85%	1.76	-5.41%	-5.07
	SELL	866	7.50%	7.19	0.50%	0.50
2004	BUY	1853	4.17%	5.41	3.41%	4.56
	SELL	912	2.55%	4.41	0.09%	0.16
2005	BUY	1754	0.20%	0.28	-3.95%	-5.73
	SELL	1220	1.53%	2.72	-1.30%	-2.37
2006	BUY	2055	2.79%	4.21	3.16%	5.30
	SELL	1462	1.17%	2.19	1.79%	3.53
2007	BUY	2575	-0.66%	-0.89	2.52%	3.53
	SELL	1267	-3.47%	-7.06	-0.96%	-2.02
2008	BUY	2785	-1.12%	-1.16	3.32%	3.56
	SELL	818	-9.40%	-14.34	-2.60%	-4.33
2009	BUY	423	5.13%	6.26	3.33%	4.19
	SELL	1058	4.76%	4.48	2.51%	2.32

Above are all the results for buy and sell transactions made by other insiders for every single year presented. We can observe large differences in both cumulative abnormal returns as in the t- values.

5.4.3 Investment Companies' Insiders Cumulative Abnormal Return with Firm Fixed Effects

Table IX. Pooled Regressions with Firm Fixed Effects and t- tests for Investment Companies' Insiders Transactions.

	Value Weighted		Equally Weighted	
	CAR	t-test	CAR	t-test
BUY	1.25%	1.58	1.98%	2.37
SELL	-5.75%	10.96	-3.69%	-7.02

The firm fixed pooled regression makes the cumulative abnormal return of the buy transaction made by investment companies' insiders positive. This contradicts our results in Table III. However, the cumulative abnormal return for the sell transactions is still significantly negative.

5.4.4 Individual Investment Company's Insiders Cumulative Abnormal Return

Table X. Firm Specific Abnormal Returns and t- tests for Investment Companies' Insiders Transactions.

			Value Weighted		Equally Weighted	
Company		Number of Transactions	CAR	t-test	CAR	t-test
Investor	BUY	125	10.04%	2.99	14.38%	4.37
	SELL	29	-5.18%	3.41	-2.94%	1.83
Kinnevik	BUY	95	7.29%	1.84	6.34%	1.88
	SELL	81	2.86%	0.85	1.09%	0.34
Latour	BUY	767	-5.12%	3.55	-6.39%	4.53
	SELL	411	-12.26%	9.83	-7.24%	6.53
Industrivärden	BUY	469	-1.17%	0.76	-1.26%	0.83
	SELL	173	-1.21%	1.27	-0.70%	0.73
Lundbergs	BUY	327	2.23%	1.05	2.03%	1.13
	SELL	120	-2.31%	2.28	-2.18%	2.07
Melker Schörling	BUY	121	-5.75%	0.86	-3.24%	0.47
	SELL	18	-16.41%	7.65	-10.14%	1.04

We can observe that there are differences between different companies. But it is hard to make any conclusions because of the generally low significance levels. What we can observe is that when insiders from Latour makes insider transactions, the abnormal returns are strongly negative and significant for both buy and sell transactions. This company obviously drives down the mean of the total sample, especially since Latour has done a large fraction of the total transactions made by investment companies' insiders.

5.5 Analysis of Our Results

There is a significant difference between investment companies' insiders and other insiders' returns for both the buy- and sell transactions in all cases. However, since investment companies' insiders do not earn abnormal returns relative to the other insiders on both their buy and sell transactions we are not able to draw any conclusions regarding the sum of the abnormal returns they are able to generate relative to other insiders. In order to draw this conclusion, with the results we received, we need to weight every return by their transaction size to make comparable portfolios between the investment companies' insiders and the other insiders. Since we do not have this data we are not able to do this kind of conclusion.

Furthermore, there are several possible explanations to our results. It is worth notice that we have contradictory results, i.e. the investment companies' insiders have a negative abnormal return on their buy transaction but they outperform other insiders on their sell transactions. Due to this it is difficult to

draw any general robust conclusions, since the arguments in the buy transactions become counter arguments in the sell transactions and vice versa. However, below we discuss some possible explanations for our findings.

5.5.1 Investment Companies' Insiders Earn Negative Abnormal Return on Buy Transactions

An insider from an investment company earns a negative abnormal return of 1.58 % value weighted and a statistically significant negative abnormal return of 2.25% equally weighted on a six month horizon on their buy transactions. Below are three possible explanations discussed.

Firstly, it might be the case that investment companies' insiders put a larger focus on their ability to control and develop their holdings compared to a general investor. One of the main reasons for this is the fact that most investment companies strives to realize operational changes in the firms that they are owners in. As a result, investment companies' insiders care less about the short term potential economic profit attributable to the stock that they invest in, compared to the average investor.

Secondly, a buy transaction made by an investment company insider changes the ownership structure that creates an uncertainty about the firm and its future. Since the market dislikes uncertainty they punish the company by pushing down the stock price.

Last but not least, as noted in the arguing above, it is likely that investment companies' insiders has different investment horizons in their investments compared to the average investor. It is reasonable to believe that this will affect their investment strategy. The longer investment horizon an investor has the less dependent are she to buy a stock on the very bottom of the cycle. As showed in Figure 8 below, it is possible that an investment company insider is a little bit "too early" in the investment cycle relative to the average investor. Since our calculations are based on a six month horizon our results that investment companies' insiders earn a negative abnormal return on their buy transaction are due to our selection of the length of the event window. This is because of the fact that investors, in general, have a longer time horizon than six months on their investments.

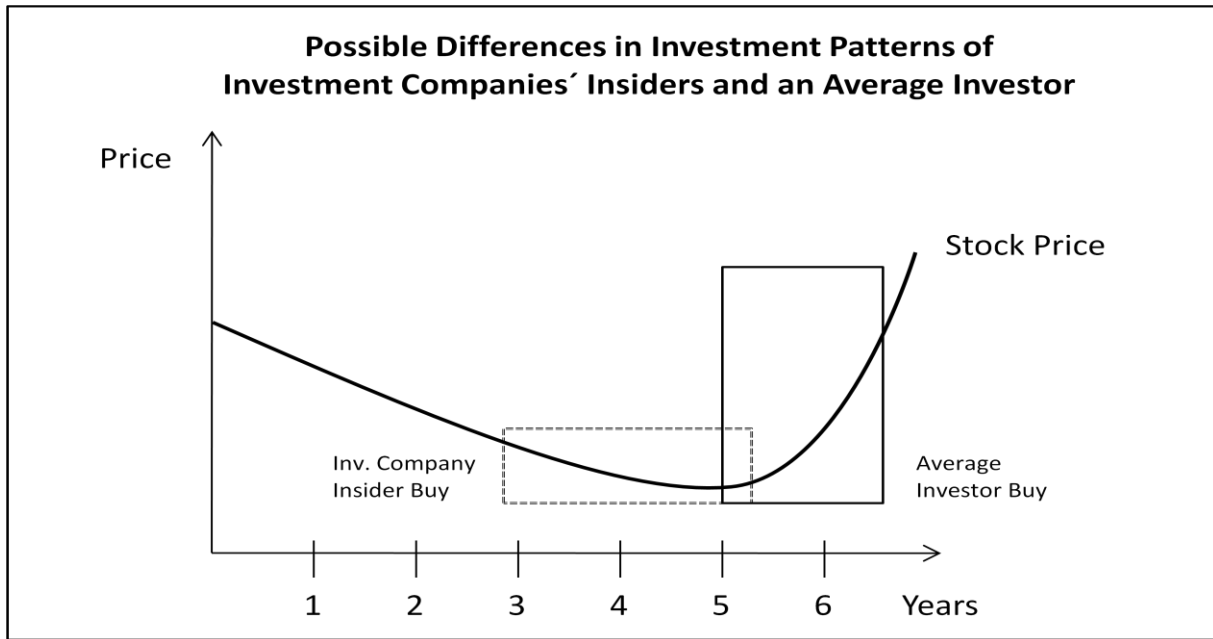


Figure 8. Possible Differences in Investment Patterns of Investment Companies' Insiders and an Average Investor

5.5.2 Investment Companies' Insiders Earn Less Money on Their Buy Transactions Relative to Other Insiders

Investment companies' insiders earn on average a negative statistically significant abnormal return of 3.69% value weighted and a statistically significant negative abnormal return of 3.76% equally weighted less on their buy transactions relative to other insiders on a six months horizon. Both the "ability to control and develop their possession" and the "difference in time horizon" explanations discussed under chapter 5.5.1 are likely to hold here as well. Besides those two explanations, there are two additional explanations that could explain the fact that those investment companies' insiders earn less money on their buy transactions relative to other insiders.

Investment companies in general and our subsample in particular tends to invest in more monitored and well known companies compared to the average investor. Ravina and Sapienza finds that insiders within firms with high level of corporate governance do not create as high abnormal return on their insider transactions as insiders from firms with low level of corporate governance. Combining those two facts with the assumptions that larger and better monitored firms have a higher level of corporate governance, gives us a potential explanation to why investment companies' insiders are not able to earn a higher abnormal return than other insiders.

As mentioned above Jeng et al. states that insiders in small companies tend to have more inside information relative to insiders in large companies. Since our six investment companies and their

portfolio companies are larger than the average company, their insiders should, according to Jeng et al., have less private information. This might obstruct their possibilities to earn a higher abnormal return relative to the other insiders.

5.5.3 Investment Companies' Insiders Earn More Money on Their Sell Transactions Relative to Other Insiders

Investment companies' Insiders earn on average a statistically significant abnormal return of 6.54% value weighted and 4.44% equally weighted more on their sell transactions relative to other insiders on a six month horizon. The "increased uncertainty due to changes in ownership structure" explanation discussed under chapter 5.5.1 above is likely to hold as an explanation here as well. In addition there are two possible explanations to our findings.

Ravina and Sapienza conduct that insiders sitting in the audit committee are able to earn a higher abnormal return than other insiders. Since all the investment companies in our subsample has significant influence in most of their positions it is likely that they are able to place one of their board members in the audit committee and as a result have access to important financial figures. Moreover, it is reasonable to assume that the investment companies' insiders have a greater tendency to spread the inside information among themselves compared to the other insiders. Given that the above mentioned assumptions holds the investment companies' insiders have a greater opportunity to make a higher abnormal return than other insiders.

Furthermore, Jenter states that top managers have contrarian view on the value of their company relative to the market. This in a combination with the fact that it is reasonable to believe that an investment company's insider does not suffer from the same emotional attachment to their portfolio companies since they are not directly related to it. Hence we are able to conclude that investment companies' insiders might have a more pure economic rationale in their sell transactions. As a result investment companies' insiders are able to make higher abnormal returns relative to the other insiders, which may be more personal attached to and have an unrealistic view of the firm.

5.6 Validity and Reliability

It is of great importance that the validity and reliability of our study is high in order to be able to make accurate and trustworthy conclusions from our research. The validity of this study depends on our ability to measure and analyze exactly that we are supposed to measure and analyze in order to answer to our research question. The reliability on the other hand, depends on how accurate we are in the process of managing our data (Holme & Solvang, 1997).

5.6.1 Validity

The event study methodology is central and frequently used for measuring abnormal return (MacKinlay, 1997). However, one of the most significant implications of this methodology is that the event study also captures external non firm specific events that we do not want to incorporate in our analysis. Such factors could be changes in interest rates, currency changes or fluctuations in other important macroeconomic variables. Besides those, there are also other events that could have severe effects on the financial markets (Wells, 2004), such thing could for an example be terror actions, natural disasters etcetera. Hence there is a tradeoff between having an event window that is long enough in order to get interesting results and minimizing the length of the event window in order to increase the validity. We argue that a time horizon of six months is an optimal event window to answer our research question.

5.6.2 Reliability

Throughout this study we have been handling and processing an extensive data set. There is always a risk for human errors during the set up and processing of the data. Such error could have severe and misleading effects on the results and the conclusions and hence undermine the reliability of the study. Throughout our study we have been using a high level of accuracy and carefulness in order to avoid such errors and pitfalls. The historical returns for the stocks as well as the index used to calculate the abnormal returns are collected from Thomson DataStream Advance. Those data are to be seen as reliable, since Thomson DataStream Advance is a trusted source of historical financial data. Data regarding the insider trading transactions has been gathered from FI. We value the data collected from FI as highly reliable since they are a government controlled supervising authority. Those facts presented above with the fact that we conduct test statistics to our results leads us to state that our information obtains a high degree of reliability.

6 Conclusions

Firstly, we conclude that the investment companies' insiders are not able to make higher abnormal returns on their buy transactions relative to other insiders. In fact they actually perform a significant negative abnormal return relative to the other insiders.

Secondly, we have found empirical evidence that investment companies' insiders do earn a higher abnormal return on their sell transactions relative to other insiders.

However, there are strong yearly time effects and there are also substantial firm specific effects in our data sample. Those two effects make our results less robust.

Finally, there is a negative overall significant difference between transactions made by investment companies' insiders and other insiders. However, since we do not have any data on size of transactions, we cannot conclude that investment companies' insiders on average are able to earn higher abnormal return than other insiders or not on a six month basis.

7 Future Studies

A Future study, with the same approach as ours, which distinguish between when an insider does a transaction for the company or for her own private account would be interesting. Furthermore, to be able to draw more accurate conclusions on the average return, a study which takes the size of the transaction into account would be rewarding for the academic society.

As noted, the Swedish business environment is unique with its relatively large fraction of investment companies. However, investment companies do exist on foreign markets as well. Hence, it would be exciting to do a similar study outside the Swedish borders in order to see if the same patterns can be observed abroad.

Furthermore, Cohen et. al. has done a study where they separate insider transactions in two groups, regular and opportunistic. The abnormal return of the regular transactions was not statistically different from zero while the abnormal return for the opportunistic transactions were significant different from zero. To be able to do this separation between the transactions in a combination with our approach would be highly interesting.

Last but not least, this thesis investigates transactions that have taken place in listed companies. Of course there are other investment companies, such as private equity firms that mainly invest in non-public companies. Even though it would have been considerable harder to conduct, a similar approach as in our thesis that investigates that kind of markets would be fascinating.

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Appendix 1 – Investment Companies on OMX Stockholm Stock Exchange

Large Cap	Mid Cap	Small Cap
Hakon Invest	Bure Equity	ACAP Invest
Industrivärden	East Capital Explorer	Havsfrun
Investor	Säkl	Ledstiernan
Kinnevik	Vostok Nafta	LinkMed
Latour	Öresund	Luxonen SDB
Lundbergs		Midway
Melker Schörling		Novestra
Ratos		Svolder
		Traction

Appendix 2 – Members of the Investment Companies 2001-2009

Investor		Kinnevik		Latour	
First name	Family name	First name	Family name	First name	Family name
Percy	Barnevik	Jan	Stenbeck	Gustaf	Douglas
Claes	Dahlbäck	Bo	von Horn	John	Dahlfors
Jacob	Wallenberg	Johan	Björkman	Eric	Douglas
Peter	Wallenberg	Edvard	von Horn	Inga-Britt	Ahlenius
Gunnar	Brock	Cristina	Stenbeck	Anders	Böös
Anders	Scharp	Anders	Björkman	Elisabeth	Douglas
Marcus	Wallenberg	Pehr G	Gyllenhammar	Ingrid	Flory
Sune	Carlsson	Cristina	Stenbeck	Carl-Henric	Svanberg
Håkan	Mogren	Lars-Johan	Jarnheimer	Fredrik	Palmstierna
Mauritz	Sahlin	Anders	Fällman	Tord	Henriksson
Koichi	Nishimura	Edvard	von Horn	Bo	Eveborn
O.	Griffith Sexton	Johan	Björkman	Eric	Douglas
Sirkka	Hämäläinen	Pelle	Törnberg	Carl	Douglas
Ulla	Litzén	Dag	Tigerschiöld	Bertil	Svensson
Börje	Ekholm	Erik	Mitteregger	Caroline	af Ugglas
Peter	D. Sutherland	Rickard	von Horn	Fredrik	Palmstierna
Björn	Svedberg	Stig	Nordin	Göran	Wirenstam
Lena	Treschow Torell	Vigo	Carlund	Jan	Svensson
Grace	Reksten Skaugen	Johan	Klingspor	Erik	Dahlgren
Sune	Carlsson	Wilhelm	Klingspor	Tuomo	Inkinen
Michael	Treschow	Cristina	Stenbeck	Ralph	Öqvist
Sven	Nyman	Pelle	Törnberg	Richard	Bergqvist
Lars	Wedenborn	Anders	Fällman		
		Habs	Wahlbom		
		Thorbjörn	Hallström		
		Geron	Forsman		
		Magnus	Borg		
		Bo	Myrberg		
		Jan-Henrik	Sandberg		
		Bo	Gidlund		
		Annika	Jonsson		
		Per	Eriksson		
		Henrik	Nord		
		Tobias	Söderholm		
		Kenneth	Portin		
		Hans	Wahlbom		

Industrivärden		Lundbergs		Melker Schörling	
First name	Family name	First name	Family name	First name	Family name
Bo	Rydin	Per	Welin	Melker	Schörling
Tom	Hedelius	Lennart	Bylock	Mikael	Ekdahl
Sverker	Martin-Löf	Fredrik	Lundberg	Carl-Henric	Svanberg
Lennart	Nilsson	Ulf	Lundahl	Henrik	Didner
Boel	Flodgren	Tom	Hedelius	Stefan	Person
Inga-Britt	Ahlenius	Matt	Mullern	Sofia	Schörling
Arne	Mårtensson	Bengt	Pettersson	Ulrik	Svensson
Lars Olof	Grönstedt	Katarina	Martinsson		
Finn	Johnsson	Christer	Zetterberg		
Lennart	Nilsson	Mats	Guldbrand		
Clas	Reuterskiöld	Sten	Peterson		
Anders	Nyrén	Gunilla	Berg		
Fredrik	Lundberg	Mats	Guldbrand		
Olof	Faxander	Carl	Bennet		
Clas	Reuterskiöld	Christer	Nöjd		
Carl-Olof	By	Nils	Svanberg		
Thomas	Nordvaller	Kaj-Åke	Thorvaldson		
Bengt	Kjell	Michael	Knutsson		
Fredric	Calles				
Martin	Hamner				
Lars	von Celsing				
Jacob	Röjdmärk				
Clas-Göran	Pettersson				
Sverker	Sivall				
Stefan	Sundblom				
Fredric	Calles				
Jacob	Röjdmärk				
Erik	Röjvall				
Martin	Hamner				
John	Klint				
Jens	Melander				