

An Event Study of Insider Trading on the Iceland Stock Exchange

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Abstract

The purpose of this study is to examine whether insiders on the Icelandic market generate abnormal returns. The abnormal returns are defined as the cumulative average abnormal return (CAAR) where the Iceland All-Share Index serves as the benchmark. The study used a sample of 3,426 insider trades notifications from the Icelandic market during the period from 1 July 2000 to 31 December 2007. The main findings are that Icelandic insiders have managed to earn abnormal returns for both buy and sell transactions over the short, medium and long term horizon except for sell transaction over the shortest window. The results also show that large owners and board members do not generate positive CAAR for their buys transactions. When looking at results by company size the highest CAAR is obtained for buys in Large Companies and sales in Small Companies. Industry analysis suffered from a small sample in many categories but sell transactions for Industrial, Consumer Staples and Health Care companies were the ones that generated the highest CAARs.

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INTRODUCTION

Insider trading is an often discussed subject and normally with negative connotations. This is understandable as trading where an insider is using undisclosed information to his benefit is illegal in most Western countries. But trading done by insiders does not necessarily have to be unlawful. Legal insider trading is when, at the time of the trade, the insider does not have any material information about the security that has not been made public. Such legal insider trading is then required to be published to the market.

The Icelandic market is a small market and has often been criticised for being “an insider’s market”. But very few studies have been done to see if this is actually the case. The purpose of this study is to find out if insiders on the Icelandic market generate abnormally superior returns as compared to other investors in the market. The period studied is 1 July 2000 – 31 December 2007 and the superior returns are defined as the cumulative aggregated abnormal returns (CAAR) over pre-defined investment periods. In addition this study looks at different insider groups to see if certain insider groups are profiting more from their trading than others. These groups are: Board Members; Management; Significant Ownership; and Others. The effects of a firm’s size are also looked at, as well as seeing if the industry a company operates in has any influence on the abnormal returns earned by its insiders.

The relevancy of studying this is threefold. Firstly it serves as an indicator for the efficiency of the market as a whole, if insiders are not able to earn abnormal returns suggests that all information is immediately available to the market and that the market exploits this information instantly. Secondly, as trading on inside information is unlawful in Iceland, as it is in most Western countries; it suggests that these laws are not properly enforced if insiders are on average able to generate abnormal returns. Finally it can be beneficial for the general market participant to create trading strategies that replicate insider trading if these trades are statistically shown to generate abnormally high returns. To the author’s knowledge this is the first study of this kind that is performed on the Icelandic market and the database used for the analysis had to be created from scratch.

This thesis is organised in the following manner: First there is a discussion on how the terms insider, insider information and insider trading are defined in the Icelandic law as well as a discussion on the purpose of legislation of this kind; The second part provides a brief background to the Icelandic stock market in general as this may be an unfamiliar territory to many; Thirdly there is an overview of previous studies that have been done in this field. Then, in chapter four, the hypothesis of this thesis is formally defined before we look into description of the data (chapter 5) and the methodology of the study (chapter 6); finally the results of the study are presented (chapter 7) and the conclusions of this study (chapter 8) as well as suggestions for further research (chapter 9).

INSIDERS, INSIDE INFORMATION & INSIDER TRADING

The terms insider, insider information and insider trading are defined in ACT 107/2007 and are these terms defined in a similar way in Scandinavian and European legal systems. Three different acts have governed the subject during the observation period. The first was from 1996-2003, the second Act was in place from 2003-2007 and the current Act has been in place since 1 November 2007.

The definitions of insiders, inside information and insider trading have however remained constant over the observation period despite these legislation changes and for the purpose of this study we can assume there has been no legislation change of consequence during the period observed.

Insiders

The term insider is defined in Act 107/2007, which governs insider trading in Iceland as of 1 November 2007. According to Icelandic law insiders can be divided into two categories, primary insiders and temporary insiders. Primary insiders are those that due to their job position or relation to a listed company are always insiders. The CEO of a company, its Board, management and auditor are all examples of primary insiders. Other insiders are temporary insiders if they gain access to confidential information regarding a company that can influence the market price of the shares in that company. Since temporary insiders are, by definition, always prohibited from trading, all reported insider trades during the observation period were by primary insiders.

Inside Information

Insider information is defined in Act 107/2007 as information about the issuer of securities, the securities themselves or other non-public information that is likely to influence the market price of the said securities if made public.

Insider Trading

Insider trading refers to securities trading, in particular trading in listed equities, where either the buyer or the seller, or both, have access to non-public information that would probably affect pricing if made public.

Insiders are prohibited from profiting from the confidential information they obtain, by either buying shares that in light of the insider information are likely to increase in price or selling shares that are likely to decline. Such trades constitute illegal insider trading. Insiders in a listed company are however authorized to trade in the securities of the company as long as no material knowledge exists of any inside information that can influence market prices.

On the Icelandic market insiders are obligated to seek permission prior to a trade from the compliance officer of the company and then report their insider trades to the issuer. The issuer in

turn sends a notification of the trade to both the Iceland Stock Exchange and the Icelandic Financial Supervisory Authority (FSA). The Iceland Stock Exchange then publishes the notification in its news system. The following information is to be included in the notification:

1. Name of the Issuer.
2. Date of notification.
3. Name of the primary insider, or the financially connected party if applicable.
4. Connection of the primary insider with the Issuer.
5. Date of trading and the time of day when trading took place.
6. Type of financial instrument.
7. Whether trading involved buying or selling.
8. Nominal value and price in trading.
9. Nominal value of primary insider's holding or holding of financially connected party after trading.
10. Date of final settlement of trading, if applicable.

The Purpose of Insider Trading Legislation

Although most developed countries in the world have set in place laws that prohibit insider trading based on insider information, many have questioned whether insider trades are as harmful as often is claimed or if they can in fact be beneficial to the market. This section discusses briefly the main arguments for both views.

Arguments for insider trading legislation include:

- Insider trading can reduce the confidence for the market. If certain investors with insider information can gain excessively to the detriment of others the confidence in the market will be reduced. This will lead investors to either demand higher returns to compensate for this or they will simply turn away from the equity market, to the detriment of the economy. Those disagreeing with this claim that investors are such a small part of the market that they barely have an impact.
- Insider trading increases the risk of poorer disclosure of information. If insiders are allowed to trade at will, conflict can arise between the efficiency of the market and the insiders' desire to delay disclosure for their personal benefit. Those opposing do however claim that insiders mainly conceal information for competition purposes.
- Insider trading is a form of information theft. The insider has access to information due to his relationship to the company. This information is an asset of the company and should therefore not be used for the personal benefit of the insiders.

- Insider trading is unjust. If a certain group of investors having access to superior information is allowed to trade using this information other investors can consider the market unjust and be unwilling to participate in it. The proponents of no regulation however point out the market is already skewed since investors differ for example in their size and access to quality analysis.

Those that oppose regulation on insider trading however point out:

- Regulation deters insiders from owning shares in the company they manage. With quarterly reporting as well as other events that the market needs to be informed about, and if the insider is restricted in his dealings prior to these announcements there are not that many days in the year left for him to trade.
- Insider trading contributes to shares being accurately priced. Proponents of no regulation argue that it is beneficial for the market if all relevant information is incorporated into share prices and insider trading would contribute to this effect. A counterargument is though that simply publishing the inside information would be more effective.
- Insider trading is a victimless act. A willing buyer and a willing seller agree to trade an asset which the seller rightfully owns and the counterparty of the insider would have traded anyway at the same price with somebody else.
- Difficulties with enforcement. Passive insider trading is when an insider waits with his sell because he is aware that the share price will likely go up after certain information is released or waits with a buy if the information he has will likely move the price down. This kind of passive insider trading is impossible to detect or regulate and some claim that no trading at all should therefore be regulated.

THE ICELANDIC MARKET¹

The Icelandic financial market is a small market and is therefore likely unfamiliar to many. Although it has gained some notoriety in recent months due to the spectacular collapse of its banking sector. This chapter serves to give a brief overview of the main characteristics of the market during the period observed. The Icelandic economy grew explosively in the last decade and attracted the attention of the international financial community and even more so when the market collapsed in the fall of 2008. This study however only looks at data up until the end of 2007 and therefore excludes the period directly leading up to the collapse. This chapter serves to give a brief overview of the Icelandic market during the years 2000-2007.

While many European stock exchanges can trace their history decades or even centuries back, the Iceland Stock Exchange (ICEX) is still only an adolescent. Established in 1985 as a joint venture of banks and brokerage firms ICEX has developed very quickly in recent years. The first equities were listed in 1990 and a decade later the number of listed companies had reached 75. During the observation period 2000-2007 a total of 29 companies was listed while 77 were de-listed so at the end of year 2007 the number of listed companies stood at 27.

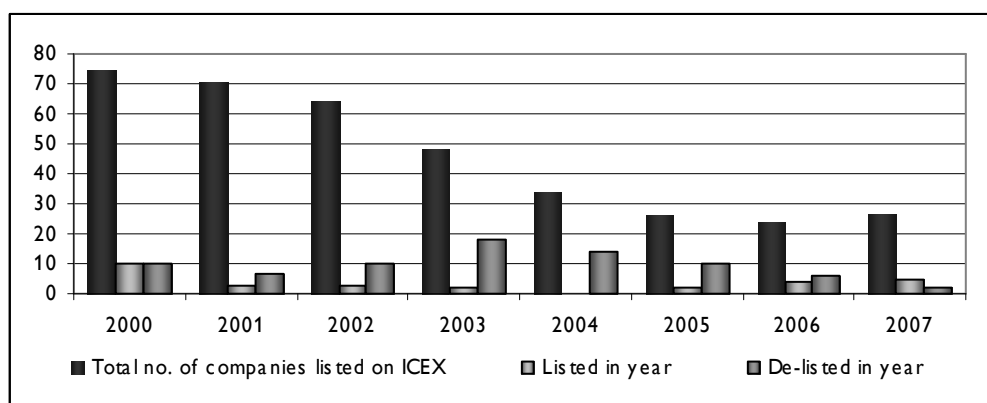


Figure 1: Number of listed companies on ICEX 2000-2007

But although the number of listed companies has steadily declined the market value of the Icelandic equity market grew exponentially during the observation period, a development lead, to a large extent, by the explosive growth of the Icelandic banks combined with substantial increases in stock prices.

¹ This chapter is based on information found on the Iceland Stock Exchange webpage (www.omxnordicexchange) and from the OMX Nordic Exchange Quarterly Reports 2000-2007.

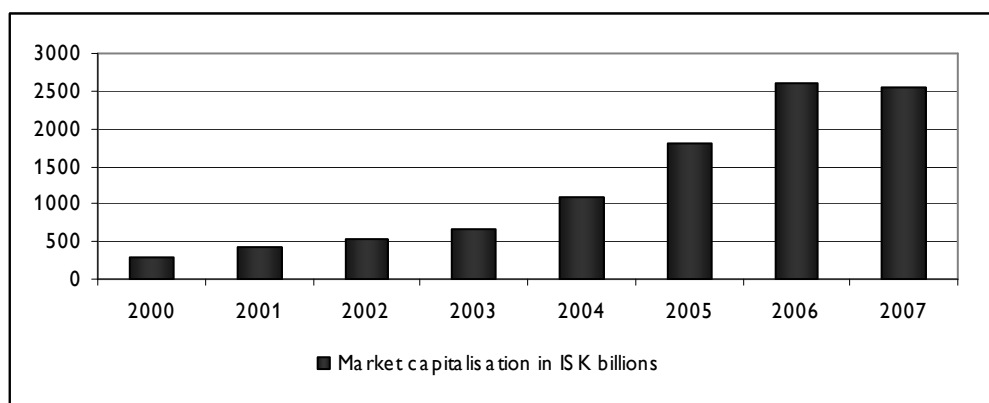


Figure 2: Market capitalisation of all ICEX listed companies in ISK billions

Trading volumes correspondingly increased during the period although sharp decreases were to come in volumes during 2008 following the decline of the equity market.

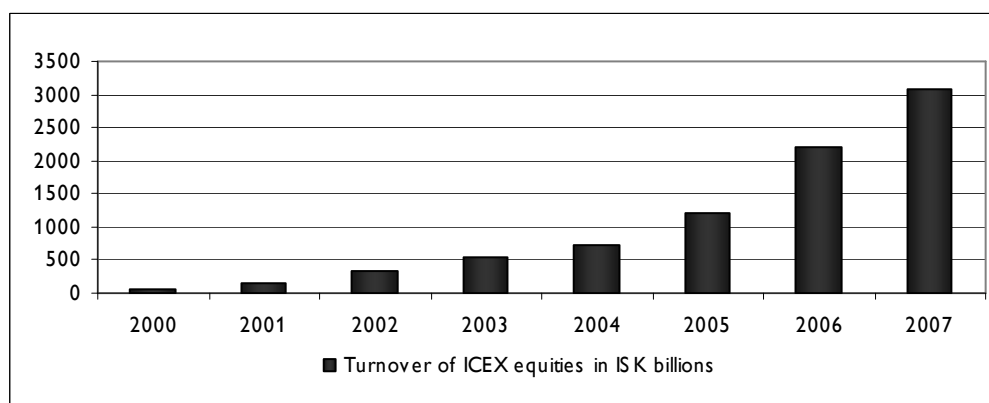


Figure 3: Turnover of ICEX equities in ISK billions

But although both market capitalisation and turnover have grown substantially during these years the Icelandic market remains miniature compared to its Nordic neighbours as can be seen from Figure 4.

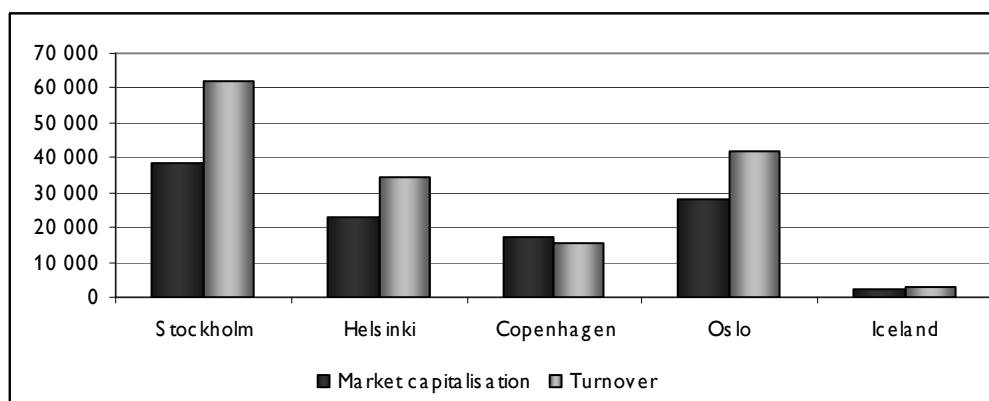


Figure 4: Market capitalisation end of year 2007 and Turnover 2007 for the Nordic Stock Exchanges

The Icelandic market is therefore both small and young, and as such likely to be somewhat unsophisticated which in turn increases the risk of illegal insider trading. During the observation

period there was though only one case of insider trading fraud that went all the way to the courts. But the results of the case were that the insider in question was acquitted. This suggests that monitoring is somewhat lenient.

OVERVIEW OF LITERATURE

Efficient Market Theory

Like so many others, this thesis owes its theoretical background the Efficient Market Theory proposed by Eugene Fama in 1970. According to Fama (1970) the market is efficient when security prices reflect all available information. Efficient market hypothesis is therefore the idea that since information is quickly and efficiently incorporated into asset prices at any point in time, old information cannot be used to foretell future price movements. Fama (1970) distinguished between three different subsets of market efficiency:

- Weak form
- Semi-strong form
- Strong form

Weak Form

The weak form states that stock prices reflect information found by analysing market trading data such as past prices, trading volumes or short interest. This means that it would be impossible to earn excessive returns by using technical analysis but fundamental analysis as well as insider information could give investors superior returns.

Semi-Strong Form

The semi strong form hypothesis asserts that all readily available public information regarding the firm is reflected in the stock prices. New information is therefore assumed to be processed quickly by the market and instantaneously incorporated into prices. Excessive returns can therefore only be earned if the investor possesses inside information and uses it for his trading activity.

Strong Form

The strong form version of the efficient market hypothesis states that, stock prices reflect all information pertaining to the company, including information that only insiders have access to. If this form of the theory were to hold this thesis would be redundant as it would be certain that insiders would be unable to earn superior returns. Most would agree that insiders do in fact have access to insider information long enough before public release to be able to benefit from it. The question is if existing regulation is able to prevent the insiders from doing so. Even in a small and immature market like Iceland in 2000-2007.

Insider Trading

Insider trading has been the subject of numerous studies made from many different perspectives. A full presentation of the literature is therefore impossible but in this chapter the findings of the research papers believed to be the most relevant to this thesis are presented.

One of the first and most famous articles on insider trading was done by Jaffe (1974). He examined data from the United States between 1962 and 1968 and came to the conclusion that insiders do indeed possess and exploit exclusive information. Jaffe classified an insider as a net purchaser for a given month if the number of this insider's buys exceeded sells for that particular month. A given month for company XYZ was then classified as a month of net purchases depending on whether the number of purchasers was greater or less than the number of sellers.

Various other studies have since been performed on the US market that have all yielded the same results; Finnerty (1976) used a methodology similar to Jaffe but looked at the period 1969-1972 and also found that insiders in their trading seem to benefit from the inside information they possess. Rozeff & Zaman (1988) looked at the time period 1973-1982 and came to the same conclusion; as did Seyhun (1988) who studied 1975-1981.

Research done on other markets has also supported the original findings. Baesel & Stein (1979) studied data on insider trading from the Toronto Stock Exchange and found evidence of even larger superior returns than the American studies had shown which suggests that the smaller the market the higher the abnormal returns. In addition Baesel & Stein found that the abnormal returns earned differed according to the position held by the insider, with insiders who had access to superior information (bank directors) earning superior returns to those who did not have this access (ordinary insiders). Pope, Morris & Peel (1990) came to the same conclusion after looking at data for the UK market.

There are on the other hand also contradictory findings that have been published. Lin & Howe (1990) who looked at US data, and found that if transaction costs are taken into account trading strategies based on insider trades do not obtain abnormal results.

Eckbo & Smith also found no evidence of abnormal returns for insiders trading on the Oslo Stock Exchange during 1985-1992 in their famous study. They did not apply the commonly used event study framework but instead constructed portfolios that simulated insider holdings (i.e. not only insider trades), which reflects better the actual holding periods of insiders. Unfortunately available data does not allow the Eckbo & Smith study to be replicated on the Icelandic market.

Icelandic Research

There are not that many studies that have been performed on the Icelandic market and none that are completely comparable to the study done in this paper.

A general study on market efficiency of the Icelandic market was conducted by Gunnlaugsson (2005) who studied the relationship between P/E and P/B ratios, size, historical returns, dividend yields, and returns on the Icelandic market for the period 1993-2003 and found some indications of market inefficiency during the period.

Jónsson (2006) studied whether insider information has leaked prior to publish disclosure, i.e. whether there are indications of illegal insider trading on the Icelandic market (as opposed to the legal and announced insider trading that is studied in this paper). He examines 9 stock exchange announcements during the period 2004-2005 and looks at price movements prior to the public disclosure. His findings suggest that confidential information does leak to the market prior to publication.

The only study found that looks at insider trading notifications, and thereby studies legal insider trading, is done by Hauksson (2005) who studied the predictive value of insider trades for the period 1999-2005. He looked at the 10 companies had the highest turnover for each year (in total 21 companies) but the results were inconclusive. In his study a given period is considered a buy period if there are more insider buys than there are sales by insiders. He then studied whether the market as a whole subsequently moves upward following a buy period and downwards following a sell period, i.e. whether aggregated insider transactions can have a predictive power for the market as a whole. This does not seem to be the case.

HYPOTHESIS

The purpose of insider trading legislation is to make sure that insiders do not benefit from trading based on non-public (or inside) information. As soon as this information has been disclosed to the market it should then be reflected in the share price given that markets are efficient. The null hypothesis tested here is therefore that insiders on the Icelandic market do not earn any abnormal returns from their transactions, or more formally:

H_0 : No abnormal returns from insider transactions

H_1 : Abnormal returns from insider transactions

The following was also tested using the same hypotheses as above:

- Are significant abnormal returns dependent on the type of insider?
 - o Board Members
 - o Management
 - o Ownership
 - o Others
- Are significant abnormal returns dependent on the size of the company?
 - o > ISK 100 bn
 - o ISK 15- 100 bn
 - o < ISK 15 bn
- Are significant abnormal returns dependent on the type of industry?
 - o As classified by the GICS standard

DATA

The hypotheses described in the previous section have been tested using data from 2000-07-01 to 2007-12-31. The data includes all reported insider trades during this period for companies listed on the Iceland Stock Exchange; historical share prices for companies with reported insider trades; as well as historical index values to be used as a benchmark in the event studies. In addition information regarding companies' market capitalisation and industries was gathered. In this section the characteristics and collection processes of the data are described and possible limitations of the data discussed.

Reported insider trades

Insiders in companies on the Iceland Stock Exchange are obliged to report their trading activity to the company in question on the same day as trading is executed. The company is, in turn, required to immediately report these trades to both the Financial Supervisory Authority and the Iceland Stock Exchange. The Stock Exchange subsequently discloses the trades to the market.

Neither the Stock Exchange nor the Financial Supervisory Authority have gathered the insider trades into a database that could be used for analysis. Therefore, for the purpose of this study, each and every notification had to be examined and such a database created. The upside of this is that, to the author's knowledge, no study of this kind has previously been performed on the Icelandic market. The downside is, however, that typing errors or interpretation inconsistencies with regards to the classification of trades cannot be completely ruled out. All possible care has though been taken to make sure the database is error free and that trades are classified in a consistent manner. The latter though being somewhat challenging as both the format of the notifications as well as reporting standards were not completely consistent over time. The information included in this database is: the name of the company, trade date, number of shares, share price, buy/sell, and type of insider.

During the observation period a total of 3,426 trade notifications were published. These notifications do however include subscription rights; stock options; repurchase agreements; transfers of securities between companies owned by the same insider; stocks paid out as dividends, bonuses and board remunerations; or stocks transferred as gifts or due to divorce settlements. These types of trades have a limited informative value as they are unlikely to be motivated by insider information and have therefore been excluded from this study. These exclusions are in line with the methodology in previous studies (e.g. Finnerty, 1976; and Pope, Morris and Peel, 1990) making the results comparable. In addition company's trading in its own shares has also been excluded as these are commonly not classified as insider trades. Finally a number of notifications were later corrected and the trades behind them therefore reported twice. Only the corrected notifications have been included

in this study. After these adjustments the number of trades included in the study is 2,987, where 1,660 are buy trades and 1,327 are sales.

Twenty six of these trades were reported without a trade price, but assuming the trading day's closing price for these transactions the market value of the trades included in this study is ISK 1,288 billion which is 15.5% of the volume traded on the exchange during the period. The insiders were more active in their buys than their sells with buys amounting to ISK 690 billion while the market value of sells was ISK 598 billion.

During the period a total number of 93 companies were listed on the Iceland Stock Exchange. Although only 15 were listed for the whole period as new listings, delistings, mergers and takeovers were extremely frequent during this time. Almost all of the listed companies had some insider trading activity during the period or 78, although the number of trades per company differs considerably as can be seen from the graph below.

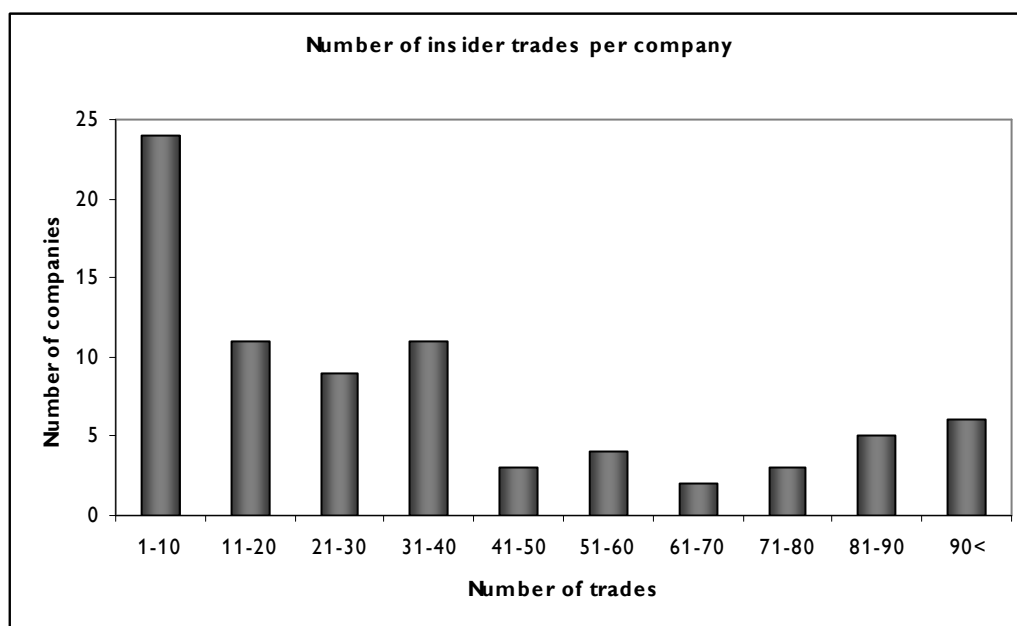


Figure 5: Number of insider trades per company

Historical prices

The Iceland Stock Exchange provided a database with historical closing prices for all equities listed during the observation period. The data used also includes the 125 days prior and post the observation period to allow for the estimation of the market model as well as the calculation of the abnormal returns.

Due to the frequent listing and delisting activity on the Icelandic market in recent years quite a few events occurred either too close to the listing day for the market model to be estimated; or too close to the delisting day for abnormal returns be estimated for the longer event windows. The number of observations excluded for this reason was 503 leaving a total of 2,484 observations to be analysed.

Finally trades in a specific security were netted intra-day so that for each day there could only be one event in each security. The trades were netted so that if the number of shares bought in a given company for a certain day exceeded the number of shares sold for that same company during that particular day, this day was marked as a “buy day” for that company. This resulted in a total of 1,529 events that were included in the study.

Benchmark

The benchmark used is the Iceland All-Share Price Index which includes all the shares listed on the Iceland Stock Exchange at any given time. Each company is given a weight in the index that corresponds to the company's market capitalisation in relation to the market capitalisation of the market as a whole.

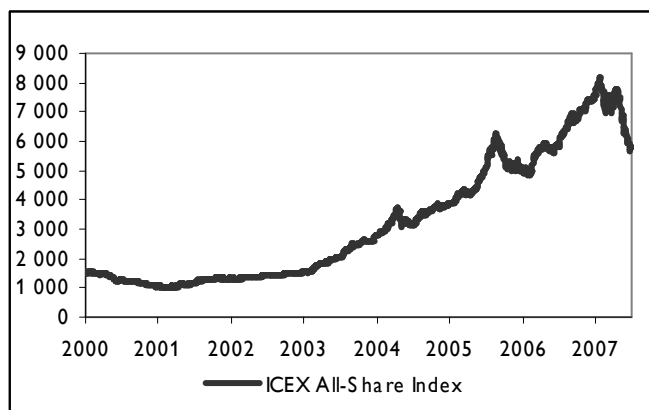


Figure 6: ICEX All-Share Index 2000-2007

METHODOLOGY

Event Study

An event study was performed to examine whether insiders are achieving abnormal returns on the Icelandic market. The event day is the trading day and is defined as $t=0$. Since insider trades on the Icelandic market are reported on the same day as they occur the event window is simply that one day.

The estimation window consists of the 125 days prior to the event day and is used to assess the normal performance for each security. The choice of an estimation window is somewhat arbitrary but relies to an extent on convention since a 120-180 day estimation window is common practice in previous studies of similar nature. 125 trading days is approximately a half year of trading and is deemed of reasonable length to allow for a sufficiently large sample while at the same time keeping intertemporal correlation low.

Three post-event windows of differing length were used to measure the returns over the short, intermediate and longer horizon, or 5 days, 21 day and 125 days respectively.

All trades for a specific security were netted intra-day so that if more than one transaction in an individual security occurred in any given day these trades were summed together and counted as one single event.

Calculating abnormal returns and their variance

First, daily returns for each security are calculated as:

$$R_{i\tau} = \ln \left[\frac{P_{i\tau}}{P_{i,\tau-1}} \right],$$

where P_{it} is the closing price of security i on day t . The returns for the market index are computed using the same method.

The market model as outlined by MacKinlay (1997) is then used to test the sample for abnormal returns. First the market model:

$$R_{i\tau} = \alpha_i + \beta_i R_{m\tau} + \varepsilon_{i\tau},$$

where $\hat{\alpha}_i$ and $\hat{\beta}_i$ are the ordinary least squares estimates of α_i and β_i .

From this model abnormal returns are defined as:

$$AR_{i\tau} = \hat{\varepsilon}_{i\tau} = R_{i\tau} - (\hat{\alpha}_i + \hat{\beta}_i R_{m\tau})$$

The variance of the abnormal returns is calculated by dividing the sum of the squared abnormal returns with the number of days in the event window adjusted for the loss of degrees of freedom ($n-1$).

$$\text{var}(AR_{i\tau}) = \frac{\sum (AR_{i\tau})^2}{(n-1)}$$

In order to make statistical inferences about the data the abnormal returns observations need to be aggregated through time and across securities. First the average abnormal return (AAR) for N events is calculated as:

$$AAR_{\tau} = \frac{\sum AR_{i\tau}}{N}$$

The variance of AAR is the sum of the variances of the abnormal returns divided by the square of the number of events after adjusting for the loss of degrees of freedom

$$\text{var}(AAR_{\tau}) = \frac{\sum \text{Var}(AR_{i\tau})}{(N-1)^2}$$

The cumulative average abnormal returns (CAAR) are then calculated by aggregating over the event window $\tau = T_1$ to $\tau = T_2$

$$CAAR(\tau_1, \tau_2) = \sum_{\tau} AAR_{\tau}$$

And finally the variance of CAAR is found by summing together the variances of the abnormal returns (AAR) over the event window:

$$\text{Var}(CAAR(\tau_1, \tau_2)) = \sum_{\tau} \text{Var}(AAR_{\tau})$$

The null hypothesis that the abnormal returns do not differ significantly from zero can then be tested using the following t-statistic:

$$t_{CAAR} = \frac{CAAR(\tau_1, \tau_2)}{\text{var}(CAAR(\tau_1, \tau_2))} \sim N(0,1)$$

Insider sub-groups

Intuitively one would assume that the closer the insider is to the company the better equipped he is to use this information to earn abnormally high returns when trading in the company. This has been supported by previous studies like Baesel & Stein (1979) who found that bank directors earned higher abnormal returns than the average insider. This was also tested for the Icelandic market and the procedure described in the previous section used to test if there is a difference in the returns generated by different sub-groups of insiders. The insiders were divided into four sub-groups: Board Members, Management, Large Owners and Others. The last group is somewhat diverse and includes secretaries of management, key personal in e.g. accounting and legal departments; and specialists such as auditors and legal counsel.

The classification follows the trade notifications made by the companies themselves and is therefore somewhat dependent on the individual company's system of titles since neither the Stock Exchange nor the FSA require any standardised classification of insiders. This could cause one company, with inflated management titles, to have relatively more insider trades belonging to the management group than a company that disperses management titles more conservatively. To mitigate this problem the classifications were kept broad to ensure that person's of similar status are classified in the same way between companies.

In few of the reported trades, groups of insiders had entered into transactions through mutually owned investment companies. If these insiders belong to different sub-groups, the trade itself is, considered to belong to equally many sub-groups and therefore included in the analysis of more than one sub-group.

It can also be the case that trades that netted each other out in the main study, as is the case when one insider is selling a position to another, might be included when the sub-groups are analysed since the insider selling is part of a different sub-group then the insider buying. This explains why there are more events in the sub-group analysis than there are in the main analysis.

Market Capitalisation

The data was also analysed to see if the size of the companies made any difference to the abnormal returns earned by the insiders. The main reason insiders are able to earn abnormal returns comes from the information asymmetry they benefit from, i.e. they have better information about the company they are dealing in then the average investor. Intuitively one would assume that this effect becomes more pronounced the smaller the company since an insider of a certain position in a small company has a more encompassing knowledge of the small company than a person in a similar

position for a larger company would have. In addition smaller companies are less followed by analysts and the business media, making the “average investor” less informed about the company. Finally any news are likely to have a more distinct effect on a smaller company than a large one making the inside information more valuable.

The companies were divided into three classes based on their market capitalisation at the end of each year as published in The Stock Exchange Quarterly Reports. If the company was delisted during the year the market capitalisation for the last month of listing was used instead. Companies that had a market value in excess of ISK 100 billion were classified as Large Cap, companies with market value between ISK 15 and 100 billion as Mid Cap, and companies smaller than ISK 15 billion as Small Cap. An overview of the market capitalisation of each the companies at year-end can be found in Appendix I.

Industry

Finally, in order to analyse whether the abnormal results earned by insiders are affected by industry, the companies were categorized according to the Global Industry Classification Standard (GICS)². The Iceland Stock Exchange has made use of this standard since the beginning of 2005 and the classification of companies that have been listed after that was therefore made simple. A total of 52 companies were however not classified by the Exchange since they had been delisted before the adaptation of the GICS. The classification of these firms was therefore trickier and had to be based on judgement. This was though aided by the relative homogeneity of the Icelandic market which has mostly consisted of financials and fisheries (the latter falling into the consumer staples category) as well as familiarity with the companies in question. In addition use was made of the history sections of the web pages of some of the companies in order to identify the industry class it should be placed in. There are 10 main classes in the GICS system: Energy, Materials, Industrials, Consumer Discretionary, Consumer Staples, Health Care, Financials, Information Technology, Telecommunication Services, and Utilities. All classes except Utilities have had a representative on the Icelandic market over the observation period. A complete listing of the classifications of the companies can be found in Appendix II.

² Developed by Standard & Poor's and Morgan Stanley Capital International.
See for example: www.msibarra.com/resources/pdfs/GICSSectorDefinitions.pdf

RESULTS

Aggregated Results

Depicting the cumulative abnormal aggregated returns in a graph for all sell and buy transactions respectively shows that the effect is quite prominent, especially for insider sales, where insiders seem to have managed to avoid, by selling in time, an average drop of 7% in their shares during the subsequent 125 days. For the insider buys this effect is not as obvious and the CAAR for the buys for the 125 days window is less than half of what it is for the sells, or less than 2%. For both groups the abnormal returns are quite prominent in economical terms and make it worthwhile for other investors to replicate the insiders in their trading. The abnormal returns for the buys stems mostly from the first few days in the event window while the CAAR for the sales increases almost linearly throughout the event window. These results are both statistically and economically significant.

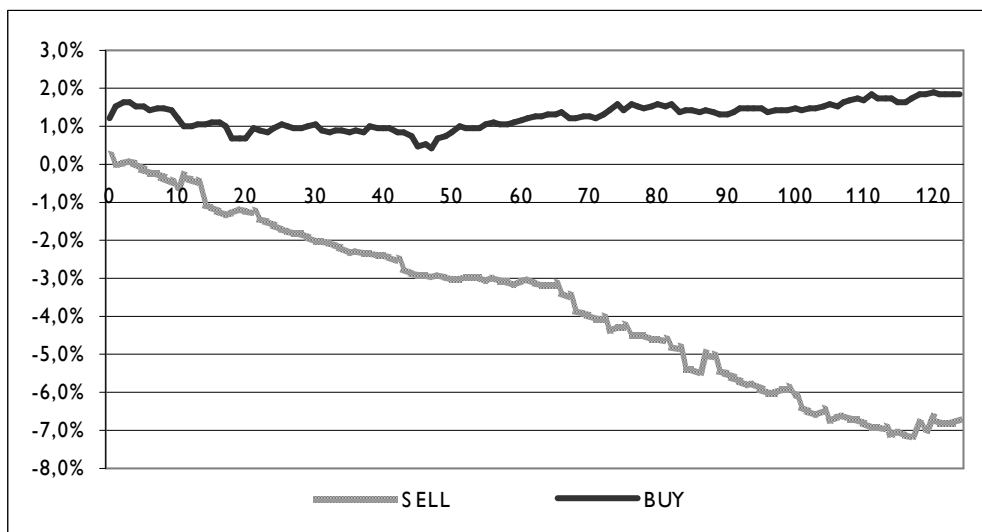


Figure 7 CAAR All Data

	Df (n-1)	Event window	CAAR	test statistic	p value	H ₀ rejected
BUY	881	5 days	1,53%	8,5237	0,0000	yes
		63 days	1,26%	11,2773	0,0000	yes
		125 days	1,83%	20,1100	0,0000	yes
SELL	646	5 days	0,06%	0,2558	0,7982	no
		63 days	-3,08%	-27,7943	0,0000	yes
		125 days	-6,71%	-53,2176	0,0000	yes

Table 1 Results for all transactions

Looking at the results in Table 1 shows that the null hypothesis is rejected at a 5% significance level for all event windows for both the sell and buy transactions except for the 5-day window for the sell transactions. In all cases when the null hypothesis is rejected the p-value is extremely low so the significance of the results is high. All CAARs except the shortest sell window are also in the direction that was to be expected, i.e. the equities show on average abnormal negative results following insider's sales and positive abnormal results in the case of buys. The results are also all economically significant as apart from the shortest event window for the sell transactions. The highest abnormal results are found for the long event window for sell transactions, or 6.71% which is extremely high considering the relatively short time frame. This is even more noteworthy considering that the observation period was more characterized by upturns than downturns.

Results by Insider Sub-Groups

The results for the individual insider groups can be seen in Table 2. Surprisingly, it is for the group Others that the results are the strongest and the null hypothesis is rejected for both buy and sell transactions for all event windows. The results for the Management group are also strong, apart from the shortest window for sell transactions, which is in line with the aggregated results. The Boards and the Significant Ownership groups do however not fare as well. The buy transaction of both the Board and Owners of significant stakes are however shown to generate abnormally low results in the long run. The reason could be that these groups focus on the political aspects of acquiring an ownership than they do on the returns. Both these groups fair similarly in their divestments and seem to be able to time sales better than their buys as the null hypothesis is rejected for both groups at the 63 and 125 days windows.

		Df (n-1)	Event window	CAAR	test statistic	p value	H ₀ rejected
Board	BUY	572	5 days	0,94%	5,3022	0,0000	yes
			63 days	-0,84%	-5,7212	0,0000	yes*
			125 days	-1,87%	-15,9087	0,0000	yes*
	SELL	265	5 days	-0,09%	-0,4931	0,6224	no
			63 days	-3,07%	-26,1014	0,0000	yes
			125 days	-5,91%	-29,3334	0,0000	yes
Management	BUY	303	5 days	1,89%	10,4153	0,0000	yes
			63 days	3,42%	25,7245	0,0000	yes
			125 days	5,79%	47,1927	0,0000	yes
	SELL	338	5 days	0,41%	0,9284	0,3539	no
			63 days	-1,57%	-8,4041	0,0000	yes
			125 days	-5,70%	-34,1782	0,0000	yes
Ownership	BUY	73	5 days	0,23%	0,7714	0,4430	no
			63 days	0,09%	0,5440	0,5881	no
			125 days	-0,48%	-2,8228	0,0061	yes*
	SELL	26	5 days	-0,46%	-1,0312	0,3119	no
			63 days	-4,34%	-13,8552	0,0000	yes
			125 days	-6,71%	-21,2060	0,0000	yes
Others	BUY	49	5 days	2,68%	5,7284	0,0000	yes
			63 days	5,64%	14,5193	0,0000	yes
			125 days	14,87%	39,0322	0,0000	yes
	SELL	81	5 days	-0,75%	-3,3600	0,0012	yes
			63 days	-8,34%	-41,0539	0,0000	yes
			125 days	-10,44%	-32,1698	0,0000	yes

*the null hypothesis is rejected but the results are in the opposite direction of what is expected

Table 2 Results by Insider Groups

Figure 7 depicts the results clearly. Looking at the graph the two groups Others and Management stand out with considerable accumulated average abnormal returns or 14.87% and 5.79% over the 125 days event window. The CAAR for the buy transactions of the Other group rises spectacularly over the event window to the level of 14.87% which is incredibly high abnormal returns for such a relatively short investment horizon. The reason for these unexpected results could be the relatively few observations in this group or only 45. It seems at least unlikely that investors could expect additional returns in the vicinity of 15% if they were to follow the trading patterns of insiders that are not part of the three main insider groups.

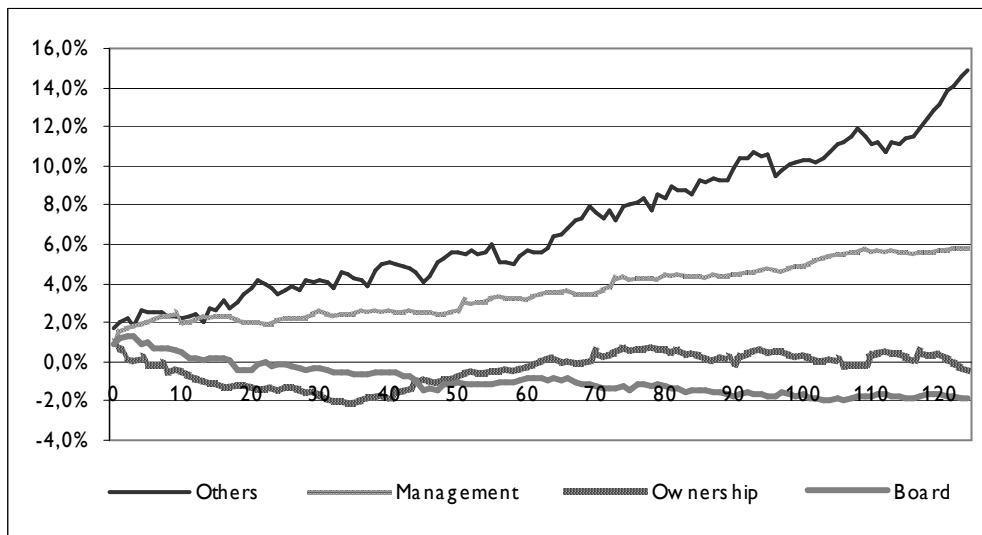


Figure 8 CAAR of Buys by Investor Group

As can be seen from Graph 8 the results for the sell transactions are more unanimous, with all groups earning abnormal returns over the whole event window. Apart from the statistically non-significant short horizon sells of the management group, all groups and all event windows generate results in the expected direction although the results were only statistically significant for the medium and long term for all groups. The shortest event window showed statistically significant results only for the Others group.

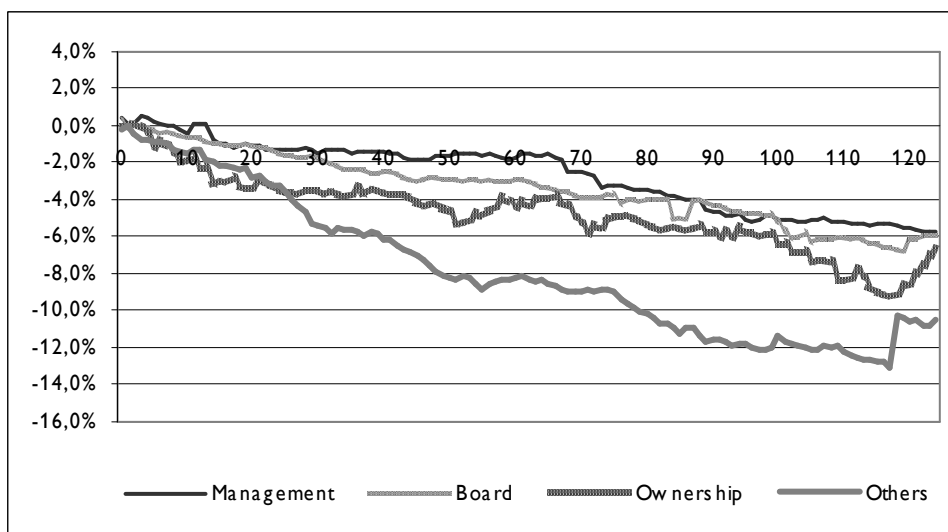


Figure 9 CAAR of Sales by Investor Group

Results by Market Capitalisation

As predicted, the strongest effect is for the sell transactions of the Small Cap group where insiders manage to avoid a 12.56% drop in their shares in excess of the market over the subsequent 125 days. But the results are less pronounced for the buy transactions of this group with long term abnormal returns being close zero and the null hypothesis therefore accepted for this type of transactions. The short term results are though substantial (1.87%) and statistically significant. The Large Cap group however defies expectations with both buy and sell transaction being both economically as well as statistically significant for all event window lengths. The results for the buy transaction are especially striking or 10.92% which is even more surprising considering that the large cap companies can form a considerable part of the market index making the results of outperforming (or underperforming) large cap companies “bleed” into the index which thereby decreases the abnormal results earned by the insider. The results for the Mid Cap group are less pronounced with insiders beating the market by 1.03% on average when buying and avoiding a 2.17% loss when selling. The null hypothesis is though not rejected for the medium term buy transactions and the short term sell transactions, making the results for the Mid Cap companies the most ambiguous.

		Df (n-1)	Event window	CAAR	test statistic	p value	H ₀ rejected
Large Cap	BUY	136	5 days	1,53%	10,7585	0,0000	yes
			63 days	5,99%	25,3198	0,0000	yes
			125 days	10,92%	58,9146	0,0000	yes
	SELL	91	5 days	-1,86%	-2,0886	0,0395	yes
			63 days	-4,24%	-12,3794	0,0000	yes
			125 days	-2,33%	-8,9019	0,0000	yes
Mid Cap	BUY	299	5 days	1,02%	7,7573	0,0000	yes
			63 days	0,23%	1,0176	0,3097	no
			125 days	1,03%	5,9679	0,0000	yes
	SELL	273	5 days	0,72%	1,6460	0,1009	no
			63 days	-0,44%	-2,5287	0,0120	yes
			125 days	-2,17%	-9,4411	0,0000	yes
Small Cap	BUY	444	5 days	1,87%	5,4759	0,0000	yes
			63 days	0,49%	3,5156	0,0005	yes
			125 days	-0,04%	-0,3017	0,7630	no
	SELL	280	5 days	0,05%	0,2425	0,8086	no
			63 days	-5,16%	-33,5849	0,0000	yes
			125 days	-12,56%	-76,2456	0,0000	yes

*the null hypothesis is rejected but the results are in the opposite direction of what is expected

Table 3 Results by Company Size

The results are evident from Figures 10 and 11 where the CAARs for both the buy and sell transactions have been depicted. In the graph with the buy transactions the Large Cap companies stand out with a steady increasing trend over the whole event window. For the Mid and Small Cap companies a strong short term effect however seems to level out the longer the event window.

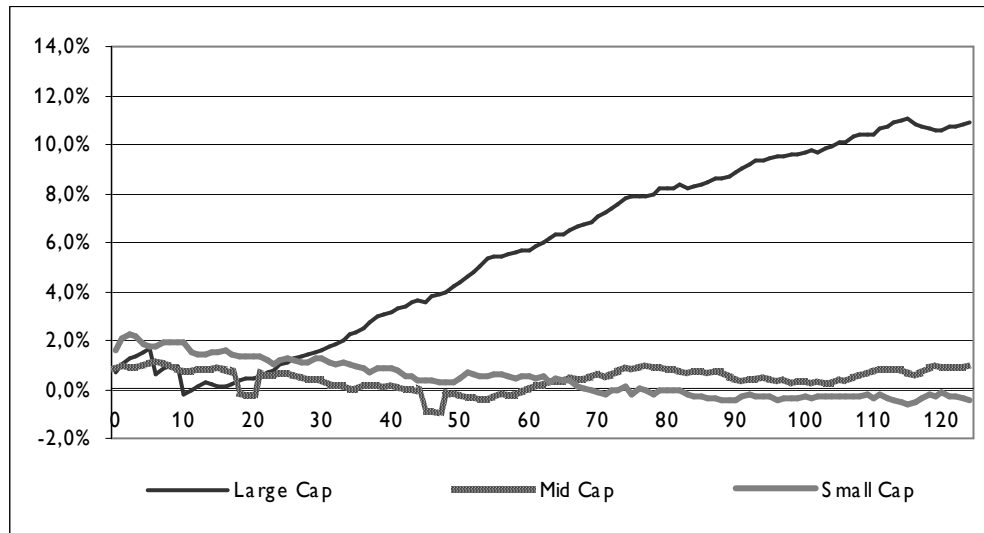


Figure 10 CAAR of Buys by Market Capitalisation

In the graph of the CAAR of the sell transactions the Small Cap companies now stand out with a steep and consistently increasing CAAR. The trend for the Mid and Small Cap companies is however less distinctive but the indication seems to be that if the event window were to be increased even further the CAAR would be decreasing even further.

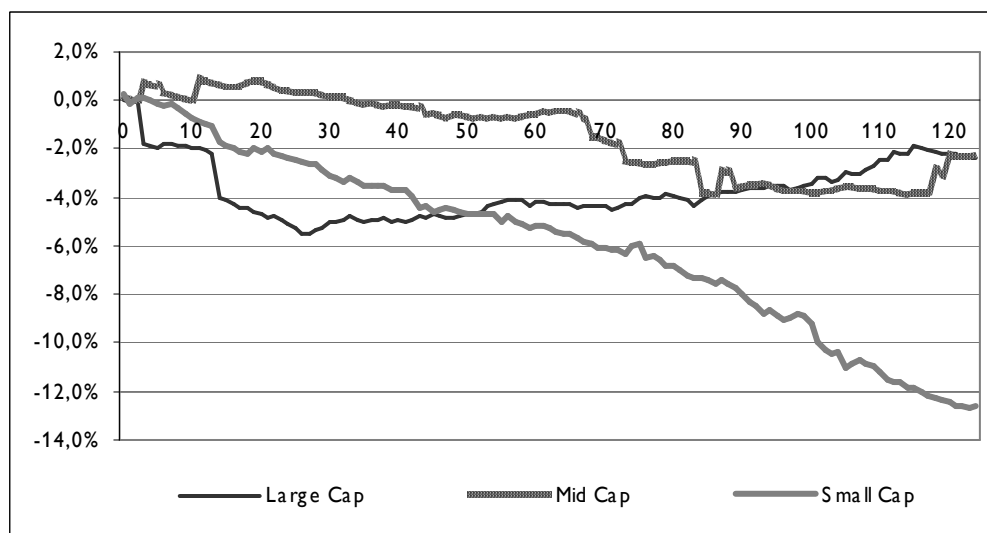


Figure 11 CAAR of Sales by Market Capitalisation

Results by Industry

Finally the data was divided by industry groups using the GICS classification system. The Icelandic market has been a rather homogenous market with the majority of the companies listed on the exchange being either Financials or Consumer Staples (fisheries). Industrials and Health Care do though also have a few relatively large representatives on the Icelandic Exchange. The samples for the other groups (Energy, Materials, Consumer Discretionary, IT and Telecom Services) are however uncomfortably small making the results less reliable for these groups. As can be seen from the results in Table 4 it is only for the Energy group, of those smaller groups, that the null hypothesis is rejected for both the buy and sell transactions and all event windows. For the other small groups the results are more often than not either statistically insignificant or in the opposite direction of what is expected.

		Df (n-1)	Event window	CAAR	test statistic	p value	H ₀ rejected
Energy	BUY	25	5 days	1,46%	2,0951	0,0465	yes
			63 days	3,31%	9,6513	0,0000	yes
			125 days	4,93%	14,6932	0,0000	yes
	SELL	25	5 days	-1,02%	-2,7811	0,0102	yes
			63 days	-5,30%	-19,1448	0,0000	yes
			125 days	-3,93%	-12,4383	0,0000	yes
Materials	BUY	20	5 days	2,88%	13,9709	0,0000	yes
			63 days	-2,16%	-8,1787	0,0000	yes*
			125 days	3,81%	15,6619	0,0000	yes
	SELL	6	5 days	6,10%	2,0484	0,0864	no
			63 days	3,04%	2,7423	0,0336	yes*
			125 days	-1,92%	-2,0790	0,0828	yes
Industrials	BUY	133	5 days	2,28%	10,0683	0,0000	yes
			63 days	2,13%	12,7537	0,0000	yes
			125 days	2,85%	17,0182	0,0000	yes
	SELL	110	5 days	-0,32%	-1,8152	0,0722	no
			63 days	-8,14%	-54,3155	0,0000	yes
			125 days	-13,66%	-87,3868	0,0000	yes
Consumer Discretionary	BUY	31	5 days	2,03%	2,0112	0,0531	no
			63 days	-0,21%	-0,4529	0,6538	no
			125 days	-1,67%	-3,8063	0,0006	yes*
	SELL	10	5 days	-0,63%	-1,1548	0,2750	no
			63 days	-2,59%	-5,5522	0,0002	yes
			125 days	2,16%	3,4946	0,0058	yes*

Consumer Staples	BUY	263	5 days	1,14%	5,0704	0,0000	yes
			63 days	-2,11%	-7,6220	0,0000	yes*
			125 days	-5,85%	-27,7415	0,0000	yes*
	SELL	120	5 days	0,79%	2,4358	0,0163	yes*
			63 days	-3,67%	-20,7387	0,0000	yes
			125 days	-9,39%	-28,3773	0,0000	yes
Health Care	BUY	72	5 days	2,58%	6,3711	0,0000	yes
			63 days	11,59%	24,5989	0,0000	yes
			125 days	21,47%	57,2543	0,0000	yes
	SELL	86	5 days	-2,20%	-2,3064	0,0235	yes
			63 days	-1,28%	-3,3298	0,0013	yes
			125 days	-6,70%	-16,0409	0,0000	yes
Financials	BUY	256	5 days	1,08%	2,1083	0,0360	yes
			63 days	0,83%	4,8937	0,0000	yes
			125 days	2,17%	15,8038	0,0000	yes
	SELL	200	5 days	0,81%	1,3695	0,1724	no
			63 days	-1,03%	-4,0699	0,0001	yes
			125 days	-1,77%	-6,8647	0,0000	yes
Information Technology	BUY	45	5 days	1,43%	2,3601	0,0227	yes
			63 days	1,98%	5,5701	0,0000	yes
			125 days	0,11%	0,2563	0,7989	no
	SELL	56	5 days	-0,10%	-0,1439	0,8861	no
			63 days	-3,92%	-9,1184	0,0000	yes
			125 days	-14,49%	-32,8612	0,0000	yes
Telecommunication Services	BUY	28	5 days	1,64%	3,3542	0,0023	yes
			63 days	6,73%	17,9920	0,0000	yes
			125 days	17,14%	47,2497	0,0000	yes
	SELL	25	5 days	0,17%	0,3493	0,7298	no
			63 days	1,57%	4,6058	0,0001	yes*
			125 days	6,50%	18,4799	0,0000	yes*

*the null hypothesis is rejected but the results are in the opposite direction of what is expected

Table 4 Results by Industry

Looking at the other four (main) groups it is Financials that return the most modest abnormal returns of these industry groups or 2.17% and -1.77% for the longest event window for buy and sell transactions respectively. The abnormal returns for the sell transactions are a lot more pronounced for the other three groups or -13.66%, 9.39% and 6.70% for Industrials, Consumer Staples and Health Care respectively over the longest event window. For Consumer Staples the buy transactions yield a considerable loss over the medium and long term event window but for both Health Care and

Industrials the null hypothesis is rejected for buy transactions for all event windows. These results are also economically significant with a CAAR of 2.85% for Industrials and 21.47% for Health Care.

CONCLUSION

Shortly after this study was completed Iceland went through extremely difficult times. Three of the main banks were nationalised and 75% of the market capitalisation in the Iceland Stock Exchange disappeared almost overnight. When this is written it is still unclear what the effects will be for the economy as a whole and on the companies that still remain listed in Iceland. It is though apparent that the Icelandic stock market will take years to recover to previous levels, if it ever will.

The results of this study can therefore no longer be used to construct trading strategies on the Icelandic market, despite the results often being very conclusive. But hopefully the relevance of the study is broader than for the Icelandic market alone, since the different insider groups studied should share the same characteristics across countries.

The main conclusion of this study is that insiders on the Icelandic market have managed to earn abnormal returns in their trading activities. The insiders have especially been able to avoid abnormal price declines by selling in time. These results are in line with previous studies done in other markets as in the studies done by Jaffee (1974) for the US market; by Baesel & Stein (1979) for the Canadian market; and also Pope, Morris & Peel (1990) for the UK market.

The study also shows that the results earned differ somewhat between different insider groups where Others and Management are able to generate abnormally high returns for both their buy and sell transactions while Owners and Board members are only generating abnormally high returns for their sell transactions and seem to be losing relative to the market when they buy. A likely reason is that when these latter groups are buying they are more interested in maintaining or increasing their influences than they are in the returns. These results for the buy transactions of Owners and Board Members go against previous findings by e.g. Baesel & Stein (1979) that found that the closer to the company the insider was the higher his abnormal returns. It was also extremely surprising to find the group Others was the best performing group as one would have assumed the opposite. The only explanation can be that lower-level employees base their transactions purely on performance expectations while the trades of the other groups are more "political" in their dealings.

The results when the effect of company size was studied were also unexpected. The high abnormal returns for the sell transactions in small companies were in line with expectations, but the extremely high returns for the buy transactions of the large companies are puzzling. The Large Cap group includes mainly financial companies but also one health care company and one industrial company. Looking at the results divided by industries it shows that it is the healthcare company that is driving up the results for the buy transactions of the large cap companies, since the results for both the Financials and the Industrials are far more modest. Since it is only one company driving these

unexpected results they should be taken with grain of salt and care should be taken in applying them to other markets.

The industry analysis suffered from the small sample size for many of the industries and the focus was therefore put on Iceland's more prominent industries; Financials, Consumer Staples, Industrials and HealthCare where the number of events was at least close to or above 100 for all groups. The buy transactions for the Consumer Staples were the only group that underperformed the market. One wonders if the reason for this is the prominence of the fisheries industry in the Icelandic political landscape and that the buying of these companies is to some extent driven by the influence it brings the insiders. The extremely high returns for the sell transactions for Consumer Staples, HealthCare and Industrials as well as for the buy transactions for Health Care are however surprising since the majority of the companies in these industries can be described as well established and are fairly large.

The results of this study could be used to construct trading strategies in (the remnants) of the Icelandic market or other markets as the study suggests that doing so would result in returns above what can be considered normal or expected. The strategy could then be to follow all sell transactions done by insiders although with the caveat that these would not work in the extreme short run. The study also suggests that an investor could do well buy following buy transactions of insiders that do not have a strategic holdings in the company. In addition sell transactions in small companies should be followed. Industry specific results probably need to be tested further before trading strategies are based on them and the results for the buy transactions of Large Cap companies are too influenced by one company to be implemented as a trading strategy.

But what is probably more relevant, and at the same time worrying, is that these results suggest that, in the context of the Efficient Market Theory, the Icelandic market was not efficient during the time period studied. Insiders seem to be able to earn abnormal returns which would not be possible if the market had been perfectly efficient. This raises the question on how authorities should respond since it is apparent that current regulation and monitoring is not yielding the desired results.

SUGGESTIONS FOR FURTHER RESEARCH

Hopefully the Iceland Stock Exchange or the Icelandic Financial Supervisory Authority will in the future make available additional data that shows not only the insider trades but also regularly publish the total holdings of all insiders at certain points in time. This would allow researchers to follow the methodology of Eckbo and Smith (1998) who constructed portfolios of insiders' holdings and compared to the market portfolio and came to the conclusion that insiders were not earning abnormally high returns on the small Norwegian market. These results are in stark contrast to results obtained with the conventional event study method in various markets.

In addition it would have been interesting to break the data further down and investigate whether for example ownership structure or analyst coverage affect the results obtained by insiders. Unfortunately this data is not readily available for the Icelandic market.

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APPENDICES

I - Market Capitalisation

In ISK millions

		2001	2002	2003	2004	2005	2006	2007
365		1 642	2 186	9 948	11 302	26 049	15 743	7 236
A	4 067	5 768	7 828	7 376	27 836	23 974	29 614	40 720
ACT	15 743	21 076	44 183	125 439	115 859	167 063	215 644	290 445
AFL	1 672	1 033	3 326	3 630	5 112			
ALMH	870	749						
ATOR	2 762	2 344	2 304	4 093	16 226	17 751	22 806	33 365
AUBA	691	576	504	598	582	778		
AUDL	4 020	3 376	3 093					
BAKK	2 722	11 066	17 796	27 835	39 122	82 285	134 868	126 236
BAUG	14 031	17 636	26 113	25 873				
BUN	19 475	19 167	24 924	27 904				
BURD	22 323	15 595	32 459	31 524	66 706	107 001		
DLTA	5 016	9 335	16 249					
ESKJA	1 670	2 933	3 610	3 429	3 610			
EXISTA							243 872	224 382
FBANK	3 749	1 957		5 335				
FFB	3 534	4 631						
FHUS	743	669	743	929				
FIEY				763	509	678		
FL	6 460	4 037	11 074	14 419	24 989	111 645	202 597	144 707
FLAGA				3 005	4 090	3 322	1 888	613
FMB	99	142	245	295	384	384	498	
FRMH	204	355	695					
GLB	41 500	43 400	47 400	67 200	125 440	227 232	332 370	326 631
GRND	6 655	7 395	8 726	9 909	11 462	15 786	21 333	21 333
GRUN	829	732	829	953	981			
HAMP	2 535	2 150	2 425	3 100	3 050	4 300	3 800	3 525
HB	3 630	4 840	7 260					
HEDN	310	300						
HFEIM							58 292	65 122
HGUN	3 030	3 368	4 378	3 704	4 310			
HISL	861	707	461					
HLBU	3 214	2 789	3 261	4 064	5 160			
HMRK	345	592	295	340	320			
HTOR	980	1 088	1 323	1 151	1 803	1 803		
HUSA	5 221	3 930	5 333					
HVES	79	46	45	59				
IAV	4 970	3 010	4 886	5 166				
ICEAIR							27 600	27 750
IG	5 611	6 135	7 332	8 604	13 342	20 814	21 989	14 958
IHUG	4 000	948	1 981	2 179				
ISI	53	14						
ISJA	2 204	818	1 200	1 200				
JRDB	1 908	1 869	1 856	3 980	8 080	10 240		
KALD			5 787	8 018	12 632			
KAUP	15 207	15 108	27 960	98 903	292 023	495 757	622 721	651 599
KEA B	317	161						
KEFV		1 334	1 461					
KER	10 987	12 076	11 779	12 175				
KOGN	3 015	1 395	2 529	2 880	8 974	11 850	14 379	

LAIS	23 618	23 207	24 987	43 500	98 010	278 823	292 048	397 343
LIF	1 560	2 550	2 344	1 750	2 193			
LODN	375	200	300					
LTSJ	1 627	465	439	587	254	186		
MARL	9 428	6 242	4 177	6 578	11 811	15 604	28 265	41 186
MOSAIC						54 529	44 377	50 758
NYHR	3 696	1 320	2 191	2 323	2 693	3 422	3 770	5 452
OLIS	5 695	5 427	6 432	6 633				
OPKF	9 030	3 213	4 747	5 647	8 205			
OSSR	21 677	16 356	17 736	14 320	24 202	43 883	43 498	41 666
PLST	506	161	190	260				
SAEP	1 014	646	1 165	980	848			
SAMH	12 303	17 264	16 600	14 940	18 426	20 086		
SFS B	240	280	290	200	202	360	390	390
SIMI		41 163	40 460	47 144	63 328	68 254		
SJVA	17 433	15 795	15 503	19 950				
SKEL	6 459	6 496	11 029	12 011				
SKRR	2 800	1 260	1 462	1 686				
SKST	2 029	1 995	1 724					
SL	210	470						
SPRON								45 687
SRMJ	2 507	2 466	4 190	3 844				
STAK	132	70	43	70	79			
STRB	5 937	7 825	8 750	20 457	51 570	164 710	180 249	156 423
SVN	3 256	4 400	6 092	6 800	7 225			
TAEK	1 761	526	434	175				
TEYMI							14 760	21 208
TF				440		451		
THAT C	1 263	321	310					
THOR	4 395	4 418	6 120	5 453	7 511			
THRF	4 125	2 640	1 650					
TM	11 655	12 121	9 883	13 893	20 606	25 641	41 104	50 153
TNGI	587	882	1 367	1 014	1 588			
TRS	4 160	4 160	5 850	5 200				
UA	5 976	6 402	8 483					
VAKI	206	161	84	68				
VISHF			12 566	16 918	26 742			
VNST	3 756	4 226	6 730	5 399	6 182	6 573	7 043	13 303
VXSJ	483	422						
100+		Large cap						
15-100		Mid Cap						
-15		Small Cap						

II - Industry Classifications

		2001	2002	2003	2004	2005	2006	2007
365	50	50	50	50	50	50	50	20
A	30	30	30	30	30	30	30	30
ACT	35	35	35	35	35	35	35	35
AFL	40	40	40	40	40			
ALMH	40	40						
ATOR	40	40	40	40	40	40	40	40
AUBA	25	25	25	25	25	25		
AUDL	40	40	40					
BAKK	30	30	30	30	30	30	30	30
BAUG	25	25	25	25				
BUN	40	40	40	40				
BURD	20	20	20	20	20	40		
DLTA	35	35	35					
ESKJA	30	30	30	30	30			
EXISTA							40	40
FBANK	40	40	40	40				
FFB	40	40						
FHUS	30	30	30	30				
FIEY				30	30	30		
FL	20	20	20	20	20	20	20	40
FLAGA				35	35	35	35	35
FMB	30	30	30	30	30	30	30	
FRMH	20	20	20					
GLB	40	40	40	40	40	40	40	40
GRND	30	30	30	30	30	30	30	30
GRUN	30	30	30	30	30			
HAMP	20	20	20	20	20	20	20	20
HB	30	30	30					
HEDN	20	20						
HFEIM							20	20
HGUN	30	30	30	30	30			
HISL	40	40	40					
HLBU	40	40	40	40	40			
HMRK	40	40	40	40	40			
HTOR	30	30	30	30	30	30		
HUSA	25	25	25					
HVES	40	40	40	40				
IAV	20	20	20	20				
ICEAIR							20	20
IG	30	30	30	30	30	30	30	30
IHUG	40	40	40	40				
ISI	25	25						
ISJA	15	15	15	15				
JRDB	10	10	10	10	10	10		
KALD			40	40	40			
KAUP	40	40	40	40	40	40	40	40
KEA B	40	40						
KEFV		20	20					
KER	10	10	10	10				
KOGN	45	45	45	45	45	45	45	
LAIS	40	40	40	40	40	40	40	40
LIF	35	35	35	35	35			

LODN	30	30	30					
LTSJ	40	40	40	40	40	40		
MARL	20	20	20	20	20	20	20	20
MOSAIC						25	25	25
NYHR	45	45	45	45	45	45	45	45
OLIS	10	10	10	10				
OPKF	45	45	45	45	45			
OSSR	35	35	35	35	35	35	35	35
PLST	15	15	15	15				
SAEP	15	15	15	15	15			
SAMH	30	30	30	30	30	30		
SFS B	30	30	30	30	30	30	30	30
SIMI		50	50	50	50	50		
SJVA	40	40	40	40				
SKEL	10	10	10	10				
SKRR	45	45	45	45				
SKST	30	30	30					
SL	25	25						
SPRON								40
SRMJ	30	30	30	30				
STAK	20	20	20	20	20			
STRB	40	40	40	40	40	40	40	40
SVN	30	30	30	30	30			
TAEK	45	45	45	45				
TEYMI							50	50
TF				40		40		
THAT C	45	45	45					
THOR	30	30	30	30	30			
THRF	40	40	40					
TM	40	40	40	40	40	40	40	40
TNGI	30	30	30	30	30			
TRS	30	30	30	30				
UA	30	30	30					
VAKI	20	20	20	20				
VISHF			40	40	40			
VNST	30	30	30	30	30	30	30	30
VXSJ	40	40						

GICS classification:

10	energy
15	materials
20	Industrials
25	consumer discretionary
30	consumer staples
35	health care
40	financials
45	information technology
50	telecommunications services