

# Abnormal returns prior to tender offers in the Swedish Stock Market

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## Abstract

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For this paper 236 tender offers on Swedish listed companies have been studied. The purpose was primarily to investigate abnormal return for the target companies between 1997 and 2009. We believe that there are three main factors affecting the abnormal return: leakage of information that reach some institutions or individuals but not the whole market, pure market speculation and rumors that are available to the whole market. An analysis was made on variables that could explain leakage before a public announcement of a merger or an acquisition. With the results conclusions were made that significant abnormal returns can be observed for pre bid run-ups in the Swedish Stock Market. Since evidence could not be found for illegal insider trading and media speculation could not explain the abnormal returns, the conclusion of this study is that the abnormal returns are due to a combination of leakage affected by insider information and pure market speculations.

**Key Words:** Insider trading, Abnormal return, Pre bid run-up

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## 1. Introduction

“Change-of-control transactions provide an opportunity for corporate insiders with knowledge of an impending takeover to earn abnormal returns by buying stock in the target firm ahead of the first public announcement and selling after the bid has been announced”

**(King & Padalko 2005)**

Insider trading investigations and prosecutions have been most common in corporate mergers and acquisitions (Meulbroek 1992). Still, only a few cases of pre bid run-ups that are investigated by the Ekobrottsmyndigheten (EKB) in Sweden are taken to court. It is difficult to prove that a pre bid run up is due to insider leakage or market speculation. The most well-known insider trading scandals in Sweden are the Pinkerton insider affaire in 1999 and the Cevian-, Nordea- and the Morgan Stanley- insider scandals in 2007 (For further readings see Affärsvärlden (2002) and Affärsvärlden (2009)).

The purpose of this paper was to analyze abnormal returns prior to announcements of a merger or an acquisition for Swedish listed companies on OMX, Nordic Growth Market (henceforth abbreviated NGM) and Aktietorget. Apart from a general observation of pre bid run-ups on Swedish listed companies, an analysis has been made on the underlying factors that could explain the abnormal return before a tender offer. To obtain an up to date analysis on pre bid run-ups on the Swedish market, the chosen time period was from 1997 to 2009. Many previous studies have been made on insider trading, mostly on other markets than on the Swedish market. This study attempts to bring a deeper knowledge in this field, with an analysis of explanatory variables that to our knowledge has not previously been studied.

## 2. Background

Discussions are held worldwide on whether regulations on insider trading are effective and whether insider trading is improving or reducing efficiency, either at firm level or for the stock market as a whole (Beny 2005).

“At firm level, the debate concerns the agency implications of insider trading; that is, the effect of insider trading on agency costs within the firm. At the market level, the debate concerns the effect of insider trading on characteristics of the stock market, such as stock market liquidity and volatility and stock price efficiency or accuracy” **(Beny 2005)**

There are several arguments whether insider trading should be publicly regulated or left as a matter for private contracting. We have summoned the main arguments necessary for the subject of this paper. Arguments in favor of regulations are e.g. that regulations on insider trading are necessary from a fair perspective (Eklund 2003). All existing or potential shareholders in the market should have access to the same information (Eklund 2003). Bainbridge (2000) explains three efficiency-based arguments for regulating insider trading.

- (1) Insider trading harms investors and thus undermines investor confidence in the securities markets.
- (2) Insider trading harms the issuer of the affected securities
- (3) Insider trading amounts to theft of property belonging to the corporation and therefore should be prohibited even in the absence of harm to investors or the firm.

**(Bainbridge 2000)**

According to King & Padalko (2005), insider activity could undermine investor confidence, reduce liquidity in secondary markets, increase the rate of return demanded by less-informed investors or raise the cost of capital for firms, thereby reducing public welfare. Opponents of insider trading laws, e.g. Manne (1966), believe that insider trading is efficient and therefore is a mandatory prohibition inefficient. Others, e.g. Epstein (2004) believe that insider trading may be efficient or inefficient depending on the firm and, in either event, Epstein would prefer private contracting over regulation because he believe that private parties are more capable than the government of assessing the effect of insider trading on the corporation (Beny 2005).

## 2.1 The Swedish legal System

### 2.1.1 Definition of an Insider and Insider information

For this paper we have defined an insider according to the definition from the Swedish law: *Lag (2000:1087) om anmälningsskyldighet för vissa innehav av finansiella instrument*. The following persons are considered to have a position of possessing inside information in a public company:

- ❖ A member or alternate member of the company or its parent company's board
- ❖ Executive Director or Deputy Executive Director of the Company or its parent
- ❖ Auditor or deputy auditor of the company or its parent
- ❖ Member of general partnership, which is the parent company, excluded limited partners
- ❖ A person that is of senior management or has other qualified assignment and has access to unpublished information, which could affect the share price of the company
- ❖ Officers and agents that according to point 1-3 above or other leading positions of a subsidiary could obtain access to unpublished information that may affect the share price
- ❖ Large shareholders of the company, which means owning at least 10 percent of the capital or of the voting rights or owning shares together with an other individual or legal entity.
- ❖ A person that has a close relation to large shareholders of the company, at least 10 percent of the capital or of the voting rights

The definition of insider information is according to *Lag (2005:377) om straff för marknadsmissbruk vid handel med finansiella instrument*, information about non-public circumstances, which will significantly affect the price on the financial instrument. According to that same law, it is illegal for a person who has access to insider information to buy or sell the financial instrument.

### 2.1.2 Law and Regulations

Even though insider trading has existed in both the Swedish and in the international markets for the last century, it was not until the middle of the 20<sup>th</sup> century that law and regulations were effectively adapted to this phenomenon. In the US, regulations on insider trading began to develop in the 1930s. However, it was not until the 1960s that insider trading was forbidden (Eklund 2003). In Sweden, it was not until in 1985 that insider trading was criminalized (Eklund 2003). The legislation on insider trading was developed in 2000 where "*Insiderstrafflagen*" (2000:1086) and "*Lagen om anmälningsskyldighet för vissa innehav av finansiella instrument om anmälningsskyldighet*" (2000:1087) became

legal documents. In 2005 "*Lagen om straff för marknadsmissbruk vid handel med finansiella instrument*" (2005:377) also called *Marknadsmissbrukarlagen* (henceforth abbreviated MmL) was implemented. MmL then replaced *Insiderstrafflagen* (2000:1086).

The purpose of the regulation on the insider trading is to protect the market's and the public's confidence (Ds 2000:4). The legal development shows a clear trend towards an ever more restrictive view of insider trading (Eklund 2003). In spite of this, experience from countries that have prohibited insider trading shows that the law has had little preventive effect and the suspected insider trading has proved to be very difficult to prosecute (Eklund 2003).

Apart from the above mentioned laws, three players have a responsibility towards prohibiting and investigating insider trading. Firstly, financial institutions and firms such as exchanges and banks have the responsibility to report any suspicion of insider trading or other illegal activity that would affect the stock market. The report is made to *Finansinspektionen* (henceforth abbreviated FI), a Swedish equivalent to the S.E.C.. FI who is responsible for that MmL is followed correctly, is also in charge of the *Insynsregistret*, the Swedish equivalent to the *Official Summary of Securities Transactions and Holdings*, a directory where trades from the insiders of a firm are registered. According to FI (2010), a person with insider's status must report to (FI) within five banking days after a transaction. *Ekobrottsmyndigheten* (henceforth abbreviated EBM) is the third instance related to insider trading regulations. Since 2004 EBM is solely responsible for insider investigations.

However, it is also noteworthy that pre bid run ups do not have to be a result of only insider trading. It can also be sophisticated trading or rumor that causes abnormal returns. Kyle (1985) differentiates three types of traders: a single risk neutral insider, random noise traders and competitive risk neutral market makers. By using non-public information, the insider makes positive profits, while the uninformed noise trader trades randomly (Kyle 1985). The third type of trader sets prices (in the semi-strong sense) conditional on the information they have on the quantities traded by others (Kyle 1985). This would indicate that the third group, even though they are outsiders, would be able to predict pending takeovers with only public information. An alignment thereby exists with the semi-strong form of the Efficient Market Hypothesis, which will be further discussed in the next section of this paper.

### 3. Theoretical framework

#### 3.1 Previous research

In a study of the American equity market, Keown & Pinkerton (1981) found abnormal returns for announced and completed mergers during 1975-1978. The daily average abnormal return was significant from twelve trading days prior to the announcement of a tender offer (Keown & Pinkerton 1981). They concluded that mergers are rarely held in secret and trading on the nonpublic information exists (Keown & Pinkerton 1981). Jarrell & Poulsen (1989) found similar results and that there were no differences in abnormal return between hostile and friendly take-overs. King & Padalko (1981) studied pre bid run ups of Canadian takeovers between 1985 and 2002. A recently published thesis by Kleman & Whetje (2009) studied pre bid run-ups in the Swedish market during 1999-2008. Their results also supported the finding that significant abnormal returns exists (Kleman & Whetje 2009).

#### 3.2 The Efficient Market Hypothesis

As mentioned previously, discussions on insider trading have focused on whether insider trading affects the market efficiency. The theoretical background regarding market efficiency was initiated by Eugene Fama in 1970 with the Efficient Market Hypothesis (henceforth abbreviated EMH). According to Fama (1970), in an efficient market any information that could be used to predict a stock performance should already be reflected in the price. Therefore, if there are any profit-opportunities, investors will immediately take advantage of this until there are no profit-opportunities left and the price reaches equilibrium. Underlying assumptions to this theory are that all information is available to everyone and therefore there are no transaction costs (Fama 1970). No buyer or seller can affect prices alone and actors want to maximize their profits (Fama 1970). However, in reality different markets are more and less analyzed, which has an impact on the effectiveness of the market. Less analyzed markets tend to be less efficient (Bodie, Kan & Marcus 2008), whereby smaller firms tend to be less analyzed than bigger ones (Bodie, Kan & Marcus 2008).

Fama (1970) distinguishes the EMH between three forms.

- *The weak-form hypothesis* – Stock prices reflect on all information that can be derived by

examine trading data e.g. past prices.

- *The semi strong-form hypothesis* – Stock prices reflect on all publicly available information of a firm. E.g. past prices, firm's product line, quality of management, patents, forecasted earnings but not the information that is only available for insiders in the company.
- *The strong-form hypothesis*- Stock prices already reflect on all information relevant to the firm, even including the insider information of the company.

The strong form hypothesis would indicate that active portfolio management would be useless and not result in higher returns than passive portfolio management. If the strong form would explain the market most correctly, insider trading prior an announcement would not exist. In fact, there would not be a major shift in the stock price by the time of a tender offer announcement since the market would have adjusted for this new information along the time as the insiders decided on the deal. On the contrary, if there is an indication of pre bid run-ups that is followed by high abnormal returns on the announcement day, the strong form of the EMH would not hold and the semi-strong would be more adaptable.

### 3.3 M&A Premium

In the next part of this paper, underlying reasons for trading on inside information are discussed. A clarification will be made on why stock prices fluctuate during the time of a tender offer and why companies pay a premium to the target's shareholders. According to Andrade, Mitchell & Stafford (2002), between 1973 and 1998 the yearly average of the median premiums on M&A:s in the U.S. was at 39.33 percent. But why would a company be willing to pay almost a 40 percent premium? A premium does not have to indicate that the market does not understand the real value of the target company, which would contradict the EMH. To understand the premium that is offered, one needs to understand the different purposes for the underlying acquisitions. There are several underlying factors and explanations for an acquisition, and only a few will be mentioned and discussed in this paper. *The Efficiency theory* states that in general three different synergies exist: financial synergies, operational synergies and managerial synergies (Trautwein 1990). To be assured, as an acquirer, that you will be able to implement potential synergies plans, it is of importance to acquire the majority of the equity in order to gain control of the target. Another theory is the *Monopoly Efficiency*, where the acquisition results in a greater market share (Trautwein 1990). The third theory is the *Valuation theory*,

which argues that an M&A is planned and executed by managers who have better information on the target's value than the stock market (Trautwein 1990). Given that the current stock price is the discounted value of all future cash flows to shareholders, the positive effects of an M&A would create higher future cash flows to the acquirers and therefore explain a higher price than the current market price.

A challenge for the acquirer to overcome is the free-riding problem of stockholders (Grossman & Hart 1980). If the target's bid price is below a fictional share price, which incorporates the post acquisition gains for the company, every shareholder has the opportunity not to tender the offer and free-ride on the gains of the acquisition. Depending on enough of the other shareholders choose to tender. If the *Valuation theory* does not hold, the bidder has to offer a price at least equal to the market's expected future value of the company in order to overcome the free-riding problem. Therefore the offer price should theoretically reflect all the synergy gains to be accepted by the shareholders.

A recent and well debated example from the M&A industry is the Kraft and Cadbury-deal where Kraft's final offer was 13 times Cadbury's past EBITDA and roughly 49 percent more than the average stock price during the month prior to the offer. According to The Financial Times (2010), this premium was not high comparing to prior transactions in the food industry, which is on average 12 times the EBITDA. Some of the reasons that were previously explained would motivate the acquirer to pay such a high price for the target. Kraft's CEO, Irene Rosenfeld, stated that a \$675 million of annual cost synergies could be achieved by the end of the third year, at the same time as Kraft could take advantages of the geographical and product markets where Cadbury is present (Financial Times 2010).

### **3.4 Factors contribution to increased leakage and abnormal return**

The existence of pre bid run-ups does not necessarily have to indicate illegal activity. King & Padalko (2005) explains that studies of corporate takeovers have not been able to discern whether pre-bid run-ups reflect illegal insider trading (including leakage), the market's anticipation of an impending bid in response to legitimate sources such as media speculation, pure speculation (i.e. an "acquisition premium" is incorporated in the share price if the market thinks the company is a good target for an acquisition) or some combination of all three.



It is hard to obtain an exact understanding of the fraction of the pre bid run-ups that is anticipated by insider trading or by the market. For this paper different potential factors were studied that could affect the leakage and therefore the abnormal return for a firm's stock price before the announcement of a tender offer. In the following section factors believed that could affect the leakage the most will be discussed. These variables will also be explained more technically in the Methodology section.

### **3.4.1 Swedish or Foreign Acquirer**

The domicile of the acquirer can have different effects on the abnormal return. One could argue that the leakage of non-public information and therefore abnormal return should be greater if the bidder is in the same market as the target. This would result in less leakage if the acquirer was foreign.

### **3.4.2 Financial Advisors**

Kale, Kini & Ryan (2003) discussed in their paper the advisors role in corporate takeovers. They concluded that the better reputation the analysts have, the higher the value for the takeover will be and the higher the probability is that the takeover becomes completed. Bodnaruk, Massa and Simonov (2007) showed in their study that insider trading is present between the different divisions in global investment banks. This implied that the same bank that was advisory for an M&A deal also took a position in the target before the announcement (Bodnaruk, Massa & Simonov (2007). The acquired stakes by the banks were shown as being positively related to the probability of observing the bid and to the target premium (Bodnaruk, Massa & Simonov (2007). An aspect that has not been studied is the potential relationship between the leakage and the advisory firm. Therefore this was analyzed as well as the number of advisory firms that have been involved in each deal.

### **3.4.3 Deal Value**

Hackbarth & Morellec (2008) found that abnormal returns are lower for larger deals than for smaller. Finnerty (1976) found that insiders purchase shares in smaller sized companies with higher profitability and greater dividend and that insider sells shares of the companies with the opposite characteristics. Therefore it was of interest to observe if the deal values for the sample had a correlation with the pre bid run-ups.

### **3.5 Factors contribution to overall higher bid-premium**

A number of factors in a take-over lead to higher offered bid-premium. Therefore a number of control variables are needed to normalize the above stated factors. If these control variables are not included, the correlation between factors impacting abnormal returns and factors impacting the bid-premium could result in false interpretations about the cumulative abnormal return.

#### **3.5.1 Cash or Stock**

As many previous papers Faccio & Masulis (2005) concluded that the deal structure can be a depending factor on corporate governance, corporate control and other financial risks. Masulis, Wang & Xie (2007) found that the deal structure has an effect on the bidder's return, where cash has a positive impact and stock had a negative one on the return. This should intuitively also have an effect on the pre bid run-up.

In a stock-swap offer, the value of the deal during the accept period is not known at the time of the announcement since there is uncertainty about the acquiring firms' future stock price. Hence, deals offered with cash should intuitively converge to the offered cash price more quickly than with stock-swap and hybrid forms.

#### **3.5.2 Rumor and Media Speculation**

Pre bid run up do not always have to be a result of insider trading. Sometimes the media speculates of a potential takeover before the actual announcement date, which can lead to abnormal trade on the speculated firm's stock. However, insiders might be using the media as an alibi for their insider trading, making it look like the pre bid run up is due to public information. The prosecutor accused the Cevian-insider of acting in this way (Affärsvärlden 2010). The tender offers that the prosecutor is referring to are Biacore, Gambro and Skandia Försäkring AB. Due to these accusations an individual evaluation has been made on the abnormal returns for these stocks, shown in the Empirical Results.

### 3.5.3 Volume

A common attribute for the insider trader is that they prefer to trade when the stock is liquid (Admati & Pfleiderer 1988). The reason for this is to minimize their impact on the trading volume. The liquidity of a stock can have numerous other effects on the pre bid run-ups. E.g. financial institutions tends to follow stocks that are liquid and don't put as much emphasis on stocks of smaller firms with illiquid stocks. This would have an impact on the speculation of a potential M&A before the public announcement.

## 4. Data

The data sample contained potential acquisitions, tender offers, where the target was a publicly traded company listed on any of the Sweden's three stock exchanges: Nasdaq OMX, NGM or Aktietorget. The time frame was between 1997 and 2009. The initially data sample was on 448 tender offers. An exclusion was made on divestments and minority stake offers since those deals do not usually yield the same magnitude of shift in stock price as bids for control do. More precisely, the data sample only included tender offers on acquisitions, IBOs, mergers where the offer resulted in a percentage of the shares that would guarantee the bidder control of the target (over 50 percent) and the percentage of shares for the deal equaled at least 15 percent. However, offers from acquires that all ready had a majority stake in the target and want to increase their ownership, e.g. from 60 percent to 90 percent was excluded. Finally, the offers that were a follow-up bid or a counter-bid were excluded if the new bid was made less than a year from the original offer. This was due to the fact that the target already was heavy scrutinized by the market. This resulted in 256 tender offers. A continued elimination of the tender offers was made by also excluding offers where the target had done an IPO fewer than 100 trading days prior the offer due to estimation problems and very high attention from the market. Also where the acquirer has bought some part of the target's equity bit by bit, so called a toehold. Lastly, the data sample did not contain bids where previous bids had been offered by the same acquirer within a year. The total data sample resulted in 236 deals.

The data was collected from different databases, depending on the required data. The tender offers were collected from two different databases; OMX for all deals where the company was listed on OMX and Bloomberg for all deals where the company was listed on NGM or Aktietorget. From

these databases the deal value and the payment structure was obtained as well as the information on whether or not it was successful. The stock prices, the trade volume and the market value of the bidder were obtained through Datastream. The information regarding the deal, such as the financial advisor, the rumor date and percentage sought, was collected through the database Zephyr.

Trading day zero was defined as the first trading day where the market can react on the announcement of a deal. This means that in those cases where an announcement reaches the market post market close or when the stock exchange was closed, the trading day after as the day zero was used.

#### **4.1 An overview of the data**

In the Appendix (D1), the reader finds an overview of all the 236 tender offers, where the target, the bidder, the announcement date and the CAR (-10;-1) CAR (-5;-1) are presented.

In D2 descriptive statistics is presented as well as data for most of the studied explanatory variables on leakage and the control variables. This table will hopefully give a clearer overview of the data sample. In the results section (A5) the reader firstly obtains an overview over the bidder's financial advisors. The firms that have been involved in most deals are Enskilda (15 percent), Handelsbanken (11 percent), Carnegie (6 percent), Nordea (5 percent) and ABN Amro (4 percent). The rest of the advisors were individually involved in a too small number of deals and were therefore categorized into groups. The average number of financial advisor per deal was 0.85. Even though several of the deals were advised by numerous advisors, 31 percent of the deals did not report a use of financial advisory services. This could be due to the fact that they only had juridical or accounting advisories, that they did not to report this information correctly or that they just did not use any advisories for the deal.

Among the 236 deals, 67.2 percent of the deals were paid with cash, the rest with stock or a hybrid form of payment. 82.4 percent of the bids were successful and 28.2 percent of the average trading value per day during the estimation window had a value of less than 10 million SEK.

## 5. Methodology

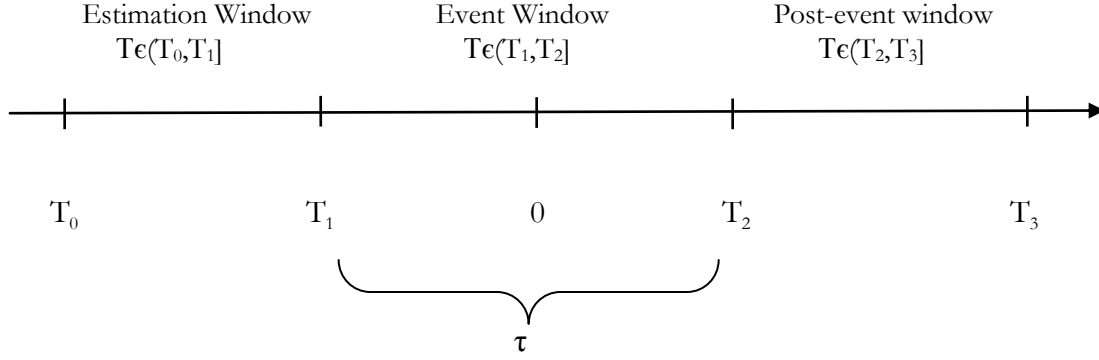
In order to examine if insider trading has occurred for listed Swedish companies that has been exposed by a tender offer, an event study was performed in accordance to Keown & Pinkerton (1983), King & Padalko (1981), Meulbroek (1981) and other prior research in this field. An event study is a statistical method to assess the impact of an event on the value of a firm. The statistical software package STATA was used for all the analysis

The method included two steps. The first step, the event study, was to measure the amount of abnormal return prior to the announcement day which could indicate leakage. This was followed by a more profound Ordinary Least Squared (OLS) analysis of the cumulative abnormal return for every firm, which included a search for specific parameters that could explain the abnormal return.

### 5.1 First-step

The event study was divided into two time periods, the estimation window and the event window. One could also add a post-event window as shown in the figure below, however this data was not seen as needed for the regression and analysis for this paper. The estimation window was tested for the stock returns ranging from 120 to 31 trading days prior to the announcement (-120, -31). The intention with this time span was to obtain a good estimate of the normal return of the target's stock. As well as limiting the amount of noise in the estimate due to leakage. For the event window, stock returns ranging from -30 trading days prior the announcement up until one day before the event (-30,-1) were included.

Even though the noise might have been limited by not taking (-30,-1) trading days into account when estimating the normal return, some noise would be included since the returns for a specific firm are related to news like dividends announcement, financial reports, capital structure changes that could have occurred during the estimation periods. The main goal was however to acquire a normal return which would reflect on the current state of the firm.



When the abnormal return was estimated, returns ranging from -120 trading days prior the announcement up until 10 trading days after the announcement,  $[-120;10]$ , were used.

The regression techniques that have been used for previous event studies were used to calculate the different returns for this study. The following function was used to calculate the return for firm  $i$  at date  $t$  as well as for a market proxy using adjusted prices:

$$R_{it} = \ln \left( \frac{P_{it}}{P_{it-1}} \right) \quad (1)$$

When estimating the normal return the predicted return from the Capital Asset Pricing Model (henceforth abbreviated CAPM) was used. CAPM was independently introduced by Jack Treynor (1961), William Sharpe (1964), John Lintner (1965) and Jan Mossin (1966).

$$R_{it} = \alpha_{it} + \beta_{it} * R_{Mkt_{it}} \quad (2)$$

The chosen proxy for the market portfolio was the OMX-Stockholm Benchmark index (see graph C1). This index is a value-weighted index containing the 80-100 largest, by market value, firms listed on the OMX. The index performance is specifically created to serve as a good benchmark for investors (OMX Group 2007). As pointed out by Richard Roll and Stephen Ross (1980), CAPM regressions are condemned to get some bias in their estimates partly since one cannot find the entire market portfolio and therefore a proxy for the market portfolio is used in practice. This will of course also affect the regressions in this study where CAPM was used since the real Swedish Market portfolio cannot be found.

After calculating the returns, the abnormal return was defined as the difference between the estimated normal return and the realized return. Since the excess returns were not used in (2), the alpha from the regression was also used when estimating the abnormal return:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i * R_{Mkt_{it}}) \quad (3)$$

To make sure that the abnormal returns were robust and to take the critique of CAPM into consideration, AR was also defined as the difference between the real return and the return of the market:

$$AR_{it} = R_{it} - R_{Mkt_{it}} \quad (4)$$

With the abnormal return estimates, a new variable was defined to determine if abnormal price movements in the stock price existed before the date of announcement. Given the definition above, we believe that abnormal return has three (aside from measurements errors) main explanations: leakage of information that reach some institutions or individuals but not the whole market, pure market speculation and rumors that is available to the whole market. Since it's hard to separate the two first mentioned main explanations these have been treated as one compounded explanation. Abnormal return due to rumors can however more easily be taken out of the sample, as previously explained.

The next step was to calculate a variable measuring the average abnormal return for the sample during each specific trading day. In the appendix the measure is presented in three definitions: The standard one derived from (3), without the CAPM-estimates (4) and a variation of (3) where observations were excluded if they neither had a price jump at the announcement or positive cumulative abnormal return from trading day -10 until 0. The last AAR can be said to have been the one of greatest value for us. If the share price already is at a level near the offer, leakage would not appear as abnormal return. The latter AAR would therefore give a more accurate view of the existence of leakage and insider trading.

$$AAR_t = \frac{\sum_{i=1}^{n=236} AR_{it}}{n} \quad (5)$$

Subsequently, the student t-test was used to determine if the AAR for the given trading day, in relation to the announcement, was statistically larger than zero. When testing this, significance levels for a one-sided alternative was used.

$$T_t = \frac{AAR_t}{\frac{Stdev(AAR)_t}{\sqrt{n}}} \quad (6)$$

After t-testing all of the AAR:s, the aim was to also test if the cumulative effect was significant. Cumulative abnormal return and cumulative average abnormal return were calculated by the following formulas:

$$CAR_{i=} \sum_{l=-10}^{t=-1} AR_{it} \quad (7)$$

$$CAAR_t = \frac{\sum_{l=1}^{n=236} AR_{it}}{n} \quad (8)$$

## 5.2 Second step

For the next regression, analyzes were made on certain deal characteristics and their impacts on the cumulative abnormal return. CAR during the last 10 days was used as the base variable for the dependent variables. The large number of different forms of CAR led to noisy dependent variables. The time-period was chosen given the point in time that the t-tests suggested that the cumulative abnormal return became statistically significant and should therefore be least noisy. To robust test the definition, a longer and a shorter time window was also used.

Intuitively, the abnormal return should be positive correlated to the bid premium. Therefore, to shield against this matter, the following equation was used with and without the minimum and maximum constraint:

$$\max (0 ; \min \left( \frac{CAR_i(t-10; -1)}{CAR_i(t-10; 0)} ; 1 \right)) \quad (9)$$



Given earlier work in both fields of pre bid run-ups before tender offer announcements and in the more general field of M&A, the following set of independent variables were used to establish if there are certain variables that impact abnormal return. Some of these variables were described more profound earlier in this paper. In this section a more technical explanation will be given to each variable.

### 5.2.1 Leakage proxy

The intention of this variable was to measure the amount of abnormal trading during the last week. This was defined as the average trading volume during the last two trading weeks (-10;-1) (because the CAAR starts to be significant 10 days before the announcement day) divided by the average trading volume from the start of the sample (-120) until the trading day (-11):

$$\frac{\sum_{i=-10}^{t=-1} V/n}{\sum_{i=-120}^{t=-11} V/n} \quad (10)$$

If the coefficient for this variable in the OLS regressions is positive then it implies that on average, the higher the trading volume is during the last two weeks, the higher is the CAR. This relationship could suggest that the leakage is of a high enough magnitude to drive up the trading volume and therefore it is analyzed as a proxy for leakage.

A version of this variable was also tested when one was subtracted from the formula. This was due to worries that the variable would take up parts of the intercept since its average was close to one. The different definition did not impact the results.

### 5.2.2 Published rumor dummy

To divest any bias due to media speculation and other rumors of acquisitions, Zephyr's database was used to observe the difference between the rumor and the announcement date for the tender offers. Two dummy variables were created; the first one took a value of one if the rumor occurred during the last two weeks prior to the offer and zero for all other rumor periods, including no difference between the rumor date and the announcement date. The second dummy took a value of one if there was a difference between the rumor date and the announcement and zero if there had not

existed a rumor period and if the first dummy had a value of one. The first should control for false CAR due to public information during the event window, the second should measure the effect of a firm being on some kind of “watch list” for investors.

### **5.2.3 Financial advisors**

As explained earlier in this paper, financial advisors to each tender offer have been observed, since we wanted to measure the effect of certain institutions on abnormal return. The intention was to take financial advisories, lawyers and accountants in consideration. However, the information on which lawyers or accountants that was behind each deal was scarce and these advisory services were in most cases made by many different smaller firms and therefore this information became insignificant.

After have gathered data on financial advisors a set of dummy variables were created for each financial advisor for the bidder. The exclusion of the target’s advisory was due to the fact it had fewer observations and that in some cases the target and its advisory are not aware of the proposed acquisition before the public announcement. A bank or an M&A boutique that had been advisories to more than 10 deals obtained their own dummy variables. The rest were categorized into three groups; other Scandinavian M&A advisories, smaller M&A advisories and other international banks. A group was also created for those who had not reported usage of financial advisory services. The type of deals that did not report a financial advisor was of different characteristics and therefore should not create any bias in the regressions.

### **5.2.4 Number of Advisors**

The intuition was that the number of persons involved in a deal should have a positive correlation with the probability of leakage. Therefore the effect of number of financial advisors working on the buy side of the deal on the abnormal return was measured.

### **5.2.5 Deal Value**

To measure the effect of the deal size on the abnormal returns, each value of the potential acquisition was studied by taking the share price offer times the number of shares that the buyer wanted to acquire. The logarithm of Deal Value was used in the regression since we believe that the

effect should be non-linear. E.g. an increase in Deal Value from 15 million SEK to 20 million SEK probably does not have the same effect as an increase from 2000 million SEK to 2005 million SEK.

## **5.2.6 International or domestic deal**

Since all the targets in the data sample were Swedish public firms, the intention was to observe if the nationality of the acquirer would influence the abnormal return. It can be argued that the Scandinavian market is relatively closely integrated with most of the financial firms having their main operations in these countries. Therefore “international” was defined as outside Scandinavia. A dummy variable was created where the variable took the value of one if the acquirer was a firm outside of Scandinavia and zero otherwise.

## **5.1.7 Payment type**

To control for the fact that cash offers have greater post announcement return than stock swaps and hybrids, a dummy variable was created. This dummy took a value of one if the payment type of the tender offer was cash and zero if the deal structure was in another form; stocks, swaps or hybrids.

## **5.1.8 Volume**

When observing all targets, it was noticed that some firms’ stocks were very illiquid and not trading as often as others were. Therefore another dummy was created, which controlled for the illiquidity of the targets’ stocks. The dummy took the value of one if the average trading value per day during the estimation window had a value of less than 10 millions. The level was selected after observing very small price movements for stocks that had a value of trading volume lower than 10 millions.

Another variable for volume was also used to control for differences in liquidity for stocks above the dummy level. The logarithm of the trading volume was used since it can be argued that the relationship between trading value and CAR most likely is non-linear. I.e. an increase from 4 million SEK to 12 million SEK does not have the same impact as a trading volume increase from 1000 million SEK to 1008 million SEK. This variable could also work as a proxy for less analyzed stocks since financial institutions tends to follow stocks that are liquid and don’t put as much emphasis on stocks of smaller firms with less liquid stocks.

### **5.1.9 Time-periods**

Abnormal returns can be believed to be different during certain time periods. We believed that the trends of M&A:s is most likely due to factors that would have an effect on the industry over more than a year and therefore wanted to control for this. Since the intention with this paper was not to look at a yearly effect on insider trading such as an implementation of a new law, time periods was believed as a better control variable for abnormal returns. The time periods were 1997-2000, 2001-2004 & 2005-2009.

### **5.2 Second Regression**

With the above defined regressors a number of regressions were performed. Several different versions of the CAR as the regressands were used. The main independent variable was CAR (-10,-1). A CAR with the same time-period was used excluding the observations without high AR on the announcement day and with a negative CAR (-10, 0). However, in general it is hard to choose a correct CAR-variable since the form of the cumulative abnormal return greatly differs amongst the different observations.

Thereafter, the CAR with a range of different regressors was tested. First with each variable group by themselves, e.g. all the advisors dummies as regressors or the Leak variable as the lone regressor. After this, more variables were added in different steps to determine the true effect they had on the regressand. With this methodology a better understanding hoped to be obtained for which of the variables that was correlated with each other. The Leak variable was dropped in some of the regressions since this variable had a strong effect.

## **6. Empirical Results**

In our first part regression significant abnormal returns were found for all three definitions of AAR. In graphs C2 & C3 in the results section, one can observe the CAAR both including and excluding the observations without a high abnormal return at the announcement day or when they had a negative CAR (-10,0). In both cases the CAAR starts to become positive from trading day -25 and the CAAR at trading day -1 is equal to 6.3 percent and 6.9 percent respectively. Graphs in C4 & C5 shows normalized versions of C2 & C3 where the CAAR at the event day is set to one and the rest of the CAAR's at the different days are relative to that day. There it can be observed that

approximately 27 percent and 28.6 percent respectively of the total CAAR was reached one day proceeding to the event.

During the last week of trading before the event, four out of five trading days experienced significant AAR (B2). The results are also robust to the definition of AR since the same four trading days were significant (although not at the same level) in the model without beta estimation (B2).

In the model where observations with negative run-up were excluded the same results as above were found but more statistically significant. The AAR during the last trading week ranges from 0.45 percent up to 1.20 percent in the three definitions. These returns are large enough to also be financially significant.

The CAAR displayed in the graphs starts to be significant at the 5 percent level 10 trading days before the event (B3) where the last three days are significant at the 0.1 percentage level. The CAAR without the negative observations is significant at the 5 percent level 13 trading days prior to the event and the full last trading week the significance levels are below 0.1 percent (B3). The CAAR are well above 2 percent at the start of the next to last trading week and hence the results are also financially significant.

B4 displays the impact of our explanatory variables on CAR (-10,-1) (except the Advisor dummies). The fact that the Leakage variable was significant means that the CAR was on average higher the more the average trading volume exceeded the standard trading volume. This variable was also significant when controlling for the more illiquid companies (Volume < 10 million), which more easily could obtain high values of the Leakage Variable. The variable was significant in all regressions whichever variables that were used simultaneously. No other variable other than the Leakage Variable and the intercept were significant at the one percent level. Overall the regressions had a low  $R^2$ , this could be due to the fact that the factors that explain the CAR are hard to quantify or because of the earlier mentioned different forms of CAR for each observation. The fact that the leakage variable was the only significant variable could be explained by that this variable does not depend as much on the different forms of CAR since it is defined with the same time window as the dependent variable.

In B4 one can see that the other variables display less consistency in their coefficients. The time-periods were the only other set of variables that were significant when working as the only

regressors. The sub-period 1997-2000 had a high negative value with 2005-2009 as the time base. Likewise when 1997-2000 worked as the base, 2005-2009 had a high positive value, although not significant. The sign of the 2001-2004 time period dummy depended on which of the other two time-periods that was used as the base period. The size of the coefficients and whether they were positive or negative were robust to adding other explanatory variables, controlling for certain types of deals being more common during different years. This suggests that the trend is going towards a market with more abnormal returns and reactions prior to announcements.

Our other explanatory variables were insignificant at acceptable levels although they had the anticipated signs. The signs suggested that the CAR decreases with large deals and with international acquirers. On the other hand the CAR increased with the number of firms working as financial advisors on the deal and with the average volume of the target. The latter variable could, as explained earlier, also be viewed as a proxy for number of analysts covering the company.

None of the control variables Cash and Success, which were used to try to control for a high bid premiums were significant. Cash had the expected sign but success did not. Success was used as a proxy for the investors' estimation of a successful bid when they obtained information about the deal. The fact that this had the wrong sign could be due to the variable working bad as proxy, market did not successfully incorporate the probability of success in their valuations or because of the low variance of the variable.

In the regressions when advisors were included, the results did not differ vastly (B5). In one of the regressions the dummy for smaller "unknown" financial advisors were negative and significant. This was without controlling for the value of the deal. When controlling for the Deal Value the "Other Advisors" was still negative but it was insignificant. The signs of the other advisor dummies were also hard to interpret since they differed depending on which other characteristics that was included.

When using CAR (-10,-1) excluding the observations without a negative run-up as the dependent variable (see B6 & B7) the results were mainly equal to our main CAR. The same can be said for B8 where the percentage of the total CAR (-10, 0) was used. The only striking difference was that in these last regressions, the dummy for rumor during the event period was positive instead of negative. However they were more insignificant than in the other regressions.

A couple of other regressions with different dependent variables can be viewed in the appendix (under other regression results).

King and Padalko (2005) investigated pre bid run-ups on the Canadian market with a data sample of 420 offers. This was a notably bigger data sample than ours and they used a different event window and a slightly different methodology. Results from the Canadian study showed: The CAAR (-20,-1) were 7.0 percent and the total CAAR including the announcement was 18.9 percent. Ascioglu, McNish & Wood (2002) studied the U.S market but observing tender offers in 1995. Their CAAR (-20,-1) was 6.4 percent and the CAAR including the announcement day was 12.7 percent. The pre event CAAR was similar to our findings but they had a lower total CAAR (see B1 & B3).

Our data sample included the targets that have been discussed regarding the Cevian-insider scandal; Gambro, Biacore & Skandia Försäkring AB. However, the Pinkerton scandal where Securitas was the bidder was on a U.S. target firm and was therefore excluded from our sample. The CAR (-10,-1) for Gambro, Biacore and Skandia Försäkring AB was 9.7 percent, 6.4 percent and -1.5 percent respectively. That can be compared with our average CAR (-10,-1) for the whole sample, 4.5 percent. Looking at the trading volume during the time before the public announcement for these firms we could observe a higher volatility than usual. The graphs C5, C6 & C7 shows the price development for these firms. They also underline the problem with different forms of AR since the price movements occur during different time-periods in the estimation- and/or event window.

## **7. Conclusions**

Our results clearly show that there is abnormal return before the tender offers become public. Due to a lot of different forms of CAR and the relative small number of observations it is hard to draw any conclusions on which variables that truly effect the abnormal return before an announcement of a tender offer, except our Leakage Variable. The positive CAR coincides with a lot of trading on the stocks in question, which could be explained by leakage.

Since our empirical results showed that the rumor impact is not a significant explanatory variable on abnormal returns, the pre bid run-ups should be affected by non-public information. Therefore, one could conclude that our results are in line with the semi-strong form of the Efficient Market Hypothesis. However, it is harder to conclude in which way our results would support this

conclusion. Is the pre bid run ups due to information that only the insiders possess and take advantage of? Or are market speculators as outsiders able to predict pending takeovers with only public information? These two types of trading have been impossible for us to separate. And we therefore have to conclude that abnormal returns are due to a combination of illegal insider trading and pure market speculations.

However it is important to point out that leakage does not always have to show up as abnormal return. There could be cases in our sample when there has been a leak and some trade on the non-public information. This only creates abnormal return if it impacts the price setting mechanisms enough. Likewise there could have been cases in our study where abnormal return exists due to the random walk properties of stock returns.

## **8. Future research**

Analyzing pre bid run-ups of only Swedish takeovers results in a small sample size especially when the data sample is refined by different criterion. Therefore it might be of interest to broaden the sample by observing tender offers on the whole Scandinavian market. Making the time period larger or having a less narrow selection criterion could also be done, but that approach creates other problems such as including irrelevant tender offers. Even though these markets intuitively have small cultural and juridical difference, comparisons on the leakage and its explanatory variables could be made. One could also study the change in the juridical system in regards to insider trading and look at the effect on pre bid run-ups. Our finding of a significant relationship between abnormal return and abnormal trading volume could also be compared and analyzed with the framework of Behavioral Finance and particularly the buy signs of technical analysis.



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# Results

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## A – Descriptive statistics

### A1 – Year Distribution

<b>Year</b>	
1997	4.6%
1998	5.9%
1999	11.8%
2000	13.4%
2001	9.7%
2002	4.6%
2003	8.8%
2004	5.5%
2005	6.3%
2006	9.7%
2007	8.4%
2008	8.8%
2009	2.5%
All	100%

### A2 - Time Period distribution

<b>Time period</b>	
1997-2000	35.7%
2001-2004	28.6%
2005-2009	35.7%

### A3 – Tables over Control variables

<b>Control variable</b>	<b>Average</b>
Cash offer	67.2%
Bid Successfull	82.4%
Volume < 10 mil.	28.2%

#### A4 – Explanatory variables

Variable	Average	Stddev.	Min	Max
Leak Variable	1.46	1.39	0.00	12.38
Deal value	5401.12	19855.19	6.79	244891.00
Rumor during event window	1.7%			
Rumor any time else	8.4%			
Number of financial advisors	0.85	0.75	0.00	4.00
Volume	203.3248	797.8335	0.539091	10949.64
Buyer outside of Scandinavia	27%			

#### A5 - An overview of the allocation of the financial advisories for the acquiring companies

Advisor	Percentage
Other smaller advisors	10%
Foreign Investment Banks	18%
Other Scandinavian Advisors	14%
Handelsbanken	11%
Nordea	5%
Carnegie	6%
Enskilda	15%
ABN Amro	4%
No advisor reported	17%
All	100%

## B Results from First Part Regression

**B1- An overview of our results of the Cumulative Abnormal Return, CAR.**

Variable	N	Average	Stdev	Min	Max
Car -10:-1	236	4.56%	0.14	-0.60	0.85
Car-5:-1	236	3.60%	0.11	-0.56	0.55
Car %-normalized	236	35.89%	0.37	0.00	1.00
Car %	236	135%	10.02	-16.83	121.75
Car-1:1	236	18.04%	0.18	-0.18	1.18
Car -10:-1 without negative	236	3.55%	0.12	-0.56	0.49
Car -15:-1	236	5.25%	0.18	-0.62	1.33

## B2 - Table over the average abnormal return the last 30 trading days.

This table shows results with three different definitions of AR. The first one is with AR= Realized Return – CAPM predicted return. The second one is with AR= Realized Return – Market Return. The third one is a version of the first one where all observations that did not experience a price shift at the event day (or had not a positive CAR (-10, 0)) are excluded. The third column in each table indicates how many of the observations that had positive AR that specific trading day.

T	AAR	t-stat	Positive
-30	0.01%	0.05	45.80%
-29	0.48%**	1.74	51.68%
-28	-0.51%	-2.06	44.96%
-27	0.25%	1.06	50.84%
-26	0.02%	0.08	50.00%
-25	-0.24%	-0.72	52.52%
-24	0.00%	0.01	48.32%
-23	0.42%**	1.93	57.56%
-22	0.11%	0.42	49.58%
-21	0.21%	1.00	55.88%
-20	-0.02%	-0.07	48.32%
-19	0.13%	0.49	52.94%
-18	-0.07%	-0.29	50.84%
-17	0.11%	0.54	47.90%
-16	0.19%	0.78	55.04%
-15	-0.20%	-0.67	47.48%
-14	0.17%	0.91	50.00%
-13	0.22%	0.81	46.64%
-12	0.37%	1.23	51.26%
-11	0.13%	0.39	49.58%
-10	0.56%**	1.78	54.20%
-9	-0.14%	-0.42	50.84%
-8	0.18%	0.67	50.00%
-7	0.09%	0.36	48.32%
-6	0.29%	1.07	47.90%
-5	0.98%***	2.79	51.26%
-4	0.46%**	1.80	55.88%
-3	0.79%**	1.99	58.40%
-2	0.45%	1.26	57.56%
-1	0.91%****	3.02	59.66%
0	17.15%****	14.51	89.50%

AAR	t-stat	Positive
0.05%	0.20	42.86%
0.31%	1.08	46.64%
-0.66%	-2.53	39.08%
0.06%	0.25	44.12%
-0.19%	-0.77	45.80%
-0.40%	-1.18	47.90%
-0.14%	-0.35	47.06%
0.35%*	1.60	54.62%
0.16%	0.57	47.06%
0.23%	1.07	50.84%
-0.12%	-0.47	43.28%
0.15%	0.54	51.26%
-0.13%	-0.53	43.70%
0.00%	0.00	42.02%
0.21%	0.84	51.68%
-0.20%	-0.66	47.48%
0.23%	1.27	47.90%
0.18%	0.67	43.70%
0.15%	0.49	43.70%
0.14%	0.44	46.22%
0.33%	1.07	48.74%
-0.24%	-0.68	45.38%
0.08%	0.29	50.42%
0.03%	0.12	47.48%
0.23%	0.81	49.16%
0.86%***	2.45	48.74%
0.38%*	1.44	50.42%
0.63%**	1.66	52.52%
0.44%	1.19	52.52%
0.82%***	2.67	52.94%
17.09%****	14.49	89.08%

AAR	t-stat	Positive
0.02%	0.09	41.60%
0.52%**	1.79	47.90%
-0.53%	-1.99	41.18%
0.33%*	1.31	47.90%
0.02%	0.07	46.22%
-0.25%	-0.71	50.00%
-0.07%	-0.14	43.70%
0.36%*	1.53	52.10%
0.15%	0.53	46.64%
0.23%	1.05	52.10%
0.07%	0.27	45.80%
0.15%	0.52	48.74%
0.00%	0.02	47.06%
0.11%	0.51	43.28%
0.24%	0.91	51.26%
-0.02%	-0.10	42.44%
0.09%	0.47	45.80%
0.31%	1.10	44.12%
0.44%	1.34	47.90%
-0.04%	-0.16	46.22%
0.62%**	1.84	50.84%
0.00%	-0.01	47.48%
0.13%	0.51	47.90%
0.08%	0.34	45.38%
0.33%	1.19	44.12%
1.18%****	3.20	47.48%
0.63%***	2.32	53.36%
0.84%**	1.95	54.62%
0.48%	1.24	52.94%
1.08%****	3.36	55.88%
18.67%****	15.20	84.87%

Level of significance: \*= 10% ; \*\*= 5% ; \*\*\*=1% ; \*\*\*\*=0.1%

### B3 - Table over the cumulative average abnormal return the 30 last trading days

This table displays results from two different definitions of AR. The first one is with AR= Realized Return – CAPM predicted return. The second one (CAAR v. 2) is a version of the first one where all observations that did not experience a price shift at the event day (or had not a positive CAR (-10, 0)) are excluded.

T	CAAR	t-stat	CAAR v. 2	t-stat
-30	0.00%	-0.15	0.00%	0.29
-29	0.48%**	1.74	0.48%	1.79
-28	-0.03%	-0.08	0.00%	-0.01
-27	0.22%	0.50	0.30%	0.70
-26	0.24%	0.55	0.31%	0.75
-25	0.00%	-0.01	0.08%	0.16
-24	0.00%	0.00	0.02%	0.04
-23	0.42%	0.60	0.35%	0.51
-22	0.53%	0.71	0.49%	0.67
-21	0.74%	0.94	0.71%	0.91
-20	0.72%	0.93	0.77%	1.02
-19	0.86%	1.15	0.91%*	1.27
-18	0.79%	1.02	0.91%	1.23
-17	0.89%	1.09	1.01%*	1.29
-16	1.09%	1.23	1.24%*	1.47
-15	0.89%	0.93	1.22%*	1.38
-14	1.06%	1.07	1.30%*	1.41
-13	1.28%*	1.28	1.59%**	1.71
-12	1.65%*	1.53	1.99%**	1.97
-11	1.78%*	1.62	1.95%**	1.87
-10	2.33%**	1.99	2.52%**	2.25
-9	2.19%**	1.79	2.52%**	2.17
-8	2.37%**	1.94	2.64%**	2.25
-7	2.46%**	1.96	2.72%**	2.27
-6	2.74%***	2.14	3.03%***	2.45
-5	3.73%***	2.88	4.11%****	3.28
-4	4.19%***	3.16	4.69%****	3.69
-3	4.98%****	3.29	5.45%****	3.73
-2	5.43%****	3.48	5.90%****	3.90
-1	6.34%****	3.95	6.89%****	4.45
0	23.50%****	11.41	24.07%****	12.03

**Level of significance:** \*= 10% ; \*\*= 5% ; \*\*\*=1% ; \*\*\*\*=0.1%



## B4 – Regressions with CAR(-10,-1) as the regressand

The standard error is shown below the coefficients in parentheses.

Car -10,-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Constant	0.0025 (0.015)	0.0415**** (0.009)	-0.0027 (0.015)	0.0030 (0.015)	0.0087 (0.033)	0.0088 (0.033)	0.0060 (0.033)	0.0061 (0.033)	0.0517 (0.035)	0.0489**** (0.011)	0.0430**** (0.014)	0.0373**** (0.017)	0.0676*** (0.023)	0.0393** (0.018)	0.0653**** (0.015)
Leak Variable	0.0299**** (0.011)		0.0312**** (0.010)	0.0299**** (0.011)	0.0309**** (0.010)	0.0308**** (0.010)	0.0313*** (0.010)	0.0313*** (0.010)							
Rumor last 10 trading days		-0.0623 (0.054)	-0.1055 (0.087)		-0.1016 (0.089)	-0.1019 (0.089)	-0.1112 (0.089)	-0.1118 (0.090)							
Rumor earlier than -10		0.0620 (0.048)	0.0612 (0.044)		0.0626 (0.044)	0.0627 (0.044)	0.0626 (0.044)	0.0626 (0.044)							
Ln (Deal Value)					-0.0018 (0.004)	-0.0016 (0.004)	-0.0030 (0.005)	-0.0028 (0.005)	-0.0010 (0.004)						
Buyer outside Scandinavia						-0.0047 (0.016)		-0.0058 (0.017)	-0.0120 (0.017)						
Number of Advisors							0.0122 (0.012)	0.0124 (0.012)			0.0031 (0.012)				
Cash								0.0124 (0.020)							
Success													-0.0266 (0.025)		
Ln (Volume)														0.0018 (0.005)	
1997-2000															-0.0358** (0.018)
2001-2004															-0.0242 (0.027)
2005-2009															x
Volume < 10 m.															x
Level of significance: * = 10%; ** = 5%; *** = 1%; **** = 0.1%															
No. Of Obs.	236	236	236	236	226	226	226	226	226	236	236	236	236	236	236
P-value	0.0064	0.2116	0.0101	0.0243	0.026	0.0495	0.0451	0.0744	0.8312	0.492	0.7901	0.5408	0.2895	0.6954	0.1406
R-sq	0.086	0.0192	0.1112	0.086	0.1155	0.1157	0.1194	0.1198	0.0002	0.0015	0.0003	0.0018	0.0054	0.0005	0.0123

## B5 – Regressions with CAR (-10,-1) as the regressand

The standard error is shown below the coefficients in parentheses.

CAR -10:-1	16	17	18	19	20	21	22
Constant	0.0170 (0.039)	0.0112 (0.037)	0.0496**** (0.014)	0.0076 (0.020)	0.0286 (0.056)	0.0194 (0.053)	0.0242 (0.019)
Leak Variable	0.0298*** (0.010)	0.0300*** (0.010)		0.0285*** (0.011)	0.0305*** (0.010)	0.0307*** (0.010)	0.0304*** (0.011)
Rumor last 10 trading days	-0.0929 (0.103)	-0.0947 (0.105)			-0.0838 (0.109)	-0.0858 (0.111)	
Rumor earlier than -10	0.0619 (0.043)	0.0567 (0.045)			0.0659 (0.042)	0.0610 (0.044)	
Ln (Deal Value)	-0.0030 (0.005)	-0.0029 (0.005)			-0.0039 (0.006)	-0.0036 (0.006)	
Buyer Outside Scandinavia	-0.0140 (0.019)	-0.0149 (0.019)			-0.0112 (0.019)	-0.0122 (0.019)	
ABN Amro	0.0004 (0.025)	0.0029 (0.027)	-0.0043 (0.031)	-0.0125 (0.028)	0.0048 (0.027)	0.0061 (0.029)	
Carnegie	-0.0353 (0.035)	-0.0358 (0.035)	-0.0391 (0.031)	-0.0436 (0.030)	-0.0380 (0.035)	-0.0379 (0.036)	
Enskilda	0.0099 (0.027)	0.0087 (0.027)	-0.0055 (0.029)	0.0051 (0.028)	0.0140 (0.028)	0.0128 (0.028)	
Handelsbanken	0.0091 (0.021)	0.0100 (0.022)	-0.0170 (0.020)	-0.0058 (0.020)	0.0106 (0.021)	0.0106 (0.021)	
Nordea	0.0299 (0.044)	0.0259 (0.046)	0.0207 (0.042)	0.0128 (0.050)	0.0270 (0.044)	0.0232 (0.046)	
Foreign Investment Bank	0.0284 (0.029)	0.0280 (0.030)	0.0356 (0.031)	0.0240 (0.028)	0.0273 (0.029)	0.0270 (0.030)	
Other Scandinavian Advisors	0.0053 (0.022)	0.0034 (0.023)	-0.0148 (0.021)	-0.0031 (0.020)	0.0041 (0.022)	0.0023 (0.022)	
Other Advisors	-0.0239 (0.020)	-0.0238 (0.020)	-0.0412 (0.020)	-0.0372* (0.020)	-0.0196 (0.022)	-0.0194 (0.022)	
1997-2000		x x				x x	-0.0391** (0.018)
2001-2004		-0.0006 (0.022)				0.0024 (0.021)	-0.0290 (0.025)
2005-2009		0.0171 (0.020)				0.0159 (0.019)	x x
Volume < 10				-0.0032 (0.019)	-0.0057 (0.023)	-0.0052 (0.023)	-0.0005 (0.018)
Cash					0.0243 (0.021)	0.0242 (0.022)	
Success					-0.0288 (0.025)	-0.0267 (0.024)	

Level of significance: \*=10%; \*\*=5%; \*\*\*=1%; \*\*\*\*=0.1%

No. Of Obs.	226	226	236	236	226	226	236
P -value	0.2188	0.2569	0.3948	0.2153	0.2154	0.3113	0.0386
R-sq	0.1354	0.1389	0.0322	0.1056	0.1466	0.1491	0.1011

## B6 – Regressions with CAR (-10,-1) as the regressand (excluding negative CAR (-10, 0))

The standard error is shown below the coefficients in parentheses.

Car -10,-1 w/o negative	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Constant	0.0101 (0.015)	0.0405**** (0.009)	0.0044 (0.015)	0.0107 (0.016)	0.0138 (0.035)	0.0140 (0.035)	0.0113 (0.035)	0.0115 (0.035)	0.0557 (0.038)	0.0582**** (0.012)	0.0533**** (0.014)	0.0574*** (0.020)	0.0838**** (0.024)	0.043** (0.018)	0.0513** (0.024)
Leak Variable	0.0299*** (0.011)		0.0317*** (0.010)	0.0298*** (0.011)	0.0314*** (0.010)	0.0313*** (0.010)	0.0319*** (0.010)	0.0318*** (0.010)							
Rumor last 10 trading days		-0.1022* (0.061)	-0.1582 (0.107)		-0.1536 (0.108)	-0.1533 (0.108)	-0.1666 (0.106)	-0.1664 (0.107)							
Rumor earlier than -10		0.0678 (0.052)	0.0647 (0.047)		0.0678 (0.048)	0.0680 (0.048)	0.0673 (0.047)	0.0676 (0.047)							
Ln (Deal Value)					-0.0017 (0.005)	-0.0015 (0.005)	-0.0030 (0.005)	-0.0027 (0.005)	-0.0006 (0.005)						
Buyer outside Scandinavia						-0.0055 (0.017)		-0.0063 (0.018)		-0.0164 (0.018)					
Number of Advisors							0.0118 (0.013)	0.0120 (0.013)			0.0004 (0.012)				
Cash												-0.0053 (0.023)			
Success													-0.0365 (0.026)		
Ln (Volume)														0.0031 (0.005)	
1997-2000															-0.0129 (0.026)
2001-2004															x
2005-2009															x
Volume < 10 m.															0.0189 (0.028)
Level of significance: * = 10%; ** = 5%; *** = 1%; **** = 0.1%															
No. Of Obs.	217	217	217	217	210	210	210	210	210	217	217	217	217	217	217
P -value	0.0081	0.0095	0.0096	0.0302	0.0213	0.0414	0.0369	0.0647	0.9037	0.3754	0.9747	0.8148	0.1645	0.5421	0.2397
R-sq	0.0876	0.0253	0.1214	0.0876	0.1269	0.1272	0.1306	0.131	0.0001	0.0027	0	0.0003	0.0096	0.0015	0.0092

## B7 – Regressions with CAR (-10,-1) as the regressand (excluding negative CAR (-10, 0))

The standard error is shown below the coefficients in parentheses.

Car -10:-1 w/o negative	16	17	18	19	20	21	22
Constant	0.0197 (0.041)	0.0150 (0.048)	0.0597*** (0.014)	0.0169 (0.021)	0.0518 (0.061)	0.0472 (0.065)	0.0041 (0.025)
Leak Variable	0.0312*** (0.010)	0.0314*** (0.010)		0.0288*** (0.011)	0.0321*** (0.010)	0.0322*** (0.010)	0.0302*** (0.011)
Rumor last 10 trading days	-0.1635 (0.121)	-0.1673 (0.123)			-0.1598 (0.124)	-0.1632 (0.125)	
Rumor earlier than -10	0.0685 (0.046)	0.0639 (0.048)			0.0712 (0.046)	0.0673 (0.048)	
Ln (Deal Value)	-0.0028 (0.006)	-0.0029 (0.006)			-0.0044 (0.007)	-0.0043 (0.006)	
Buyer Outside Scandinavia	-0.0145 (0.020)	-0.0150 (0.020)			-0.0113 (0.020)	-0.0118 (0.021)	
ABN Amro	-0.0065 (0.025)	-0.0041 (0.027)	-0.0130 (0.032)	-0.0207 (0.028)	0.0017 (0.026)	0.0029 (0.028)	
Carnegie	-0.0581 (0.036)	-0.0581 (0.036)	-0.0489 (0.037)	-0.0584* (0.035)	-0.0618* (0.034)	-0.0615* (0.035)	
Enskilda	0.0069 (0.028)	0.0059 (0.028)	-0.0120 (0.030)	-0.0014 (0.029)	0.0115 (0.029)	0.0106 (0.029)	
Handelsbanken	0.0160 (0.024)	0.0169 (0.024)	-0.0182 (0.023)	-0.0034 (0.022)	0.0194 (0.024)	0.0196 (0.024)	
Nordea	0.0293 (0.042)	0.0262 (0.044)	0.0113 (0.043)	0.0037 (0.050)	0.0280 (0.042)	0.0253 (0.044)	
Foreign Investment Bank	0.0264 (0.030)	0.0263 (0.030)	0.0345 (0.032)	0.0224 (0.029)	0.0253 (0.030)	0.0252 (0.030)	
Other Scandinavian Advisors	0.0089 (0.023)	0.0073 (0.024)	-0.0181 (0.021)	-0.0062 (0.020)	0.0086 (0.024)	0.0073 (0.024)	
Other Advisors	-0.0155 (0.022)	-0.0143 (0.021)	-0.0370 (0.020)	-0.0339* (0.020)	-0.0127 (0.024)	-0.0117 (0.023)	
1997-2000		0.0000 (0.023)				-0.0021 (0.023)	-0.0088465 (0.024)
2001-2004		x x				x x	x x
2005-2009		0.0151 (0.027)				0.0104 (0.026)	0.0248 (0.027)
Volume < 10				-0.0035 (0.019)	-0.0066 (0.024)	-0.0065 (0.023)	-0.0011 (0.018)
Cash					0.0119 (0.024)	0.0119 (0.024)	
Success					-0.0384 (0.027)	-0.0367 (0.026)	

Level of significance: \*=10%; \*\*=5%; \*\*\*=1%; \*\*\*\*=0.1%

No. Of Obs.	210	210	217	217	210	210	217
P -value	0.2177	0.2434	0.5231	0.312	0.1854	0.2641	0.0702
R-sq	0.1495	0.152	0.0306	0.1074	0.1606	0.1621	0.0985

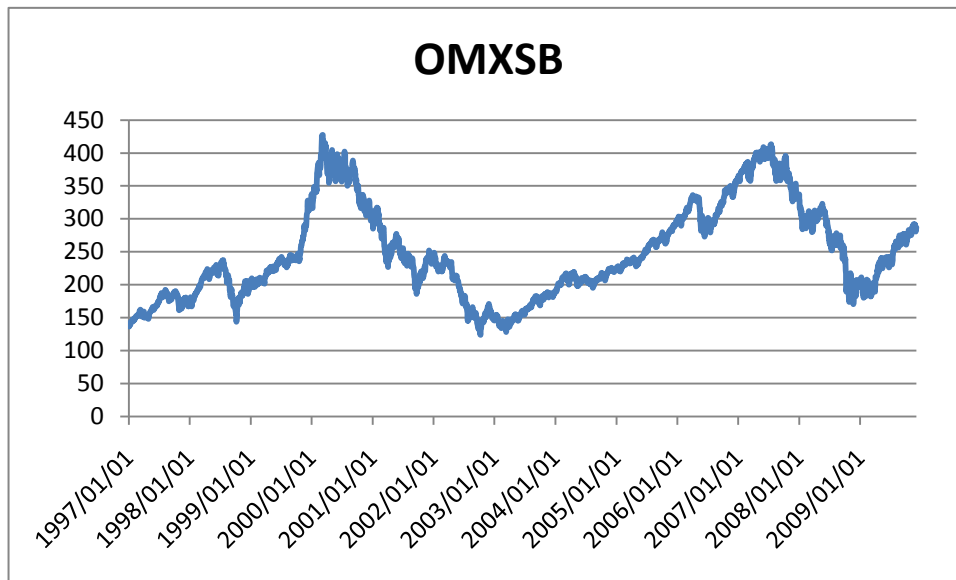
**B8- Regression with percentage of CAR (-10,0) as the regressand. Standardized so that CAR only takes on values between 0 and 1**

The standard error is shown below the coefficients in parentheses.

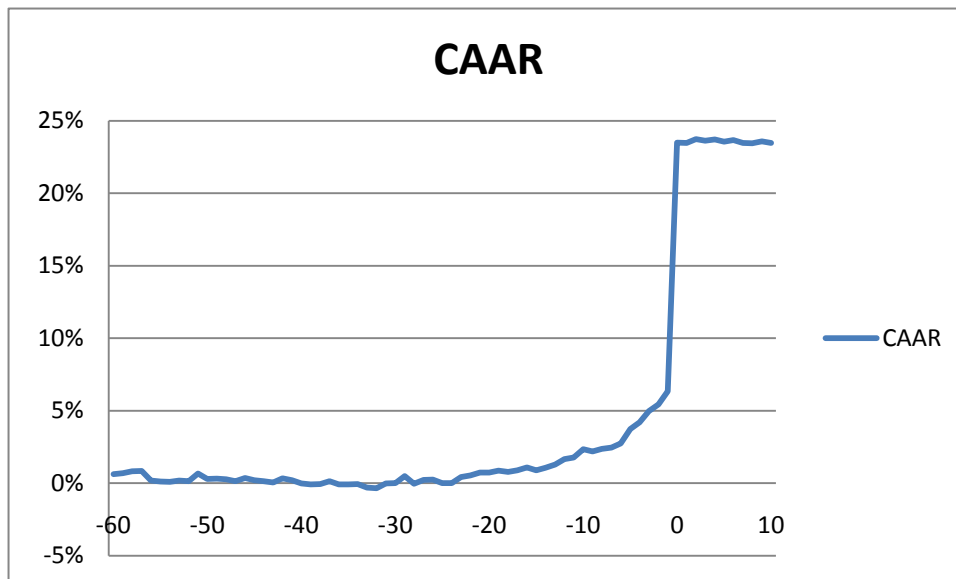
<b>Car % of total event return</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Constant	0.3020*** (0.036)	0.3534*** (0.025)	0.2999*** (0.036)	0.1967** (0.092)	0.0146 (0.113)
Leak Variable	0.0396** (0.018)		0.0379** (0.018)	0.0351** (0.018)	0.0361* (0.019)
Rumor last 10 trading days		0.1891 (0.234)	0.1368 (0.222)	0.0985 (0.212)	0.0896 (0.195)
Rumor longer than 10 t. days prior		0.0277 (0.088)	0.0267 (0.085)	0.0206 (0.087)	-0.0070 (0.092)
Buyer outside Scandinavia				-0.0530 (0.052)	-0.0624 (0.053)
Ln (Deal Value)				0.0050 (0.017)	0.0142 (0.017)
Number of Advisors				0.0207 (0.032)	0.0130 (0.032)
Ln (Volume)				0.0163 (0.018)	0.0254 (0.023)
1997-2000				x	x
2001-2004					0.1465** (0.062)
2005-2009					0.0899 (0.059)
Volume < 10 m.					0.0809 (0.077)
Level of significance: *=10%; **=5%; ***=1%; ****=0.1%					
No. Of Obs.	236	236	236	226	226
P -value	0.0302	0.6915	0.1321	0.1791	0.0517
R-sq	0.0211	0.0046	0.0236	0.041	0.0721

## C- Graphs

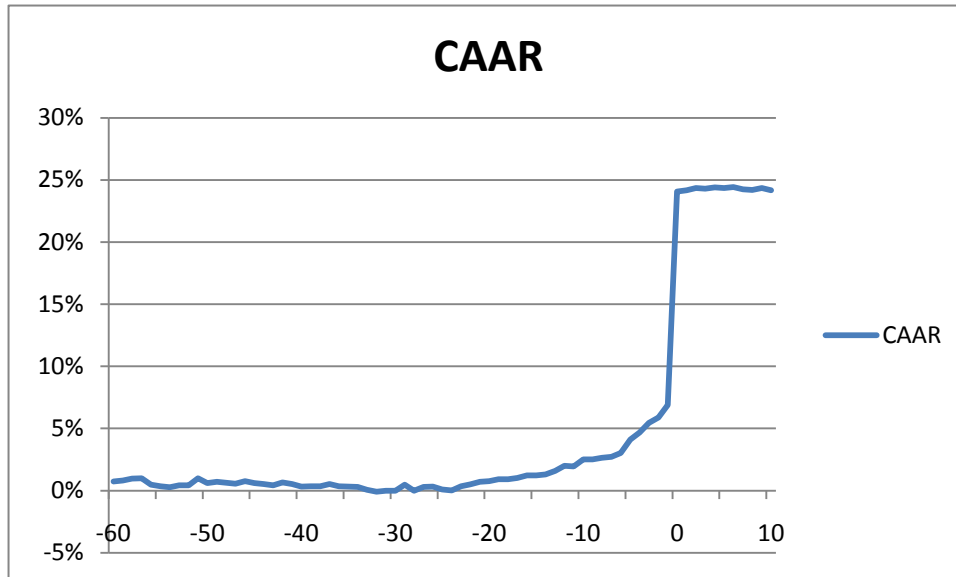
C 1- Graph over OMXSB used as Market Proxy in the Beta Estimation



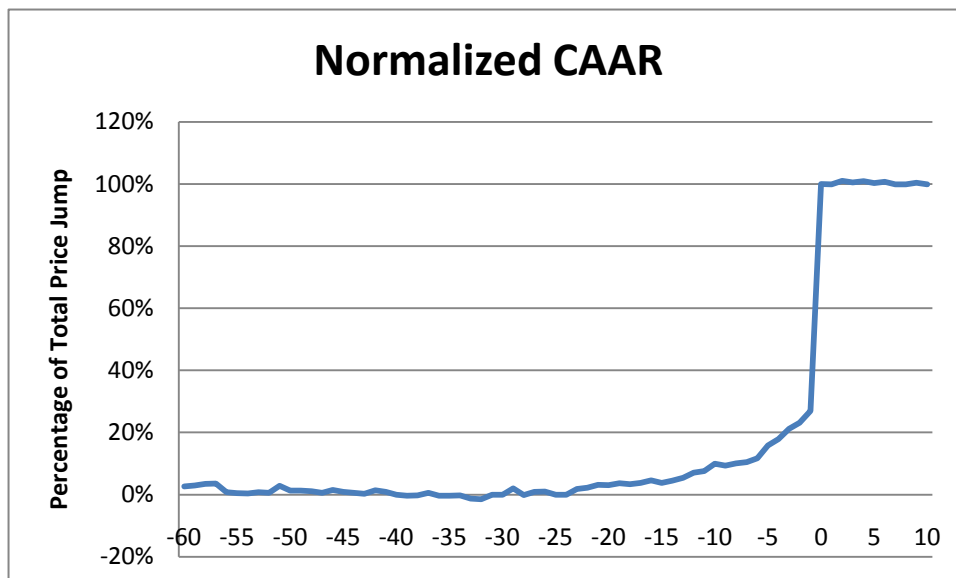
C 2 - Graph over CAAR (-60,10)



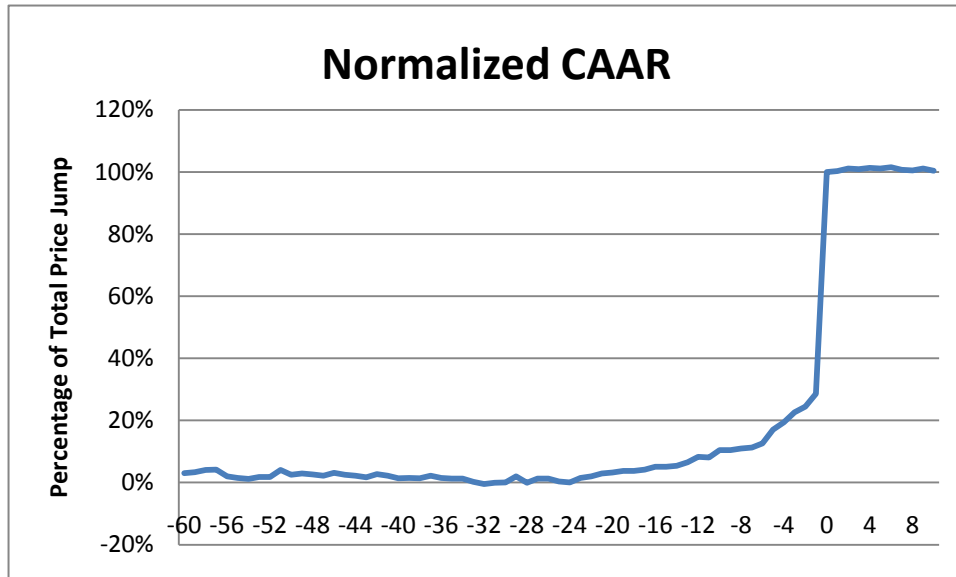
**C 3 - Graph over CAAR (-60,10) (without observations without a price jump or negative CAAR (-10,0))**



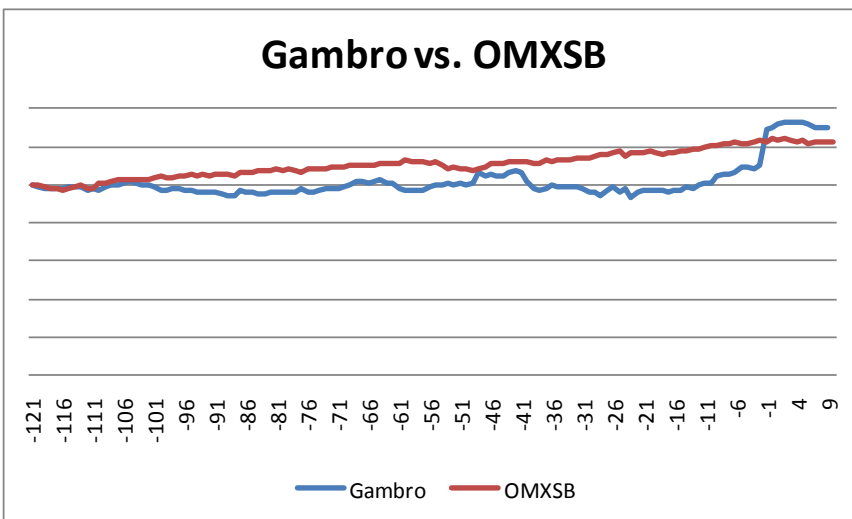
**C 4 - Graph over Normalized CAAR (-60,10)**



**C 5 - Graph over Normalized CAAR (-60,10) (without observations without a price jump or negative CAAR (-10,0))**

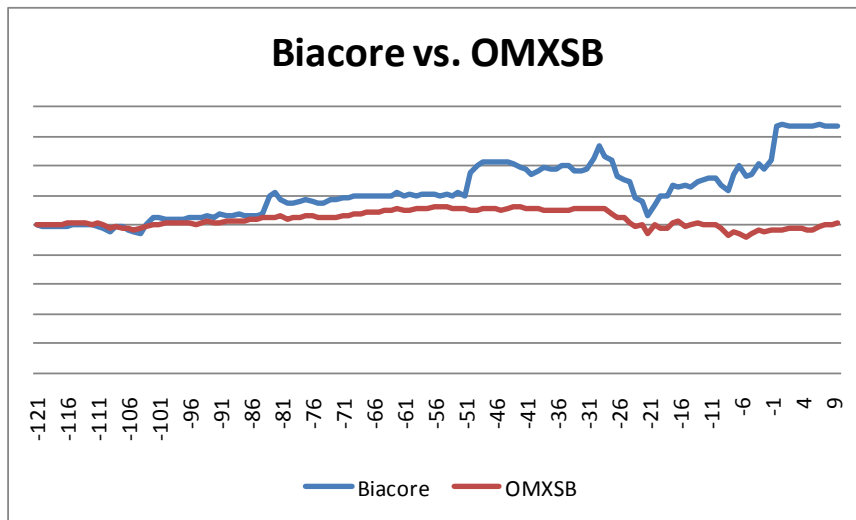


**C6 - Graph over stock prices for Gambro**

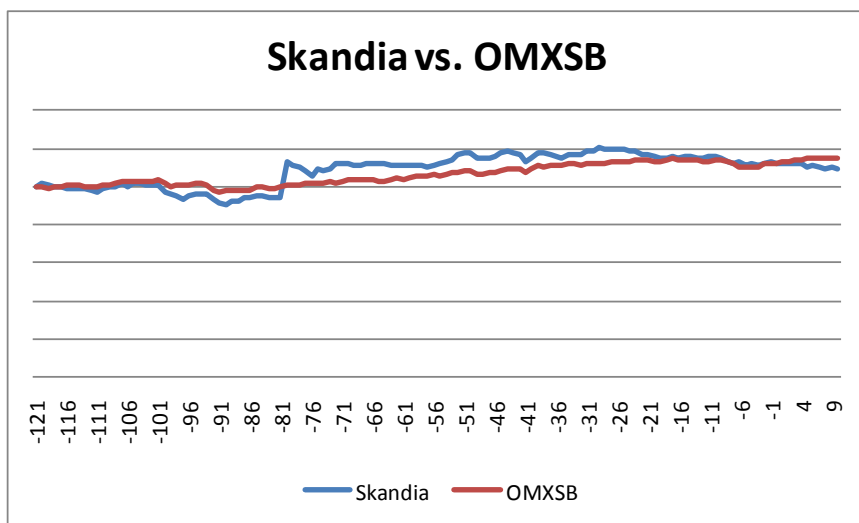




C7 - Graph over stock prices for Biacore



C8 - Graph over stock prices for Skandia



# Appendix

## D1 - Complete Data Sample (236 tender offers)

The following table shows the data sample that our event study is based on. The list consists of 236 tender offers on Swedish listed firms from 1997- 2009. The tender offers included are those where the result of the merger or acquisition results in more than 50 % of the targets equity. The data shown below is sorted in alphabetical order.

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
ABB	ABB	29/03/1999	0.143	0.160
Academedi	Newell Communications	22/10/2007	0.079	0.123
Acando	Frontec AB	14/05/2003	0.193	0.116
Accelerator Nordic AB	Optovent Enterprises Inc	15/07/2003	-0.280	-0.021
AGA	Linde AG	16/08/1999	0.126	0.000
Ainax	Scania AB	19/11/2004	-0.006	-0.004
All Cards Service Center	XPonCard Group AB	24/09/2007	0.188	0.158
Allgon	LGP Allgon Holding AB	22/08/2000	0.086	0.092
Allgon	LGP Allgon Holding AB	21/01/2003	0.025	-0.007
Althin	Baxter Sweden	22/12/1999	-0.009	0.179
Annehem Fastigheter AB	Peab AB	17/04/2009	0.050	0.027
Arena Personal AB	NorgesInvestor 4 AS	30/09/2008	-0.139	-0.007
Arete	TurnIT	13/09/2000	0.271	0.124
Ark Travel	Goldcup D 3319 AB	22/10/2007	0.218	0.220
Artema Medical	Cardias Science Inc	10/01/2001	0.166	0.196
ASG	Danzas AG	26/04/1999	0.083	0.067
Aspiro	Schibsted ASA	17/02/2005	0.049	-0.010
AssiDomän	Sveaskog	11/10/2001	0.017	0.013
Astidius	IVG Holding	17/03/1999	0.058	0.053
Astra	Zeneca	9/12/1998	0.104	0.047
ATLE AB	Ratos AB and 3i Group Plc	19/02/2001	0.031	0.021
AU-System	Teleca AB	10/12/2001	0.052	-0.010
Autodiagnos AB	Genrad Inc	22/02/2000	-0.074	-0.009
Avanza Bank Holding AB	Nordnet AB	21/05/2002	-0.076	-0.010
Avesta Sheffield AB	Outokumpu OYJ	28/09/2000	0.075	0.081
Balder	Drott AB	9/02/2000	-0.027	-0.022
Ballingslöv	Stena Adactum AB	16/05/2008	-0.031	-0.058
Benima	Sigma AB	1/09/1998	-0.041	-0.082
Biacore International	GE Healthcare	20/06/2006	0.064	0.001
Binar AB	Pomona-gruppen AB	19/09/2003	0.150	0.002
Biolin Scientific AB	Meda AB	28/12/2001	-0.126	-0.072
Biora	Straumann Holding AB	6/04/2003	0.059	0.026
Boss Media	GEMed AB	1/02/2008	0.000	0.072
BPA	Procuritas Capital Partners	18/05/1999	0.027	0.051
Broström	A.P. Moeller Maersk A/S	27/08/2008	0.041	0.004
BT Industries	Toyoda Automatic Loom Works, Ltd	4/04/2000	0.009	0.030
Bulten	Finnveden AB	21/09/2000	0.009	-0.037
Capio AB	Opica AB/ Nordic Capital	01/09/2006	0.059	0.023
Caran	WM-data AB	14/12/1998	-0.004	-0.058
Carl Lamm	Carl Lamm Holding AB	6/05/2008	-0.014	0.016
Carl Lamm Holding	Ricoh European Holdings PLC	17/04/2009	-0.048	-0.036

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
Cash Guard AB	PSI Group ASA	15/04/2008	-0.010	-0.021
Cell Network	Mandator AB	7/02/2000	-0.179	-0.017
Celsius	SAAB AB	16/11/1999	0.035	0.066
Celtica	Ljungberg Gruppen AB	13/06/2003	0.014	-0.005
Cision	Triton Fund II	30/04/2008	-0.050	-0.037
Cloetta Fazer	Oy Karl Fazer AB	16/06/2008	-0.029	-0.024
Cloetta Fazer	Oy Karl Fazer AB	17/02/2005	0.007	-0.006
Connecta	Information Highway AB	25/02/2000	0.088	0.112
Consafe Offshore AB	ProSafe ASA	3/05/2006	0.028	-0.002
Custos	Custos AB/Orebro	8/11/2006	-0.007	-0.018
Dahl International AB	Dahl Intressenter AB	11/02/1999	0.111	0.134
Diffdhamb	Raisio Group	13/02/2003	-0.002	0.038
Digital Illusions CE AB	Electronic Arts Inc	15/11/2004	-0.045	-0.015
Digital Illusions CE AB	Electronic Arts Inc	17/03/2006	0.015	-0.021
Diligentia	Balder AB	20/03/2000	0.034	0.052
Dimension	ProAct IT Group AB	15/09/2003	-0.598	-0.565
Din Bostad AB	Fastighets Balder AB	26/06/2009	0.373	0.229
Diös	AP Fastigheter AB	27/09/2000	0.004	0.020
EI & Industrimontage Svenska AB	E&I Intressenter AB	14/06/2007	0.023	-0.021
Eldon	EQT Scandinavia BV	10/08/1999	-0.056	-0.008
Elverket Vallentuna AB	E.ON AG	25/09/2007	0.026	0.026
Emil Lundgrens	Gtie S.A	17/12/1999	0.036	0.007
Enator	Tieto Corp. Oyj	3/03/1999	-0.105	-0.038
Eniro	SEAT Pagine Giallo S.p.a	7/05/2001	0.077	0.059
Entra	Tieto Enator AB	21/12/1999	0.125	0.039
Epsilon	Danir	9/01/2003	0.056	0.022
Esselte	JWCA	24/05/2002	0.037	0.077
Evidentia	Claesson & Anderzen Invest	17/02/2000	-0.008	-0.064
Fabege	Näckebo AB	4/06/1997	0.016	0.013
Fabege	Wihlborgs Fastigheter AB	19/07/2004	0.059	0.015
Fastighets AB Tornet	Fabege AB	3/02/2006	0.075	0.077
FB Industri Holding AB	B&B Tools AB	6/10/2000	0.002	-0.028
Finnveden	Cidron Invest	15/11/2004	0.004	0.015
Focal Point AB	Telelogic AB	13/04/2005	0.013	0.026
Folkebolagen	Lindab AB	8/05/2000	0.002	-0.028
Forænergy	Forænergy Inc	17/03/1998	-0.083	-0.032
Frango	Cognos Inc	24/08/2004	-0.014	0.010
Friluftsbolaget	Fjällräven AB	31/05/2001	0.018	-0.001
Gambro	Indap AB	3/04/2006	0.097	0.046
Gamers Paradise Holding AB	CISL Gruppen AB	17/10/2005	0.537	0.207
GANT	Procastor S.A.	11/12/2007	-0.015	0.001

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
Gexø AB	Nordic Mining ASA	12/05/2006	0.455	0.305
Gibek Louis AB	Teleflex Medical Inc	12/05/1999	0.018	-0.005
Global Gaming Factory AB	Global Factory Sweden AB	28/07/2006	0.307	0.374
Glocalnet	Telenor ASA	7/02/2006	-0.151	-0.107
Gorthon Lines AB	Rederi AB Transatlantic	7/10/2004	-0.048	0.026
Gorthon Lines AB	Rederi AB Transatlantic	7/10/2004	0.073	0.026
Gotic	Vasakronan	30/08/1997	-0.016	-0.020
Graninge	Sydskraft	04/11/2003	0.039	0.054
Graphium	Argynnis Industrier	30/04/1997	0.004	0.086
Guide	Framtidsfabriken	3/12/1997	0.239	0.210
Gunnebo Industrier	Segulah Stelletta Holding AB	22/07/2008	0.171	0.057
Gylling Optima	Johnson Controls Inc	29/08/2000	0.035	0.186
Gymgrossisten Nordic AB	Modern Times Group AB	14/12/2007	0.082	0.009
Hoist International	Hoist Intressenter	19/12/2003	0.066	0.049
Home Properties AB	Home Invest ASA	24/06/2005	0.074	0.031
HQ Fonder AB	HQ AB	20/06/2005	0.080	0.058
Human Care	GGC Health Care LLC	14/01/2008	0.149	0.262
Humlegården	Länsförsäkringar	1/11/1999	0.035	0.100
IBC Shipping	ICB Shipping Ltd	20/08/1997	0.082	0.060
IBS	Deccan Value Advisors Fund L.P.	30/06/2008	0.024	0.014
IM Innovationsmaklarna AB	Affärsstrategerna AB	11/07/2001	-0.140	-0.168
IMS Data	Martinsson Gruppen	18/02/2002	-0.224	-0.127
Industriförvaltnings AB Kinnevik	Kinnevik Investment AB	16/02/2004	-0.105	-0.032
Intentia International	Lawson Software Inc	2/06/2005	0.083	0.102
Intra International AB	IntraUSA Group Inc/The	2/12/2000	-0.227	-0.156
inWarehouse AB	Komplett ASA	27/03/2007	0.043	-0.061
Invik & Co	Milestone eHF	26/04/2007	-0.001	0.019
IRO	Van de Wiele	16/08/2000	0.247	0.230
Jacobson & Widmark AB	WSP Group PLC	11/05/2001	0.039	0.017
JC	RNB Retail & Brands	9/05/2006	-0.082	0.007
Jobline	TMT One AB	18/01/2002	0.291	0.234
JP Nordiska	Kaupthing Bank hf	29/08/2002	0.038	0.006
JPBank	Matteus AB	19/01/1999	-0.046	-0.024
Kalmar Industries AB	Partek AB	15/05/2000	0.025	-0.022
Karlshamn	BNS Industrier AB	11/07/2005	0.040	0.017
Karolin Machine Tool AB	Nordstjernan AB	18/12/2003	0.042	0.029
Karolin Machine Tool AB	Nordstjernan AB	29/10/2007	-0.213	-0.146
Kipling	Dimension AB	17/12/2001	0.033	-0.016
Kjessler & Mannerstrale AB	Traction Holding AB	14/02/2000	-0.032	-0.056
Klippan	Weland AB	23/01/2006	-0.199	0.013
Klövern	Wihlborgs Fastigheter AB	11/09/1997	0.024	0.037

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
Kontakt East Holding AB	Multiple acquirers	26/05/2008	0.097	-0.009
Lawson International AB	Lawson Software Inc	2/06/2005	0.083	0.102
LB Icon AB	LB International AB	21/03/2006	-0.013	-0.026
Ledstiernan	Thuban AB	30/11/2009	-0.093	0.028
LGP Allgon Holding	Powerwave Technologies Inc	1/12/2003	0.067	0.001
Lifco	Carl Bennet	15/06/2000	0.005	-0.020
Liljeholmens	Duni	2/12/1998	-0.052	0.002
Lindab	Lindab Intressenter	15/05/2001	0.033	0.038
Index	KappAhl Holding AB	13/08/2007	0.056	0.002
LPI Precision Ab	Finnveden AB	11/11/1998	-0.118	0.000
Lundin Oil	Talisman Energy Inc	21/06/2001	0.145	0.100
Mandamus Fastigheter	LRF Fastigheter	20/03/2003	0.044	0.034
Mandator	Fujitsu Services	8/10/2007	0.008	-0.012
Mandator/ Cell Networks	Pixelpark AG	20/03/2000	-0.077	-0.127
Mariebergs Tidning	Bonnierföretagen	31/03/1998	0.017	0.038
Martinsson Gruppen AB	Atle AB	16/09/1999	0.228	0.161
Matteus	NH Nordiska Holding	10/04/2001	0.005	-0.074
Mogul	Adera AB	26/11/2003	0.135	0.322
Monark	Grimaldi Industri - koncernen	20/11/1999	0.211	0.066
Munksjö AB	Smurfit Holdings	29/01/2002	-0.001	0.005
Måldata	Sigma AB	17/12/1999	0.235	0.290
N&T	Simbel	15/11/1999	0.025	0.041
Narkes Elektriska AB	Segulah Alfa AB	11/09/2006	-0.006	0.002
Naturkompaniet	Friluftsbolaget Ekelund & Sagner AB	20/03/2000	0.214	0.137
Nefab	NPNC Intressenter AB	27/08/2007	0.120	0.149
Netwise	Trio AB	25/10/2001	0.033	0.044
Netwise AB	Telefonaktiebolaget LM Ericsson	5/06/2006	0.096	0.012
NK City Fastigheter	Hufvudstaden AB	30/03/1998	-0.069	-0.037
Nordbanken	Nordbanken Holding AB	13/10/1999	0.088	0.050
Nordström & Thylin	Argonaut AB	24/11/1997	-0.091	-0.035
Norrporten	NS Holding AB	21/08/2000	0.086	0.069
North Atlantic Natural Resources	Lundin Mining Corp	21/01/2005	0.015	-0.011
Näckebo	Drott AB	8/9/1999	-0.033	0.013
OMX AB	Nasdaq Stockmarket Inc	25/05/2007	0.185	0.187
One Media Holding AB	International Marketing & Sales Group	17/01/2008	0.064	0.091
Optimail	Posten Norge AS	22/11/2005	-0.005	-0.026
Optimum Optik AB	Synoptik Holding AS	13/04/2004	0.478	0.485
PanAlarm AB	Panaxia Security AB	21/10/2008	0.010	-0.098
Pandox	APES Holding	21/11/2003	0.016	0.017
Peab Industri AB	Peab AB	10/11/2008	0.010	0.012
Peak	Carli Gry International A/S	16/03/1998	-0.050	-0.074

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
Perbio Science	Fisher Scientific International Inc.	26/06/2003	0.014	-0.003
Pergo	Pfleiderer Sweden AB	15/01/2007	0.069	0.077
Persea AB	Investor Group	21/07/2003	0.007	-0.001
Perstorp	Perstorp Intressenter	10/04/2000	0.014	0.045
Piren	Rodamco N.V.	24/01/2000	-0.033	0.007
Platzer Fastigheter AB	Fastighets AB Tomet	06/04/2001	-0.041	-0.114
PLM	Rexam Ltd	30/11/1998	0.042	0.027
PriFast	Balder AB	3/01/1999	-0.062	-0.017
Pronyx	Teleca AB	5/07/2002	-0.073	0.034
Protect Data	Check Point Software Technologies Ltd.	20/11/2006	0.013	-0.002
Provobis	Scandic Hotels AB	12/04/2000	0.095	0.042
Q-Med	Ivytan AB	3/11/2008	0.185	0.094
Realia	Columna Fastigheter AB	23/04/2002	0.035	0.027
Resco	AcandoFrontec AB	9/01/2006	0.438	0.191
Resco	Fi System SA	11/09/2000	0.053	0.008
Riddarhyttan	Agnico-Eagle Mines limited	12/05/2005	-0.009	-0.008
RKS AB	Sigma AB	6/05/2004	-0.122	-0.069
Rörvik Timber	Ittur Industrier AB	2/06/2005	0.080	0.012
SalusAnsvar	DnB NOR BANK ASA	20/08/2007	0.421	0.416
Sandblom	Sandblom & Stohne Intressenter	10/11/1997	0.049	0.083
Sardus	Atria Koncern AB	16/02/2007	0.115	0.111
Scancem	Heidelberger Zement AG	27/07/1999	0.002	-0.006
ScandiaConsult	Ramboll	28/10/2002	0.073	0.087
Scandic Hotels AB	Ladbrokes PLC	23/04/2001	0.062	0.004
Scandinavian Online	Eniro AB	18/12/2001	0.848	0.545
Scandinavian PC Systems	PC-Systemer ASA	23/03/1999	-0.094	-0.031
Scania	Volvo AB	30/04/1999	0.032	-0.003
Scania	MAN AG	18/09/2006	0.165	0.141
SecuritasDirect	ESML Intressenter AB	13/11/2007	0.113	0.166
Segerström & Svensson	Sanmina-SCI Corp	25/01/2001	-0.149	-0.108
Semcon	JCE Group AB	6/03/2009	0.069	0.074
Sendit AB	Microsoft Corp	12/05/1999	0.280	0.009
Senea	Kamstrup A/S	24/07/2006	0.132	0.100
Shelton Petroleum AB	Boerse Stuttgart	17/11/2008	0.262	-0.303
Sifab	Fastighets AB Tomet	30/11/1998	0.042	-0.055
Sigma	Askerö Utveckling AB	27/03/2008	0.083	0.034
Skandia Försäkring	Old Mutual Plc	2/09/2005	-0.015	-0.018
Skanditek Industriförvaltning AB	Bure Equity AB	14/10/2009	-0.026	0.023
Skoogs	Trelleborg AB	25/08/1997	0.085	0.023
Song Networks	Tele 2 Sverige	22/09/2004	0.506	0.031
Spectra	Thermo Instrument Inc.	7/01/1999	-0.027	-0.033

Target	Bidder	Announcement Day	CAR -10:-1	CAR -5:-1
Spendrups Bryggeri	Spendrups Invest AB	1/05/2001	0.046	0.050
Stena-Line	Stena Line AB	31/10/2000	0.005	0.024
Stora	ENSO Oyj	26/06/1998	-0.087	-0.011
Storheden	Wihlborgs Fastigheter AB	15/04/1998	0.031	0.020
Strålfors	Posten AB	14/03/2006	0.003	0.001
Svedala	Metso Oyj	21/06/2000	0.056	0.075
Swedbank (föreningssparbanken)	SEB	22/02/2001	-0.042	0.005
Svenska Brand	Lansforsakringar Wasa FörsäkringsAB	26/02/2001	0.072	-0.008
Svenska Orienten	SOL Intressenter	25/03/2003	0.058	0.108
Sydkraft	E.ON Energie AG	21/01/2001	0.006	0.005
Telelogic	IBM Corporation	04/06/2007	0.274	0.196
Tornet, Fastighets	LRT Acquisition AB	20/10/2003	-0.009	-0.013
Tradedoubler	AOLS Holding AB	15/01/2007	-0.072	-0.040
Trio AB	Netwise AB	20/04/2005	-0.102	-0.078
Trio AB	Teligent AB	8/02/2006	-0.056	-0.024
TryggHansa	S-E-Banken AB	1/12/1997	0.036	0.024
TurnIT	Noom AB	22/12/2004	-0.054	-0.029
Utfors AB	Telenor ASA	18/11/2002	0.324	0.187
Wayfinder Systems AB	Vodafone Group PLC	9/12/2008	-0.050	-0.017
Verimotion	NetSys Technology Group	11/09/1998	0.029	0.329
Vision Park Entertainment	KF Media	3/09/2001	0.401	0.376
VLT AB	Investor Group	31/08/2004	0.003	0.005
WM-Data	LogicaCMG plc	21/08/2006	-0.024	0.004
Vostok Energo Investments Ltd	Vostok Gas Ltd	9/04/2003	-0.044	-0.054
XPonCard	Oberthur Technologies S.A.	19/02/2008	0.089	0.035
XPonCard Group AB	Argynnis Industrier	30/04/1999	0.004	0.086
Y.C.O. Businesspartners AB	Varmlands Finans Sverige AB	31/05/2006	0.293	0.284
Zeteco	Partek Oyj Abp	09/03/2000	-0.006	0.007
Zeunerts AB	Kopparbergs Bryggeri AB	14/09/2000	0.029	0.002
Zodiak	De Agostini Communications S.p.a	26/05/2008	0.017	0.002
Östgöta	Danske Bank	17/03/1997	-0.017	-0.004

## D2 – A table over descriptive Statistics

This table is provided to give the reader an overview over our explanatory variables for leakages. Presented in the following table are most of our variables. The two columns next to the target, dummy variables for the rumor period are presented. The first rumor column represents rumors where the differences between the announcement date and the rumor date has been longer than two weeks. The second Rumor column represents rumor with no regard to time. With Deal Structure we explain how the offer is supposed to be paid (with cash, stock or hybrid). When looking at the domicile the acquirer, we have studied if the bidder comes from outside Scandinavia or not. For the “Number of advisor” column we have added up the financial advisor for the acquirer side. The final column represents the total value of the tender offer.

Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
ABB	0	0	0	1	0	94336.53
Academedia	0	0	1	1	0	7.99
Acando	0	0	1	0	0	146.5
Accelerator Nordic AB	0	0	1	1	1	36.22
AGA	0	0	1	1	3	30 900
Ainax	0	0	0	0	1	7036.59
All Cards Service Center	0	0	0	0	1	197.34
Allgon	0	0	0	0	2	3905.41
Allgon	0	0	0	0	1	881.94
Althin	0	0	1	0	1	515.55
Annehem Fastigheter AB	0	0	1	0	1	471.91
Arena Personal AB	0	0	1	0	1	131.39
Arete	0	0	0	0	1	374.42
Ark Travel	0	0	1	0	1	290.09
Artema Medical	0	0	0	1	1	213.16
ASG	0	0	1	1	1	3027.36
Aspiro	0	1	1	0	1	256.19
AssiDomän	1	0	1	0	4	28982.96
Asticius	0	0	1	0	1	3668.53
Astra	0	0	0	1	3	244891
ATLE AB	0	0	1	0	0	10423.15
AU-System	0	0	0	0	1	1229.21
Autodiagnos AB	0	1	1	1	1	231.44
Avanza Bank Holding AB	0	0	0	0	1	N/A
Avesta Sheffield AB	1	0	0	0	1	13621.67
Balder	0	0	1	0	2	3335.49
Ballingslöv	0	0	1	0	1	2047.99
Benima	0	0	1	0	1	196.62
Biacore International	0	0	1	1	1	2807.92
Binar AB	0	0	1	0	0	6.79
Biolin Scientific AB	0	0	0	0	0	53.25
Biora	0	0	1	0	1	352.34
Boss Media	0	1	1	0	1	949.93
BPA	0	1	1	0	0	1934.5
Broström	0	0	1	0	2	7556.54
BT Industries	0	0	1	1	1	7700
Bulten	0	0	1	0	1	1099.52
Capio AB	0	0	1	0	0	22888.95
Caran	0	0	1	0	1	323.12
Carl Lamm	0	1	0	0	0	622.61
Carl Lamm Holding	0	1	1	1	1	577.45



Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
Cash Guard AB	0	0	0	0	1	436.12
Cell Network	0	0	0	0	1	8031.99
Celsius	0	0	1	0	2	4486.81
Celtica	0	0	1	0	1	725.64
Cision	0	0	1	0	0	890.88
Cloetta Fazer	0	0	1	0	1	1608.49
Cloetta Fazer	0	0	0	0	0	306.79
Connecta	0	0	0	0	1	8166.27
Consafe Offshore AB	0	0	0	0	0	2133.62
Custos	0	0	1	0	1	1153.8
Dahl International AB	0	0	1	0	0	2704
Diffhamb	0	0	1	0	1	130.12
Digital Illusions CE AB	0	0	1	1	1	77.89
Digital Illusions CE AB	0	0	1	1	1	143.89
Diligentia	0	0	0	0	0	5138.76
Dimension	0	0	0	0	0	195.42
Din Bostad AB	0	0	0	0	0	510.34
Diös	0	0	1	0	1	1835.11
El & Industrimontage Svenska AB	0	0	1	0	0	483.37
Eldon	0	0	1	0	2	1631.16
Elverket Vallentuna AB	0	0	1	1	1	89.92
Emil Lundgrens	0	0	1	1	0	265
Enator	0	0	0	0	1	7622.58
Eniro	0	0	0	1	1	22503
Entra	0	0	0	0	1	2082.04
Epsilon	0	0	1	0	1	195.72
Esselte	0	0	1	1	1	5561.57
Evidentia	0	0	1	0	1	573.08
Fabege	0	0	1	0	0	2 200
Fabege	0	0	1	0	2	16513.56
Fastighets AB Tomet	0	0	1	0	1	1608.49
FB Industri Holding AB	0	0	1	0	1	138.96
Finnveden	0	0	1	0	0	3095.82
Focal Point AB	0	0	0	0	1	89.13
Folkebolagen	0	0	1	0	0	134.93
Forcenergy	0	0	0	1	0	N/A
Frango	0	0	1	1	1	383.28
Friluftsbolaget	0	0	1	0	0	107.64
Gambro	0	0	1	0	4	32514.08
Gamers Paradise Holding AB	0	0	0	0	0	306.38
GANT	N/A	N/A	1	1	1	1628.47

Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
Gexco AB	0	0	0	0	0	N/A
Gibeck Louis AB	0	0	1	1	0	N/A
Global Gaming Factory AB	0	0	1	0	0	70.33
Glocalnet	0	0	1	0	1	544.76
Gorthon Lines AB	0	0	0	0	1	N/A
Gorthon Lines AB	0	0	0	0	1	156.91
Gotic	0	0	1	0	0	773
Graninge	0	0	1	0	1	5300
Graphium	0	0	1	0	0	270
Guide	0	0	0	0	1	1291.56
Gunnebo Industrier	0	0	1	0	0	2355.08
Gylling Optima	0	0	1	1	0	548.31
Gymgrossisten Nordic AB	0	0	1	0	1	198.62
Hoist International	0	0	1	0	0	278.78
Home Properties AB	0	0	1	0	0	3228.47
HQ Fonder AB	N / A	N/A	0	0	1	474.34
Human Care	0	0	1	0	1	110.56
Humlegården	0	0	1	0	0	604
IBC Shipping	0	0	1	1	0	472.89
IBS	1	0	0	1	1	853.01
IM Innovationsmaklarna AB	0	0	0	1	1	29.34
IMS Data	0	0	1	0	1	121.98
Industriförvaltnings AB Kinnevik	0	0	0	0	1	20815.27
Intentia International	0	1	0	1	1	3756.48
Intra International AB	0	0	1	1	0	23.53
inWarehouse AB	0	1	1	0	2	173.2
Invik & Co	0	0	1	1	2	5361.44
IRO	0	0	1	1	1	1531.25
Jacobson & Widmark AB	0	0	1	0	2	930
JC	0	0	0	1	2	1984.42
Jobline	0	1	1	0	0	1107.41
JP Nordiska	0	0	0	1	1	509.04
JPBank	0	0	0	1	0	109.02
Kalmar Industries AB	0	0	1	0	1	657.54
Karlshamn	0	0	1	0	2	2054.74
Karolin Machine Tool AB	0	1	1	0	0	234.4
Karolin Machine Tool AB	0	0	1	0	1	1082.59
Kipling	0	0	0	0	1	8.18
Kjessler & Mannerstrale AB	0	0	1	0	0	171.05
Klippan	1	0	1	0	1	482.14
Klövern	0	0	0	1	0	60

Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
Kontakt East Holding AB	0	0	1	0	1	173.13
Lawson International AB	0	0	0	1	1	3113.42
LB Icon AB	0	1	0	0	2	1669.57
Ledstiernan	0	0	1	0	0	32564.05
LGP Allgon Holding	0	0	1	1	1	2939.16
Lifco	0	0	1	0	2	305.23
Liljeholmens	0	0	1	0	0	370.44
Lindab	0	0	1	1	1	4658.2
Index	0	0	1	0	1	7752
LPI Precision Ab	0	0	1	0	1	148
Lundin Oil	0	0	1	1	0	3 730
Mandamus Fastigheter	0	0	1	0	0	1363.16
Mandator	0	0	1	1	1	463.52
Mandator/ Cell Networks	0	0	0	0	1	9914.49
Mariebergs Tidning	0	0	1	0	0	5 400
Martinsson Gruppen AB	0	0	1	0	0	148.94
Matteus	0	0	0	0	1	462.28
Mogul	0	0	0	0	0	14.89
Monark	0	0	1	0	1	1 247
Munksjö AB	0	0	1	0	2	4120.98
Måldata	0	0	0	0	2	270.97
N&T	0	0	1	0	1	1447.68
Narkes Elektriska AB	0	0	1	0	0	1278.85
Naturkompaniet	0	0	1	0	0	66.77
Nefab	0	0	1	0	1	1184.59
Netwise	0	0	0	0	1	17.64
Netwise AB	0	0	1	0	1	251.9
NK City Fastigheter	0	0	0	0	0	1455.15
Nordbanken	0	0	0	0	0	N/A
Nordström & Thylin	0	1	0	0	0	3913.17
Norrporten	0	0	1	0	1	905
North Atlantic Natural Resources	0	0	0	1	0	88.96
Näckebo	0	0	1	0	2	11804.55
OMX AB	0	1	0	1	1	24787.1
One Media Holding AB	0	0	0	1	1	109.16
Optimail	0	0	1	0	2	125.65
Optimum Optik AB	0	0	1	0	1	103.57
PanAlarm AB	0	0	1	0	1	57.37
Pandox	0	1	1	0	1	4568.78
Peab Industri AB	0	1	0	0	2	5757.02
Peak	0	0	1	0	0	N/A

Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
Perbio Science	0	0	1	1	1	6115.76
Pergo	0	0	1	0	2	3007.05
Persea AB	0	1	1	0	1	57.2
Perstorp	0	0	1	0	2	9265.44
Piren	0	0	1	1	1	2867.98
Platzer Fastigheter AB	0	0	0	0	1	641.1
PLM	0	0	1	1	1	5958.81
PriFast	0	0	1	0	2	1503
Pronyx	0	0	1	1	1	48.98
Protect Data	0	0	1	1	0	4207.58
Provobis	0	0	1	0	1	611.82
Q-Med	0	0	1	0	1	3722.9
Realia	0	0	0	0	1	4773.46
Resco	0	0	0	0	1	1454.42
Resco	0	0	1	1	0	179.26
Riddarhyttan	0	0	0	1	1	967.54
RKS AB	0	0	0	0	2	87.37
Rörvik Timber	0	0	1	0	0	75
SalusAnsvar	0	1	1	0	1	749.13
Sandblom	0	0	1	0	0	358
Sardus	0	0	1	0	1	886.74
Scancem	0	0	1	1	1	21705.89
ScandiaConsult	0	0	0	0	2	377.88
Scandic Hotels AB	0	0	0	1	1	9894.64
Scandinavian Online	0	1	1	0	2	127.15
Scandinavian PC Systems	0	0	1	0	1	N/A
Scania	0	0	1	0	1	5200
Scania	0	1	0	1	2	N/A
SecuritasDirect	0	0	1	0	1	8481.93
Segerström & Svensson	0	0	0	1	1	4215.82
Semcon	0	0	1	0	0	264.52
Sendit AB	0	0	1	1	1	1047.8
Senea	0	0	1	0	1	74.45
Shelton Petroleum AB	0	0	1	1	1	40
Sifab	0	0	0	0	0	14
Sigma	0	0	1	0	1	765.47
Skandia Försäkring	0	0	0	1	2	42720.7
Skanditek Industriförvaltning AB	0	1	0	0	1	1202.5
Skoogs	0	0	1	0	4	380
Song Networks	0	0	1	0	1	3506.79
Spectra	0	0	1	0	2	2819.04

Target	0<Rumor < 2 weeks	Rumor>0	Deal Structure Cash=1 Other=0	Outside Scandinavia	Number of Advisories	Final Deal value
Spendrups Bryggeri	0	0	1	0	0	681.99
Stena-Line	0	0	1	0	1	199.73
Stora	0	0	0	0	1	32564.05
Storheden	0	0	0	0	0	1978.43
Strålfors	0	0	1	0	1	2381.72
Svedala	0	0	1	0	1	13482.22
Swedbank (föreningssparbanken)	0	0	0	0	1	74533.2
Svenska Brand	0	0	1	0	1	148.88
Svenska Orienten	0	0	1	0	3	19
Sydkraft	0	0	1	1	1	23 400
Telelogic	0	0	1	1	0	5070.09
Tornet, Fastighets	0	0	1	0	0	18038.19
Tradedoubler	0	0	1	0	1	5997.42
Trio AB	0	0	0	0	1	189.36
Trio AB	0	1	0	0	1	278.19
TryggHansa	0	0	1	0	0	N/A
TurnIT	0	0	0	0	0	242.29
Utfors AB	0	0	1	0	1	264
Wayfinder Systems AB	0	0	1	0	1	219.55
Verimation	0	0	1	0	0	117
Vision Park Entertainment	0	0	1	0	1	113.47
VLT AB	0	0	1	0	1	782.38
WM-Data	0	1	0	1	2	12649.03
Vostok Energo Investments Ltd	0	0	0	1	0	583.05
XPonCard	0	0	1	1	1	846.44
XPonCard Group AB	0	0	1	0	0	278.88
Y.C.O. Businnespartners AB	0	0	0	1	0	N/A
Zeteco	0	0	1	0	1	306
Zeunerts AB	0	0	0	0	0	N/A
Zodiak	0	0	1	1	1	1459.43
Östgöta	N/A	N/A	1	0	0	2 845

## E - Other regression results

### E1 - Regression with CAR (-5,-1) as the regressand

The standard error is shown below the coefficients in parentheses.

Car -5:-1	1	2	3	4	5
Constant	0.0178* (0.011)	0.0305**** (0.007)	0.0126 (0.011)	0.0216 (0.033)	0.0312 (0.056)
Leak Variable	0.0125* (0.006)		0.0127** (0.006)	0.0136** (0.006)	0.0141** (0.006)
Rumor last 10 trading days		-0.0001 (0.017)	-0.0177 (0.026)	-0.0099 (0.029)	-0.0038 (0.032)
Rumor longer than 10 t. days prior		0.0644* (0.035)	0.0640* (0.033)	0.0715** (0.035)	0.0740** (0.036)
Buyer outside Scandinavia				-0.0024 (0.015)	-0.0007 (0.016)
Ln (Deal Value)				0.0011 (0.005)	0.0005 (0.006)
Number of Advisors				0.0007 (0.010)	0.0012 (0.010)
Ln (Volume)				-0.0055 (0.005)	-0.0055 (0.007)
1997-2000				x	x
2001-2004				-0.0058 (0.018)	
2005-2009				-0.0013 (0.015)	
Cash				0.0168 (0.017)	
Success				-0.0202 (0.021)	
Volume < 10 m.				-0.0021 (0.027)	
Level of significance: *=10%; **=5%; ***=1%; ****=0.1%					
No. Of Obs.	236	236	236	226	226
P -value	0.0549	0.1762	0.0826	0.2312	0.4197
R-sq	0.0236	0.026	0.05	0.0603	0.0697

## E2 - Regressions with CAR (-15,-1) as the regressand

The standard error is shown below the coefficients in parentheses.

Car -15:-1	1	2	3	4	5
Constant	-0.0002 (0.017)	0.0472**** (0.011)	-0.0075 (0.018)	-0.0156 (0.043)	0.0272 (0.070)
Leak Variable	0.0366*** (0.013)		0.0387**** (0.012)	0.0402**** (0.012)	0.0408**** (0.012)
Rumor last 10 trading days		-0.1183 (0.077)	-0.1717 (0.117)	-0.1758 (0.119)	-0.1570 (0.126)
Rumor longer than 10 t. days prior		0.0867 (0.074)	0.0857 (0.068)	0.0950 (0.071)	0.1036 (0.073)
Buyer outside Scandinavia				0.0083 (0.022)	0.0134 (0.022)
Ln (Deal Value)				0.0010 (0.008)	0.0011 (0.009)
Number of Advisors				0.0169 (0.019)	0.0167 (0.019)
Ln (Volume)				-0.0061 (0.008)	-0.0118 (0.011)
1997-2000				x	x
2001-2004				0.0307 (0.027)	
2005-2009				0.0051 (0.025)	
Cash				0.0289 (0.027)	
Success				-0.0594 (0.030)	
Volume < 10 m.				-0.0275 (0.035)	
Level of significance: *=10%; **=5%; ***=1%; ****=0.1%					
No. Of Obs.	236	236	236	226	226
P -value	0.0058	0.1494	0.0044	0.0256	0.0249
R-sq	0.0799	0.027	0.1149	0.1306	0.1553

### E3 - Regressions with CAR (-10,-1) without Alpha and Beta estimated normal returns.

The standard error is shown below the coefficients in parentheses.

Car -10:-1 w/o beta estim.	1	2	3	4	5
Constant	-0.0013 (0.013)	0.0316*** (0.008)	-0.0050 (0.013)	-0.0387 (0.032)	-0.0662 (0.048)
Leak Variable	0.0256** (0.009)	0.0259** (0.009)	0.0258** (0.009)	0.0264** (0.009)	
Rumor last 10 trading days	0.0079 (0.057)	-0.0279 (0.086)	-0.0353 (0.083)	-0.0352 (0.090)	
Rumor longer than 10 t. days prior	0.0440 (0.034)	0.0434 (0.031)	0.0464 (0.033)	0.0403 (0.034)	
Buyer outside Scandinavia			-0.0013 (0.016)	-0.0024 (0.017)	
Ln (Deal Value)			0.0056 (0.005)	0.0067 (0.005)	
Number of Advisors			0.0074 (0.010)	0.0059 (0.010)	
Ln (Volume)			-0.0033 (0.006)	-0.0033 (0.008)	
1997-2000				x	
				x	
2001-2004				0.0100 (0.019)	
2005-2009				0.0266 (0.018)	
Cash				0.0185 (0.019)	
Success				-0.0055 (0.023)	
Volume < 10 m.				0.0021 (0.026)	
Level of significance: *=10%; **=5%; ***=1%; ****=0.1%					
No. Of Obs.	236	236	236	226	226
P -value	0.0049	0.4316	0.0123	0.0564	0.1212
R-sq	0.0789	0.0098	0.0894	0.1022	0.1155



## E4 - Regression with percentage of Total CAR (-10,0)

The standard error is shown below the coefficients in parentheses.

Car % of total event return	1	2	3	4	5
Constant	1.3101 (0.819)	1.3982* (0.721)	1.4142 (0.869)	2.5157 (3.427)	-0.0662 (0.048)
Leak Variable	0.0269 (0.248)	-0.0113 (0.205)	0.0448 (0.193)	0.0403 (0.226)	
Rumor last 10 trading days		3.0851 (3.458)	3.1008 (3.360)	4.2408 (3.354)	4.1741 (3.551)
Rumor longer than 10 t. days prior		-1.2044 (0.740)	-1.2041 (0.740)	-0.3821 (0.544)	-0.7521 (0.690)
Buyer outside Scandinavia				-1.2142 (0.823)	-1.4098 (0.943)
Ln (Deal Value)				0.3244 (0.560)	0.5238 (0.610)
Number of Advisors				-0.3950 (0.637)	-0.5412 (0.695)
Ln (Volume)				-0.7746 (0.654)	-0.3814 (0.432)
1997-2000				x	x
2001-2004				4.1107 (2.531)	
2005-2009				0.8647 (0.637)	
Volume < 10 m.				2.5856 (1.850)	
Level of significance: *=10%; **=5%; ***=1%; ****=0.1%					
No. Of Obs.	236	236	236	226	226
P -value	0.9139	0.124	0.2453	0.7282	0.882
R-sq	0	0.0028	0.0028	0.0203	0.0536