



**SCHOOL OF ECONOMICS
AND MANAGEMENT**
Lund University

The Impact of Special Dividend and Redemption Announcements on the Swedish Stock Market

Bachelor's Thesis

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Syfte: Denna studie syftar till att undersöka marknadsreaktionerna av meddelanden rörande utgivning av specialutdelningar eller införande av inlösenprogram och därmed om dessa meddelanden kan innehålla information.

Metod: En eventstudie har genomförts, där händelsen är dagen för meddelandet av den föreslagna utgivningen av specialutdelningar eller införandet av inlösenprogram. Överavkastningar uppskattades med den justerade marknadsmodellen för två urval, ett urval med meddelanden om specialutdelningar och ett med inlösenprogram.

Teoretiska perspektiv: Signaleringshypotesen liksom hypotesen om en skattdriven klienteffekt är de viktigaste teorierna för denna studie. Den effektiva marknadshypotesen är ytterligare en viktig teoretisk grund som kan medverka till förståelse för marknadsreaktioner, speciellt marknadsreaktioner som sker innan meddelandedagen.

Empiri: Den empiriska undersökningen visar att det finns en statistiskt signifikant överavkastning i samband med meddelanden om utgivning av specialutdelningar. Det går däremot inte att påvisa någon statistiskt signifikant överavkastning i samband med meddelanden om inlösenprogram.

Resultat: Enligt resultatet för urvalet med meddelanden om specialutdelningar är det möjligt att dessa meddelanden kan fungera som verktyg för att överföra information från företagen till den svenska aktiemarknaden. Dessa resultat är speciellt starka de två dagarna som omger meddelandedagen med en statistiskt signifikant överavkastning på 3,94 % vid 0,1 %-nivån. Studien visar dessutom att det föreligger en statistiskt signifikant överavkastning dagarna före meddelandedagen. Någon statistiskt säkerställd överavkastning kunde däremot inte påvisas för urvalet med inlösenmeddelanden.

Abstract

Title: The Impact of Special Dividend and Redemption Announcements on the Swedish Stock Market

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Key words: Signalling hypothesis, special dividend, redemption, abnormal return, Sweden

Purpose: The aim with this study is to investigate the market reactions to announcements of special dividends and redemptions in Sweden and thus if these announcements can signal information.

Methodology: This study is an event study, where the event is the day of the announcement of a suggestion regarding issuance of special dividends or redemptions. The abnormal returns were estimated for two samples with the market adjusted returns model, one including special dividend announcing firms and the other redemption announcing firms.

Theoretical perspectives: The signalling hypothesis and the hypothesis of a tax induced clientele effect are the most important hypotheses for this study. The efficient market hypothesis is another theoretical base that may explain the market reactions to the studied announcements, especially the pre-announcement activities that may occur.

Empirical foundation: The empirical findings show that there is a statistically significant abnormal return upon special dividends announcements. There is however no statistically significant abnormal return for the redemption announcements.

Conclusions: According to the results of the special dividend sample, it is possible that these announcements may be used as conveyors of information from the managers to the Swedish stock market. The evidence is especially strong with a significant abnormal return of 3.94 % at the 0.1 % level during the two days surrounding the actual announcement day. The study also shows that there are some sort of positive pre-announcement activity that is statistically significant. There was however no statistically significant abnormal return upon the announcement of redemption programs and therefore no evidence have been found supporting the signalling hypothesis regarding redemption announcements.

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Chapter 1

Introduction

1.1 Background

During the last year, Swedish public firms have experienced a period with unusually high profits and very strong cash flows (Lindroth, 2005). A firm in a situation like this has to decide upon relevant alternatives regarding distribution of the excess cash. This decision raises essential questions concerning shareholder value and signalling effects. The firm can either reinvest the capital in internal projects or distribute it to the shareholders as cash dividends, redemptions or through a share repurchase. A too large amount of excess cash may be inferior to the firm, since it may function as a signal to the market that there are no good investment options. Furthermore, it can make the firm a target to hostile takeovers, since good takeover candidates are firms with large cash reserves and low debts. A large amount of excess cash can also increase the risk of management investing in projects that would not be invested in otherwise, for the mere reason of spending money (Dittmar, 2005).

Previous studies (Ofer and Siegel, 1987; Asquith and Mullins, 1983) show that a change in the size of the dividend signals information about future earnings of the firm to the stockholders. Hence, management avoid increasing the regular dividend payout if it is only a temporary increase. Special dividends have been used for distribution of temporary excess cash to the stockholders for a long time. The special dividends are usually labeled "extra", "bonus" or "special" in Sweden and in USA even "year-end". Management uses the labels to signal that the special dividend only is a temporary payout. Since the labels are used to signal to the market that the dividend does not convey the same information as an increase of regular dividends (Gombola and Liu, 1999), one may assume that the announcement has no significant effect on the stock price, but previous studies suggest otherwise. Brickley (1983) found that the announcement of special dividends had a positive effect on the stock price, suggesting that they in fact are sending signals to the market. Brickley also presented results indicating that the reaction to an announcement of an increase in regular dividend payout was larger than the reaction from the announcement of the special dividend.

There are tendencies showing that the year of 2005 will be an extreme year considering dividends with an expected increase of 40 % to more than 100 billion SEK compared to 2004. This increase is related to the huge increase in the issuance of special dividends and execution of repurchase/redemption programmes (Herlitz, 2005). Since 2000 it has been possible for Swedish public firms to repurchase stocks and this alternative of reinvestment has been popular, especially the last year. Previous research at Södertörn University College (Olin and Delin-Brindner, 2005) concerning the stock price reaction to the announcements of share repurchases shows small but not significant increases of the stock prices for Swedish firms around the announcement day. Previous research from Lund University (Cederbrant et al., 1997) showed that before repurchases were allowed in Sweden, the announcements of share redemptions had a significant positive impact on the stock price. Despite share repurchases now being legal in Sweden, redemptions still exists and a number of Swedish firms have used this as a way to distribute large amounts of cash to their shareholders this year.

1.2 Problem discussion

A number of studies (Bhattacharya, 1979; Kalay, 1980; Miller and Rock, 1985; John and Williams, 1985) have focused on the signalling hypothesis in relation to issuance of dividends. The signalling hypothesis assumes that an informational asymmetry exists between the firm and the market. In this way, the corporate management can allow the dividends to convey information concerning future earnings. According to this discussion, managers should distribute information about future earnings with regular dividends. Other studies of the American market shows that special dividends (Brickley, 1983; Gombola and Liu, 1999; Jayaraman and Shastri, 1988; DeAngelo et al., 2000) and repurchases (Vermaelen, 1981) also result in market reactions, and thus may signal information. Studies of regular dividend changes among Swedish public firms (Alkebäck, 1997; Andersson et al., 2003; Ford et al., 2002) do not indicate that these changes convey information to the Swedish market. In the absence of previous studies covering the market reaction from the announcement of special dividends and redemptions from Swedish firms, this is an interesting area to study further. This is motivated by the increasing use of special dividends and redemptions in Sweden and that these investment alternatives might be used as tools of signalling.

1.3 Purpose

The purpose of this thesis is to investigate the market reaction to the announcements of special dividends and redemptions in Sweden and thus if these announcements can signal information. The results can be used by management when considering using payout alternatives such as these to convey information to the market.

1.4 Delimitations

This study is based on historical data from Swedish companies listed on the Stockholm Stock Exchange within the period of 2000 - 2005. Only special dividends in cash are studied and therefore not scrip dividends. The research was further limited by exclusively studying quantitative factors and no qualitative investigations, such as reasons for using the chosen payout method or characteristics for firms using the different distribution alternatives were conducted. Repurchases will not be included in this study, since this has already been the subject of a few Swedish studies (Olin and Delin-Brindner, 2005; Håkansson et al, 2003; Kranc et al, 2000) and since this is not a permanent capital transfer to the stockholders, unlike dividend payouts and redemptions. The redemption sample were taken from the years 2004 and 2005. The time limit made collection over more years impossible, since the amount of press releases that needed to be examined in order to find the correct announcements regarding redemptions were extensive. This was due to difficulties of narrowing the search, since no commonly accepted word for redemption is used in these announcements.

1.5 Thesis outline

The outline of the following chapters is illustrated in Figure 1.1 below. In Chapter 2 the methodology used will be discussed and a research method will be chosen. This research method will influence the theory discussion in Chapter 3, where previous studies and related theories are investigated. The research method will furthermore be of use in Chapter 4, where it sets the standard for the collection of historical data. Chapter 5 includes the analysis of this data, and in Chapter 6 conclusions from the analysis will be drawn.

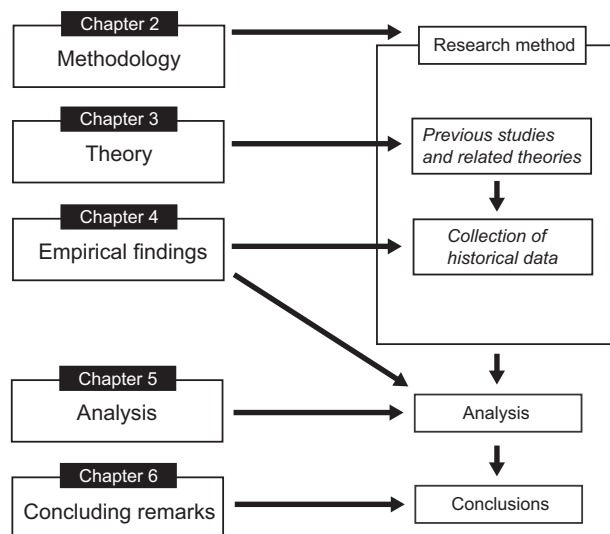


Figure 1.1: *The outline of the thesis.*

1.6 Our audience

For understanding this thesis, basic knowledge in finance is required, as well as an understanding for statistic and quantitative methods. Furthermore, a keen interest in the world of finance and especially corporate dividend policy will encourage the reader to turn to the next page. Our aim is that the results will be useful for students and teachers, as well as managers and other professionals.

Chapter 2

Methodology

This chapter deals with the choices that were made during the work with this thesis regarding a relevant research methodology. The chosen research method will be discussed, as well as the reasons for this choice and the most important alternatives. Furthermore, the reliability and validity of the results from using this method will be discussed, as well as the quality of the sources and attained results.

2.1 Research method

In order to investigate if the announcements of special dividends and redemptions do convey information, the market reaction after these announcements were studied. The term *announcement* is defined in Section 2.3.4. The definition of special dividends in this study is dividends labeled "extra", "bonus" and "special". The obvious parameter to study was of course the stock returns for firms announcing special dividends or redemptions. This is a commonly accepted method when studying dividends and the market's reaction to their announcements. The question in this study is thus of a testing nature, since the focus is on the extent and occurrence of these reactions. Since the extent of this phenomenon is of interest, an extensive approach will be used. This means that many units will be investigated but few parameters will be focused.

To investigate the market reaction after these announcements, an event study (Section 2.3.1) was conducted. The stock returns for a firm announcing a special dividend or redemption were analyzed and adjusted with an index, the OMX Stockholm Price Index (OMXSPI). The choice of this index will be discussed in Section 2.3 below. All calculations have been performed with Microsoft Excel and the diagrams are generated with MatLab (Mathworks).

2.1.1 Deductive method

In this study a deductive approach was used. Existing theory was studied and then applied to the reality, by formulation of hypotheses regarding the market reaction

to the announcements. The major risk with this approach is that only information considered relevant to the researcher is collected and that this data tends to support the researcher's expectations. Important and unexpected results could therefore be lost. The alternative would have been to use an inductive approach. In reality, this means starting by collecting empirical data, without clear expectations, and from this data construct the theories. The major criticism against this approach is that it is impossible to conduct a study with a completely open mind, and that researchers will always have some expectations, whether aware of it, or not (Jacobsen, 2002). With this in consideration, a deductive approach was used, since by paying attention to the criticism against this method, an awareness of the researchers' own expectations from the study and therefore an awareness of the risks were gained. (Jacobsen, 2002). Furthermore, a large number of studies have been conducted in this area of interest, and it is reasonable to let their results serve as a starting point for the present study. These previous studies will be brought to attention in Chapter 3.

2.1.2 Quantitative method

Simplified, quantitative data is data in form of numbers, and qualitative data is data in form of words (Jacobsen, 2002). Traditionally the quantitative method is the most commonly used method in deductive studies (Bryman and Bell, 2003) and a common approach in studies with an extensive nature (Jacobsen, 2002). Nevertheless a qualitative method or a combination of the both could be very fruitful. In this study a quantitative method was chosen. A quantitative approach is useful when the aim of the study is to describe the extent of a phenomenon, and it makes generalization possible (Jacobsen, 2002). The ideal results should be general, so that they can be applied to a larger population. In order to be able to generalize the results to other units than the ones studied, a large number of units need to be included in the study. The focus is thus not on individual differences, but on the generalized results from the whole group. The disadvantages with a quantitative approach are that only a few parameters are usually possible to investigate, that it is a rather inflexible approach, and that the researcher has decided what is important before the actual study (Jacobsen, 2002). Besides these disadvantages, a quantitative method is a good choice when investigating the frequency and extent of a phenomenon, and is hence a good choice of approach in this study. A qualitative approach could also have been used, by for example interviewing analysts about their reactions to announcements of special dividends and redemptions, but in order to gain results that could be generalized to other firms on the Swedish market, a quantitative method was considered a better choice.

2.2 Methodology problems

When using a quantitative approach it is important to consider the method used to obtain an image of the real life. In order to increase the quality of the results

it is important to reflect on and question the reliability, validity and replicability throughout the research process.

2.2.1 Reliability

For a good study, the reliability of the results has to be high. The term reliability addresses the questions about how trustworthy the results are and if similar results will be found if the research is done once again (Bryman and Bell, 2003; Jacobsen 2002). The reliability of the results is determined by how the measuring is performed and the thoroughness during the processing of the information (Holme, 1997). In this study reliable databases have been chosen in order to obtain correct information. Collected data have been analyzed to exclude divergent values. More information about the databases and the research procedure can be found in Section 2.3.

2.2.2 Validity

An important question to be asked is if the measurements are valid. Two different types of validity need to be taken into consideration. High internal validity means that the research methods really measure what they are intended to measure. High external validity means that the results can be generalized and thus are applicable to other areas or to the whole theoretic population. These two types of validity need to be reflected upon in order to increase the whole validity of the results (Jacobsen, 2002). A correct choice of the statistical method is important in order to obtain a good internal validity. Measuring the stock returns after the announcements of special dividends and redemptions were considered a good method for studying the market reaction to these announcements. When considering the internal validity, the questions that needed to be reflected upon and answered are what to be defined as the actual announcement and the time span over which to study the stock returns. These questions will be discussed below in Section 2.3. Though, the most important aspects in order to gain a high internal validity on the results are an awareness of the internal validity problem and a consistent questioning of the methods used throughout the research process. To gain a good external validity the units included in the study need to represent the total theoretic population of interest (Jacobsen, 2002). The total theoretic population in this study is as previously mentioned the public firms noted on the Swedish Stock Exchange. By including a large number of firms from different lists, that have announced special dividends or redemptions the last years, the possibility of generalization increases and the external validity can be considered high. The units included in the study will be discussed in more detail in Section 2.3.

2.2.3 Replicability

A third important question to address is the replicability of the results. The methods used in the research need to be described so that other researchers can replicate the

study (Bryman, 2003). The research process is described in detail below in Section 2.3, to make it possible for other researchers to verify the results and repeat the study.

2.3 The research process

Two samples were collected. The first sample consists of 44 announcements suggesting special dividends in the period 2000-2005. The second sample consists of six announcements suggesting redemptions during the years 2004 and 2005. Stock prices were collected (Section 2.3.2) and converted to stock returns for five different event windows, see Section 2.3.1. The stock returns were adjusted with the OMXSPI for the same period. The index OMXSPI is an all-share index that includes all shares on the A-list and the O-list of the Stockholm Stock Exchange. It is a weighted index based on stock prices of the included shares. The choice of this index is motivated by the wide range of shares included. A t-test was finally used and an analysis was made concerning the effect on the stock return when announcing a special dividend or redemption.

2.3.1 The event study

The event in this study was defined as the first announcement of the upcoming special dividend or redemption. These announcements were usually included in the notice to attend the general meeting. Five event windows were used to gain a good image of the market reactions from the announcements (MacKinlay, 1997). The time span from four days before until 15 days after the event was studied. One event window stretched over this whole period $[-4, +15]$. Another event window stretched from four days before the announcement up until the actual announcement day $[-4, -1]$. This event window was used to gain an image of the market reactions before the release of the public announcements and thus if speculation, insider trading or information leakage have occurred. A third event window included the announcement day and one day before and after $[-1, +1]$. This was included to investigate the immediate market reactions. By also including an event window stretching from the announcement day and five days after $[0, +5]$, the short term market reaction to the announcement could be studied. The last event window used included five days after, until fifteen days after the announcement day $[+5, +15]$. As this event window reaches 15 days after the announcement it is possible to investigate if any possible price reactions may be more than temporary. The firms chosen for this event study were all listed on the Stockholm Stock Exchange.

2.3.2 Data collection

When collecting data the type of data used needs to be considered. Data can be divided into primary and secondary data. Primary data is information that

is collected for the first time and secondary data is data that already has been collected by someone else (Jacobsen, 2002). In this study only secondary data has been collected. The database Affärsdata was used to search for press releases where special dividends and redemption programmes were announced. This database is commonly used in Swedish studies and is widely accepted and considered reliable, and thus compatible with the reliability and replicability questions discussed in Subsection 2.2. Using the databases Reuters 3000 Xtra and OMX, the stock prices were collected as well as the OMXSPI for the days of interest. For both special dividends and redemptions the firms were noted on the Stockholm Stock Exchange. For the special dividends data was collected for the years 2000 to 2005 and all announcements found were included. For the redemption sample, all announcements found in the years 2004 and 2005 were included.

2.3.3 Sample collecting issues

The search for firms conducting a special dividend or redemption was done using the database Affärsdata, as mentioned in Section 2.3.2. Though this is a reliable database it is possible that some announcement events have been missed in the search process, due to the extensive amounts of press releases studied, and that some of these were difficult to interpret.

Totally nine firms found had to be neglected due to the absence of trade in the days surrounding the announcement. A previous study (Jayaraman and Shastri, 1988) has shown that the stock price reaction is higher for the announcement of the first special dividend than for the announcements of special dividends the subsequent years. In our study four firms were found with special dividend announcements two years in a row. Still, these were not sorted out. The reason for this is that not all special dividend and redemption announcements during this period have necessarily been found, as mentioned above. Hence, other first (or subsequent) announcements from the firms might have been excluded (included) without our knowledge. In order to be consistent no firms were disqualified due to this reason.

2.3.4 The announcements

For both the special dividends and the stock redemptions the definition of the announcements in this study was press releases where the news was released for the first time. The actual special dividend or redemption need not have been decided upon at this time, the mere suggestion from the firm to the stockholders that a special dividend or redemption should be decided upon was often considered as the announcement. This news is often included in the notice to attend the shareholders' general meeting. This may be considered as a peculiar definition of the announcement, since it is not certain if there will be a special dividend/redemption or not, and since the size of this has not been decided either. But there is a good reason for this choice of announcement event. The reason is that for almost all firms sug-

gesting special dividends or redemptions, the general meeting voted in favor of this suggestion. For these first announcements included in this study, the general meeting for all the respective firms decided in favor of the suggestions. This could be an indication that the stockholders prefer payouts in cash instead of the cash being invested by the firm, but it can also be a result of the signalling hypothesis. The reason for this consistent approving of these suggestions is however not included in the span of this report, and will thus not be discussed further. No consideration has been taken to simultaneous information in the announcement (for example earnings and investments). Possible contamination effects will be discussed in Chapter 5.

2.3.5 Models

Stock and index returns

Returns for the stock prices and the index were calculated using Equation 2.1 below.

$$R_{it} = \frac{P_1 - P_0}{P_0} \quad (2.1)$$

where R_{it} is the normal return of security i at time t , P_1 is the closing price on the investigated day and P_0 is the closing price the prior day.

The market model

In an event study the abnormal return needs to be calculated. The market model is a statistical model that relates the return of the security to the return of the market portfolio (MacKinlay, 1997). The abnormal return, AR , for the security i at time t is defined by Equation 2.2:

$$AR_{it} = R_{it} - \alpha_{it} - \beta_i R_{mt} \quad (2.2)$$

where R_{it} is given from Equation 2.1, α_{it} = the adjusted return for security i , β_i = the systematic risk of security i and R_{mt} = the return of the market portfolio.

The market adjusted returns model

The risk, β_i , has not been measured within this study, instead the abnormal return was calculated with the market adjusted returns model according to Equation 2.3. This is a derivative of the market model and in this adjusted market model α and β are estimated to 0 and 1 respectively. This means that the risk of a security is approximated to the market risk. This model assumes that expected returns are the same for all shares, but not necessarily constant for each share. In a study

comparing the market model with the market adjusted returns model the results showed that the differences were quite small (Brown and Warner, 1980). Another study (Eades et al., 1985) have examined this from a different perspective and instead focused on the possible differences in risk during the announcement period and they found no significant increase in risk during this period. Therefore the market adjusted returns model has been used in this study to calculate the abnormal return.

$$AR_{it} = R_{it} - R_{mt} \quad (2.3)$$

Cumulative abnormal return (CAR)

The cumulative abnormal return is an aggregation of the abnormal returns along two dimensions, through time and across different securities. By calculating the CAR value fluctuations in the abnormal return are smoothened out. The CAR value between time τ_1 and τ_2 for share i is given by Equation 2.4.

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau_1}^{\tau_2} AR_{it} \quad (2.4)$$

Mean value for all shares (\overline{CAR})

The mean value of CAR , \overline{CAR} , for all shares was calculated with Equation 2.5.

$$\overline{CAR}(\tau_1, \tau_2) = \frac{1}{n} \sum_{i=1}^n CAR_i(\tau_1, \tau_2) \quad (2.5)$$

where n is the number of observations.

Hypothesis testing

The variance of CAR , $VAR(CAR)$, was calculated with Equation 2.6 (Körner and Wahlgren, 2005).

$$VAR(CAR) = \frac{\sum CAR^2 - \frac{(\sum CAR)^2}{n}}{n - 1} \quad (2.6)$$

The standard deviation can then be calculated with Equation 2.7.

$$\sigma(CAR) = \sqrt{VAR(CAR)} \quad (2.7)$$

The null hypothesis, H_0 was defined as that the event did not have any affection on the return of the security, i. e. that the cumulative abnormal return CAR between τ_1 and τ_2 was zero.

$$H_0 : \overline{CAR}(\tau_1, \tau_2) = 0 \quad (2.8)$$

$$H_1 : \overline{CAR}(\tau_1, \tau_2) \neq 0$$

Five different event windows (Section 2.3.1) were tested for both special dividends and redemptions. The hypothesis testings were made using the test function given in Equation 2.9 (Blom and Holmquist, 1998).

$$t = \frac{\overline{CAR} - \overline{CAR}_0}{\sigma(CAR)/\sqrt{n}} \quad (2.9)$$

where \overline{CAR} is the mean value, \overline{CAR}_0 is the null hypothesis, $\sigma(CAR)$ is the standard deviation of CAR and n the number of observations. The tests were based on the 5 % significance level. The t-value t is compared to the critical t-value, t_{crit} , for this level of significance. The critical t-values were taken from Blom and Holmquist (1998). If the calculated t-value t exceeds the critical t-value ($t > t_{crit}$) the null hypothesis will be rejected.

Chapter 3

Theory

3.1 Capital distribution options

At the stage of economic upswing in the market, many companies have to take into consideration the questions regarding distribution of excess liquidity. This excess liquidity can, if not reinvested, be distributed by dividends, share repurchases or redemptions.

3.1.1 Dividends

The dividends can be divided into regular and specially designated dividends (SDDs) (labeled as extra, special or year-end), hereafter referred to as special dividends or SDDs. In Sweden the most frequently used labels are "extra", "bonus" and "special". The regular dividends are issued annually in Sweden and quarterly in the US (Alkeback, 1997). In Sweden, the size of the dividend is regulated by "Aktiebolagslagen" (1975:1385) (Translation: Corporate Act), which states that the dividend can not be issued by an amount that with consideration taken to the firm's consolidation needs, liquidity or general situation contradicts appropriate business manner.

At the point when the firm has to decide how to distribute its excess liquidity, the firm's dividend policy will support and motivate a certain distribution alternative. The dividend policy is based upon a number of factors, where the most important are taxes, signalling effects, investor clientele and the incidence of appropriate projects that could be invested in. Alkeback (1997) has identified three different types of dividend policies:

A firm following *the residual dividend policy* considers reinvestment of internally generated funds as good as or maybe the best alternative to maintain the highest possible rate of return compared to a cash payout. Firms with this policy accept all projects generating positive net present values and at the same time hold the target capital structure stable by using common equity and internally generated funds to finance new projects. The leftovers may be paid out as dividends to the stockhold-

ers. This theory states that dividend payouts do not influence a firm's value, since other reinvestments have already been considered, but on the other hand, dividend payouts may signal information about the available investment alternatives of the firm. On the opposite side *the independent dividend policy* begins with a decision about an appropriate dividend payout and then investment alternatives for the remaining excess cash are considered. Finally the firm's financial policies are adjusted in order to maintain the target capital structure. Another possible dividend policy is *the simultaneous dividend policy*, which is a mix of the above mentioned dividend policies. According to the studies of Miller and Modigliani (1961) the choice between these dividend policies is, which will be discussed in Section 3.2, irrelevant.

3.1.2 Repurchases

The possibility to repurchase own stocks has only been in Sweden allowed since 10th of March 2000 according to the Governments Proposition (1999/2000:34). Share repurchases are regulated in Chapter 7 in Aktiebolagslagen (Corporate Act). Firms listed on the Swedish Stock Exchange may repurchase its own stock and only ten percent of the total amount of stocks may be repurchased. However, repurchases are unlike dividends and redemptions reversible, i.e. if the firms later on finds itself in need of cash, it can sell the repurchased stocks again. Dittmar (2000) listed the reasons why firms repurchase stocks. The main reasons for repurchasing stocks according to Dittmar are to take advantage of presumable undervaluation and also to transfer excess cash to the stockholders. Jensen (1986) also found that stock repurchases are used to distribute excess capital and Vermaelen (1981) found that stock repurchases are used to signal undervaluation to the market. However, Dittmar (2000) also showed that stock repurchases are used to alter the firms leverage ratio, to reduce dilution effects caused by stock options and to avoid hostile takeovers.

3.1.3 Redemptions

Redemptions are regulated by Chapter 6 in Aktiebolagslagen (Corporate Act). Redemption programmes have been increasingly used by Swedish firms the last year. The Swedish Bank Handelsbanken have handled the redemption procedure for a number of firms (including SKF, Atlas Copco (see Appendix C) and Electrolux among others) that have used redemptions to transfer excess capital to the stockholders (Froste, 2005). The major strategy behind this method is tax induced because the method makes it possible for individual investors to postpone the taxes which will be discussed in Section 3.3.1 below. Redemptions were allowed in Sweden before repurchases were and a study by Cederbrant et al. (1997) concerning market reactions to redemption announcement from this period will be discussed in Section 3.5.

3.2 Miller and Modigliani's irrelevance theory

In their first study, Miller and Modigliani (1961) defined an ideal economy with perfect capital markets, rational behavior and perfect certainty. A perfect capital market is characterized by the existence of buyers and sellers of securities that are individually incapable of affecting the stock price, because the transactions are not large enough in relation to the total transaction amount. The prerequisites for this statement are that all investors have costless access to the same information about the stock price and the relevant factors affecting it. There are further no transaction costs nor tax differentials (between dividends and capital gains and between distributed and undistributed profits). Rationally behaving investors always prefer more wealth to less and they are at the same time indifferent to increasing wealth through cash payouts or through increasing value of their holdings. Finally, there is perfect certainty among each investor regarding the firm's future investment programmes and also about the corporation's future profits. Because of this certainty there are no differences between stocks and bonds.

In this perfect world the size of the dividend or the choice of capital distribution strategy would have no effect on the market value of the stocks. In a perfect capital market the firm's distribution strategy is irrelevant and even in a more realistic world with market imperfections (caused by transaction costs or a tax differential between capital gains and dividends) the size of the capital transfer to the stockholders would not have any significant effect on the value of the firm. They argue that this depends on the large fraction of total shares that is held by institutional investors who are unaffected by tax differentials, i.e. the clientele effect. In the same study, Miller and Modigliani also admit that in the case of a change in the size of the dividend some effect of signalling occurs, because the market interprets a change in dividends as information about the firm's future earnings according to the signalling hypothesis. The signalling hypothesis will be discussed in Section 3.3.2 below.

3.2.1 The substitution hypothesis

According to the discussion above, Miller and Modigliani (1961) claim that in a perfect market, dividends and repurchases are perfect substitutes, which means that it does not matter which of these alternatives the firm uses to distribute its excess capital. The substitution hypothesis is thereby fulfilled.

Allen et al. (2000) claim that repurchases and dividends are not substitutes as stated above. The background of this is that institutional investors that aim towards an even flow of dividends during a long period of time prefer dividends to repurchases in a world with a tax differential, where the relatively less taxed institutional investors have an advantage. Institutional investors are in this way attracted to firms with large dividend payouts. This is called the clientele effect and will be further discussed in Section 3.3.1 below.

Grullon and Michaely (2002) state that repurchases of stocks have shown increasing occurrence as an important alternative for American firms to distribute their excess capital. These repurchases are financed to a larger extent with funds that otherwise would have been used to finance increasing dividends. According to their results, American firms view repurchase programmes as substitutes for payout of dividends and firms that have exclusively been using dividends, now are willing (or have already started) to repurchase stocks. This study also shows that firms engaged in repurchase programmes, which have in the same time decreased their dividend payouts, experience no market reaction to their stocks from the dividend cut announcement that is significantly different from zero. Firms without repurchase programmes and that have decreased their dividend payouts experience a significantly negative price drop on their stocks, following the dividend cut announcement.

3.3 Factors influencing the distribution strategies

There are several important factors that affect firms in their choice of distribution strategies or dividend policies. One of the most famous and widespread theories concerning dividend policies was developed by Lintner (1956). He interviewed managers from a diverse group of 28 firms in the US about their dividend policies and concluded that the managers are rather conservative in their dividend policy decisions. They made decisions according to their belief that stockholders prefer a rather stable dividend rate and that the market appreciates stability. Managers also try to avoid dividend changes if they are uncertain about their ability to deliver a dividend at the same level the following years. In general, when considering different distribution alternatives, consideration must be taken to the investor clientele that is attracted to firms with certain capital distribution policies. These distribution policies are subsequently influenced by tax differentials and signalling effects, which are the most important factors influencing this study.

3.3.1 Taxes and the clientele effect

In Sweden, the firm's distributed profits are taxed at both corporation and shareholder level by 28 % and 30 % respectively. This double taxation has been debated for a long time because Sweden is one of few countries that incur tax at both levels without any tax relief to the individual shareholder (Forsgårdh, 2005). This means that there is a tax differential between dividends and capital gains not affecting institutional investors that hold the majority of the Swedish stocks. This may in turn support a clientele effect as will be discussed below. The redemption model that Handelsbanken has suggested to a number of firms in Sweden is based upon this disadvantageous taxation for individual shareholders. The model is further illustrated in Appendix C and it is based upon a split, where one old share becomes a number of new ones. One of these new shares is called a redemption share, which

goes through a forced redemption (Atlas Copco, 2005).

According to Miller and Modigliani (1961) and the irrelevance theory the chosen capital distribution policy does not have any effect on the value of the firm. In a world with market imperfections such as tax differentials between different groups of investors, it is possible that some sort of clientele effect will influence the distribution policy. Miller and Modigliani hypothesized that if dividends are taxed at a different level compared to capital gains, firms paying out dividends to a larger extent will attract different investor clientele than firms issuing almost no dividends at all. Pettit (1977) claims that his study provides the first direct empirical evidence that the demands for certain dividend paying securities are induced by both transaction costs and tax differentials between dividends and capital gains.

A previous study by Elton and Gruber (1970) shows that there is a positive correlation between the dividend yield and the ex-dividend day price drop and that the occurrence of a price drop smaller than the dividend per share is consistent with the hypothesis that there is a tax-induced clientele effect. Subsequently, a change in a firm's dividend policy could cause a costly change in shareholder value, due to transaction costs and possible negative price movements. This is opposed by Kalay (1982), who found that the relative price drop does not necessarily mean that there is a tax-induced clientele effect and the ex-dividend day behavior can not be used as evidence of a clientele effect as inferred earlier. He means that the relative price drop in previous studies is statistically insignificant, because some of the observations seem to be dependent. This counter act were again answered by Elton and Gruber (1984) who think that Kalay (1982) severely underestimated the transaction costs at the present period, but they are still satisfied with the fact that Kalay (1982) despite his adjustments still finds that the results are consistent with a possible tax-induced clientele effect.

Barclay (1987) also studied the ex-dividend day behavior, by comparing firms between 1900 and 1910 before the enactment of the federal income tax in the US, with firms between 1962 and 1985 after the enactment of the federal income tax. He found that the stock prices dropped by the full amount of the dividend during the pre-tax period, which supports the hypothesis that with no tax differentials, investors value dividends and capital gains as perfect substitutes. By comparing the pre-tax results with the results from the period with a tax differential, he found that the addition of a tax differential cause investors to discount the value of the taxable dividends in relation to capital gains.

Lewellen et al. (1978) re-examined the issue of a tax induced clientele effect, but instead of studying large investors they looked at individual shareholders and their demographic attributes. They found that only a weak clientele effect exists and this effect was for example distinguished when comparing younger investors to older ones. Younger investors seem to hold low-dividend paying securities more often.

Older people that hold securities are generally more likely to be attracted to high-yield securities due to the transaction costs. This is because the cash income that is needed to replace previous employment earnings is less costly to obtain from collecting dividends than by buying and selling securities.

A study by Blume (1980) also observes the possible occurrence of a clientele effect amongst individual investors in conformity with Lewellen (1978). He found that the returns on stocks with above (below) average dividend yields were higher (lower) than the returns on non-dividend paying stocks (at the same risk level) between 1947 and 1976. At the same time, there are higher tax rates on dividends than capital gains and therefore the expected situation would be higher before-tax returns on stocks that pay dividends compared to non-dividend paying stocks, i.e. a positive linear relationship between before-tax return and dividend yield would be expected. This means that there are investors that prefer increasing dividends and decreased retained earnings to decreasing dividends and increased retained earnings even though there are disadvantageous tax rates. This fact is consistent with the "bird in the hand" argument, i.e. that some investors prefer certain dividends now to uncertain future cash flows, with the assumption that retained earnings are invested in cash flow producing assets.

According to the previous studies mentioned above there are some who claim that there is a significant tax induced clientele effect and some presenting evidence that is inconsistent with a clientele effect.

3.3.2 The signalling hypothesis

On an efficient market, unexpected changes of dividends will result in market reactions around the announcement day according to Mann (1989). If the changes are positive (negative) and unexpected, there will be a positive (negative) reaction on the stock market. This is because investors assume that important information about the company is signalled through the dividend change. Investors in the real world neither have access to relevant nor costless information regarding the firm's future prospects. The firm can in this way convey information to the investors through the dividends, which is commonly referred to as the signalling hypothesis or the information content of dividends. By changing the dividend payout size, the firm may affect the investors' expectations regarding the future prospects of the firm, which in the end may affect the share price (Alkeback, 1997).

Mann (1989) also suggests that signalling may occur when there is a significant information asymmetry between buyers and sellers. As an example, sellers of high quality products can overcome this asymmetry if they discover a way to signal to the buyers that their particular quality is better. If the seller succeeds to convince the buyer, the seller can sell the product at a higher price. During the past fifty years a large number of studies have covered the area of dividend signalling, but

the majority of these studies cover regular dividends (or make no difference between labeled and unlabeled dividends) on the US stock market. The most recent years have also included studies on dividends with different labels, such as extra and special on other markets than the American. In this subsection, the findings from some of these studies will be summarized.

A study by Brickley (1983) provides insight into the meaning of specially designated dividends (SDDs) in corporate finance. He compares the stock returns surrounding the SDDs to the ones surrounding regular dividend increases. The traditional approach according to Lintner (1956) says that the managers increase the regular dividend only when it is absolutely certain that this level can be maintained for several years. The announcement of regular dividend increases may according to this approach convey positive information regarding the firm's future prospects. When the managers are uncertain about the future prospects of the firm they may instead use a SDD to distribute the excess liquidity, which means that this SDD may not convey as clear information as a regular dividend increase. Hence it is less likely that this SDD will be repeated, because of the temporary characteristics. The results from this study (Brickley, 1983) shows that both the SDDs and the regular dividend increases convey positive information, but the regular dividend increases appear to convey even more positive information than the SDDs. Another interesting finding is that there is no significant difference in earnings changes during the announcement year and the previous year between firms issuing SDDs and firms issuing regular dividend increases. The interesting part is that the firms increasing the size of regular dividends show statistically larger earnings changes during the year after the announcement of the dividend increase.

A study by Bhattacharya (1979) shows why certain firms pay dividends despite the assumption that dividends are taxed at a higher rate than capital gains. A second assumption needed for this study is the presence of an informational asymmetry regarding the cash flows of the firm's productive projects, where investments are done. With the developed model for dividend signalling Bhattacharya shows that the signalling cost which is equal to the tax penalty (the tax differential between the tax rate on dividends and on capital gains) leads the dividends to serve as signals. This is due to the fact that firms with less profitable projects will not signal falsely because of the tax penalty that makes them subject to higher costs when financing the dividends with external funds.

Dielman and Oppenheimer (1984) studied the market reactions around the announcement day for announcements with different messages. There were announcements regarding significant dividend increases and decreases, but also announcements concerning no changes and omissions of dividends. The purpose was to find evidence supporting the signalling hypothesis. Their results show that at the announcement date and the day after there are significant abnormal returns, with positive returns to continuations and increases of dividends and with negative re-

turns to omitted and decreased dividends. They found however that for the group with announcements concerning omitted dividends the market reaction depends on the firms' prior dividend payment stability. A firm that has announced omission and that has a very stable dividend payment history will experience a more negative abnormal return than a firm with a less stable dividend payment history. This result is consistent with the managers' thoughts about dividend payout stability found by Lintner (1956).

Eades et al. (1985) also studied the market response to dividend announcements and found that when the ex-dividend day is close in time to the announcement date the market reaction is sluggish and there is lag due to the confounding of the announcement effects and the ex-dividend effects. They also tried to relate the highly significant increases in returns on the announcement day to changes in risk during this announcement period. This is because the dividend announcements may convey highly important information regarding the value of a certain firm which may lead to increasing risk of the firm's shares. Because of this, the expected returns should increase as the investors demand credit for the risk increase and therefore the positive reaction in stock price may be explained by the increase in risk. The study by Eades et al. showed however that there was no significant increase in beta (the risk of the firm's shares) during this announcement period.

Miller and Rock (1985) developed a model for the firm's dividend/investment/financing decisions that works under the assumption of an informational asymmetry, i.e. that the firm's managers know more about the actual state of the firm's earnings than the investors. They show by this study that the dividend announcement effect is equal to the earnings announcement effect (the price change following the firm's earnings disclosure) and that the dividend announcement effect is the reverse of the financing announcement effect (the price change following the firm's new financing decisions). This means that if the managers decide to decrease the investments to increase the dividends, the investors would overestimate the future earnings, because the dividend announcement conveys information regarding future earnings only through the current earnings. If the managers try to fool the market in this way there will only be a temporary effect, because according to Miller and Modigliani (1961) the market will find out about the true nature of the investment/dividend situation. Miller and Rock agree with Miller and Modigliani's statement above, but they also made clear that the shareholders that managed to sell their stocks at the higher price in fact made a temporary gain.

John and Williams (1985) discuss the existence of a signalling equilibrium. This is related to the situation when managers need to raise funds for investments by either issuing new shares or retire fewer outstanding shares. In either case there will be an unfavorable dilution effect, which may be reduced by using valuable inside information conveyed by a taxable dividend. If outside investors are attracted to this, the current shareholders dilution effect may be reduced. Following this discussion,

the signalling equilibrium equals the fact that the managers maintain the dividends at an optimal level and the outside investors act in a way that the correct stock price can be maintained. Because of this fully revealing equilibrium, there will be no false signalling of dividends (Miller and Rock, 1985). John and Williams criticize the model developed by Miller and Rock, because the dividends will disappear when taxes are introduced and the firms will signal its insider information by the use of less costly repurchases.

The trustfulness of the information content conveyed by the dividends has been studied by Benartzi et al. (1997). They examined whether the information contained in dividends has anything to do with a firm's future earnings. It could be a signal about a future growth in earnings or even a permanently shift (Lintner, 1956) in earnings. The outcome provides no evidence supporting any significant increase in future earnings changes, but instead they found that previous earnings increases are strongly connected to current dividend increases. They also strengthened the old belief that firms announcing dividend increases are less likely to show decreases in future earnings.

The question covering the information content of special dividends and also the question regarding special dividends as substitutes to regular dividends has been studied by DeAngelo et al. (2000). In their retrospect of the issuance of special dividends in the 20th century, they found that special dividends have almost been abandoned during the last 40 to 45 years, after a period when the special dividends were considered close substitutes to regular dividends. They relate this shift to the clientele effect where the shares owned by retail investors have decreased and the institutional ownership has taken over. The special dividends have been less important because the institutional investors are more able to see that the special dividends are close substitutes to regular dividends. Regarding the information content and market reaction to special dividends they found that the stock market generally reacts positively to special dividend announcements (with constant regular dividend payment) when studying firms between 1965 and 1995. The stock price reaction is however not systematically related to the magnitude of the special dividend. The market reacts positively both to increases and decreases in special dividends in relation to the dividend the prior period.

3.4 Market efficiency

The market reaction to the announcements of special dividends or redemptions depend on the market's efficiency. An efficient market according to Fama (1969) is a market where the stock prices are based on all available information and thus reflect this information at all times. Efficiency also includes a time parameter. If a market is to be totally efficient, new information must be included in the stock price very rapidly. If not, some fast reacting investors will be able to make abnormal returns.

Fama (1969) divides this market efficiency hypothesis into three forms. In a weak form of market efficiency the stock prices reflect only the available historical data and with this efficiency future price movements can not be predicted (Arnold, 2005). In a strong form of market efficiency the stock price is based on all information of relevance, even non-public and privately held information. Even though some insiders have more information than others, no one is able to make an abnormal profit in a market with strong efficiency, and this market is totally inefficient. In a semi-strong form of efficiency the stock prices will instead reflect all publicly available information. Investors with inside information can make abnormal returns, but it is not possible to make abnormal returns on analyzing the publicly available information, since this information is already absorbed in the stock price (Arnold, 2005).

If all investors were rational and had the same information, it would not be possible to make abnormal returns. But investors are not necessarily rational in a traditional financial point of view (Nofsinger, 2005). Some investors prefer cash dividends to capital gains even though cash dividends are taxed higher. Private investors will not always react in the same way as an institutional investor.

The semi-strong form of efficiency is the most common form on stock exchanges. However, a study at Lund University (Afanou, 2005) show that the OMX Stockholm 30 (the 30 stocks that have the largest volume of trading on the Stockholm Stock Exchange) has the weak form of efficiency. Another study at Lund University (Lundquist, 1996) showed that the Swedish market was of a rather weak form of efficiency.

3.5 Previous research

3.5.1 Special dividends

Gombola and Liu (1999) test three hypotheses, signalling, free cash flow and the wealth transfer hypotheses when examining the market reaction to SDD announcements. The wealth transfer hypothesis occurs when the firm's assets are shifted to the shareholders and thereby the bondholders experience a loss in proportion to the shareholders' gain. The free cash flow hypothesis states that firms with greater agency problems regarding free cash flow face more powerful price reactions upon dividend increases, because these firms are less likely to increase their dividends. Common characteristics for such firms are poor investment opportunities and a low Tobin's Q (the market value of assets/replacement cost ratio). The signalling hypothesis for SDDs have been studied by Brickley (1983), which was discussed above. Gombola and Liu collected 196 SDD announcements from the period 1977 to 1989. In addition, they only chose firms that had not paid an SDD for at least two years prior and subsequent announcements were excluded. By this selection process the sample will consist of firms with unexpected SDD announcements. This sample con-

sists of 196 firms with an equal amount of announcements. The market reactions were analyzed with the market model and an event window ranging from one day before the announcement to one day after. The results show an average abnormal return on the full sample of 2.663 %, which is significantly different from zero at the 0.01 level. This can be compared to the average abnormal return reported by Brickley (1983) of 2.116 %, who studied 164 firms that made SDD announcements between 1969 and 1979. The results of Gombola and Liu strongly support the signalling hypothesis and it is therefore possible that the SDD announcements convey information about future earnings.

The signalling hypothesis for SDDs were also tested by Jayaraman and Shastri (1988), who studied the stock and bond price reactions to these announcements. Their stock sample consisted of 2023 announcements made by 660 firms between 1962 and 1982. The firms were all listed on either the American Stock Exchange (AMEX) or the New York Stock Exchange (NYSE). The bond sample consisted of 154 straight bonds issued by 63 firms (also present in the stock sample) also listed on AMEX and NYSE. The event window was set from one day before to one day after the announcement day. The average abnormal return of the stock price for the full sample was 1.629 % (significant at the 0.05 level). The abnormal return is higher for firms with fewer SDD announcements over the sample period. They also found that the stock price reaction is higher to the first announcement than for the subsequent announcements. Finally, their results show that bond prices are not affected by SDD announcements, which gives no support to the wealth transfer hypothesis. The stockholders are the ones that gain from this information signalling.

An Australian study by Balachandran and Nguyen (2004) also examined the signalling power of special dividends. The sample included 167 special dividend announcements between 1989 and 2002 issued by Australian publicly listed firms. The abnormal returns were calculated through the market model and they also used two event windows with the first ranging from the day before to the announcement day and the second from the day before to the day after the announcement day. The results indicate that there is an average abnormal return for the sample of 3.43 % for the first event window $[-1, 0]$ and 3.67 % for the second $[-1, 1]$. These are both significant at the 0.01 level. Another useful result comes from their tests on contaminated versus uncontaminated dividend announcements. An announcement may be contaminated by simultaneous reports of for example earnings results. Balachandran and Nguyen managed to separate contaminated dividend announcements from those that are pure. The results from this examination provide no significant evidence of differences in market reactions between contaminated and uncontaminated announcements on SDDs. This shows that the market reactions from the announcements during the sample period are mainly related to special dividend announcements.

Finally, a study by Balachandran et al. (2004) examined the intra-industry impact

of special dividend announcements released on the Australian market with the same sample used by Balachandran and Nguyen (2004). Besides this sample, another sample with an equal amount of rival firms was used. The purpose was to analyze the information transfer within three different industry categories: industrial non-financial firms, financial firms and resources firms. This information transfer may further affect the firms according to either the contagion hypothesis, competitive shift hypothesis or not at all. The contagion hypothesis is accompanied by positive price impact for non-announcing firms in the same industry, i.e. announcements that contain industry wide favorable news. The competitive shift hypothesis is supported by negative intra-industry price impacts. This industry contains firms that are related through a competitive structure. The results of the sample with the announcing firms provide industry specific differences in average abnormal returns. The industrial non-financial industry reached 4.44 % while the average abnormal return for the financial and resources industry was 2.48 % and 2.46 % respectively (with the event window $[-1, 1]$). These returns are significant at the 0.01 level except for the resources industry where there was no significance. When analyzing the information transfer between announcing firms and their rivals it was found that resources firms react positively (supporting the contagion hypothesis) and financial firms react negatively (supporting the competitive shift hypothesis). Regarding the industrial non-financial firms the information transfer did not have any significant effect on the stock price.

3.5.2 Redemptions

Redemptions and the market's reactions to their announcement is a quite unexplored area. However, one study from Lund University (Cederbrant et al, 1997) found a significantly positive market reaction to these announcements on the Stockholm Stock Exchange before the allowance of repurchases. They used a sample of eleven announcements of redemption programmes and estimated the abnormal returns with the market adjusted returns model. The redemption announcements occurred between 1993 and 1997. Their results show that there is an abnormal return of 4.51 % over the event window $[-5, +5]$, which is statistically significant at the 5 % level. The results also indicate pre-announcement activities and therefore they suggest that the market do not show a semi-strong form of efficiency, rather a weak form.

Chapter 4

Empirical findings

The data for the investigated firms are presented in Appendix A (special dividend announcements) and Appendix B (redemption announcements). The attained results from this study are separated into two sections, special dividends and redemptions. The announcement day is defined as day zero in all diagrams and tables. The marks on the corresponding days in the diagrams are based on the closing prices. The null hypothesis (H_0) is rejected if the abnormal return is significantly different from zero. If a significant difference can not be found, the null hypothesis is accepted. As presented in the methodology chapter, the hypotheses are stated below:

$$\begin{aligned} H_0 : \overline{CAR}(\tau_1, \tau_2) &= 0 \\ H_1 : \overline{CAR}(\tau_1, \tau_2) &\neq 0 \end{aligned} \tag{4.1}$$

4.1 Special dividends

For the special dividend samples the estimation of cumulative abnormal returns (CAR) are shown in different diagrams for each year between 2000 and 2005 as well as the average CAR values for all years. The results of the statistical analysis for each event window during the entire sample period are presented in a concluding table (see Table 4.1). The sample size differs from year to year and the sample size used is clearly stated in each case.

4.1.1 Estimation of abnormal returns

The results from the CAR estimation for the year 2000 are presented in Figure 4.1 below. The sample for this year consists of four observations. On the announcement day the CAR value increases drastically to about ten percent followed by a gradual

fall during the following 15 days towards the initial value. For this sample, the announcement only has a temporary impact on the stock price. The diagram also shows that there is a small rise before the actual announcement day.

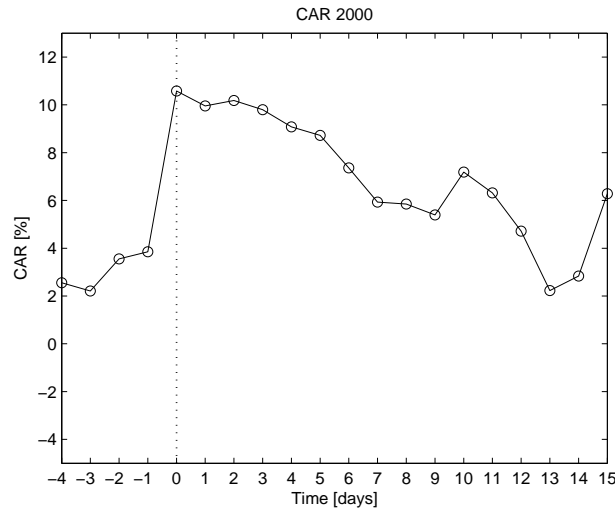


Figure 4.1: *CAR* values for year 2000, 4 observations.

For year 2001 Figure 4.2 presents a gradually rising *CAR* to approximately ten percent although a small leap upwards could be identified on the announcement day. During this period the number of observations is ten and the effect of the announcement is maintained beyond the event window. A small increase occurs before the actual announcement day.

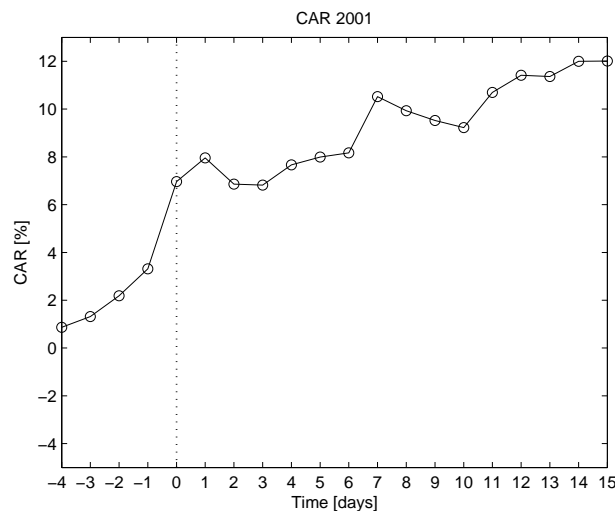


Figure 4.2: *CAR* values for year 2001, 10 observations.

The *CAR* estimation for year 2002 is presented in Figure 4.3. During the an-

nouncement day there is a considerable leap upwards with a following period of erratic movements from the day after the announcement and over the remaining period. This sample consisted of four observations and the effect may be interpreted as rather permanent over the event window. This sample also indicates a slight increase before the announcement day.

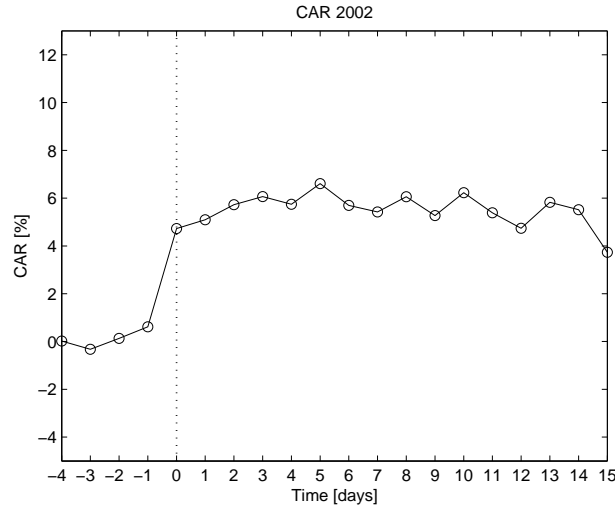


Figure 4.3: *CAR* values for year 2002, 4 observations.

The *CAR* estimation for year 2003 is depicted in Figure 4.4, which presents results fluctuating around the normal return level ($CAR = 0$). This behavior is prolonged until the tenth day after the announcement day, where it declines below zero and then continues to drop. A small leap upwards on the announcement day can be found, but this is only an instantaneous and short positive reaction since the *CAR* estimation on the day after the announcement sinks back to approximately the same value as before the announcement. Seven observations were made in 2003.

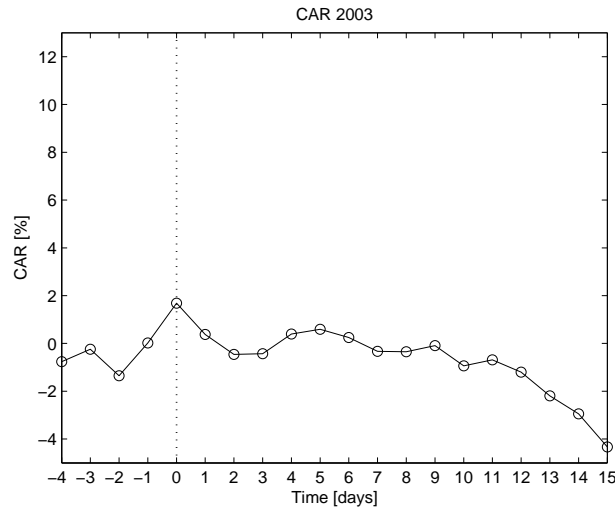


Figure 4.4: *CAR* values for year 2003, 7 observations.

The estimation of *CAR* for the year 2004 is presented in Figure 4.5. Four observations were made for this year. There is a linear increase from the second day before the announcement day to the sixth day after. The most remarkable detail of this sample is that there is no exceptional behavior connected to the announcement day what so ever.

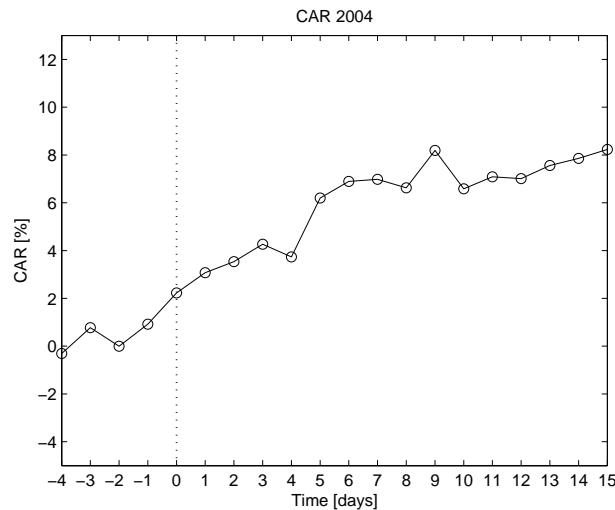


Figure 4.5: *CAR* values for year 2004, 4 observations.

During 2005 there were 15 announcements in the sample, making this the largest. The *CAR* for this sample period is represented by Figure 4.6. In similarity to 2000, 2001, 2002 and 2003 there is a leap, though smaller, on the announcement day. This leap is followed by a plateau and a rise upwards at the eleventh day after the announcement day. Some rice also occurs before the announcement day.

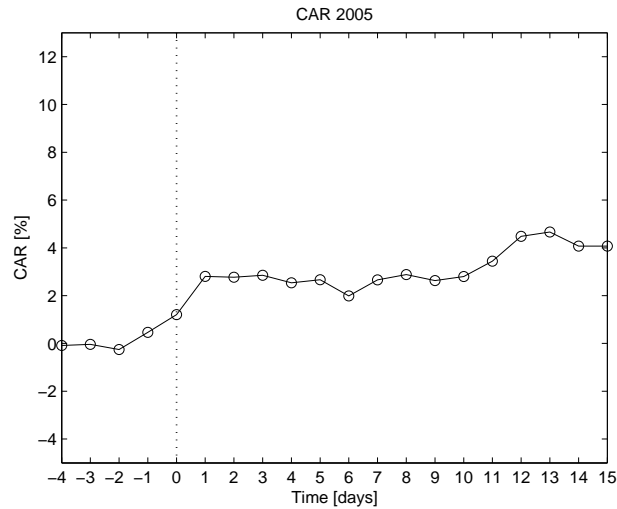


Figure 4.6: *CAR* values for year 2005, 15 observations.

Finally, in Figure 4.7 the years 2000-2005 are summarized and all together there are 44 observations over the entire sample period. The diagram presents a steady increase starting one day before the announcement day. As the announcement is released the *CAR* value leaps upwards and stabilizes at a new higher level, where it remains during the rest of the event window.

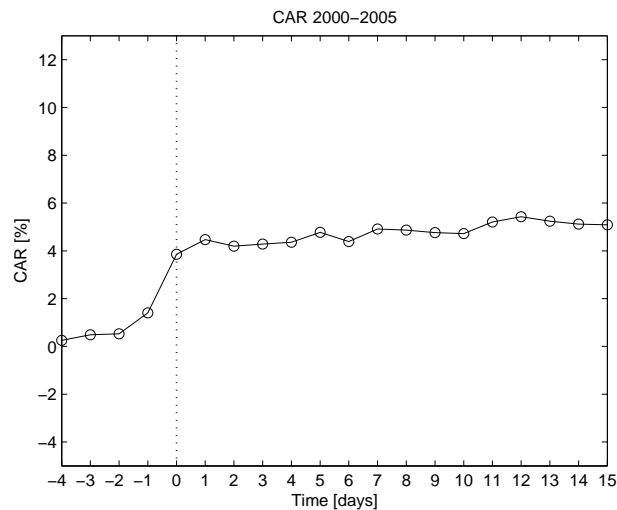


Figure 4.7: *CAR* values for the entire sample period (2000-2005), 44 observations.

4.1.2 Statistical analysis

The statistical analysis is summarized in Table 4.1 below. The table presents the mean value of *CAR* for the different event windows along with the corresponding standard deviation. For all event windows except [+5, +15] the estimated abnormal

returns are statistically significant at the 5 % level. The standard deviation and the mean value increase with the width of the event window, which is expected with increasing interval of the event as the number of observations is constant.

During the event window $[-4, -1]$, which describes the reaction before the announcement day, a positive abnormal return is estimated. This is consistent with some pre-announcement activity that will be discussed in Chapter 5. An analysis of the event window $[-1, +1]$ reveals that it is during this period that the dominant increase of the abnormal return occurs. The results from the event window $[+5, +15]$ shows that the CAR value stagnates at a high level which is characterized by a rather permanent profile. During this period there is no statistically significant abnormal return. The mean value of CAR over the entire announcement period $[-4, +15]$ was 5.1 %.

Table 4.1: *Statistical results from the abnormal return estimation of the special dividend sample.*

Event window	Number of observations	Mean value [%]	Standard deviation [%]	t-value	Critical t-value	H_0	Statistical significant abnormal return
$[-4, -1]$	44	1.40	2.68	3.48**	± 2.02	Rejected	Yes, positive
$[-1, +1]$	44	3.94	6.35	4.12***	± 2.02	Rejected	Yes, positive
$[0, +5]$	44	3.37	7.25	3.09**	± 2.02	Rejected	Yes, positive
$[-4, +15]$	44	5.09	10.9	3.11**	± 2.02	Rejected	Yes, positive
$[+5, +15]$	44	0.73	6.13	0.79	± 2.02	Accepted	No

***, **, *Significant at the 0.01, 0.05 and 0.1 levels, respectively

4.2 Redemptions

This section presents the results for the redemption sample. Data were collected from 2004 and 2005 and the sample consists of six observations, with five observations in 2005 and only one in 2004. As the number of observations for this sample was much less than in the case of special dividends only one CAR diagram for the entire period was generated. The results of the statistical analysis for the entire sample period are presented in a concluding table (Table 4.2).

4.2.1 Estimation of abnormal returns

The results from the CAR estimation over the sample period 2004 to 2005 are presented in Figure 4.8. The pre-announcement period presents a stable profile around the normal level ($CAR = 0$), but at the day before the announcement there is a small increase followed by a slight decrease on the announcement day and a subsequent fall during the following 15 days. The diagram presents a negative stock price reaction to the redemption announcement.

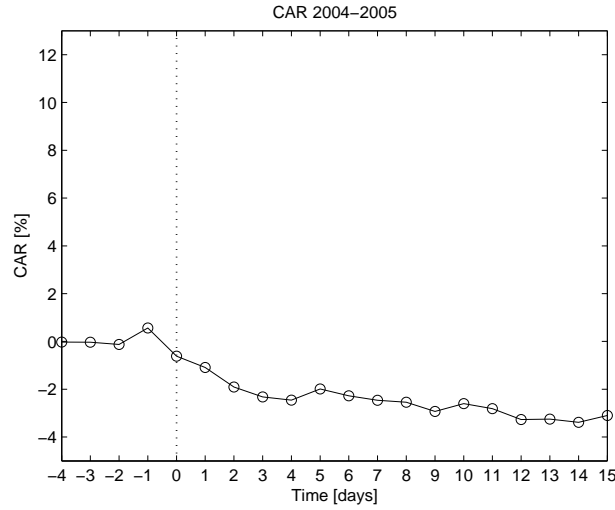


Figure 4.8: *CAR* values for the entire sample period (2004-2005), 6 observations.

4.2.2 Statistical analysis

The results from the statistical analysis are presented in Table 4.2 below. The table presents the mean value of *CAR* for each event window along with the corresponding standard deviation. None of the event windows display a statistically significant abnormal return and the null hypothesis has to be accepted, which means that there is no evidence consistent with abnormal returns to redemption announcements. The mean value of abnormal return shows a decreasing tendency and the standard deviation increases with increasing width of the event window.

Table 4.2: *Statistical results from the abnormal return estimation of the redemption sample.*

Event window	Number of observations	Mean value [%]	Standard deviation [%]	t-value	Critical t-value	H_0	Statistical significant abnormal return
[-4,-1]	6	0.57	1.14	1.21	± 2.45	Accepted	No
[-1,+1]	6	-0.97	3.41	-0.69	± 2.45	Accepted	No
[0,+5]	6	-2.56	3.41	-1.84	± 2.45	Accepted	No
[-4,+15]	6	-3.10	5.76	-1.32	± 2.45	Accepted	No
[+5,+15]	6	-0.65	2.55	-0.62	± 2.45	Accepted	No

Chapter 5

Analysis

The presented results from the estimations of abnormal returns upon special dividend announcements and announcements of redemption programmes will be analyzed and discussed in this chapter.

5.1 The special dividend sample

According to Table 4.1 above, the average abnormal return for the special dividend sample reached 3.94 % with the event window $[-1, +1]$ and this result was statistically significant at the 0.1 % level. This means that there is an abnormal return following this announcement and that there may be some kind of information signalling if the signalling hypothesis is considered. This result may also be compared with statistically significant abnormal returns found in previous studies (with the same event window) of for example 2.116 % (Brickley, 1983), 2.663 % (Gombola and Liu, 1999), 1.629 % (Jayaraman and Shastri, 1988) and 3.67 % (Balachandran and Nguyen, 2004).

There are positive reactions during the days before the announcement $[-4, -1]$, which may be related to leakage of information, insider trade or speculative activity. When comparing the event windows $[-1, +1]$ and $[0, +5]$ it is obvious that the most activity occurs in the first window. During the period $[+5, +15]$ no statistically significant abnormal return was found, which means that there is only normal return during this period. This indicates that the return stabilizes after the first turbulent days surrounding the announcement. Finally, the abnormal return over the event window $[-4, +15]$ is about 5 percent, which should be considered as a rather high abnormal return.

The diagrams for 2000 (Figure 4.1) and 2003 (Figure 4.4) present results that differ substantially from the entire sample period presented in Figure 4.7. The year 2000 was a turbulent period on the stock market with more speculative activity. A possible explanation to the decreasing *CAR* during this year could be that speculating investors are more willing to make short term investments and to sell off

their holdings after an increase in stock price. The results for 2003 are hard to interpret. At the same time, there are only four and seven observations for 2000 and 2003 respectively and therefore no significant conclusions can be drawn. The other years present a similar profile as for the entire period, which is characterized by a dramatic increase from the day before to one day after the announcement day and a subsequent stagnation. With consideration taken to the signalling hypothesis, Miller and Modigliani (1961) claimed that if there is no relevant information conveyed with the announcement, the market reaction will be temporary. The results from the present study indicate that the effect of the announcement is more than temporary (Figure 4.7) which indicate that relevant information is being signalled. As the number of observations for the annual diagrams is low it is hard to draw any further conclusions regarding the differences from year to year.

The results over all years including the 44 announcements provide evidence consistent with the occurrence of abnormal returns to special dividend announcements and it is further possible that managers may use this distribution alternative to signal information to the Swedish stock market.

5.2 The redemption sample

In Table 4.2 the results from the abnormal return estimation for the redemption sample are presented. The negative abnormal returns were not statistically significant from zero and the null hypothesis had to be accepted. For the first few days after the announcement (event window $[0, +5]$) there was an average abnormal return of -2.6 %. As the sample only included six observations and since there was no significant difference from the normal return to the abnormal return it is not possible to conclude that the market reacts negatively to announcements concerning redemption programmes. The signalling hypothesis is thus not supported by these results. The study by Cederbrant et al. (1997) shows however that before repurchases were allowed in Sweden the announcement of redemptions resulted in a statistically significant positive abnormal return. It is possible that the signalling effect from redemptions is not the same today when repurchases are possible options for signalling and cash distribution.

5.3 General discussion

The fact that both TeliaSonera and SSAB have reported issuance of special dividends and redemption programmes during 2005 indicates that the different alternatives of cash distribution may be used complementary and not necessarily as substitutes.

A factor that may affect the results is the risk of the shares (β), which in this study has been approximated to one (equal to the market risk). If the risk of the announcing firm's shares increases during the announcement period the abnormal

return will be smaller (because the normal return will increase) and subsequently reach the breakpoint where the null hypothesis has to be accepted (see Equation 2.2). The results will therefore not support a significant stock price reaction to the announcement, due to a too large increase in risk. As mentioned in Chapter 3, Eades et al. (1985) showed in a study that there was almost no difference in beta during the announcement period and that a significant increase in beta could not be supported. Therefore it is likely that this approximation of β and α will have no significant effect on the results.

The contamination of the announcement with other reports of earnings etc. may also affect the magnitude or the existence of abnormal returns. The redemption announcements were all reported in combination with the closure report including the earnings announcement. The special dividends were mostly reported in combination with the notice to attend the shareholders' general meeting where suggestions regarding regular dividends also are reported. These simultaneous announcements may affect the market reactions. It should be noted that special dividends most often are substantially larger than the regular dividends, even though it is not necessarily the case. Furthermore, as stated earlier in this report, previous studies (Alkebäck, 1997; Andersson et al., 2003; Ford et al., 2002) of announcements concerning regular dividend changes on the Swedish stock market have not found any significant abnormal returns and therefore it is possible that these announcements do not contribute to the market reaction. According to the theory in Chapter 3, and the study by Balachandran and Nguyen (2004) there were no evidence supporting a significant difference in abnormal returns of contaminated special dividend announcements to uncontaminated special dividend announcements. This may however differ from our study of the Swedish stock market and especially on our part-study of announcements regarding redemption programmes. Therefore we can not draw any conclusions regarding the magnitude or existence of a contamination effect of subsequent reports to the market reaction of announcements of special dividends or redemptions.

Since no statistically significant results regarding abnormal returns were found for the redemption sample, it is not possible to draw any conclusions regarding the tax induced clientele effect on the differences in market reactions for the special dividends versus redemptions.

In the present study, some stock price rises were found before the actual announcement day for the special dividends indicating existence of insider trading, information leakage or speculation. Because of the abnormal return around the announcement day, with the assumption that some insiders must have the information before the actual announcement is released, it is reasonable to assume that insiders can make an abnormal return based on their information. This indicates that the market does not have a strong form of efficiency.

Chapter 6

Concluding remarks

6.1 Conclusions

The purpose with this study was to investigate if there are any market reactions to announcements of special dividends or redemption programmes and thus if these announcements can signal information. The results from the special dividend sample provide evidence that are consistent with the occurrence of abnormal returns to these announcements. It is further possible that these announcements may be used as conveyors of information from managers to the Swedish stock market. The evidence is especially strong with a significant abnormal return of 3.94 % at the 0.1 % level during the two days surrounding the announcement day.

There was no statistically significant abnormal return upon the announcement of redemption programmes and therefore no evidence have been found supporting the signalling hypothesis with redemption announcements.

The study also shows that there is positive pre-announcement activity that is statistically significant and during the post-announcement period (from day +5 to +15) there is no statistically significant abnormal return, which indicates a more than temporary.

6.2 Proposals for future research

During the work with this thesis, suggestions for interesting topics of investigation have sprung to mind, and these will be brought to attention in this section.

- Since no significant abnormal return from the announcements of redemptions were found in this study, a more thorough study covering these market reactions both before and after the abolition of the Swedish repurchase restriction is suggested.
- Another interesting area to investigate is the occurrence of special dividends

in different industries, and the impact of intra-industry information transfer, with consideration to the contagion- and competitive shift hypotheses.

- The announcements of special dividends can signal information about the firm's future profits to the stockholders, and therefore it is of interest to investigate if these announcing firms actually attain higher profits.

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Databases

Reuters 3000Xtra

Affärsdata

OMX

ELIN@Lund

	05-02-02	05-02-03	05-02-04	05-02-05	05-02-06	05-02-07	05-02-08	05-02-09	05-02-10	05-02-11	05-02-12	05-02-13	05-02-14	05-02-15
Sandvik														
Security price [SEK]:	286	288.5	286.5	289.5	292.5	289.5	289.5	289.5	288.5	288.5	288.5	288.5	288.5	288.5
Security return [%]:	0.87	-0.69	1.05	1.04	-0.69	1.04	-1.2	1.2	-0.17	0.88	-1.22	1.41	0.35	1.19
Index [%]:	233.51	232.74	234.38	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	236.61	237.6
Index return [%]:	-0.33	0.7	1.27	-0.21	0.74	-1.57	0.74	0.74	-0.03	0.58	-0.74	0.4	-0.27	-0.01
AR [%]:	1.2	-1.4	-0.22	1.24	-0.36	-1.94	-0.36	-1.14	-0.14	-0.75	-1.36	2.36	-0.48	1.01
CAR [%]:	1.2	-0.19	-0.42	0.82	-1.11	-1.1	-1.47	-1.61	-2.36	-3.72	-1.84	-0.83	-0.39	-0.04
Seco Tools														
Security price [SEK]:	324	318	324	326	330	334	340	340	343	340	339	339	338.5	345
Security return [%]:	-1.85	1.89	0.62	1.23	1.23	1.21	1.8	0.88	0	0.88	-0.29	0	-1.18	1.92
Index [%]:	233.51	232.74	234.38	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	236.61	237.6
Index return [%]:	-0.33	0.7	1.27	-0.21	0.74	-1.57	0.74	0.74	-0.03	0.58	-0.74	0.4	-0.27	-0.01
AR [%]:	-1.52	1.18	-0.65	1.43	0.47	3.36	-1.43	0.92	-1.45	0.56	-0.14	0.45	-0.4	0.27
CAR [%]:	-1.52	-0.34	-0.99	0.44	0.91	4.28	3.03	3.95	2.5	3.06	2.92	3.37	2.97	3.23
Hufvudstaden														
Security price [SEK]:	49.7	49.5	48.5	48.5	49	49	49.3	49.3	49.7	49.9	49.7	49.7	49.8	49.8
Security return [%]:	-0.4	-2.02	0	1.03	0	0.61	0	0.81	0.4	-0.4	0	0.2	-2.41	0.98
Index [%]:	234.38	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	237.26	236.63	236.61	237.6
Index return [%]:	1.27	-0.21	0.74	-1.57	0.74	1.24	-0.03	0.58	-0.56	0.14	-0.74	0.4	-0.27	-0.01
AR [%]:	-1.67	-1.81	-0.74	2.6	-1.24	0.65	-0.58	1.38	0.26	0.34	-0.4	0.27	0.01	-0.22
CAR [%]:	-1.67	-3.49	-4.23	-1.63	-2.87	-2.23	-2.8	-1.43	-1.16	-0.82	-1.23	-0.96	-0.95	-1.17
Q-med														
Security price [SEK]:	193	195	197	200	201	195	191	188	186	186.5	187	186.5	187	186.5
Security return [%]:	1.04	1.03	1.52	1.52	0.5	-2.99	-2.05	-1.57	-1.06	0.27	-0.27	-0.27	0.27	-0.27
Index [%]:	234.38	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	237.26	236.63	236.61	237.6
Index return [%]:	1.27	-0.21	0.74	-1.57	0.74	1.24	-0.03	0.58	-0.56	0.14	-0.74	0.4	-0.27	-0.01
AR [%]:	-0.24	1.23	0.78	2.07	3.85	-4.23	-2.02	-2.15	-0.5	0.13	1.01	-0.67	0.53	-0.26
CAR [%]:	-0.24	1.78	3.85	-4.23	-1.63	-2.87	-2.23	-2.8	-1.43	-1.16	-0.82	-1.23	-0.96	-0.95
SSAB														
Security price [SEK]:	170	168.5	169	168.5	170.5	168.5	171	171	171	170	170	168.5	167.5	172.5
Security return [%]:	-0.88	0.3	1.19	-0.3	1.19	-1.47	1.79	0	0	-0.58	0	-0.88	-0.59	2.99
Index [%]:	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	237.26	236.63	236.61	237.6	240.1
Index return [%]:	-0.21	0.74	-1.57	1.24	-0.06	-1.43	1.21	-0.56	0.14	-0.74	0.4	-0.27	-0.01	0.42
AR [%]:	-0.68	-0.44	1.27	-0.06	0.1	-1.34	1.21	-0.62	-0.14	0.15	-0.4	-0.62	-0.59	1.93
CAR [%]:	-0.68	-1.12	0.15	0.1	-1.34	-0.13	0.44	0.3	0.45	0.05	-0.56	-1.15	-1.57	0.36
Nefab														
Security price [SEK]:	168	167	167	167.5	170	175	176	176	176	174.5	175	176	177	178
Security return [%]:	-0.6	0	0.3	1.49	0.8	2.94	0.57	0	-0.85	0.29	0.57	0.57	0.56	0
Index [%]:	237.36	236.87	238.62	234.88	237.88	237.72	239.09	237.74	238.07	236.61	237.26	236.63	236.61	237.6
Index return [%]:	-0.21	0.74	-1.57	1.24	-0.06	-1.43	1.21	-0.56	0.14	-0.74	0.4	-0.27	-0.01	0.42
AR [%]:	-0.39	-0.74	1.87	-0.74	0.99	2.97	0.56	-0.14	-0.11	-0.12	0.84	0.58	0.15	-1.05
CAR [%]:	-0.39	-1.13	0.74	0.99	0.99	3.96	4.52	4.38	4.27	4.16	4.99	5.57	5.72	4.66

Appendix B - Redemption data

Electrolux	04-02-05	04-02-06	04-02-09	04-02-10	04-02-11	04-02-12	04-02-13	04-02-14	04-02-15	04-02-16	04-02-17	04-02-18	04-02-19	04-02-20	04-02-21	04-02-22	04-02-23	04-02-24	04-02-25	04-02-26	04-02-27	04-02-28	04-02-29	04-02-30	04-02-31
Security price [SEK]:	167,5	169,5	172,5	174,5	175,5	177,5	178,5	179,5	180,5	181,5	182,5	183,5	184,5	185,5	186,5	187,5	188,5	189,5	190,5	191,5	192,5	193,5	194,5	195,5	196,5
Security return [%]:	0,9	0,3	1,77	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	1,16	
Index [%]:	205,05	209,02	210,27	211,9	212,41	213,14	213,51	213,81	214,05	214,25	214,41	214,59	214,78	214,96	215,15	215,32	215,49	215,66	215,83	216,00	216,17	216,34	216,51	216,68	216,85
Index return [%]:	1,94	0,6	0,78	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	
AR [%]:	-1,04	-0,3	0,99	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	
CAR [%]:	-1,04	-1,34	-0,35	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	0,57	
SSAB	05-01-20	05-01-21	05-01-22	05-01-23	05-01-24	05-01-25	05-01-26	05-01-27	05-01-28	05-01-29	05-01-30	05-01-31	05-02-01	05-02-02	05-02-03	05-02-04	05-02-05	05-02-06	05-02-07	05-02-08	05-02-09	05-02-10	05-02-11	05-02-12	05-02-13
Security price [SEK]:	163,5	164	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	163,5	
Security return [%]:	0,31	-0,3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Index [%]:	228,35	227,91	225,82	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	228,35	
Index return [%]:	-0,19	-0,92	1,12	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,11	
AR [%]:	0,5	0,61	-1,12	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	0,81	
CAR [%]:	0,5	1,11	-0,01	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	
SKF	05-01-21	05-01-22	05-01-23	05-01-24	05-01-25	05-01-26	05-01-27	05-01-28	05-01-29	05-01-30	05-01-31	05-02-01	05-02-02	05-02-03	05-02-04	05-02-05	05-02-06	05-02-07	05-02-08	05-02-09	05-02-10	05-02-11	05-02-12	05-02-13	05-02-14
Security price [SEK]:	317	312,5	315	324	318,5	318,5	324	315	319	321,5	321,5	326	326,5	326,5	326,5	326,5	326,5	326,5	326,5	326,5	326,5	326,5	326,5	326,5	
Security return [%]:	-1,42	0,8	1,11	1,73	1,11	1,73	2,06	-0,78	0,63	1,88	1,88	1,23	1,06	1,06	1,06	1,06	1,06	1,06	1,06	1,06	1,06	1,06	1,06	1,06	
Index [%]:	227,91	225,82	228,35	228,6	228,6	228,6	229,81	228,16	229,96	229,96	232,25	233,51	232,74	234,38	237,36	236,87	238,62	234,88	237,8	238,62	238,62	237,72	239,09	237,74	
Index return [%]:	-0,92	1,12	0,11	0,53	0,11	0,53	0,41	-1,17	0,79	1,12	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	
AR [%]:	-0,5	-0,32	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	1,1	1,2	
CAR [%]:	-0,5	-0,82	0,18	1,38	0,18	1,38	0,59	-1,18	0,59	1,17	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	0,59	
Atlas Copco	05-01-26	05-01-27	05-01-28	05-01-29	05-01-30	05-01-31	05-02-01	05-02-02	05-02-03	05-02-04	05-02-05	05-02-06	05-02-07	05-02-08	05-02-09	05-02-10	05-02-11	05-02-12	05-02-13	05-02-14	05-02-15	05-02-16	05-02-17	05-02-18	05-02-19
Security price [SEK]:	295,5	299	297	301	301,5	301,5	306,5	308	308	313	314	314,5	311,5	321	319	318	318	315,5	314,5	311,5	311,5	311,5	311,5	311,5	
Security return [%]:	1,18	-0,67	1,35	0,17	0,17	1,49	0,49	1,62	0,32	0,16	0,16	-0,95	3,05	-0,62	-0,31	-0,31	-0,31	-0,31	-0,31	-0,31	-0,31	-0,31	-0,31	-0,31	
Index [%]:	228,6	229,81	228,16	229,96	232,25	233,51	232,74	234,38	237,36	236,87	238,62	234,88	237,8	239,09	237,74	238,62	238,62	237,72	239,09	237,74	238,62	238,62	237,72	239,09	
Index return [%]:	0,53	-0,72	0,79	1,1	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	
AR [%]:	0,66	0,05	0,56	-0,83	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	
CAR [%]:	0,66	0,7	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	1,26	0,43	

	05-02-03	05-02-04	05-02-07	05-02-08	05-02-09	05-02-10	05-02-11	05-02-11	05-02-14	05-02-15	05-02-15	05-02-16	05-02-17	05-02-18	05-02-19	05-02-21	05-02-22	05-02-23	05-02-24	05-02-25	05-02-28	05-03-01	05-03-02	05-03-03	05-03-04	05-03-05	05-03-06	05-03-07	05-03-08	05-03-09	05-03-10	05-03-11	05-03-12	05-03-13	05-03-14	05-03-15		
Gambro	102,5	102,5	103,5	103,5	103,5	103,5	101	101	99,5	98,25	98,25	99	96,75	96,75	97,25	97,25	97	95,25	96	97,25	97	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	
Security price [SEK]:	0	0	0,98	0,98	0,98	0,98	-1,94	0	-1,49	-1,26	-1,26	0,76	-2,27	-2,27	0,52	0,52	-0,26	-1,8	0,79	1,3	-0,26	-0,26	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	-0,52	
Security return [%]:	232,74	234,38	237,36	236,87	238,62	234,88	237,8	237,72	239,09	237,74	237,74	238,07	236,31	236,61	237,26	236,63	236,63	236,61	236,61	237,6	240,1	240,43	240,9	242,37	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51
Index [%]:	0,7	0,7	1,27	-0,21	0,74	-1,57	1,24	-0,03	0,58	-0,56	-0,56	0,14	-0,74	0,4	0,4	-0,27	-0,27	-0,01	-0,01	0,42	1,05	0,14	0,2	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	
Index return [%]:	-0,7	-0,7	-0,3	-0,28	-0,25	1,08	-3,18	0,03	-2,06	-0,69	-0,69	0,62	-1,53	-7,26	-7,14	-7,14	-7,14	-1,8	-1,8	0,37	0,25	-0,39	-0,71	-1,13	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	
AR [%]:	-0,7	-0,7	-1,28	-1,53	-1,53	-0,45	-3,63	-3,6	-5,66	-6,35	-6,35	-5,73	-7,26	-7,26	-7,14	-7,14	-7,14	-8,93	-8,93	-8,31	-8,31	-8,71	-9,42	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	-10,55	
CAR [%]:																																						
Telia Sonera	40,6	41,5	41,5	41,1	41,1	41,4	41,8	42	41,6	41,4	41	40,9	40,5	40,5	40,3	40,2	40,2	40,5	41,2	41,2	41,1	40,9	41,1	40,6	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	40,9	
Security price [SEK]:	2,22	2,22	0	-0,96	0,73	2,19	-1,88	0,48	-0,95	-1,44	-1,44	-0,24	-0,98	-0,98	-0,49	-0,25	-0,25	0,75	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	1,73	
Security return [%]:	234,38	237,36	236,87	238,62	234,88	237,8	237,72	239,09	237,74	238,07	238,07	236,31	236,61	236,61	237,26	236,63	236,63	236,61	236,61	237,6	240,1	240,43	240,9	242,37	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51	242,51
Index [%]:	1,27	1,27	-0,21	0,74	-1,57	1,24	-0,03	0,58	-0,56	0,14	-0,74	0,4	-0,74	0,4	-0,27	-0,27	-0,01	-0,01	0,42	1,05	0,14	0,2	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	0,61	
Index return [%]:	0,95	0,95	0,21	-1,7	2,3	1,66	-1,84	-0,1	-0,39	-1,58	-1,58	0,5	-1,38	-1,38	-0,23	-0,24	-0,24	0,33	0,68	0,68	-0,38	-0,68	-0,12	-1,27	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	-0,28	
AR [%]:	0,95	0,95	1,15	-0,55	1,75	3,4	1,56	1,46	1,07	-0,51	-0,51	-0,01	-1,39	-1,39	-1,62	-1,86	-1,86	-1,53	-0,86	-1,24	-1,24	-1,92	-2,04	-3,32	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59	-3,59		
CAR [%]:																																						

APPENDIX B - REDEMPTION DATA

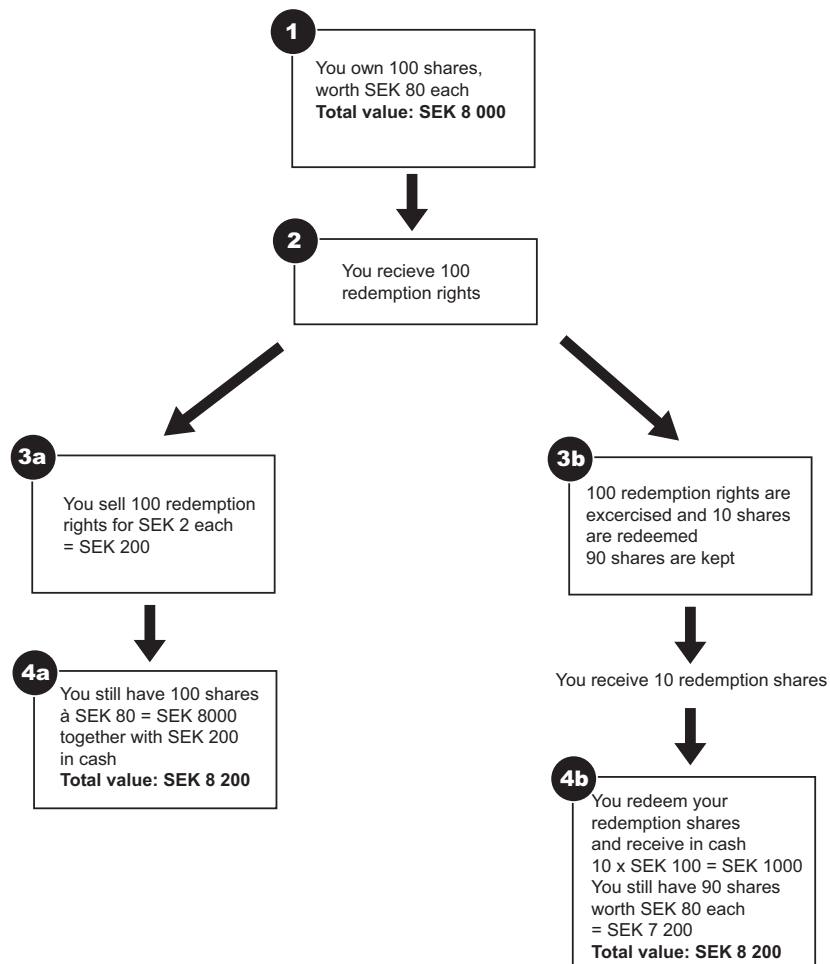
Appendix C - Redemption programme

Redemption - an example

In this example a redemption process is described for an owner of 100 shares. The owner has two alternatives:

- 1) Sell the redemption rights
- 2) Exercise the redemption rights and have shares redeemed.

Assumption: The net worth is SEK 100 per share with share price of SEK 80 during the whole period.



Source: Atlas Copco (2005)