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Stock Market Reactions and Offering Discounts of Swedish Equity Issues[☆]

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Abstract

This paper investigates the characteristics of rights offerings and private placements conducted by firms listed on the Stockholm Stock Exchange between 1986 and 2005. Specifically, we study stock market reactions and offering discounts at their respective announcements in order to recognize which factors the stock market takes into consideration when judging the merits of an equity issue. We find that Swedish rights offering announcements are accompanied with a negative average abnormal return of -2.0%, while private placements are associated with a 2.1% positive abnormal return. The average discounts for rights offerings and private placements amount to 40.9% and 5.5%, respectively. Swedish corporate law has a restrictive take on the acceptability of using private placements as a vehicle for issuing equity, whereas rights offerings are fully in line with current legislation. On these grounds, we interpret the merits of private placements in order to judge whether the current legislation can be motivated from a shareholder wealth perspective. Based on the results, we conclude that shareholders of firms conducting private placements are, on average, *better off* after the issue, whereas the opposite holds for rights issues. Thus, we argue that prohibition of private placements cannot be motivated on the basis of shareholder wealth maximization.

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1 Introduction

The choice between different sources of finance for operational purposes has been subject of much research in recent decades. Particular attention has been given to the relative choice of finance between retained earnings, debt or equity. Newspaper articles have observed that certain types of equity issues give rise to significant stock market reactions, which could seriously affect firm value in the eyes of outside investors. On these grounds, it is vital for companies and regulators to understand the stock market reactions equity issues give rise to and consequently, what makes a particular issue value-creating or not. Studies within this area on the Swedish market are very sparse, and not extensive enough to give a thorough understanding of the fundamentals of Swedish equity issues. For these reasons, we will study the characteristics of Swedish equity issues from companies listed on the Stockholm Stock Exchange from 1986 to 2005 and investigate stock market reactions following their announcements. We are confident that this will give valuable insights to not only academics, but also to legal practitioners and corporate finance specialists.

An equity issue conducted by a listed firm, known as a seasoned equity offering (SEO), can come in one of three forms - a *public offering*, a *rights offering* or a *private placement*. A public offering is an issue where everyone in the general public has rights to sign up for new shares. It is currently the predominant equity issue method used in the United States, whereas it is practically non-existent in Sweden and other European countries. A rights offering refers to an equity issue where all existing shareholders of the issuing company have right to sign up for new shares on a pro rata basis at a certain price and during a certain time period. Since all existing shareholders are eligible to sign up for new shares, there is a possibility that they will all sign up for shares, in which case there will be no *dilution* of share value and no change in ownership structure.^{1,2} Such an issue can thus be regarded as more or less a reshuffling of capital from investors to the company, leaving the firm value *per share* exactly the same. In reality, however, the issue may be priced at a *discount* to current market price.³ Since the existing shareholders are allowed to resell their subscription rights, assuming efficient markets, no wealth transfer from existing shareholders to outside investors should take place, i.e. there would be no dilution of share value, and no stock market reactions would exist.⁴

¹ Note that we will use the terms rights offerings, rights offers and rights issues synonymously.

² The term *dilution* stands for the reduction in value that results from the fact that the issue leads to a higher number of shares over which firm value must be divided. Also, the term *dilutive* will be used in the same fashion.

³ Discount is defined as the closing price on the day after the offering minus the issue price, divided by the closing price on the day after the offering. Also note that premiums are viewed as negative discounts.

⁴ The terms subscription rights and pre-emptive rights will be used interchangeably.

Anecdotal evidence from newspapers, however, indicates that the stock market reactions for rights issues seem to be negative on average, which is quite puzzling given our theoretical reasoning. For example, the day after the announcement of the 30 billion SEK rights issue by telecommunications giant Ericsson in 2002, the Swedish newspaper *Dagens Industri* reported of a 24% reduction in market capitalization, in just one day. Previous academic research on rights offerings, however, has yielded mixed results. Examining the Swedish market, Molin (1996) documents negative and Cronqvist and Nilsson (2005) find positive average stock market reactions following rights issue announcement, respectively, both of which are insignificant. On the Norwegian and Swiss market, Bøhren, Eckbo and Michalsen (1997) and Loderer and Zimmermann (1988) find positive and significant abnormal returns and, in contrast, Armitage (1999) and Slovin, Sushka and Lai (2000) find negative and significant abnormal returns for rights offerings the UK market.⁵ In other words, previous research has not succeeded in determining if rights issues, on average, can be regarded as value-creating or not.⁶ In Ericsson's case, the reaction was most likely due to the realization of investors that the company was in worse financial position than originally anticipated.

Private placements, on the other hand, are targeted to *specific* investors that may or may not be affiliated with the firm.⁷ If these specific investors are offered to buy newly issued shares below the current market price, i.e. at a discount, the existing shares of the company will lose value in the marketplace, predicting a negative effect on firm value. It is on these grounds that private placements are often criticized for benefiting new investors at the expense of existing shareholders. However, this criticism neglects the fact that there may be other factors at work that may affect the stock price at the announcement. In fact, many studies have shown that private placements actually have zero or even *positive* stock market reactions at the announcement, which indicates that the dilutive effects are in fact *offset* by other factors.

In Sweden, Molin (1996) has found a statistically significant abnormal return of 3.2% by investigating 76 private placements between 1980 and 1994. In addition, Cronqvist and Nilsson (2005) find a positive stock market reaction of 7.3% at the announcement of private placements for the years 1986-1999 measured over the three days surrounding the announcement. This suggests that private

⁵ Note that we regard abnormal return as the return of an individual security in excess of what can be considered a normal return in the equity markets. Also note that the expression *stock market reaction* will be used synonymously with abnormal return throughout the paper.

⁶ We begin by making the assumption that positive stock market reactions are equivalent to increases in firm value, and further on, we will relax this assumption.

⁷ We will use the terms private placement, private equity placement, private issue and private offering interchangeably throughout the paper.

placements carried out by Swedish firms are indeed value-creating, both to the new investors and the existing shareholders.

The positive stock market reactions to private placements are quite intriguing, considering the fact that Swedish corporate law has a very restrictive take on issuing equity through private placements, whereas rights issues are generally recommended. If private placements are indeed value-creating to all parties as predicted by the stock market, why constrain the use of private placements as a form of raising capital?

Private placements were first allowed through a legal amendment in 1973, mainly to facilitate investment by the large national pension funds (Proposition 1973:93). Swedish corporate law has two principles that are used to judge equity issues. The *equal treatment principle* states that all shareholders should be treated equally, for example in terms of issue discounts and the right to subscribe to new shares (Aktiebolagslag 3:1). In addition, the *general clause* of Swedish corporate law declares that the assembly is prohibited from coming to a decision that could give an undue advantage to a shareholder or someone else, while being at a disadvantage for the company or an individual shareholder (Aktiebolagslag 9:37). Interpreting these two principles strictly, it means that the existing shareholders should always have the right to sign up for new shares in equity issues and that the use of private placements does not concur with Swedish corporate law. Exceptions to the rule, however, may be possible if the private placement is justified on what the legislation refers to as "objective grounds" (SOU 1971:15 and Proposition 1973:93). What situations should be considered as objective grounds is yet to be determined. The Swedish Standing Committee, however, has stated that it should be exceedingly rare for a private placement of equity to take place on any terms without conflicting with the general clause (LU 1973:19).⁸ The Stock Market Committee interprets these objective grounds in a slightly different way and states that it would only be acceptable to issue equity privately if a company is in a financial crisis and the only way to survive is by means of a private placement (Aktiemarknadsnämndens uttalande, 2002:2).

According to Johansson (2004) three factors influence the legal assessment of a private placement and its consistency with the general clause. These are: (i) the new shares' issue price (discount); (ii) the change in ownership conditions in the company; and (iii) the motive behind the issue (purpose). Most weight, however, tends to be assigned to factor (i) and (iii).

We question this view of legal practitioners, where the acceptability of using private placements is judged on factors such as the change in ownership structure and the motive behind the issue, which

have no direct empirical link to the value creation benefits shown in previous research. If existing shareholders actually gain from private placements while losing from rights issues, imposing restrictions on value-creating activities would not only be irrational, but also inefficient from the firm's point of view. On these grounds, we want to investigate the characteristics of both rights issues and private placements in Sweden in order to examine how the stock market reacts to certain offerings, by comparing the two equity issue methods and interpreting the information conveyed by the announcement of these issues.

The objective of this paper is threefold. First, we want to describe the characteristics of Swedish equity issues conducted during the last 20 years, i.e. between 1986 and 2005. Particular attention will be placed on discount characteristics, volume and ownership distribution over time, the target of and purpose behind the issue, and the stock list at the Stockholm Stock Exchange the firm was listed on at the time of the issue.⁹ Second, we want to measure and explain the variability in rights issue- and private placement discounts and stock market reactions at their announcements and see to what extent these issues are dilutive or not. In other words, we want to identify the factors that the stock market takes into consideration when establishing the merits of an equity issue. Third, the purpose of the paper is to determine if a direct application of Swedish corporate law is in line with shareholder wealth maximization as judged by the stock market reactions at the announcements of private placements. Such an application would rule out the use of private placements and lead firms to issue equity through rights issues instead. The overall purpose of the corporate law is to maximize shareholder wealth, and if the current criteria for judging equity issues do not serve this purpose, it may be reasonable to adjust current legislation. It is the authors' conviction that the investigation we perform will have interesting and important practical implications for not only legislators as stated above, but also professionals interested in predicting the effects of a particular issue.

This paper expands on previous research in numerous areas. First, using hand-collected data from a period of 20 years for all companies ever listed on the main Swedish stock exchange lists, this study is, to our knowledge, the most thorough survey of rights offerings and private placements ever conducted on the Swedish marketplace. For example, over 300 prospectuses from the National Library of Sweden were investigated and over 800 press releases were examined, specifically for this study. We will in great detail show the characteristics of Swedish equity issues in terms of e.g. discounts and equity issue volumes, and their development over time. Second, this paper is

⁸ The Standing Committee is called *Lagutskottet* in Swedish

⁹ Note that a large portion of this paper will be focussed on descriptive characteristics of the equity issues in our sample.

unprecedented by its thorough investigation of Swedish rights offering and private placement stock market reactions and the determinants of these effects. Third, it expands on previous research by focusing on the fallacies of the current legislation from a corporate finance perspective and proves that private placements are, in contrast to popular belief, actually beneficial to existing shareholders, on average. We are certain that this study will have strong practical implications beyond previous Swedish SEO research.

The remainder of this paper is organized as follows. Section 2 describes the theories and hypotheses of stock market reactions of equity issues and the purpose of issuing equity with a discount to the current market price. Section 3 explains the methodologies used in the event study as well as the methodologies used to perform the cross-sectional regressions. Section 4 describes the data collection procedure used to attain the current data set as well as general characteristics of the Swedish equity issues during the period 1986-2005. In section 5, we investigate the stock market reactions to rights offering and private placement announcements. Section 6 presents the results from our cross-sectional regressions used to explain the discounts and stock market reactions, and the main findings are presented in section 7. Section 8 concludes with suggestions for further research.

2 Theoretical Foundation and Hypotheses

In order to interpret and explain the discounts and stock market reactions for rights issues and private placements in our samples, we present in this section the main theories in the field of equity issue announcement effects, tailored to meet the purposes of the paper. We begin by reviewing the basics of capital structure theory to be able to discern the hypotheses that can help explain discounts as well as the stock market reactions that appear in conjunction with our equity issues.

2.1 *Capital Structure Irrelevance*

In a Modigliani and Miller (1958) framework, the value of a firm and hence the cost of capital is indifferent to the choice of financing.¹⁰ In such a world, issuing equity or rearranging the capital structure would not affect the value of the firm, and by consequence, there would be no stock price reactions to equity issues.

We find these assumptions to be all too restrictive, however, to be applied on real world situations. Yet, the Modigliani-Miller model and its assumptions serve as a framework for finding the factors that *do* play a part in the stock market's reactions to announcements of equity issues. More

¹⁰ The Modigliani-Miller model relies on the assumptions of complete markets, symmetric information, efficient markets, fixed and exogenous cash flows, no bankruptcy costs and that securities only give cash flow rights.

specifically, we find it useful to question the assumptions of asymmetric information, that markets are efficient and that mispricing does not occur, that securities only give cash flow rights and lastly that the firm's cash flows are fixed and exogenous (Modigliani and Miller, 1958).

Using these assumptions as a starting point, we will continue by discussing the announcement effects from an *adverse selection* point of view, which is an ex ante effect of asymmetric information between management and investors. Second, we will discuss how the *timing* of equity offerings may affect the stock market returns through periods of favourable conditions for equity issues. Third, we will give an overview of theories that explain the abnormal return from an *moral hazard* point of view, arguing that the stock market reactions reflect information about an ex post effect of asymmetric information concerning agency problems within the firm. Fourth, we will mention a few words about the direct effects of capital structure through adjusted debt-to-equity ratios, an effect that deviates from the Modigliani-Miller framework through the fact that the firm's cash flows are not fixed and exogenous, but rather affected by the choice of financing for different reasons. Fifth, we will describe how inefficient markets in terms of illiquidity can affect both discounts as well as the abnormal return following announcements of private placements.

2.2 *Adverse Selection*

The most common framework for understanding stock market reactions in conjunction with announcements of equity issues is that of asymmetric information between management and investors. The Myers and Majluf (1984) model aims to capture the ex ante effects of asymmetric information for public offerings.¹¹ In this framework, it is assumed that management knows more about the true value of the firm than do outside investors and that management maximizes the utility function of the existing shareholders. Broadly speaking, one may view their model as a classic lemons and peaches situation applied to equity issues, where uninformed investors consider each firm to be equally valuable, even though some firms (peaches) are in fact undervalued and other firms (lemons) are overvalued in the marketplace. If a firm is undervalued, dilutive effects will make equity issues costly for existing shareholders and only firms that are relatively overvalued will choose to issue shares. In other words, a situation of adverse selection in the market for public offerings will emerge, making it costly for firms to issue equity publicly. These costs are commonly

¹¹ Note that this paper focuses solely on rights issues and private placements, and not public offerings. However, for the interested reader, a partial list of previous public offering research include Pettway and Radcliff (1985), Asquith and Mullins (1986), Masulis and Korwar (1986), Mikkelson and Partch (1986), Hess and Bhagat (1986), Kalay and Shimrat (1987), Barclay and Litzenberger (1988), Choe, Masulis and Nanda (1993), Masulis (1983), Korajczyk, Lucas and McDonald (1990), Hansen and Crutchley (1990), Brous and Kini (1994), Sant and Ferris (1994), Loughran and Ritter (1995), Jegadeesh (1998), Wu (2000), Brous, Datar and Kini (2001), Karim et al. (2001), Altunkılıç and Hansen (2003), and Marciukaityte and Szewczyk (2004).

referred to as adverse selection costs. Investors understand the incentives of managers of only issuing shares when the firm's stock is overvalued, and interpret the firm's decision to issue equity as a signal of low intrinsic value, leading to a negative stock market reaction for public offerings.

2.2.1 *Adverse Selection – Rights Issues*

2.2.1.1 *Adverse Selection – Rights Issues – Abnormal Return*

The Myers and Majluf (1984) model was not developed to be applied to rights offerings. Nevertheless, some scholars argue that, under certain assumptions, the Myers and Majluf (1984) model can be extended to explain the stock market reactions to rights offerings. It is important to note, however, that not all researchers agree on the applicability of the Myers and Majluf (1984) model on rights issues, and there is a large debate between financial economists of the true reasons for the stock market reactions following announcements of rights offering.¹²

For example, the model by Eckbo and Masulis (1992) builds on the Myers and Majluf (1984) model by certain, crucial assumptions. First, it relies on the assumption that the existing shareholders can participate in the issue and that their subscription rate is exogenous.¹³ Second, a liquid market for pre-emptive rights has to exist. In light of the Swedish institutional setting, we find these assumptions to be quite reasonable. Along the lines of Myers and Majluf (1984), the Eckbo and Masulis (1992) model also assumes that management has inside information of firm value that existing and outside investors are not aware of. In the choice between issuing and not issuing through a rights offering, management will, given a certain take-up level, choose to issue shares if the firm is overvalued relative to the dilutive effects of having outside investors placing capital in the firm below the true firm value. Investors understand their incentives of only issuing shares when the overvaluation is considerable, and interprets the decision to perform a rights issue as negative information. By consequence, this leads to negative abnormal return at the announcement of the rights issue. The critical assumption here is that the take-up level is exogenous. If existing shareholders participate in the issue on a pro rata basis, there will be no wealth transfer from the existing shareholders to outside investors, and consequently, there would be no stock market reaction. If the take-up is less than 100%, and those shareholders who choose not to participate resell

¹² For example, Wu and Wang (2002) as well as Wu and Wang (2004) argue that neither the Myers and Majluf (1984) model, nor a generalized version of it can be used to explain stock market reactions following rights issue announcements. Eckbo and Masulis (1992), on the other hand, speak in favour of an application of the Myers and Majluf (1984) model to rights issues under certain strict assumptions. Other studies, e.g. Hou and Meyer (2002), apply the model directly to rights issues.

¹³ Please note that we use the terms subscription rate and take-up level interchangeably to denote the share of the existing shareholders who choose to participate in the issue, instead of reselling their subscription rights to outside investors or simply letting them expire.

their pre-emptive rights to outside investors, adverse selection costs would emerge. In other words, only the part of the issue not subscribed to by existing shareholders is subject to adverse selection costs. Consequently, we expect higher adverse selection costs the lower the subscription rate by existing shareholders.¹⁴ Furthermore, in line with the Myers and Majluf (1984) model, one can also argue that the *level* of asymmetric information is, contingent on a certain take-up level, negatively related to the stock market reaction for rights issues, since high asymmetric information leads to high adverse selection. By consequence, small firms, which are thought to have a high degree of asymmetric information between management and investors, are associated with high adverse selection costs. Thus, according to theory, there will be a positive relation between firm size and the stock market reaction for rights issues. Closely related to asymmetric information theories, we also argue that the higher the investment opportunities are for the firm, the more positive will the stock market reaction be at announcements of rights offerings.

An alternative theory of stock market reactions for rights offerings is proposed by Wu and Wang (2002). They hypothesize that managers enjoy private benefits of control that are unknown to outside investors, and that are not consistent with shareholder wealth maximization.¹⁵ The theory is based on the notion that management maximizes their own wealth objective function that includes both the value of their own holding and the private benefits of control of new investments. Using a private placement, which would increase monitoring of existing management or the controlling shareholder, would thereby decrease management's ability to consume private benefits of control. By consequence, managers tend to issue equity through rights offerings rather than through private placements if the latter would imply reduced private benefits of control not offset by any gains in their own holdings. Therefore, they argue that the choice of issue method signals the degree of private benefits in the firm and hence the amount of agency problems. Hence, choosing a rights offering signals that the amount of private benefits of control of the management is high, which the market interprets negatively, leading to a negative stock market reaction. Their model also predicts that the amount of investment opportunities cause firms to choose private placements over rights issues, causing the stock market to interpret rights issues negatively, since they are signals of low investment opportunities. In addition, we argue that a high level of asymmetric information gives room for the management to enjoy private benefits of control with less supervision of existing shareholders, and that rights issues with high levels of asymmetric information should serve as a

¹⁴ Unfortunately, data on the take-up level in Swedish rights offerings are not readily available, and we will therefore not shed light on this aspect in the subsequent cross-sectional analysis.

¹⁵ Naturally, if the firm is owned 100% by the management, shareholder wealth maximization will be equivalent to their private benefits of control.

stronger signal of the amount of agency problems. In other words, we expect the level of asymmetric information to be negatively related to abnormal return, just as the Eckbo and Masulis (1992) model predicts.

Table 1
Adverse Selection – Rights Issues – Abnormal Return

Underlying factor	Effect on abnormal return
Level of asymmetric information between management and investors	(-)
Firm size	(-)
Investment opportunities	(+)

2.2.1.2 *Adverse Selection – Rights Issues – Discounts*

As for rights offering discounts, the Myers and Majluf (1984) model implies the following. Since the part of the rights issue not subscribed to by existing shareholders is subject to adverse selection costs, management has incentives to reduce these adverse selection costs by setting a high discount, and thereby increase the economic incentives for existing shareholders to participate in the issue. Again, the higher the take-up level, the less adverse selection costs, so management has indeed incentives to induce a high take-up level through discounts. In addition, since the level of asymmetric information is positively related to adverse selection costs, investors should demand higher discounts if the level of asymmetric information is high. Another explanation for discounts in rights offerings is that in Sweden, companies need to disclose all price-relevant information at the announcement of the issue. Between the announcement date and the period where shareholders are allowed to buy shares, the share price might move substantially.¹⁶ This forces managers to forecast and predict what the market price of the stock will be during the signing period. If the issue price is more than the market price, no issuers would be willing to participate in the issue and the issue would fail. In the model by Heinkel and Schwartz (1986), failure of rights issues is assumed to be costly, and managers who believe the stock price will fall from the announcement until the subscription period will set a higher discount. One can extend this reasoning a bit further to also explain *stock market reactions* in rights offerings. Since managers who believe the stock will fall will set high discounts to induce high take-up levels, the market will interpret high discounts as negative beliefs from management about the prospects of the firm, and hence we expect a negative relation between discount and abnormal return for rights offerings. For discounts, however, we argue that high historical volatility of the stock returns would cause managers to set higher discounts, since they would have to hedge against

the risk of the stock price being momentarily low during the signing period. Another type of explanation for rights offering discounts is offered by Bøhren, Eckbo and Michalsen (1997). They posit that the existing shareholders of firms have personal wealth constraints and restrictions with regards to diversification of their portfolios, factors that are beyond the control of the issuing firm. These constraints make their demand curves for the stock in question downward sloping, or in other words, they become reluctant to participate in large rights offerings. To increase the economic incentives of existing shareholders to participate and balance the skewed supply-demand relation, companies offer shares at discounts to current market prices. We consider this argument to be somewhat flawed, however. If existing shareholders do not have economic incentives or possibilities to participate in the issue itself, they could very well sell on their subscription rights to outside investors, which in theory could be worth as much as the discount itself.¹⁷ Moreover, in Sweden, the sale of subscription rights is subject to capital gains taxation for individual investors and corporate taxes at the company level. Smith (1977) points out that since high discounts in the issue increase the value of each respective subscription right, taxes for the existing, non-participating shareholders increase with higher discounts. Assuming shareholder wealth maximization, this is one of the reasons why firms should be reluctant to set discounts arbitrarily high, even if such issues would induce high subscription rates of the existing shareholders.

Table 2
Adverse Selection – Rights Issues – Discounts

Underlying factor	Effect on discounts
Avoid adverse selection costs by inducing a high take-up	(+)
Level of asymmetric information through adverse selection costs	(+)
Failure of rights issues is costly and long period between announcement and signing	(+)
Stock volatility between announcement and signing	(+)
Personal wealth constraints and diversification restrictions	(+)
Capital gains taxation	(-)

¹⁶ Unfortunately, we do not know how long these time periods typically are, but press releases suggest that they are quite sizeable.

¹⁷ The minimum price for the subscription right is one where the existing shareholders are indifferent between buying shares in the issue and selling their subscription right to outside investors. The maximum price for the subscription right will be the price where the outside investor is indifferent between buying the subscription right and buying the share on the open market. Assuming a liquid market for subscription rights with no arbitrage opportunities, and neglecting the fact that outside investors might forego interest by buying a subscription right, we argue that the price will reach an equilibrium where the price is equal the maximum price outside investors are willing to pay, and thus, the subscription right will be exactly equal to the discount.

2.2.2 *Adverse Selection – Private Placements*

The Myers and Majluf (1984) model is not applicable on private placements, either. Still, it is useful as a reference for other theories that build on this framework. With the purpose of analyzing stock market reactions to private placements, Hertzell and Smith (1993) extend the Myers and Majluf (1984) model to show that private placements may mitigate the information gap by transferring information from management to investors. Since private placements are typically targeted to a small number of investors, management can credibly signal its true value to the target investors, e.g. through due diligence by the investor, and in that way bridge the information gap. Thus, the commitment of the private placement investors in the offering, as well as management's decision to forego a public issue, convey to the market that the management believes the firm is currently undervalued.¹⁸

2.2.2.1 *Adverse Selection – Private Placements – Abnormal Return*

In an adverse selection context, we expect private placements to generate larger, positive abnormal returns if the degree of asymmetric information is significant. This is because due diligence costs are larger and the commitment of funds by investors will only take place if the firm's prospects are substantial, something that is not yet incorporated into the market valuation of the company. Because of this, we expect a positive correlation between proxies for the degree of asymmetric information and the stock market reaction. For example, it is reasonable to believe that for firms conducting private placements as a step to avoid a financial crisis, the uncertainty and the asymmetric information between management and investors are higher, leading to even higher stock market reactions. Moreover, Hertzell and Smith (1993) also point out that the information asymmetries are typically larger for small firms than for large firms, which would theoretically yield a negative correlation between firm size and abnormal return for private placements. Furthermore, they point out that the effects of asymmetric information are likely to be higher if the firm has large investment opportunities, leading to a positive relation between measures of the firm's investment opportunities and abnormal return. Lastly, there is one additional factor that may affect the degree of asymmetric information between firms and investors – the level of media coverage on the firm. Since we believe that a high level of media coverage decreases the level of asymmetric information between firms and investors, we hypothesize that the level of media coverage is negatively correlated to abnormal return for private placements.

¹⁸ Since the choice of equity issue method in Sweden is in effect not between private placements and public offerings, but rather between private placements and rights offerings, the reasoning calls for some clarifications. We argue that the Hertzell and Smith (1993) argument still holds when the effective choice is between private placements and rights issues since, contingent on a certain subscription rate of existing shareholders, rights issues give rise to the same kind adverse selection costs as in public offerings.

Table 3
Adverse Selection – Private Placements – Abnormal Return

Underlying factor	Effect on abnormal return
Level of asymmetric information in general	(+)
Firm size	(-)
Investment opportunities	(+)
Media coverage	(+)

2.2.2.2 *Adverse Selection – Private placements – Discounts*

For private placement discounts, on the other hand, the Hertzell and Smith (1993) model predicts that investors expect to be compensated for the costly assessment of firm value through discounts in the issue. The implication of this theory is a positive relation between the discount and variables that, either directly or indirectly, are proxies for due diligence costs.

Table 4
Adverse Selection – Private Placements – Discounts

Underlying factor	Effect on discounts
Due diligence costs	(+)

2.3 *Market Timing*

Market timing theories are relevant for private placements as well as for rights offerings since they, in most cases, reach outside investors that are less informed about firm value than the management of the firm.

According to market timing theories of SEOs, varying market conditions and hence varying levels of asymmetric information make it more or less favourable to issue equity depending on the particular time period. Hence, there exist *windows of opportunity* when it becomes more favourable for firms to issue equity. Since more firms will issue equity, and not only firms of low quality, the adverse selection in the market for equity issues will become less severe. Also, since more firms issue equity, the decision to issue will not convey as much information about management's inside information as they would during normal periods. Hence, the windows of opportunity lead to less negative signals and by consequence, less negative stock market reactions for rights issues. For private placements, however, we argue in line with Hertzell and Smith (1993) that windows of opportunity should cause the abnormal returns to become less positive, since due diligence costs decrease and the commitment of investors does not serve as strong a signal.

The underlying factors of these windows of opportunity may be favourable macroeconomic conditions or general public optimism. Alternatively, Berkovitch and Narayanan (1993) point out that the NPV level of investments varies over time, and that this might cause windows of opportunity. Specifically, a higher NPV level of investments implies that relatively more types of firms will decide to issue equity and *not only* firms considered to be of low quality, which increases the expectation of average firm quality of issuing firms. Choe, Masulis and Nanda (1993), on the other hand, classify the windows of opportunity according to business cycles, and argue that more firms issue equity during expansionary phases of the business cycle, reducing the adverse selection and hence mitigating the negative (positive) stock market reactions for rights issues (private placements).

Table 5
Market Timing – Rights Issues and Private Placements

Underlying factor	Effect on abnormal return
Windows of opportunity for rights issues	(+)
Windows of opportunity for private placements	(-)

2.4 *Moral Hazard*

The other side of the coin of asymmetric information is the ex post effect of equity issues in terms of moral hazard. The term stands for the risk that arises if an agent does not bear all the consequences of its actions, a risk that is said to exist in the relationship between management and shareholders. Before predicting effects of private placement announcements on firm value, we will give a brief overview of the foundations of agency theory.

In general principal-agent theory, a problem is said to arise if, under the conditions of asymmetric information, the interests of the principal and the agent do not align. Because of differential interests, the agent will maximize its utility function rather than that of its principal, leading to suboptimal results from the principal's point of view. To alleviate the principal-agent problem, one could either align their respective interests through contractual agreements or decrease the asymmetric information between the two parties, e.g. through direct monitoring of the agent's activities. Applied to the shareholder-management situation, Jensen and Meckling (1976) argue that firm value should increase by a change in ownership if this change aligns the interests of managers and shareholders. Such a change could be caused by a private placement since they are directed to few, large investors, but most likely not by a rights issue since they target the existing shareholders.

2.4.1 Moral Hazard – Private Placements

2.4.1.1 Moral Hazard – Private Placements – Abnormal Return

In line with the Jensen and Meckling (1976) argument, there are two situations where private placements could affect the alignment of interests between managers and shareholders. First, the owners of the company might be dispersed and none of them large enough to have control over the company board and management. Second, companies might be controlled by a controlling shareholder that has power to elect the company board and thereby control the management.

For the first case with dispersed shareholding, Wruck (1989) argues that private placements can align the interests of managers and shareholders. She points out that private placements typically create new block holders that are large enough to have economic incentives to monitor incumbent management and serve as a disciplinary force so as to ensure value maximization.¹⁹ On the other hand, Wruck (1989) suggests that a new, sufficiently large block holder could also *collaborate* with incumbent management at the expense of other security holders, leading to entrenchment of management. As expected, Fama and Jensen (1983) argue that firm value should fall if the sale leads to such an entrenchment of management and a subsequent misallocation of resources. An alternative view is offered by Morck, Shleifer and Vishny (1988), who point out that changes in ownership concentration levels, e.g. through private placements, may increase the share held by potential acquirers of the firm. A toehold in the particular firm increases the probability of successful conditional takeover bids, leading to increased probability of acquisition of the firm, which would be value-increasing for the existing shareholders if they choose to sell their shares in the acquisition, leading to positive stock market reactions.

For the second case where a controlling shareholder controls the management, Bergström and Samuelsson (2005) argue that a private placement creates a block of minority shares large enough to gain economic incentives to supervise the *controlling shareholders'* activities. An increase of the share of the minority block increases the value of the firm through monitoring of the controlling shareholder, leading to a positive relation between the change in the minority block size, to abnormal return.

¹⁹ The argument of economic incentives has a basis in the free rider problem, which in this situation states that small shareholders have little to earn by engaging in monitoring since such fixed costs greatly surpass their personal benefits. In other words, they are rationally ignorant. Hence, monitoring of incumbent management take place only when the size of the block is large enough to offset these fixed monitoring costs. Theoretically, small shareholders could collaborate in order to set up monitoring processes, but game theory predicts that free riding might arise nonetheless if personal benefits are too low, leading to a Pareto inefficient situation.

La Porta, Lopez-de-Silanes and Shleifer (1999) show that Sweden has a relatively high proportion of family ownership compared to e.g. the United States and other European countries. Based on these observations, Cronqvist and Nilsson (2005) hypothesize that families object private placements since they are unwilling to loose control over the firm, which would be the result of a private placement to outside investors. The reason why they are unwilling to loose control is most likely due to an entrenchment of the family, and thus agency problems in the firm. Based on this reasoning, we hypothesize that issues by family-controlled firms should resolve moral hazard problems and therefore have a larger, positive abnormal return than the average issue. In addition, we argue that the size of the issue and hence the size of the potential new block holder is positively related to firm value on average. This is because large block holders have more economic incentives to monitor an entrenched management, which would lead to an increase in firm value.

Table 6
Moral Hazard – Private Placements – Abnormal Return

Underlying factor	Effect on abnormal return
Increase in ownership concentration in companies with dispersed shareholding	(+/-)
Increase of minority block in companies with controlling shareholder(s)	(+)
Increase in ownership concentration in family firms	(+)
Potential size of new block holder	(+)

2.4.1.2 *Moral Hazard – Private Placements – Discounts*

In line with the theories of Wruck (1989) and Bergström and Samuelsson (2005), discounts may be viewed as implicit compensations for future, expected monitoring services. On the other hand, Barclay, Holderness and Sheehan (2001) point out that private placement investors often become passive after the issue and that managers are aware of this beforehand. Because of this, management may be willing to offer a discount as large blocks of shares in friendly hands can be beneficial to management personally. In other words, one may view the discount as an implicit compensation to the private placement investors to *avoid* monitoring the management, and stay clear of their entrenchment. We do not find the latter theory to be very realistic in a real-world situation, but argue instead that a discount is likely to reflect expected monitoring services. In this light, we argue that the discount level should be positively related to variables that are proxies for the size, and thereby the monitoring incentives, of the new block holder created through the issue. Lastly, one may argue that some investors value control more highly than others and that they therefore demand less discounts. Hertzell and Smith (1993), for example, posit that individual investors are willing to pay extra for control, causing private placements to individual investors to be associated with less discounts.

Table 7
Moral Hazard – Private Placements – Discounts

Underlying factor	Effect on discounts
Size of the new block holder	(+)
Individual investor (valuing control highly)	(-)

2.5 Capital Structure Optimization

2.5.1 Capital Structure Optimization – Abnormal Return

In line with Modigliani and Miller (1958), one may argue that the firm's cash flows are not fixed and exogenous, but rather affected by financing choices to a large extent, in turn affecting firm value. By consequence, equity issues, including both rights offerings and private placements, have effects on the capital structure of firms that may affect the value of the firm. We distinguish two types of such effects, direct capital structure effects and indirect signalling effects.

As for the direct effect of the change in capital structure, the proceeds from the equity issue may be used to pay down debt, in which case some effects can be discerned. The cost of capital is said to vary with different debt-to-equity ratios, being a trade-off between the tax-deductibility of interest expense, other non-debt tax shields and exposure to inflation on the one hand, and direct bankruptcy costs and costs of financial distress on the other (Eckbo, Masulis and Norli, 2000). Depending on the initial leverage, each of these factors will have an individual impact on the cost of capital, causing it to follow an approximately U-shaped curve with increasing debt-to-equity ratio. Thus, for example, if the issue is used to pay down debt, the tax-shield from debt will decrease, which might increase the cost of capital and hence decrease firm value. The studies by Masulis and Korwar (1986) and Masulis (1983) point out that the average firm is underleveraged and therefore, decreases in leverage through equity issues would therefore typically lead to negative abnormal returns at the announcements. Another effect of an increased debt-to-equity ratio is potential wealth transfers from shareholders to bondholders (Hou and Meyer, 2002). This is because the credit risk of the outstanding debt decreases, reducing the risk of financial distress, which might decrease the cost of capital. The exact effect on the cost of capital and firm value, however, depends on the initial leverage.

Indirect signalling effects, on the other hand, emphasize how the equity issues and their subsequent effects on leverage convey management's expectation of future cash flows. Since a high amount of debt requires support of large cash flows, Ross (1977) argues that the ex ante choice of capital

structure reflects management's expectation about future cash flows. For example, the equity issue may be used to pay down debt, which will be interpreted by the market as decreased expectations of future cash flows, leading to a negative stock market reaction. Healy and Palepu (1990) take a slightly different view, arguing that a change in capital structure through equity issues does not specifically signal adjusted expectations of future earnings, but rather adjusted expectations of future *volatility* in earnings, since firms may adjust their leverage according to their specific operational risk rather than the cash flows they expect.²⁰

Table 8
Capital Structure Optimization – Rights Issues and Private Placements – Abnormal Return

Underlying factor	Effect on abnormal return
Equity issues by underleveraged firms	(-)

2.6 *Illiquidity*

2.6.1 *Illiquidity – Abnormal Return*

Another explanation for stock market reactions for both rights issues and private placements is put forward by Scholes (1972). He argues that each type of security in the capital markets is essentially unique and that the cross-price elasticity to other types of securities in the market is very low. This means that the demand curve will be downward sloping and that the price of a block of shares, *ceteris paribus*, is negatively related to demand. If the supply of shares increases, e.g. through an equity issue, the price of the share will inevitably go down because of the downward sloping demand curve, leading to a negative stock market reaction. For this reason, we would expect a negative stock market reaction at the announcement of equity issues, regardless if the method employed is a rights issue or a private placement.

Table 9
Illiquidity – Rights Issues and Private Placements – Abnormal Return

Underlying factor	Effect on abnormal return
Size of issue (because of price pressures)	(-)

²⁰ Note that we regard cash flows and earnings as synonymous for the purpose at hand.

2.6.2 Illiquidity – Discounts

Discounts in private placements may also be explained by the theory of Silber (1991), which relies on the assumption of inefficient stock markets and thus consistent mispricing of certain stocks. By examining private placements that had not been registered by the United States Securities and Exchange Commission (SEC) and that consequently were considered to be illiquid, Silber (1991) managed to put a price on illiquidity in private placements. Although varying with firm and issue characteristic, the restricted stock was priced at a 33.8% discount to its liquid counterpart, which shows that illiquidity premiums can be substantial and should be taken into account when explaining discounts in private equity placements. We argue that this illiquidity premium should also be demanded by investors in rights offerings.

Table 10

Illiquidity – Rights Issues and Private Placements – Discounts

Underlying factor	Effect on discounts
Illiquidity	(+)

2.7 Summary of Hypotheses and Variable Definitions

After having described the theories that will help explain discounts and stock market reactions, we proceed by stating the hypotheses and defining the variables that will be used as proxies for the effects we have given an account of. These hypotheses and proxy variables are summarized in Table 11 and in Table 12. To assist the reader, we define in Table A-1 in the Appendix the variables and metrics that will be used throughout this paper, i.e. when describing our sample data, conduct our event studies and run the cross-sectional regressions. A (+/-) sign in Tables 11 and 12 indicates that the expected effect from theories on the discount or the stock market reaction is unclear. The classification of hot and cold markets is presented in Table A-2 in the Appendix. We begin by stating proxy variables and connecting them to hypotheses concerning the discounts and stock market reactions for rights issues, and proceed with respective proxies and hypotheses for private placements.

As a proxy for adverse selection costs in the signalling model, we include *market value of equity*, which should be negatively correlated to discount since adverse selection costs decrease with firm size and

investors demand compensation for such costs.²¹ Adverse selection costs should also increase with the size of the issue, for which we use variables such as the *log of issue size* and the *fraction placed*.²² As for the *book-to-market* variable, it is a proxy for the growth opportunities for the firm conducting the issue, and should as such be negatively related to the discount level.^{23,24} Further, we include the variables *cumulative stock return 60 days prior* and *cumulative market return 60 days prior* to capture windows of opportunity, during which adverse selection costs decrease, making investors demand less discounts. The *market return variance 60 days prior* is a proxy for the market volatility between the announcement and signing period, and should in theory be positively related to discounts. Rights issues with the purpose of a *financial restructuring* are thought to be associated with more asymmetric information between management and investors, which should affect the demands of investors on discounts positively. The *A-list* variable is used a proxy for the liquidity of the stock of the firm, which should decrease demands from rights issue investors on discounts.²⁵ Because of lower asymmetric information in A-list firms, we expect the compensation for adverse selection costs through discounts to be lower in A-list firms, leading to a negative effect on discount from the *A-list* variable.

Regarding rights offering stock market reactions, variables that are proxies for asymmetric information are thought to be negatively related to abnormal return.²⁶ The firm size variable *market value of equity* is an inverse proxy of the level of asymmetric information, and should therefore be negatively related to abnormal return. The variable *log of issue size* should in theory be negatively correlated to abnormal return as predicted by Scholes' (1972) price pressure hypothesis, adverse selection costs as predicted by Myers and Majluf (1984) and asymmetric information as predicted in line with Wu and Wang (2002). Issues with *financial restructuring* purposes are associated with high asymmetric information, and should hence yield negative abnormal return. The same reasoning, although with a smaller effect on the stock market, can be applied to the *solidity/financial strength*

²¹ The adverse selection hypotheses will be grouped together with other signalling hypotheses to form the *signalling model*. This is because stock market reactions originate from information signalled by the choice of issuing equity at all, and the choice between different equity issue methods.

²² The reason for using the logarithm of the issue size is to reduce the influence of potential outliers.

²³ This proxy for growth opportunities is advocated by Korteweg and Renneboog (2003) and Adam and Goyal (2003). However, other authors such as Solt and Statman (1989) use the Tobin's q ratio as a proxy for growth opportunities, but argue at the same time that this precise value for a company can be obtained only rarely.

²⁴ The reason for using this specification rather than the market-to-book ratio, is that the latter measure can produce distorted results in the presence of near-zero or negative book values. The sign for the book-to-market proxy will be the opposite to the market-to-book ratio, however.

²⁵ This negative effect may also be motivated from an adverse selection perspective, whereby A-list firms have significantly higher media coverage than other firms, which reduces the asymmetric information between firms and investors.

variable.²⁷ From an information asymmetry perspective, issues with the purpose of *specific investments* resolve the information gap between management, but can on the other hand signal both good and bad information about the firm's prospects, depending on what investment they are specifying, making us uncertain of its effect on abnormal return. The variable *fraction placed* and the *book-to-market* variables are, albeit with different signs, proxies for the amount of investment opportunities facing the firm, which should yield positive effects on the stock market at the announcement. The *A-list* variable is meant to capture the effect of increased media coverage on asymmetric information, leading to decreased asymmetric information and a positive effect on abnormal return. Because of the time gap between announcement and signing period, the market will interpret high discounts as a negative beliefs from the management about the prospects of the stock and the firm, and hence a negative relation between discount and abnormal return.

For our market timing model, the variables *hot market*, *cumulative stock return 60 days prior*, *cumulative market return 60 days prior* and *market return variance 60 days prior* are proxies for windows of opportunity, i.e. periods where the adverse selection costs are momentarily low.²⁸ As such, we expect a positive effect on abnormal return for the first three variables, and a negative effect for the last.

In order to predict the discounts in private placements, proxies for due diligence costs of the type described in Hertzell and Smith (1993) will be used. The *market value of equity* is used as a proxy for the level of asymmetric information, and a low such value implies high due diligence costs, for which investors demand to be compensated. The *log of issue size* and the *fraction placed* variables are used as proxies for the amount of due diligence costs, leading to a positive association between these variables and the discount level. The variable *individual investor* is used to predict the reduction of discounts that individual investors demand because of private benefits of control. The variable *book-to-market* captures the extent to which value is based on growth rather than assets-in-place, which increases due diligence costs and leads to a negative association with discount. Proxies for windows of opportunity, *cumulative stock return 60 days prior*, *cumulative market return 60 days prior* and, negatively, *market return variance 60 days prior* are thought to be linked to low due diligence costs and low discounts. For the *financial restructuring* variable, we expect the level of asymmetric information,

²⁶ This reaction to asymmetric information can also be explained by the private benefits of control that emerge if asymmetric information between management and investors is considerable, in line with Wu and Wang (2002).

²⁷ This variable will also be referred to as *capital structure adjustments*, or similar.

²⁸ The hot market dummy is classified according to the criteria in Appendix A-2.

Table 11
Rights Offering Hypotheses, Proxy Variables and Predicted Signs

The table shows the rights offering hypotheses and proxy variables used in the cross-sectional regressions on discounts and abnormal return together with their respective predicted sign.

Underlying factor	Proxy variables ^a	Predicted sign
<i>Panel A: Discount hypotheses</i>		
Avoid adverse selection costs by inducing a high take-up	Market value of equity	(-)
Avoid adverse selection costs by inducing a high take-up	Log of issue size	(+)
Avoid adverse selection costs by inducing a high take-up	Fraction placed	(+)
Level of asymmetric inform. through adverse selection costs	Book-to-market	(-)
Windows of opportunity	Cum. stock return 60 days prior	(-)
Windows of opportunity	Cum. market return 60 days prior	(-)
Stock volatility between announcement and signing	Market return variance 60 days prior	(+)
Level of asymmetric inform. through adverse selection costs	Financial restructuring	(+)
Illiquidity	A-list	(-)
<i>Panel B: Signalling hypotheses for abnormal return</i>		
Firm size	Market value of equity	(-)
Price Pressure/ Level of asymmetric information	Log of issue size	(-)
Level of asymmetric information	Financial restructuring	(-)
Level of asymmetric information	Solidity/financial strength	(-)
Level of asymmetric information	Specific investment	(+/-)
Investment opportunities	Fraction placed	(+)
Investment opportunities	Book-to-market	(-)
Level of asymmetric information	A-list	(+)
Failure is costly and long period between ann. and signing	Discount	(-)
<i>Panel C: Timing hypotheses for abnormal return</i>		
Windows of opportunity for rights offerings	Hot market	(+)
Windows of opportunity for rights offerings	Cum. stock return 60 days prior	(+)
Windows of opportunity for rights offerings	Cum. market return 60 days prior	(+)
Windows of opportunity for rights offerings	Market return variance 60 days prior	(-)

^aAll proxy variables are defined in Table A-1.

due diligence costs and hence discount to be higher than on average.²⁹ The *A-list* dummy variable measures the liquidity of stocks conducting private placements, for which investors should demand to be compensated via discounts, in line with Silber (1991).

For stock market reactions to private placement announcements, proxies for asymmetric information should be positively related to abnormal return because of the information conveyed by the commitment of private placement investors and management's willingness to forego a rights issue. The *market value of equity* is a proxy for firm size, which is negatively related to asymmetric information, and by consequence, firm size should be negatively related to abnormal return. Other

²⁹ Other theories hypothesize that discounts are used because of the higher operational risks in firms conducting financial restructurings than in other firms, but we do not find this argument reasonable since an increased operational risk would already be reflected through a low stock price.

proxies for the level of asymmetric information include the *log of issue size*, *financial restructuring*, *specific investment*, and to a lesser extent the *solidity/financial strength* variable, should all be positively related to abnormal return. As a proxy for the firm's investment opportunities, the *fraction placed* variable should be positively related to the stock market reaction. As defined earlier, *book-to-market* is a proxy for growth opportunities and should as such be negatively related to the stock market reaction. Lastly, the *A-list* variable is a proxy for the level of media coverage on the firm, which reduces the asymmetric information and hence the abnormal return.

The market timing hypotheses variables *hot market*, *cumulative stock return 60 days prior* and *stock return variance 60 days prior* all serve to capture windows of opportunity. Since adverse selection costs and hence also due diligence costs decrease during these time periods, we expect positive effects on abnormal return for the first three variables and a negative effect on abnormal return for the market volatility variable.

Regarding the monitoring hypotheses, we define three variables that capture the change in ownership level of the largest owner, where the initial ownership level of the largest owner is (1) 0-25%, (2) 25-50% and (3) more than 50%, as shown in Table 12 and defined in Table A-1 in the Appendix.^{30,31} For small initial levels of ownership for the largest investors, one may view the company as owned by many, dispersed shareholders where neither has any control over management. In this case, a change in ownership level of the largest owner should increase monitoring of incumbent management, resolve moral hazard problems, increase firm value and lead to positive stock market reactions. For higher levels of ownership for the largest owner, one may view the ownership structure as comprised of a large, controlling shareholder that is likely to be affiliated with management. In this perspective, a change in ownership level of the largest owner will not increase monitoring, but rather lead to further entrenchment of management, aggravate agency problems, and result in negative stock market reactions. Theory is unable to predict, however, where the exact inflexion point in terms of alleviation or aggravation of agency problems occurs with regard to the initial ownership level of the largest owner. To capture the situation of minority shareholders monitoring a controlling shareholder affiliated with management, we also include the variable *change in non-controlling owners*, as defined in Table A-1. In line with Bergström and Samuelsson (2005), this variable should be positively related to the stock market reaction if the largest owner controls the management and the latter is entrenched. The *family control* variable is

³⁰ This procedure is in line with Molin (1996), Wruck (1989) and Morck, Schleifer and Vishny (1988). The two latter studies use slightly different cut-off points for initial ownership levels, however.

³¹ All hypotheses concerning changes in expected agency problems are grouped together to form the *Monitoring model*, since they affect firm value through changes in monitoring of the controlling party.

used to capture the situation of the increased monitoring of entrenched family-controlled management by new block holders created through private placements. We also include the variable *fraction placed* to measure the potential block of new owners created relative to the size of the firm, which we argue should lead to a positive association with abnormal return on average, in line with Wruck (1989).

Table 12
Private Placement Hypotheses, Proxy Variables and Predicted Signs

The table shows the private placement hypotheses and proxy variables used in the cross-sectional regressions on discounts and discount-adjusted abnormal return together with their respective predicted sign.

Underlying factor	Proxy variables ^a	Predicted sign
<i>Panel A: Discount hypotheses</i>		
Due diligence costs	Market value of equity	(-)
Size of the new block holder	Log of issue size	(+)
Size of the new block holder	Fraction placed	(+)
Individual investor (valuing control highly)	Individual investor	(-)
Due diligence costs	Book-to-market	(-)
Due diligence costs	Cum. stock return 60 days prior	(-)
Due diligence costs	Cum. market return 60 days prior	(-)
Due diligence costs	Market return variance 60 days prior	(+)
Due diligence costs	Financial restructuring	(+)
Illiquidity	A-list	(-)
<i>Panel B: Signalling hypotheses for abnormal return</i>		
Size of the new block holder	Market value of equity	(-)
Level of asymmetric inform. between mgmt and investors	Log of issue size	(+)
Level of asymmetric inform. between mgmt and investors	Financial restructuring	(+)
Level of asymmetric inform. between mgmt and investors	Solidity/financial strength	(+)
Level of asymmetric inform. between mgmt and investors	Specific investment	(+)
Level of asymmetric inform. between mgmt and investors	Fraction placed	(+)
Level of asymmetric inform. between mgmt and investors	Book-to-market	(-)
Level of asymmetric inform. between mgmt and investors	A-list	(-)
<i>Panel C: Timing hypotheses for abnormal return</i>		
Windows of opportunity for private placements	Hot market	(-)
Windows of opportunity for private placements	Cum. stock return 60 days prior	(-)
Windows of opportunity for private placements	Cum. market return 60 days prior	(-)
Windows of opportunity for private placements	Market return variance 60 days prior	(+)
<i>Panel D: Monitoring hypotheses for abnormal return</i>		
Increase in monitoring/entrenchment	Change in ownership conc. (1)	(+/-)
Increase in monitoring/entrenchment	Change in ownership conc. (2)	(+/-)
Increase in monitoring/entrenchment	Change in ownership conc. (3)	(+/-)
Increase of minority block that supervises contr. shareholder	Change in non-controlling owners	(+)
Increase in ownership concentration in family firms	Family controlled	(+)
Potential size of new block holder	Fraction placed	(+)

^aAll proxy variables are defined in Table A-1.

3 Methodology

3.1 Event Study Methodology

The purpose behind an event study is to study the effect of an economic event on overall firm value (Campbell, Lo and MacKinlay, 1997). A standard event study procedure is used to measure the stock market's assessment of firm value around the announcement of an equity offering. For our purposes, we will use both a general market index as a benchmark and a market model that takes into account the systematic risk and adjusts the benchmark to be specific for each firm. In the market index model, we define the abnormal return (AR) as follows:

$$AR_{i,t} = R_{i,t} - R_{m,t},$$

where R_i stands for the arithmetic daily excess (over the risk-free rate) return for security i and R_m stands for the arithmetic daily excess return for the market, for which we use a market index as a proxy.

For the market model, on the other hand, we run CAPM-regressions during the estimation period for each issue to estimate alphas and betas for each issue. We then deduct the market model normal return, defined as the alpha plus the market risk premium adjusted for the firm's exposure to systematic risk. The abnormal return for the market model is hence calculated as below:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i \times R_{m,t})$$

The cumulative abnormal return (CAR) is the abnormal return added up over the event window interval t_1 to t_2 . The definition follows below:

$$CAR_i = \sum_{t=t_1}^{t_2} (AR_{i,t})$$

In our case, we choose a number of different intervals for the event window in order to get a clear picture of the dynamics of the abnormal returns. We recognize that some information does leak out before the announcements of equity issues and that the stock market might react with some lag, and we are therefore careful not to choose an overly narrow event window. The estimation period, however, was consistently chosen to be 180 days through the range $\{-200, -20\}$, in line with common practice for event studies. The market index used as a proxy for the market return is Affärsvärldens Generalindex (AFGX), which measures the average value-weighted return for stocks listed on the A-list on the Stockholm Stock Exchange. Since our sample consists of issues of firms listed on the Stockholm Stock Exchange, we expect the correlation between individual stocks and the index to be quite large and therefore consider the index to be highly appropriate for our data set.

3.2 Discount-Adjustment of Abnormal Return

When a company performs a private placement, the non-participating shareholders suffer from a dilution effect. Because of this effect and the observed discount, we see a wealth transfer from the non-participating shareholders to the private placement investors. As Molin (1996) points out, one part of the stock market's reaction of a private placement may therefore include a revision of the stock price reflecting such a dilution effect from a private placement discount. In order to separate the pricing effect leading to dilution, and the market's reaction to the *information content* of the issue, we normalize the abnormal returns with respect to the discount in a fashion previously employed by Molin (1996):

$$AR^{adj} = AR + \frac{N_{offer}}{N_{before}} \cdot \frac{(p_0 - p_{offer})}{p_{-1}},$$

where AR^{adj} stands for the announcement day discount-adjusted abnormal return, AR is the announcement day abnormal return, N_{offer} is the number of shares in the issue, N_{before} is the number of shares in the firm the day prior to the issue, p_0 is the market price at the announcement of the offering, i.e. at time 0, p_{-1} is the market price one day prior to the announcement of the offering, i.e. at time t-1, and lastly, p_{offer} stands for the issue price. The discount-adjusted abnormal return is interpreted as the potential abnormal return that would result if the private placement was priced without a discount or a premium. Thus, as Molin (1996) effectively argues, it is the part of the event day abnormal return that is driven by the *information content* of the announcement. In the numerator, the $(p_0 - p_{offer})$ term is the value of the discount/premium in SEK *per share*, and $N_{offer} \cdot (p_0 - p_{offer})$ is hence the *total* value of the discount/premium in SEK transferred from the non-participating shareholders to the investors participating in the private placement. The denominator, $N_{before} \cdot p_{-1}$, is the total value of the shares owned by existing shareholders one day prior to the announcement. Since an *outflow* from the non-participating shareholders to the investors participating in the private placement have taken place, we must *add back* this amount to the announcement day abnormal return (hence the plus sign in the formula) to arrive at the discount-adjusted abnormal return. The negative of the total value of the discount/premium in SEK divided by the share value of the existing shareholders one day prior to the announcement captures the total *pricing effect* on the non-participating shareholders' announcement day return, given the new information. *New information*, in this context, refers to any kind of information that might affect the shareholders' judgement on firm value.

The same method was used by Molin (1996), but was developed by Bradley and Wakeman (1983) and it is used by Wruck (1989), Wu (2000), Hertz and Smith (2004), and Krishnamurthy et al. (2004). If the equity issue is conducted by means of a rights offering on a pro rata basis, all shareholders will be equally well off before and after the issue.³² Therefore, in the subsequent cross-sectional analyses, we only discount-adjust abnormal returns for private placements, not for rights offerings. The mean event day discount-adjusted abnormal return for our private placement sample is higher than the (unadjusted) event day abnormal return, as we will see later in the paper.

3.3 Cross-Sectional Regression Methodology

For the cross-sectional regressions, having the purpose of explaining the variability in the dependent variables *discount* and *abnormal return* for rights issues and *discount* and *discount-adjusted abnormal return* for private placements, we use ordinary least squares (OLS) procedures to find an appropriate model for our data. Statistical considerations, in terms of multicollinearity and heteroscedasticity, were investigated and the results are presented in Tables A-14 through A-19 in the Appendix. However, by running robust regressions, i.e. regressions that are resistant to the influence of outliers, the results do not change significantly. Hence, we do not find reasons to extend the current OLS models. The models used in the cross-sectional analyses of discounts, abnormal return and discount-adjusted abnormal return are presented in each respective analysis-section.

4 Data Description

4.1 Data Collection Procedure

In order to investigate the stock market effects at the announcement of SEOs, we use a data set consisting of all equity issues conducted by Swedish firms listed on the A-, O- and OTC-lists at the Stockholm Stock Exchange from January 1986 until December 2005.^{33,34} To attain the list of all equity issues between these years, the names of all companies ever listed on the above mentioned stock lists were collected from the book-series *Owners and Power in Sweden's Listed Companies* (Sundqvist, Sundin and Fristedt, 1986-2005). This resulted in 713 companies. The SIX Trust database was used to

³² For this to hold, it must be the case that if some shareholders choose not to participate in the issue, no outsiders could be able to buy the pre-emptive rights below the current market price. In other words, it must be the case that the pre-emptive rights are correctly priced by the market.

³³ The SBI (Stockholm Börsinformation) and NGM (Nordic Growth Market) lists are not part of the Stockholm Stock Exchange, therefore the offerings from firms listed there were excluded from our sample. Other lists outside the Stockholm Stock Exchange include e.g. Aktietorget, Innovationsmarknaden and Göteborgslistan (all named in Swedish). For definitions of the A-list, O-list and OTC-lists, see Appendix A-I Variable Definitions.

³⁴ The lists classified as the *A-list* include the old AI-, AII- and the current A-list. The lists classified as the *O-list* include the current O-list (including Attract 40) and the old O-reg list. The list called *OTC-list* includes only the current OTC-list.

find the particular equity offerings these companies had made throughout these years, and the same source was also used to find particular characteristics related to each issue. 578 firms were found in the TRUST database and it turned out that 362 of these had conducted equity issues from the above mentioned lists, giving us our total sample of 1753 equity offerings in total during the years 1986-2005. Note that no distinction was made between cash and non-cash issues, except for private placements used as payment in employee stock ownership programmes (hereafter, ESOPs) and as part of payments in mergers or acquisitions (M&A), which are shown as separate categories in most tables and sections.³⁵ The reason for treating ESOPs separately is that they differ somewhat from other private placements in that they are in the form of equity convertibles with an option to convert the securities into common stock at a predetermined price during a certain period in the future. Also, companies disclose conversion prices rather than issue prices in their prospectuses for these convertibles. Also, we do not make any distinction between standby underwritten rights issues, firm-commitment underwritten rights issues, uninsured rights issues or open offers. All publicly available prospectuses from SEOs conducted by the firms in our data set were collected from the National Library of Sweden. The prospectuses, amounting to 344, were used to gather information about issue prices, issue sizes, number of stocks issued, purposes behind the issues and the targets of each respective issue.

The Affärsdata news database was then used to scan for press releases and newspaper articles containing announcement dates and additional information about the issue characteristics. Press releases were more readily available for rights issues than for private placements. Out of the 1753 SEOs in our total sample, we exclude 69 of these due to multiple announcement effects, i.e. in 69 cases, the firms announced on the same day that they were to conduct both a rights issue and a private placement. Further, we exclude 380 observations because, apart from the issuing company's name, the year it was conducted and the type of issue, we have no other information about it.³⁶ Our final sample for the descriptive statistics section thus amounts to 1304 offerings, conducted by 344 firms on the Stockholm Stock Exchange 1986-2005.

Regarding our event study sample, the data collection was conducted as follows. From our sample of 1304 equity offerings, 890 announcement dates were found from the Affärsdata database that could be connected with the equity issues in our sample, of which 811 are used in the subsequent event

³⁵ Please note that the sample denoted "M&A" includes not only private placements used as part of stock-swaps, but also private placements and rights offerings used to raise capital to acquire companies *in the near future*. Also note that the issues denoted ESOPs are not only convertibles used in ESOPs but *all* convertibles issued. The reason for classifying them as ESOPs is that the large majority are convertibles used in ESOPs and there is no clear line between ESOP convertibles and other convertibles.

study.³⁷ The reason for excluding 79 issues is due to the fact that we have too few share price observations in the estimation period and/or event window to get reliable estimates of abnormal return.³⁸ Stock prices adjusted for equity issues, share splits and write-downs were collected from the SIX Trust database, and these were used to calculate abnormal returns. The stock index used as a proxy in the market model estimations, Affärsvärldens General Index (AFGX), was also collected from the same source. Stock prices and respective adjustment factors were collected from Thomson Datastream, and were consequently used to compute discounts and consequently discount-adjusted abnormal returns for the private placement sample. Book values of equity for each issuing firm were gathered from the Bureau Van Dijk Orbis database. The number of outstanding shares for each issuing company at the time of the issue was collected from the SIX Trust database. Information about ownership levels for each firm conducting SEOs were collected from the *Owners and Power in Sweden's Listed Companies* (Sundqvist, Sundin and Fristedt, 1986-2005) book series, and was available for each individual firm in the sample.³⁹ As stated in Table A-1, by ownership level we refer to the amount of voting rights held by the largest owner of the issuing firm prior to the offering, and not the cash flow rights, essentially because we are focusing on the owners' ability to exercise control over the firms they have invested in.

The procedure used to collect data for our final event study is summarized in Table 13.

Table 13
Data Collection

Data source	No. excluded	Reduction[%]	No. left in sample
Total sample from SIX Trust	-	-	1753
Issues with multiple announcements at the same day	69	3.9%	1684
Lack of any information except name, year and type	380	22.6%	1304
Issues without announcement dates	414	31.7%	890
Not enough share price observations for abnormal return	79	8.9%	811
Final event study sample	$\Sigma=942$	$\Sigma=53.7\%$	811

4.2 Swedish Equity Issuance at a First Glance

To give a detailed view of all the equity issues conducted in Sweden during the years 1985-2006 by firms listed on the A-, O- and OTC-lists, we start by describing the total sample of issues conducted,

³⁶ See Table A-20 for a brief description of these 380 equity issues.

³⁷ See Table A-21 for descriptive statistics on the 414 offerings for which no announcement date could be found.

³⁸ Our decision rule when excluding issues because of too few stock price observations were at least 20 observations in the estimation period and at least 2 observations in the event window, leading to an exclusion of 79 equity offerings.

despite the modest amount of information we have on some of them.⁴⁰ Table 13 shows the number of issues per year and type, for the categories rights offerings, private placements, private placements excluding issues used for ESOPs, only private placements used in mergers or acquisitions and only private placements used for ESOPs.

Table 13
Equity Issues by Year for All Seasoned Equity Offerings

The table shows the number of equity issues per year from firms listed on the Stockholm Stock Exchange 1986-2005. Five categories are used: rights offerings, private placements, private placements excl. ESOP purpose, private placements only M&A purpose, and private placement only ESOP purpose. The total number of equity offerings is 1684.

Year	Rights offerings		Private placements		Private placements excl. ESOP purposes		Private placements only M&A purpose		Private placements only ESOP purpose	
	N	%	N	%	N	%	N	%	N	%
1986	10	3.8	47	3.3	43	3.2	17	4.3	4	4.2
1987	4	1.5	38	2.7	31	2.3	1	0.3	7	7.4
1988	3	1.1	33	2.3	32	2.4	2	0.5	1	1.1
1989	7	2.7	37	2.6	35	2.6	9	2.3	2	2.1
1990	13	5	25	1.8	23	1.7	4	1	2	2.1
1991	9	3.4	15	1.1	15	1.1	6	1.5	0	0
1992	3	1.1	16	1.1	14	1.1	6	1.5	2	2.1
1993	16	6.1	22	1.5	22	1.7	6	1.5	0	0
1994	15	5.7	26	1.8	26	2	12	3	0	0
1995	8	3.1	19	1.3	19	1.4	5	1.3	0	0
1996	7	2.7	19	1.3	19	1.4	11	2.8	0	0
1997	13	5	40	2.8	40	3	25	6.3	0	0
1998	8	3.1	61	4.3	52	3.9	19	4.8	9	9.5
1999	16	6.1	94	6.6	86	6.5	36	9.1	8	8.4
2000	16	6.1	253	17.8	236	17.8	78	19.8	17	17.9
2001	25	9.6	184	12.9	175	13.2	34	8.6	9	9.5
2002	23	8.8	129	9.1	120	9	20	5.1	9	9.5
2003	21	8	125	8.8	115	8.7	31	7.9	10	10.5
2004	18	6.9	114	8	113	8.5	36	9.1	1	1.1
2005	26	10	126	8.9	112	8.4	36	9.1	14	14.7
Total	261	100	1423	100	1328	100	394	100	95	100

From Table 13, we may observe the development of each type of equity issue method and find some interesting results. Most importantly, we observe a surge in the number of private placements in the year 1999 and the years thereafter with 17.8% occurring in 2000 and 12.9% occurring in 2001. This phenomenon may be due to the extensive use of venture capital financing during the dot-com bubble

³⁹ The ownership levels from the *Owners and Power in Sweden's Listed Companies* book series are the share of total voting rights held by the individual, issuing firm.

⁴⁰ As stated previously, for 380 of the issues, we do not have any information about the offering other than the firm name and the year it was conducted. However, Table A-20 in the Appendix provides a brief description of these offerings.

and the subsequent crash. A significant portion of the private placements are used as part of payments in M&As and to a lesser extent ESOPs, and not solely to raise capital in the traditional sense. These extra categories do not change the overall picture, however, which indicates that private placements have become a significant source of corporate financing in Sweden and is for some of the years since the beginning of the new millennium, four or five times as common as rights issues.

To further illustrate the development of Swedish equity issues over time, we also plot the number of rights offerings and private placements in a column chart and attain the result shown in Figure 1. This gives a picture of the total activity of equity issuance and its variation over time, as well as a basis for comparison between the number of rights issues and private placements each year.

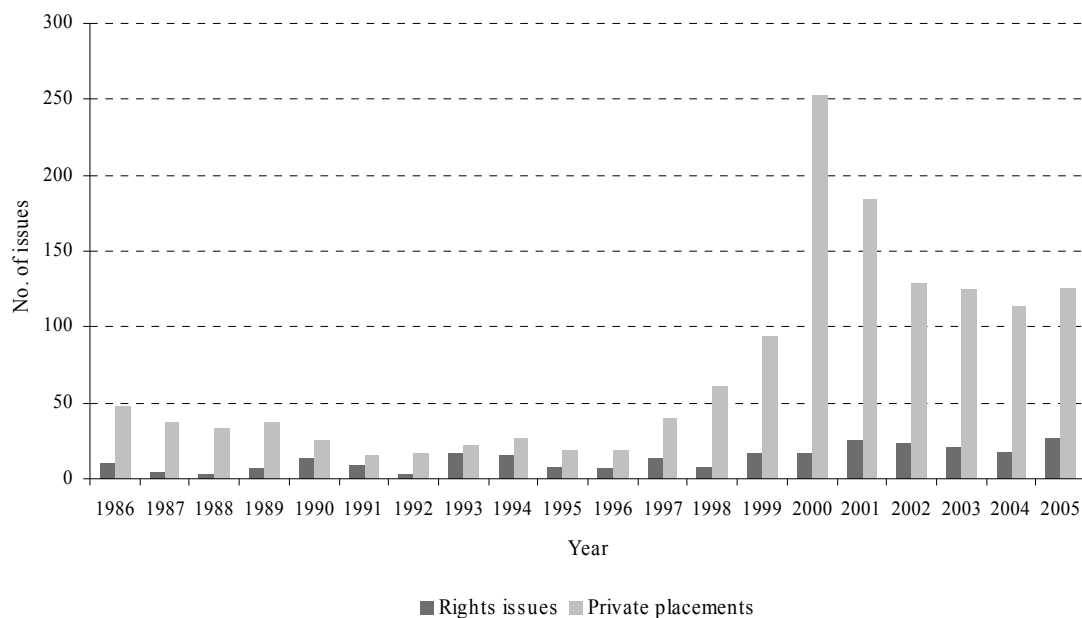


Figure 1 Number of rights issues and private placements over time.

As can be deduced from Figure 1, the amount of rights issues has been quite stable over time and has followed a vaguely mean-reverting trend, with peaks occurring every four or five years, suggesting that there exist windows of opportunity during which it becomes favourable to issue equity. The number of rights offerings has increased somewhat since the beginning of the new millennium and stayed at that a level of around 25 issues per year ever since. The private placements, however, increased dramatically from 1997 and onwards, reflecting a fundamental change in the way firms raise capital through equity issues. As far as we are concerned, this is the first study to observe the drastic change in issuance of private placements in comparison to rights offerings since the late

1990s. The reason behind this change is yet to be determined but it seems that the trend remains even after we exclude issues with ESOP purposes.

4.3 *Equity Issuance Over Time for Our Sample*

Since we do not have any information other than the company name and year of the offering for 380 of the issues above, we continue by describing the issues we *do* have valuable information about, forming our total sample of 1304 issues. The number of offerings per year and issue type is shown in Table A-3 in the Appendix.

Table A-3 shows similar results as in Table 13, of which the latter consists of *all* equity offerings made during the years 1986-2005. It is worth noting that the number of private placements has decreased with 372 offerings out of the 380 excluded. Thus, the number of rights issues have remained about the same (only 8 rights offerings have been excluded), and we conclude that the variation of the number of equity issues over time in the sample has not changed significantly by removing the issues we did not have useful information about.

4.4 *Summary Statistics*

We next proceed by giving a detailed description of our sample consisting of 1304 issues. To outline some noteworthy characteristics of the sample at hand, Table 14 displays the most important features of each issue type.

Most notably, we see that the average issue size for rights issues is more than twice the average issue size for private placements, a difference that continues to diverge if we also choose to exclude private placements with ESOP purposes. The difference in the *relative* issue size as measured by the fraction placed measure is also significantly higher for rights offerings than for private placements. The mean discount for rights issues and private placements differ quite substantially, amounting to 40.9% for rights issues, 5.5% for private placements and 8.7% for all private placement excluding those issued with the purpose of an ESOP. In terms of rights issue discounts, Bøhren, Eckbo and Michalsen (1997) report an average discount for Norwegian non-financial right issues of 67.4% for the period 1980-1984 and 24.9% for the period 1985-1993. This translates to an average discount of 40.1% for the period 1980-1993, which is very close to our value of 40.9% for Sweden. Eckbo and Masulis (1992) find average discounts of 8.3% and 12.7% for uninsured industrial and utility issues, respectively. The corresponding average discounts for standby issues amount to 20.4% and 8.3%. Other studies on rights issues, among others, Korteweeg and Renneboog (2003), Slovin, Sushka and Lai (2000) and

Table 14
Summary Statistics

Summary statistics for completed public and private issues of equity made by a sample of 344 firms listed on the Stockholm Stock Exchange A-list, O-list and the OTC-list, 1986-2005. The total number of equity offerings is 1304. All variables are defined in Table A-1.

	Mean	Median	Stdev	N	Valid [%]
<i>Panel A: Rights issues (N = 253)</i>					
Issue price [SEK]	44.66	16.50	77.26	250	98.8
Issue size [million SEK]	530.18	126.47	2176.57	252	99.6
Discount [%]	40.93	39.38	21.40	199	78.7
Market value of equity [billion SEK]	13.00	0.39	98.30	203	80.2
Fraction placed [%]	38.70	32.80	27.37	211	83.4
Largest owner [%]	32.82	28.10	20.76	253	100.0
Acc. share > 5% [%]	51.14	52.20	24.36	253	100.0
Acc. share, 25 largest owners [%]	76.09	80.00	16.50	253	100.0
<i>Panel B: Private placements (N = 1051)</i>					
Issue price [SEK]	92.11	40.50	290.72	929	88.4
Issue size [million SEK]	244.95	27.36	1267.81	975	92.8
Discount [%]	5.50	3.87	34.52	545	51.9
Market value of equity [billion SEK]	8.40	0.64	42.00	555	52.8
Fraction placed [%]	16.44	6.19	23.05	603	57.4
Largest owner [%]	32.07	26.40	21.62	1051	100.0
Acc. share > 5% [%]	49.39	49.70	24.31	1051	100.0
Acc. share, 25 largest owners [%]	77.39	80.90	15.83	1051	100.0
<i>Panel C: Private placements excl. ESOP purpose (N = 962)</i>					
Issue price [SEK]	89.06	36.00	301.08	855	88.9
Issue size [million SEK]	232.31	25.03	1260.28	905	94.1
Discount [%]	8.69	5.09	32.34	498	51.8
Market value of equity [billion SEK]	8.45	0.57	43.54	507	52.7
Fraction placed [%]	17.51	7.33	23.66	548	57.0
Largest owner [%]	31.79	26.20	21.55	962	100.0
Acc. share > 5% [%]	48.95	49.10	24.35	962	100.0
Acc. share, 25 largest owners [%]	77.03	80.45	16.04	962	100.0
<i>Panel D: Private placements only M&A purpose (N = 362)</i>					
Issue price [SEK]	82.46	48.40	102.79	331	91.4
Issue size [million SEK]	277.06	43.33	1041.52	335	92.5
Discount [%]	13.10	6.50	35.47	276	76.2
Market value of equity [billion SEK]	8.78	0.73	33.05	279	77.1
Fraction placed [%]	15.77	6.63	21.09	305	84.3
Largest owner [%]	31.70	25.15	22.91	362	100.0
Acc. share > 5% [%]	46.43	45.00	24.56	362	100.0
Acc. share, 25 largest owners [%]	75.92	78.80	16.45	362	100.0
<i>Panel E: Private placements only ESOP purpose (N = 89)</i>					
Issue price [SEK]	127.40	105.00	112.16	74	83.1
Issue size [million SEK]	408.35	58672.50	1360.39	70	78.7
Discount [%]	-59.78	-20.72	227.78	47	52.8
Market value of equity [billion SEK]	7.78	1.12	18.51	48	53.9
Fraction placed [%]	5.79	2.96	11.05	55	61.8
Largest owner [%]	35.17	29.50	22.28	89	100.0
Acc. share > 5% [%]	54.09	55.60	23.47	89	100.0
Acc. share, 25 largest owners [%]	81.21	84.30	12.75	89	100.0

N indicates the number of observations for the variable and Valid [%] denotes the share (percentage) of the observations we have valid data for. As we had a few large outliers in our sample with respect to the discount values, we exclude all observations below the 2.5 percentile and above the 97.5 percentile, respectively. The number of observations excluded by this procedure amounts to 10, 28, 26, 14, and 2 for the rights issues, private placements, private placements excl. ESOP purpose, private placements only M&A purpose, and private placements only ESOP purpose, respectively. Note, however, that this is only for the discount variable.

Armitage (1999) find average discounts of 17.1%, 17.0% and 21.0%, respectively. Studies from the United States have documented average discounts mainly for *public offerings* ranging from 1-3%.⁴¹ The public offering figures can be a bit misleading, however, considering that the mechanisms and consequences are quite different from rights issues.

Interestingly, what we observe is *higher* discounts on average for rights issues compared to public offerings. These higher discounts might be explained by the theory of personal wealth constraints, which states that managers of the issuing firm must set discounts high because personal wealth constraints limit their possibility to buy shares in the offering. Because of this, managers will set higher discounts to induce them to participate, making the firm avoid adverse selection costs. For public offerings, wealth constraints are arguably smaller since the target investor pool is larger and more investors have enough capital to participate in the issue. This speaks in favour of our results.

However, contradicting this theory is the fact that discounts in public offerings reflect adverse selection costs, since the management conveys poor firm information to the market at the time of the announcement, in line with Myers and Majluf (1984), i.e. the managers convey that the firm is overvalued. The potential degree of adverse selection costs is therefore higher in public offerings compared to rights offerings, since it is only the part of the offering sold to outsiders that is subject for such costs (Eckbo and Masulis, 1992). Thus, investors should demand a higher discount in public offerings than in rights issues, which speaks against our results.

⁴¹ One of the earliest United States studies, performed by Smith (1977), reports an average discount of 0.5% from 1971 to 1975 for rights issues. Loderer, Sheehan, and Kadlec (1991) find a 1.4% discount for 680 Nasdaq and 929 NYSE/AMEX public offers by industrial and utility firms during 1980-1984. Since the late 1980s, the average SEO discount has generally risen. Altinkılıç and Hansen (2003), Kim and Shin (2004) and Mola and Loughram (2004) observe a substantial increase in the discount on SEOs in the United States. The rate increased from less than 1% in the 1980s to 3% at the end of the 1990s depending on the authors. Specifically, analyzing a sample of 4814 SEOs during 1986-1999, Mola and Loughram (2004) estimate that the average offering of new shares is priced at a 3.0% discount from the closing price on the day before the issue. In turn, examining 590 public offering by firms listed on the NYSE and AMEX in the United States, Altinkılıç and Hansen (2003) observe a mean discount of 1.5% and for 1113 Nasdaq offers, the mean discount amounts to 3.0%. Thus, the combined mean discount in the Altinkılıç and Hansen (2003) study is 2.5%. Kim and Shin (2004) split their time period, which ranges from 1983 to 1998, into two subperiods and find that SEOs issued before August 25, 1988 (their first subperiod) are offered at no discounts or very little discounts from the pre-issue day closing price. In sharp contrast, SEOs issued after August 25, 1988 (the second subperiod) are offered at discounts of approximately 2-3%. These results are robust to different discount measures. Safieddine and Wilhelm (1996) examine a total of 474 offers by industrial firms between 1980 and 1991 and observe a mean discount of 0.5%. Following the papers of Altinkılıç and Hansen (2003) and Safieddine and Wilhelm (1996), Ergungor et al. (2004), specifically studying financial institutions, find that the mean discount is 1.6% for involuntary and 1.9% for voluntary issues, both of which are significant. Their difference, however, is statistically insignificant. Another study that uses United States data by Wu (2000) reports mean discounts for public offerings of 3.1%. A similar average discount is reported in Marciukaityte and Szweczyk (2004). Interestingly, Carpentier, L'Her and Suret (2005) find that for Canada, average discounts are smaller than the United States counterparts. From a sample of 1990 SEOs completed between 1993 and 2003, they find an average discount of 5.3% for Canadian firms.

Our discount of 5.5% for private placements is quite close to previous Swedish and international estimates, and becomes even closer if one excludes private placements with ESOP purpose, whose discounts amount to 8.69% on average. American studies show private placement discounts ranging from around 10-20%.⁴² When comparing studies from different countries, one should bear in mind that the institutional settings differ considerably between e.g. the United States and Sweden, and one should not draw any definite conclusion from such comparisons. A Swedish study by Molin (1996), however, shows similar results, with an average private placement discount in relation to the announcement day stock price of 15.9% in his sample from 1987 to 1994. In comparison to the study by Burton and Power (2003) on rights issues, which states that discounts for rights issues in the United Kingdom in general are at least 10% greater than for those of private placements, we find that our results are quite consistent with their observation.

Also noteworthy from Table 14 are the discount results for our sample with private placement with *only* ESOPs. We observe a mean discount of -59.9%, i.e. a premium. This is because these kinds of options often expire at a date occurring at least a couple of years into the future. Hence, since it is in fact an *incentive* option, managers do not want the option to be in-the-money today (which is the case if the option is priced at a discount), instead they want the employees to work hard, which improves the stock price, making the options in-the-money when they expire. Another interesting observation that can be deduced from Table 14 is that the share held by the largest owner and the sum of the share of holdings of investors with more than 5% of the voting rights, are slightly higher for rights issues than for private placements.⁴³ This might indicate that firms with large controlling owners are reluctant to issue shares through methods that might dilute the voting rights connected to their holdings. The difference in the voting power of the controlling owners do not differ significantly, however, and we hesitate to draw any definitive conclusions from this observation.

4.5 Offerings per Firm

A detailed survey of the number of issues made by different number of firms during the time period is given in Table 15.

⁴² Using data from The Wall Street Journal Corporate Index, Barclay and Holderness (2001) find an average discount of 19%. Hertz et al. (2002) determines the private placement discount to be 16.5% and Armitage and Snell (2004) also find a discount in that approximate range, specifically 13% for private placements. Lastly, through a survey of 106 placements on NYSE, AMEX and OTC firms in the United States, Hertz et al. (1993) find an average discount of 20.1%. In other words, the mean discount in different studies ranges from about 13-20%, depending on the specific sample at hand. Mentioning again the study by Carpentier, L'Her and Suret (2005), these authors find an average discount of 10.0% for their private placement sample including 2108 offerings between 1993 and 2003.

⁴³ For example, if the three largest owners own shares of 35%, 25% and 10% of the voting rights, respectively, the value for the largest owner would equal 35%. The other measure, the sum of the share of holdings of investors with more than 5% of the voting rights, would equal 70% (35% + 25% + 10%).

Table 15
Number of Equity Offerings per Firm

The table shows the number of equity offerings per firm on the Stockholm Stock Exchange 1986-2005 divided into five categories: rights offerings, private placements, private placements excl. ESOP purpose, private placements only M&A purpose, and private placement only ESOP purpose. The total number of equity offerings is 1304. An empty field in the table indicate that no company issued stocks that particular number of times during the year in question.

Number of offerings per firm	Rights offerings			Private placements			Private placements excl. ESOP purpose			Private placements only M&A purpose			Private placements only ESOP purpose		
	Firms	Offerings		Firms	Offerings		Firms	Offerings		Firms	Offerings		Firms	Offerings	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
1	106	106	41.9	117	117	11.1	66	66	6.9	92	92	25.4	51	51	57.3
2	32	64	25.3	63	126	12.0	52	104	10.8	31	62	17.1	11	22	24.7
3	16	48	19.0	41	123	11.7	37	111	11.5	18	54	14.9	4	12	13.5
4	6	24	9.5	28	112	10.7	27	108	11.2	8	32	8.8	1	4	4.5
5	1	5	2.0	15	75	7.1	15	75	7.8	6	30	8.3			
6	1	6	2.4	7	42	4.0	7	42	4.4	4	24	6.6			
7				12	84	8.0	12	84	8.7	1	7	1.9			
8				3	24	2.3	3	24	2.5	1	8	2.2			
9				5	45	4.3	5	45	4.7						
10				4	40	3.8	4	40	4.2						
11				1	11	1.0	1	11	1.1						
12				2	24	2.3	2	24	2.5						
13				1	13	1.2	1	13	1.4	1	13	3.6			
14				2	28	2.7	2	28	2.9	1	14	3.9			
15				2	30	2.9	2	30	3.1						
16															
17				1	17	1.6	1	17	1.8						
18															
19															
20															
>20				5	140	13.3	5	140	14.6	1	26	7.2			
Total	162	253	100.0	309	1051	100.0	242	962	100.0	164	362	100.0	67	89	100.0

One may observe that most firms in our sample conduct only one or two rights issues during the entire period. For private placements, on the other hand, the firms in our sample conducting many private placements during the sample period is quite substantial. At the extreme, five firms have conducted more than 20 private placements during 1986-2005, equalling 140 issues in total. This might reflect the fact that private placements are often smaller compared to their rights issues counterparts. Hence, we see a tendency of firms to issue few, but large, rights offerings, and many, small private placements.

Reducing the private placement sample with the ones with ESOP purposes does not change the picture to any greater extent. An interesting observation is that private placements as part of ESOPs are rarely issued more than twice by the same firm, and we conclude that quite a few firms conduct 10 or more private placements during the time period, while rights offerings are more evenly spread over the firm population.

4.6 *Stock List Characteristics*

The total number of issues made by firms listed on each stock exchange list is shown in Table 16 below.

Table 16
Number of Equity Offerings per Stock List at the Stockholm Stock Exchange

The table shows the number of equity offerings per stock list on the Stockholm Stock Exchange 1986-2005. The A-list includes issues from both the current firms listed on the A-list and from the companies listed on the (old) AI and AII lists. The O-list includes issues from the current firms listed on the O and Attract 40 lists, and the offerings from the firms listed on the (old) O-reg list. The OTC-list includes the issues from the firms listed on the OTC-list. The total number of equity offerings is 1304. All variables are defined in Table A-1.

Stock list	N	%
<i>Panel A: Rights issues</i>		
A-list	71	28.1
O-list	150	59.3
OTC-list	32	12.6
Total	253	100.0
<i>Panel B: Private placements</i>		
A-list	212	20.2
O-list	723	68.8
OTC-list	116	11.0
Total	1051	100.0
<i>Panel C: Private placements excl. ESOP purpose</i>		
A-list	186	19.3
O-list	666	69.2
OTC-list	110	11.4
Total	962	100.0

Table 16 (continued)

<i>Panel D: Private placements only M&A purpose</i>		
A-list	72	19.9
O-list	243	67.1
OTC-list	47	13.0
Total	362	100.0
<i>Panel E: Private placements only ESOP purpose</i>		
A-list	26	29.2
O-list	57	64.0
OTC-list	6	6.7
Total	89	100.0

Comparing the number of rights issues versus private placements conducted on the different Stockholm Stock Exchange lists in Table 16, it seems that rights issues are somewhat more evenly spread over the lists, while the distribution of private placements is slightly more biased towards the O-list. Excluding the private placements with ESOP purposes, these conclusions remain. The requirements for a listing on the A-list are harsher than for the O-list, specifically in terms of the amount held by outside investors and capabilities to generate profits in the long run, and by consequence we expect stocks of firms listed on the O- and OTC-lists to be less liquid. In other words, the data suggests that private placements tend to be carried out by firms with less liquid stocks.

To further illustrate the differences between issue types with regard to stock list, we plot the number of issues per stock list and type to form Figure 2.

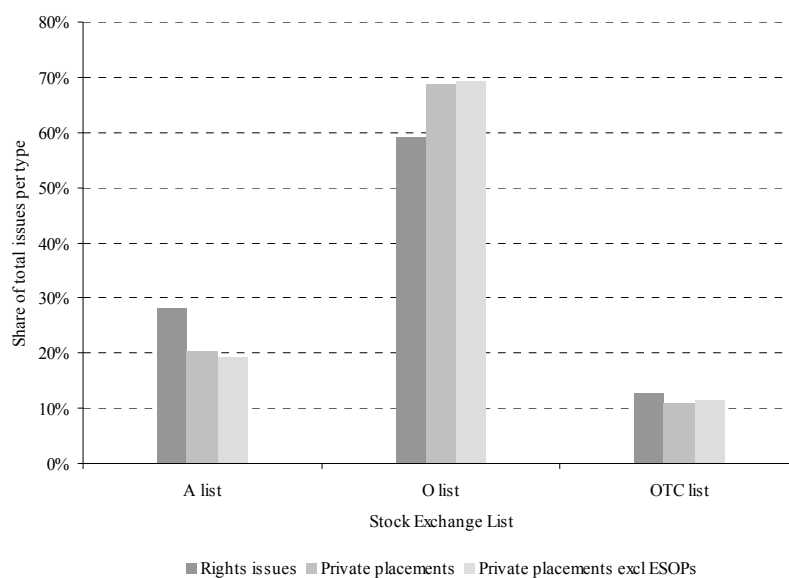


Figure 2 Number of issues per stock list at the Stockholm Stock Exchange 1986-2005.

4.7 Purpose of the Issue

Sorting the offerings by the purpose of each individual issue gives even more depth to the analysis, revealing further characteristics that were not apparent on the first look at the sample. Table 17 illustrates these characteristics.

Table 17
Number of Equity Offerings per Purpose of the Issue

The table shows the number of equity offerings per purpose of the issue by companies listed on the Stockholm Stock Exchange between 1986 and 2005. The Merger and acquisition category includes issues where the purpose is to acquire or merge with a company. If the purpose is to strengthen the balance sheet, improve solidity etc. the issue is reported under the Solidity/financial strength category. Financial restructuring means that a financially distressed firm issues equity to stay in business (survive). The Joint venture category includes issues where the purpose is to start collaboration with another firm. The Expansion category includes issues with the (broad and general) purpose of expanding its business as opposed to the Specific investment category, which includes issues where the capital will be used for a specific project or investment, e.g. to develop product X. The Incentive/option rights/convertibles category includes employee or management option programmes, i.e. where the purpose is to motivate and give incentives to certain people to increase their efforts for the firm. Finally, the last category includes issues where the purpose was neither specified nor found. The total number of equity offerings is 1304. All variables are defined in Table A-1.

Number of offerings per purpose of the issue	Rights offerings		Private placements	
	N	%	N	%
Merger and acquisition	28	11.1	362	34.4
Solidity/fin. strength	82	32.4	58	5.5
Financial restructuring	16	6.3	14	1.3
Joint venture	0	0.0	8	0.8
Expansion	35	13.8	21	2.0
Specific investment	29	11.5	36	3.4
Incentive/opt. rights	2	0.8	89	8.5
Intent not specified	61	24.1	463	44.1
Total	253	100.0	1051	100.0

Table 17 confirms the observations stated earlier, that a fair share of the private placements have an explicit purpose of an M&A transaction. Many of these are likely to have been used as non-cash payments to acquire shares or merge two companies. A couple of the rights issues were also made with the objective of acquiring other companies. Evidently, neither of these issues were made as part of a payment in the acquisition itself, but rather to raise cash to be able to acquire companies in the near future. For issues made with the purpose of increasing the employee stock holding in order to align their incentives with the company, 89 were made through private placements and only two through rights issues, since the firms conducting these two issues were fully owned by the employees.⁴⁴

⁴⁴ Note that we still consider them to be ESOPs, despite being targeted to current shareholders. This is because the purpose is practically the same.

Again, in order to illuminate the distinguishing features of rights offerings and private placements in a clear manner, we also present these results in a chart, see Figure 3.

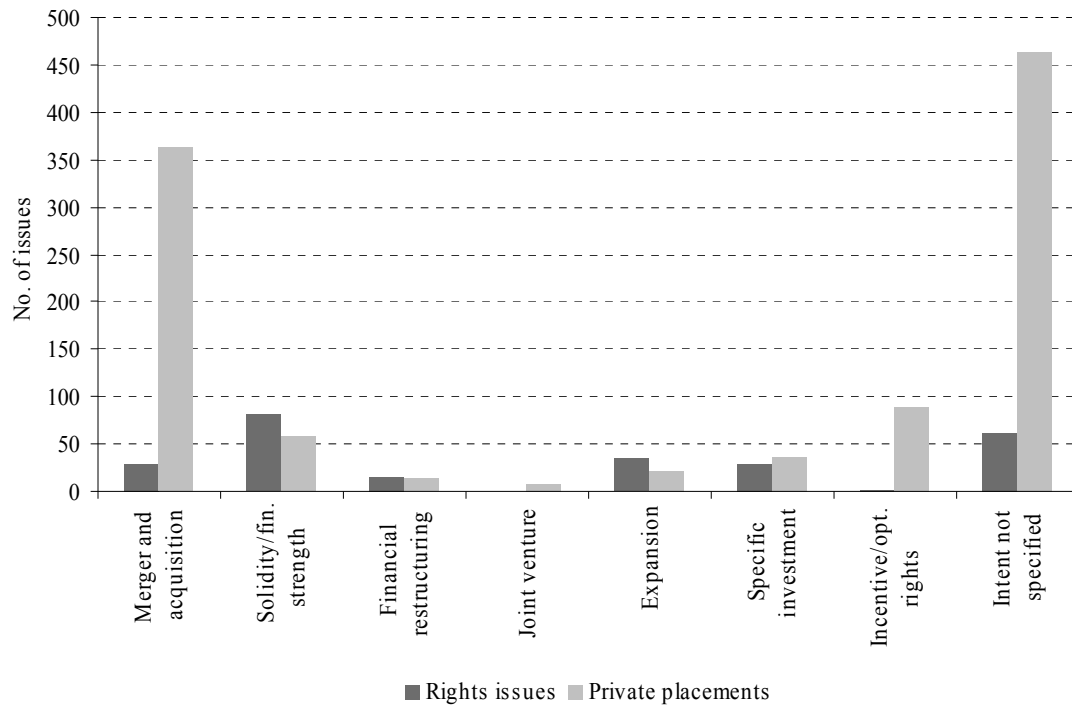


Figure 3 Number of equity offerings per purpose of each respective issue.

Figure 3 shows that, of the offerings that did not specify the intent behind the issue, a major portion of these were private placements, possibly reflecting the fact that the information on rights issues is more publicly available than for private placements. This is expected since rights issues use public channels as an information source for the potential investors to a much larger extent than is the case for private placements.

4.8 Identity of Equity Issue Investors

For the private placements where information about the private placement investors could be gathered, amounting to 1051 observations, we classify them according to issue targets of individual(s) and institution(s), or both of these categories. This classification yields the results shown in Table 18 below.

Table 18
Number of Private Placements per Target Investor

The table shows the number of private placements per target investor by companies listed on the Stockholm Stock Exchange 1986-2005. The Institution(s) category includes offerings directed to an institution or institutions such as a company. The Individual(s) category includes issues directed to private individuals such as the CEO of the company etc. If the private placement is directed both to an institution(s) or an individual(s), it is placed in the Both institution(s) and individual(s) category. The Unclear category is for issues where the target investor is not known. The total number of private placements is 1051. All variables are defined in Table A-1.

	N	%
<i>Panel A: Private placements</i>		
Institution(s)	614	58.4
Individual(s)	237	22.5
Both institutions(s) and individual(s)	17	1.6
Unclear	183	17.4
Total	1051	100.0
<i>Panel B: Private placements excl. ESOP purpose</i>		
Institution(s)	606	63.0
Individual(s)	178	18.5
Both institutions(s) and individual(s)	13	1.4
Unclear	165	17.2
Total	962	100.0
<i>Panel C: Private placements only M&A purpose</i>		
Institution(s)	279	77.1
Individual(s)	65	18.0
Both institutions(s) and individual(s)	5	1.4
Unclear	13	3.6
Total	362	100.0
<i>Panel D: Private placements only ESOP purpose</i>		
Institution(s)	8	9.0
Individual(s)	59	66.3
Both institutions(s) and individual(s)	4	4.5
Unclear	18	20.2
Total	89	100.0

The most remarkable conclusion we draw from Table 18 is that private placements targeted to institutions are about three times as common as private placements placed to individuals.⁴⁵ This distinction between investors will be useful later on when we test for monitoring theories in the forthcoming cross-sectional analysis.

4.9 Ownership Concentration

In order to study the effects on monitoring activity through equity issues, we will study the initial ownership structure from firms conducting SEOs. A thorough survey of the ownership concentration in firms issuing equity in Sweden is given in Table 19.

Table 19
Ownership Concentration of Firms Conducting Equity Offerings

The table shows the number of firms per ownership concentration category for (i) the largest owner of the firm, (ii) the accumulated share of the investors owning at least 5% of the shares, and (iii) the accumulated ownership stake for the 25 largest shareholders. All three categories are measured in the beginning of the announcement year and the ownership concentration is based on the voting rights rather than the cash flow rights (capital) of the company. The total number of equity offerings is 1304. All variables are defined in Table A-1.

			N	%
<i>Panel A: Rights issues</i>				
Largest owner [%]		≤ 25.0	109	43.1
	25.0	< ≤ 50.0	95	37.5
		> 50.0	49	19.4
Acc. share > 5% [%]		≤ 25.0	48	19.0
	25.0	< ≤ 50.0	75	29.6
		> 50.0	130	51.4
Acc. share, 25 largest owners [%]		≤ 50.0	22	8.7
	50.0	< ≤ 75.0	77	30.4
		> 75.0	154	60.9
Total			253	100.0
<i>Panel B: Private placements</i>				
Largest owner [%]		≤ 25.0	490	46.6
	25.0	< ≤ 50.0	386	36.7
		> 50.0	175	16.7
Acc. share > 5% [%]		≤ 25.0	199	18.9
	25.0	< ≤ 50.0	332	31.6
		> 50.0	520	49.5
Acc. share, 25 largest owners [%]		≤ 50.0	94	8.9
	50.0	< ≤ 75.0	264	25.1
		> 75.0	693	65.9
Total			1051	100.0
<i>Panel C: Private placements excl. ESOP purpose</i>				
Largest owner [%]		≤ 25.0	456	47.4
	25.0	< ≤ 50.0	349	36.3
		> 50.0	157	16.3
Acc. share > 5% [%]		≤ 25.0	187	19.4
	25.0	< ≤ 50.0	307	31.9
		> 50.0	468	48.6
Acc. share, 25 largest owners [%]		≤ 50.0	92	9.6
	50.0	< ≤ 75.0	245	25.5
		> 75.0	625	64.9
Total			962	100.0

⁴⁵ Again, one should note that the ESOPs directed to institutions are not ESOPs per se, but rather ordinary convertible issues.

Table 19 (continued)

			N	%
<i>Panel D: Private placements only M&A purpose</i>				
Largest owner [%]		≤ 25.0	180	49.7
	25.0	< ≤ 50.0	112	30.9
		> 50.0	70	19.3
Acc. share > 5% [%]		≤ 25.0	91	25.1
	25.0	< ≤ 50.0	106	29.3
		> 50.0	165	45.6
Acc. share, 25 largest owners [%]		≤ 50.0	39	10.8
	50.0	< ≤ 75.0	98	27.1
		> 75.0	225	62.2
Total			362	100.0
<i>Panel E: Private placements only ESOP purpose</i>				
Largest owner [%]		≤ 25.0	34	38.2
	25.0	< ≤ 50.0	37	41.6
		> 50.0	18	20.2
Acc. share > 5% [%]		≤ 25.0	12	13.5
	25.0	< ≤ 50.0	25	28.1
		> 50.0	52	58.4
Acc. share, 25 largest owners [%]		≤ 50.0	2	2.4
	50.0	< ≤ 75.0	19	21.3
		> 75.0	68	76.4
Total			89	100.0

Table 19 confirms the observation we made earlier about a slightly larger ownership concentration for firms carrying out rights offerings than for firms carrying out private placements. This can be seen by the larger share of the holdings of the largest owner above 50% of the voting rights in rights issues, as well as a smaller share of the holdings of the largest owner below 25% for the same issues. By estimating the ownership through the total percentage holdings of investors with more than 5% of the voting rights each, we reach the same conclusion. Our interpretation is that investors are reluctant to issue shares through private placements since they might dilute their voting rights, possibly because a private placement would make it more difficult for management to continue divert resources and benefit from perks at the expense of other shareholders and debtholders. This could also be an effect of the fact that many of the private placements are issued by firms listed on the O-list, whose stocks typically have higher ownership concentration than e.g. firms on the A-list. The observation about a slightly larger ownership concentration for firms conducting rights offerings is also illustrated in Figure 4. This figure shows the share of the total number of issues for firms conducting rights offerings and private placements for different initial ownership levels of the largest owner of the firm.

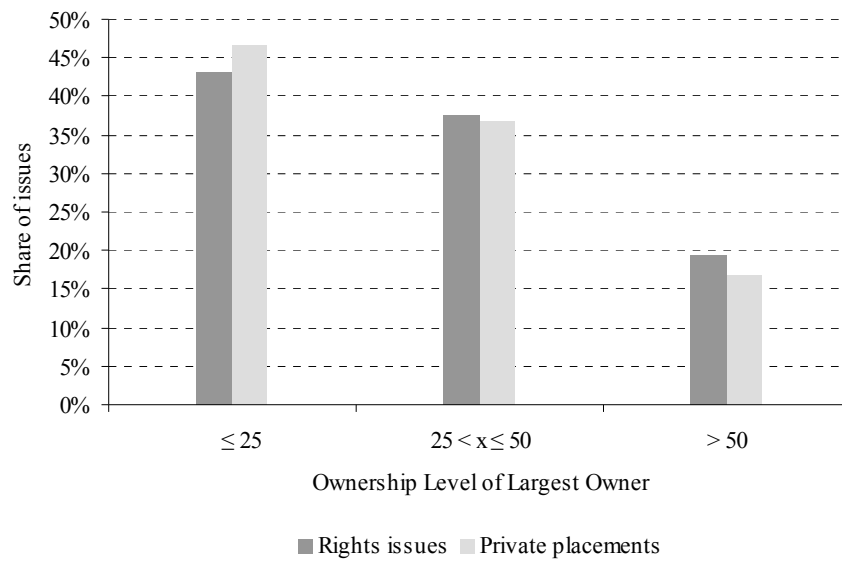


Figure 4 Share of equity offerings per initial ownership level of the largest shareholder of the firm.

Shown by staples in Figure 4 above, rights issues tend to have a somewhat larger initial holding levels than private placements, reinforcing our belief that firms choose rights issues over private placements in order to avoid potential dilution effects.

4.10 Discount Characteristics

Lastly, we will look at the general discount characteristics of the issues in our sample. We noted already in Table 14 that the mean discount for rights offerings was 40.9%, for private placements 5.5% and for private placements excluding ESOP purposes 8.7%. This is an early indication of higher discount levels for rights offerings than for private placements. To gain further understanding of the discount characteristics, we plot the discount level for rights offerings and private placements over time in Figure 5. Note that we do not include private placements excluding ESOP purposes in the chart since these discounts are basically the same throughout time with some minor discrepancies, which we will discuss later on.

It is evident in Figure 5, after having removed outliers as described in Table 14, that the discount for rights offerings has stayed at a consistently higher level than for private placements throughout the time period, even though this spread has narrowed somewhat in recent years. On average, the spread has been 38.0 percentage points during the period 1989-2005.⁴⁶ One interesting and distinct

⁴⁶ The years prior to 1989 are not included in the chart simply because we do not have enough observations during these years to plot a continuous line.

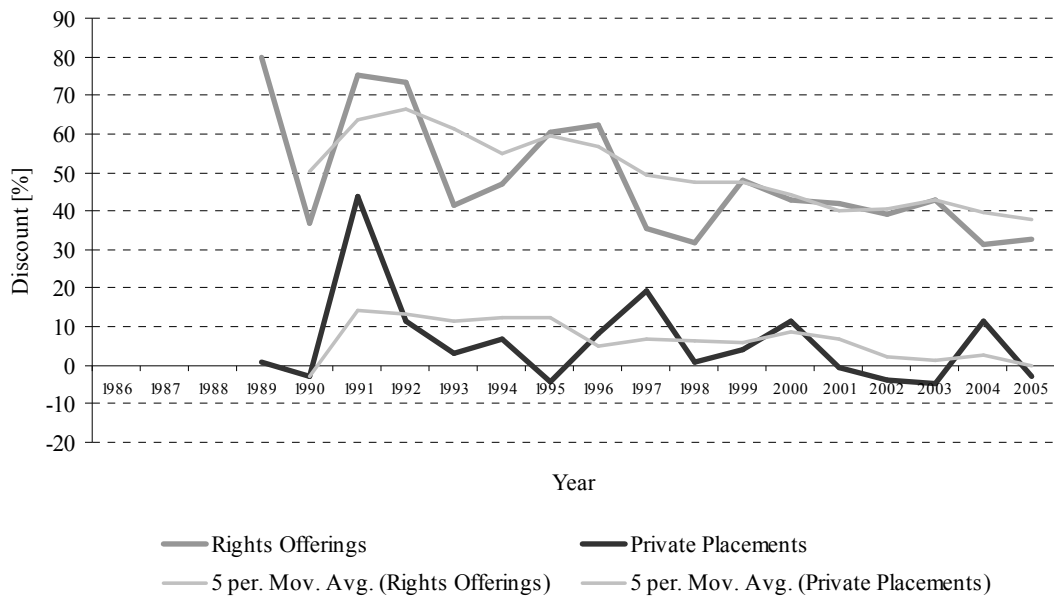


Figure 5 Mean discount development over time.

feature of the time series is the downward sloping trend the conditional mean discount has shown for both rights issues and private placements. This trend is illustrated by five-year moving averages for rights issues and private placements, respectively. One reason for the decreased discounts may be the increased liquidity in the equity markets that took place during this time period, something that Silber (1991) hypothesized would lead to lower demands of illiquidity premiums from investors' point of view and hence lower discounts in the issues. On the other hand, we recognize that the samples of issues used in the late 1980s and in the beginning of the 1990s were fairly small, leading to inefficient estimates, and that this might influence the trend in decreasing discounts. What we are certain about, however, are the large discrepancies in discounts for rights issues and private placements. This is in line with Burton and Power's (2003) observations from the United Kingdom market, where discounts of rights offerings were found to be approximately 10% higher than for private placements.

Examining Tables A-9 and A-10 in the Appendix, we find that the discounts are fairly robust with regard to market capitalization, absolute and relative issue size, ownership concentration, stock list and purpose of the issue. Hence, the discounts in the sample are reasonably stable, giving further support of the reliability of our estimates of rights issue and private placement discounts. Further characteristics of discounts for our cross-sectional samples of rights offerings and private placements can be found in *Section 5.3. Descriptive Statistics on Discounts, Abnormal Return and Discount-Adjusted Abnormal Returns*.

5 Stock Markets Reactions

5.1 Event Study Results

With the aim of describing the results of our event studies, we will in this section describe the stock market reactions to announcements of rights offerings and private placements in our sample, and investigate how they differ between categories of these issue types.⁴⁷ Stock market reactions in the form of abnormal returns, with regard to a market model-adjusted benchmark, are presented using three different event windows. The stock market reactions will be classified into five categories: (i) rights offerings, (ii) private placements, (iii) private placements excluding those with an ESOP purpose, (iv) private placements with the only purpose of an M&A transaction, and (v) private placements with the only purpose of an ESOP. The results of the market model adjusted abnormal returns for each day over the $\{-20, 20\}$ event window for our five categories are presented in Tables A-4, A-5, and A-6 in the Appendix. In addition, we present in the Appendix the cumulative abnormal return for six different event windows, i.e. three additional windows, both for the market model mentioned above and, as a robustness check, for a market index model, see Table A-7.⁴⁸ In addition, we will present figures that describe noteworthy trends in the tables, see Figures A-1, A-2, and A-3.

For the announcement day abnormal returns for rights issues, we find the following results. In line with previous US research on rights issues, who report abnormal returns in the range $\{-2.6\%, -0.5\%$, our results suggest that rights offerings are associated with a negative -2.2% abnormal return on average on the announcement day, which is significant at the 5% level (t -stat is -2.3891), as shown in Table 20.⁴⁹ Consequently, the majority of the abnormal returns (63.7%) for our rights offering sample is negative on the announcement day.

⁴⁷ For a general overview of the theory and evidence on the process by which corporations raise capital, e.g. through debt and equity issues and the associated effects on security prices, see Smith (1986). In terms of equity offerings, the evidence surveyed by Smith (1986) indicates that, on average, stock prices decrease upon announcements of new issues of common stock or securities that are convertible into common stock. To give the interested reader an flavour of the literature on areas somewhat related to the market assessment of equity issues, see Bayless and Chaplinsky (1996) for an examination of the long-run performance of initial public offerings, Liljebloom (1989) for an investigation of stock dividends and stock splits, Schipper and Smith (1986) for a study of the effects of voluntary corporate spin-off announcements on shareholder wealth, and Spiess and Affleck-Graves (1995), for an examination of the long-run post-issue underperformance by firms making straight and convertible debt offerings.

⁴⁸ Our results do not change significantly when using the market index model instead of the market model. However, as Molin (1996) points out, the market index adjustment method generates larger abnormal returns when they are positive and smaller absolute abnormal returns when they are negative, than the market model adjustment method. This is explained by the fact that the firms associated with negative stock market reactions following private placement announcements are companies with higher market model betas than firms that generate positive stock market reactions in the samples.

⁴⁹ Scholes (1972) is one of the earliest studies examining the stock price reactions following rights issues and he finds a negative equity response. Scholes (1972) hypothesized that the reactions were due to price pressure effects previously mentioned in the theory section. Unfortunately, however, the author is unable to conclude that this hypothesis

(continued)

Table 20

Cumulative Abnormal Returns Around Announcements of Equity Offerings

The mean Cumulative Abnormal Returns (CAR) are calculated using both the market-model-implied returns (using 180 days daily returns for estimating the market model coefficients), and a value-weighted market index (AFGX) as benchmarks. The sample include 201 rights offerings, 610 private placements, 552 private placements excl. ESOP purpose, 303 private placements only M&A purpose, and 58 private placements only ESOP purpose announcements (total of 811) between 1986 and 2005.

<i>Panel A: Rights offerings</i>			
Statistics	Event day	{-1, 1}	{-3, 1}
Mean CAR	-0.0220	-0.0276	-0.0204
<i>t</i> -stat	-2.3891**	-2.4636**	-1.6891*
% negative	63.7	61.7	59.2
<i>Panel B: Private placements</i>			
Statistics	Event day	{-1, 1}	{-3, 1}
Mean CAR	0.0151	0.0166	0.0213
<i>t</i> -stat	3.3706***	3.3231***	3.7103***
% positive	53.1	52.6	53.3
<i>Panel C: Private placements excl. ESOP purpose</i>			
Statistics	Event day	{-1, 1}	{-3, 1}
Mean CAR	0.0174	0.0195	0.0241
<i>t</i> -stat	3.5248***	3.5678***	3.8478***
% positive	54.0	53.8	54.3
<i>Panel D: Private placements only M&A purpose</i>			
Statistics	Event day	{-1, 1}	{-3, 1}
Mean CAR	0.0291	0.0367	0.0363
<i>t</i> -stat	3.7887***	4.4321***	3.7718***
% positive	60.4	59.1	58.4
<i>Panel E: Private placements only ESOP purpose</i>			
Statistics	Event day	{-1, 1}	{-3, 1}
Mean CAR	-0.0062	-0.0110	-0.0057
<i>t</i> -stat	-1.359	-1.6939*	-0.679
% positive	44.8	41.4	43.1

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

The three-day cumulative abnormal return (CAR{-1, 1}) is -2.8% for our sample, which is very close to the value reported by Hansen (1989) for industrials underwritten rights offering. Our results are robust to changes in the event window and using the market index model instead of the market model. As we had expected, our results show *significant* and *negative* abnormal returns following

accounted for the observed stock price decrease. Other examples of US rights offering research include Smith (1977), White and Lusztig (1980), Hansen (1989), Eckbo and Masulis (1992), and Singh (1997). Specifically, Hansen (1989) finds significant negative two-day announcement abnormal returns of -1.2% for utilities and -2.6% for industrials underwritten rights offering whereas Eckbo and Masulis (1992) find that the average two-day cumulative abnormal return is -1.0% and statistically significant for industrial issuers and -0.5% for utility issuers for standby rights. Similarly, Singh (1997) finds a negative two-day average cumulative abnormal return of -1.1% for underwritten rights offerings.

rights offerings, in contrast to previous studies from Scandinavia reporting abnormal returns in the range $\{-0.9\%, 0.5\%\}$.⁵⁰

For the private placement announcement day stock market reactions, we find a positive and statistically significant (at the 1% level) average abnormal return of 1.5%, and the percentage of positive abnormal returns is 53.1%. This is close to the values reported by Wruck (1989), and Alli and Thompson II (1993), both reporting abnormal returns of 1.9%.⁵¹

In terms of our $CAR\{-1, 1\}$ values for private placements, i.e. three-day cumulative abnormal returns, our significant private placement average cumulative abnormal return of 1.7% is in line with the one reported by Barclay, Holderness and Sheehan (2001), who find a three-day abnormal return of 2.0%, statistically significant at the 1% level. Also, our five-day average cumulative abnormal return of 2.1%, significant at the 1% level, is slightly higher than the value observed Hertzell and Smith (1993).⁵² However, comparing our private placement results with previous Swedish studies, e.g. Molin (1996) and Cronqvist and Nilsson (2005), we find slightly lower stock market reactions following private placements of equity. Molin (1996) reports a 2.7% event day abnormal return (significant at the 5% level), a 3.2% (significant at 1%) three-day cumulative abnormal return and a positive 2% (insignificant) five-day cumulative abnormal return for 76 private placement

⁵⁰ Molin (1996) examines the announcement effects following rights issues for 62 Swedish offerings between 1980 and 1994. Although insignificant, he finds a negative -0.9% three-day abnormal return following rights offerings and a positive 0.2% abnormal return during a five-day period. Cronqvist and Nilsson (2005) studies 160 rights offerings in Sweden during the period 1986-1999 and finds a positive and insignificant average three-day abnormal return of 0.4%. An Australian study by Dehnert (1991) and a Finnish study by Hietala and Löyttyniemi (1991), both examining rights offerings for listed firms as well, do not succeed in finding any significant abnormal return for the issues at the 5% level. Non-US studies that do find negative and statistically significant stock market reactions following rights offering announcements include Armitage (1999) and Slovin, Sushka and Lai (2000) for the UK market, Marsden (2000) for the New Zealand market, De Jong and Veld (2001) for the Netherlands market, and Kang and Stulz (1996) for the Japan market. Surprisingly enough, there are non-US studies that find signs of *significant positive* abnormal return at the announcement of rights offerings. On the Norwegian market, Bøhren, Eckbo and Michalsen (1997) find a positive average two-day abnormal return of 0.5% for rights issues, which is significant at the 5% level. On the South Korean market, Kang (1990) and Dhatt, Kim and Mukherji (1996) find a 1.5% and 2.4% positive abnormal return that is significant at the 5% and 1% level, respectively. Loderer and Zimmermann (1988) study the Swiss market and find an average abnormal return of 2.6% for rights issues. Using an extensive sample of 997 UK firms, Marsh (1979) comes to almost the same conclusion, i.e. a positive abnormal return of 2.1%, significant at the 5% level. Other studies showing this positive effect for rights offerings include Ball, Brown and Finn (1977) for the Australian market, Tsangakaris (1996) for the Greek market, Bigelli (1998) for the Italian market, and Tan, Chng and Tong (2002) for the Singapore market.

⁵¹ Wruck (1989) examines 128 private placements for exchange listed firms in the US between 1979 and 1985. She finds a positive two-day abnormal stock return of 1.9%, which is significant at the 5% level. Correspondingly, investigating 189 private placements made by Nasdaq listed firms 1982-1989, Alli and Thompson II (1993) report a four-day abnormal return of 4.4% (significant at the 5% level) and a two-day abnormal return of 1.9% (significant at the 10% level).

⁵² Hertzell and Smith (1993) investigate 106 private placements made by Nasdaq listed firms 1980-1987 and find a positive four-day abnormal return of 1.7%, statistically significant at the 5% level. More recent US research, e.g. Hertzell and Rees (1998), Goh et al. (1999), Besley and Kohers (2000), Wu (2000), Barclay, Holderness and Sheehan (2001), and Krishnamurthy et al. (2004) confirm the positive announcement effects following private placements of equity. The largest study of the previously mentioned is Barclay, Holderness and Sheehan (2001). By searching through the Dow Jones News Service database between 1979 and 1997, they are able to examine a sample of 594 private placements and find a three-day abnormal return of 2.0%, statistically significant at the 1% level.

announcements of Swedish firms between 1986 and 1994.⁵³ Cronqvist and Nilsson (2005) find a positive and significant (at the 1% level) average three-day cumulative abnormal return following a private placement, amounting to 7.3%.^{54,55}

We proceed by describing the event study results for private placements excluding offerings with ESOP purposes. Analogous with the private placement sample, we find a positive statistically significant (at the 1% level) announcement day abnormal return of 1.7%. The number of positive returns this day amounts to 54.0%, compared with 53.1% in the total private placement sample. In terms of the average three-day ($CAR\{-1, 1\}$) and five-day ($CAR\{-3, 1\}$) cumulative abnormal return we observe statistically significant positive values of 2.0% and 2.4%, respectively, from Panel C in Table 20.

When examining the results for private placements with an M&A purpose, it is clear that abnormal returns on average are higher for these issues compared with other private placement returns. The announcement day average abnormal return amounts to 2.9%, which is almost twice as high as the value for the total private placement sample. Panel D in Table 20 confirms the high abnormal returns for private placement with the purpose of an M&A transaction and presents significant positive values for the three-day and five day cumulative abnormal returns of 3.7% and 3.6%, respectively.

With regards to the stock market reactions following private placements with ESOP purposes, we find a negative and significant (at the 10% level) three-day ($CAR\{-1, 1\}$) cumulative abnormal return. This suggest that the stock market looks upon incentive programmes to the employees of the issuing firms as negative signals. This is not surprising considering the fact that, at least recently, there has been numerous incentive programme scandals in Sweden.

Figure 6 graphs the average cumulative abnormal return over a $\{-10, 10\}$ event window, for rights offerings and private placements, respectively.

⁵³ Molin (1996) writes that the positive average abnormal return he finds is accounted for by a majority of individual positive observations, not only by a few outliers. However, he finds three apparent outliers from his sample that exhibit abnormal returns in excess of three times the sample standard deviation and when removing these, the event-day average abnormal return falls from 2.7% to 1.5%. We find his method of keeping these highly influential outliers in his sample rather unorthodox and questionable.

⁵⁴ Specifically, they examine a sample of 136 offerings between 1986 and 1999 by firms listed on the Stockholm Stock Exchange or the SBI Marknadsplats. Beside the high abnormal returns at the announcement for private placements, they find that the abnormal return is significantly higher for private placements directed to current investors than for private placements targeted to new investors.

⁵⁵ The large value reported by Cronqvist and Nilsson (2005) could be explained by the fact that they include more volatile stocks from the SBI list, exclude banks or insurance companies, issues in which warrants account for <50% of the proceeds, and issues that result from employee stock option plans, thereby narrowing down their sample to 160 offerings, compared to 610 in our sample.

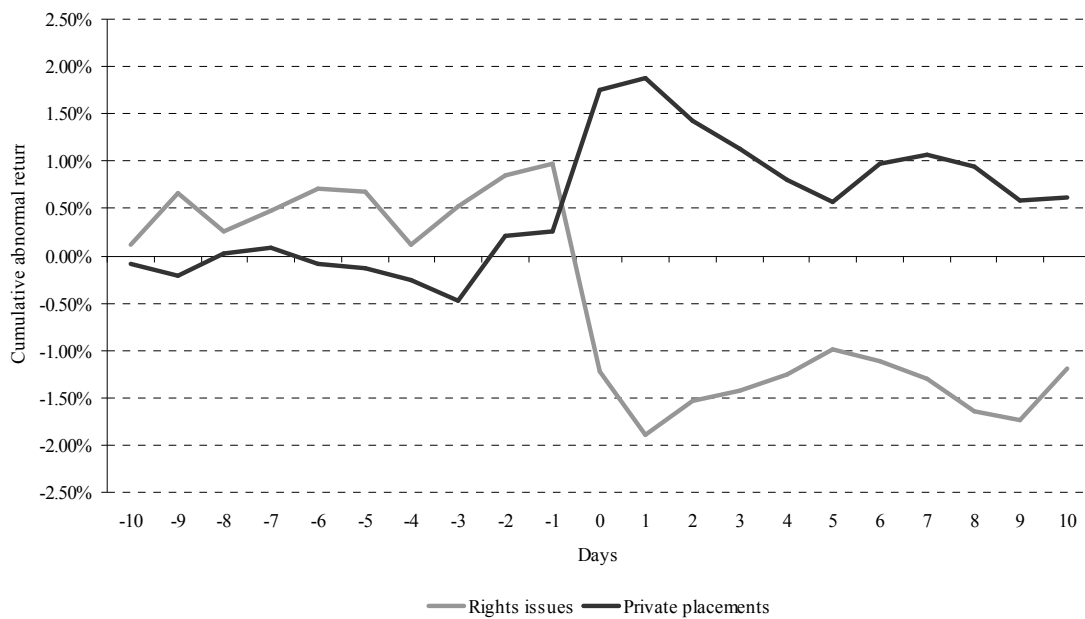


Figure 6 Market model adjusted average cumulative abnormal returns for the $\{-20, 20\}$ event window.

Interestingly, after the expected increase in the average cumulative abnormal return for the private placement sample on the announcement day, the cumulative abnormal return decreases somewhat between event day 1 and 5.⁵⁶ This might suggest that the stock market revises its valuation of the firm a few days after its initial reaction to private placement announcements, possibly because of further information provided by the issuing company after the announcement. On the other hand, there is a reason why event studies typically look at event windows of 1-5 days, in which case this overreaction would not appear. This is because returns outside these event windows might be affected by information other than the issue itself. The determinants of this phenomenon might be topic for future research.

5.2 Event Study Results per Category

To get a closer understanding of the stock market reactions for different categories of equity issues, we proceed by presenting the results of the mean five-day abnormal returns for different characteristics of the sample, as shown in Table A-8 in the Appendix. Explicitly, the table presents the cumulative abnormal returns for different purposes behind the issues, stock lists and time periods. Studying Table A-8, we find results that are both surprising and indicative of the underlying rationale behind the stock market reaction.

Panel A of Table A-8 shows some important results. First, the most common purpose of issuing shares through a rights offering, the solidity purpose, is associated with a negative average stock market reaction of -4.6%, which is significant at the 5% level. Second, it seems that issues from companies listed on the A-list are looked upon more favourably than those from companies listed on the O-list, although this is not statistically significant. Third, we find that rights offerings have only had negative significant abnormal returns during the last five years of the investigated time period, i.e. between 2001 and 2005.

As noted before, Panel B of Table A-8 shows that private placements are in general, unlike right issues, rewarded with a positive stock market reaction. But now we may also note that mergers or acquisitions is the only purpose which yields statistically significant stock market reactions. This result does not change when excluding ESOP purpose placements. Fundamentally, we see no major difference between investments in companies and other assets and therefore regard private placements with M&A purposes as any other, non-ESOP, private placement. Analogously, we find positive and significant cumulative abnormal returns when the placement is targeted to an institution. This might be explained by the fact that a large portion of the private placements classified as directed to institutions, are in fact private placements used as payment in M&A transactions. Next, we see that the cumulative abnormal return for private placements conducted by firms that are listed on the O- and OTC-lists are higher than those from the A-list, on average. Since the average firm size on these lists is smaller than A-listed firms on average, this is line with the argument that the level of asymmetric information is higher in smaller firms, which should, according to Hertzell and Smith (1993), lead to higher stock market reactions. The difference in cumulative abnormal return between O- and OTC-listed firms is remarkably large for the private placement samples in Panel B and C. Similar to the rights offering sample, both private placement samples discussed so far only yield statistically significant results in the latter half of the time period examined in this paper. However, a closer look indicates that, as opposed to the rights offering sample, the private placements conducted between the years 1996 and 2000 are accompanied with statistically significant stock market reactions. In the rights offering case, the issues that were conducted between 2001 and 2005 actually yielded significant reactions, not the ones between 1996 and 2000. This observation has an obvious explanation. During the booming IT-years prior to 2000, not many firm needed to conduct rights offerings for solidity or financial restructuring reasons, which actually were the purposes behind the rights offerings that yielded the most statistically significant negative stock market returns. Naturally, this implies less negative market reactions

⁵⁶ As far as we are concerned, this overreaction might form a basis for contrarian trading strategies, even though we do not know if it is high enough to cover transaction costs.

during these years. For the private placement samples, on the other hand, many issues were conducted during 1996 and 2000 (especially in 2000, which is observed in Tables 13 and A-3), many of which as part of stock-swap agreements. Of course, we expect these offerings to be associated with highly positive stock market reactions on average. This might also simply be a sign of investor exuberance during this certain time period. Overall, these observations remain largely the same when excluding ESOP placements from the private placement sample.

When examining private placements with the purpose of an M&A transaction alone in Panel D in Table A-8, we find highly analogous results as the previous two private placement samples, i.e. positive and statistically significant stock market reactions for placements directed to institutions, when the issue is conducted by companies on stock lists regarded as less liquid, i.e. the O- and OTC-lists, and during more recent time periods. Notable however is the positive and statistically significant (at the 10% level) five-day cumulative abnormal return of 3.6% on average for the full sample of private placements with M&A transactions as underlying purposes.

For private placements with the purpose of an ESOP, as shown in Panel E in Table A-8, our results suggest less significant cumulative abnormal returns on average. Two results are worth mentioning, however. For companies listed on the A-list at the Stockholm Stock Exchange at the time of the offering, the five-day cumulative abnormal return is *negative* -2.7% on average and statistically significant at the 5% level. On the contrary, when the firm is listed on the OTC-list at the time of the issue, the average stock market reaction is *positive* 4.7% and also significant at the 5% level. We find this result to be highly interesting. It suggests that the stock market is very suspicious when a large Swedish company issues managerial stock options and expects that the management will become entrenched and engage in value-decreasing, i.e. non-value maximizing, actions as a consequence of the issue.

5.3 *Descriptive Statistics on Discounts, Abnormal Return and Discount-Adjusted Abnormal Return*

Following Hertzell and Smith (1993), we report descriptive statistics on the relations between the discounts and discount-adjusted abnormal returns and the independent variables used in the subsequent cross-sectional analysis for the private placement samples.⁵⁷ As for the discount-adjustment, we follow the procedure outlined in the *Section 3.2 Discount-Adjustment of Abnormal Return*. For the rights offering sample, we present similar statistics, although reporting abnormal returns with no discount adjustment. The statistics are presented in Tables A-9 through A-11 in the Appendix, although the most noteworthy results will be presented in this section. Our intention with

⁵⁷ As opposed to Hertzell and Smith (1993), who use the Spearman correlation tests, we use *t*-statistics to determine *p*-values for our variables.

this descriptive statistics section is solely to present the mean discount, abnormal returns (for rights offerings) and discount-adjusted abnormal returns (for private placements) in a very detailed fashion, to investigate whether our results remain the same when dividing the variables into many subgroups and examining each of them separately. In terms of abnormal returns for rights issues, Table A-9 shows results for a *one-day* event window, in contrast to Table A-8, which uses a *five-day* event window. It turns out that the results between the two tables are similar. However, one should note that they emphasize two different dimensions – Table A-9 puts an emphasis on *differences* in abnormal returns between different sub-samples, while Table A-8 shows absolute values of abnormal returns per category.

Table A-9 reports the descriptive statistics on rights offering discounts and event day abnormal returns and Panel A presents the results for the continuous variables. From Panel A, we find that the average discount is rather stable over the subgroups for the continuous variables, ranging from around 30% to 45% in most cases. However, notable are the results for the fraction placed variable. For low levels of fraction placed, i.e. less than 5%, the mean discount amounts to 15.4%, while higher levels of fraction placed are associated with higher discounts. Also, the average discount is generally higher when the ownership concentration in the issuing firm is between 25% and 50%. None of our theories are able to explain this phenomenon. In terms of abnormal returns, the results differ quite substantially between the variables and the subgroups. For example, our results suggest that the average event day abnormal returns are much lower for small issuing companies, when the companies issue a large fraction of equity in the offering, when the issue size is relatively small, when the ownership concentration in the issuing firm is low, and when the issue implies a large (decreasing) change in the voting power of the largest shareholder of the firm making the offering. However, not all of the average abnormal returns are statistically significant as indicated by their *p*-values.

Panel B of Table A-9 depicts the results for the dummy variables that will subsequently be used in our cross-sectional regressions. The important indications here are if some particular dummy variable has a significantly higher or lower average discount or average abnormal return than the rest of the sample (denoted *Other*), i.e. the important indicator is the *Difference* rows in Panel B. If these *Differences* are significantly different from zero, then the discount or the abnormal return for the dummy variables in question stand out from the sample. For the rights offerings in Table A-9, the average discounts of the “OTC-list minus Other” difference is statistically significant, having a *p*-value of 0.0407. This result suggests that firms listed on the OTC-list, on average, issue shares with

higher discounts than other listed companies.⁵⁸ No other *Difference* rows show significant *p*-values for the level of discount.

For abnormal return, Panel B in Table A-9 suggests that rights offerings from non-A-list companies seem to have significantly higher abnormal return than other firms. The opposite holds for rights offerings by firms listed on the O-list, which have significantly *lower* abnormal return compared to rights issues by other companies. Interestingly, rights issues with financial restructurings as underlying purposes have significantly lower abnormal return than other issues, in line with Table 15. Quite interesting is the significant “Intent not specified minus Other” difference. It suggests that the stock market reacts *more positively* to an issue when the company does not disclose any purpose behind the offering either in a press release or a prospectus, than for other issues. Consequently, the market reacts *more negatively* when the companies *do* disclose information about the issue.⁵⁹

Table A-10 in the Appendix shows the descriptive statistics on private placement discounts and discount-adjusted abnormal returns and analogously with the rights offering statistics, Panel A and Panel B report the results for the continuous and dummy variables, respectively. The results suggest that the average discounts are higher for issues made by large companies, issues in which a large fraction of equity is being placed privately, when the issue size is between 100 and 300 million SEK, for issues made by firms with either very low or very high ownership concentration at the time of the offering, and for issues where the ownership concentration for the issuing firm does not change with more than 5%. Consequently, low average discounts are observed when issues are made by small companies, when a small fraction of equity is being placed in the issue, when the issue size either is less than 100 or above 300 million SEK, for issues made by firms with medium ownership concentration at the time of the offering, and for issues where the ownership concentration of the largest shareholder of the issuing firm changes with more than 5%. A few subgroups for the continuous variables have negative average discounts, i.e. premiums, such as the subgroups for low market values of equity and large changes in ownership concentrations. Compared to the rights offering sample, the discounts vary much more with regards to different subgroups, ranging from -3.7% to 13.6% depending on the subgroups.

Concerning the average discount-adjusted abnormal returns for the private placement sample in Table A-10, we find a mean value of 8.6% (significant at the 1% level), which is similar to the 8.2% reported in Hertzell and Smith (1993) and 9.2% in Krishnamurthy et al. (2004) using US data, and

⁵⁸ The reason for this might be that these firms are less liquid than e.g. their A-listed counterparts, for which investors demand a liquidity premium. In other words, if this is not included in the issue price, the investors require a discount, reflecting a liquidity premium, in order to participate in the issue.

7.2% in Molin (1996) using Swedish data.⁶⁰ Thus, by performing a discount-adjustment, the announcement day abnormal return increases from 1.5% to 8.6% for the private placement sample. Intuitively, the discount-adjusted abnormal return stands for the abnormal return that the existing shareholders of the issuing firm would have earned if there had been no dilution from the issue.

The largest average discount-adjusted abnormal return are observed for issues made by very small firms, when the companies issue a large fraction of equity in the offering, when the issue size is between 50 and 100, and above 600 million SEK, when the ownership concentration is in the medium interval, and when the change in ownership concentration is very large, i.e. above 5%. The lowest average discount-adjusted abnormal return of 0.8% is reported when companies issue a very small (less than 5.0%) fraction of equity in the offering. This value is also small on average when the market value of equity for the issuing firm is very large (above 10 billion SEK), for very small placements (below 50 million SEK in value), for private placements made by firms with an initial ownership level less than 25% or in excess of 50%, and when the issue implies a negative change in ownership concentration of the issuing company. Naturally, due to the lower average values of the discount-adjusted abnormal returns, fewer values are statistically significant compared with the rights offering sample, despite the fact that the private placement sample size is considerably higher than the size of the rights offering sample.

Panel B in Table A-10 reports the results for the dummy variables and interestingly, it can be observed that, in terms of the average discount values, the "Merger and acquisition minus Other", the "Incentive/op. rights/conv. minus Other", the "Institution(s) minus Other" and the "Individual(s) minus Other" differences are statistically significant at all conventional significance levels. All of these have positive discounts, except for the "Incentive/op. rights/conv." and "Individual(s)" groups, since they concern ESOPs to a large extent and should consequently be priced at premiums. For the average discount-adjusted abnormal returns in Panel B, the "A-list minus Other", the "Solidity/fin. strength minus Other", and the "Financial restructuring minus Other" differences are statistically significant. The significance of "A-list minus Other" difference is a surprising result due to the signalling theories described above, since it means that A-list companies have significantly higher discount-adjusted abnormal returns on average following their issue announcements than other firms. The results for the "Financial restructuring minus Other" difference was expected in line with Hertzell and Smith (1993) since these issues are associated with higher asymmetric information. The

⁵⁹ A little hint to corporate decision makers: do not disclose any information about the issue and the market will interpret this action positively, or alternatively "To speak is silver, to keep silent is gold"!

⁶⁰ Note, however, that Hertzell and Smith (1993) and Krishnamurthy et al. (2004) use a slightly different definition of discount-adjusted abnormal return.

discount-adjusted abnormal returns for the private placements with financial restructuring purposes is 261%, which gives an insight into the magnitude of information content conveyed through these issues.

When removing the private placements with ESOP programme purposes, the results remain about the same in almost every subgroup. The descriptive statistics on these particular private placement discounts and discount-adjusted abnormal returns are presented in Table A-11 in the Appendix. In general, as expected, both the mean discount values and the mean abnormal returns are higher for this private placement sample compared to the private placement sample in Table A-10. However, a few notable results are worth mentioning. In Panel A, the main differences in results when removing the ESOP purpose offerings in terms of the average discounts can be observed for the ownership concentration and change in ownership concentration variables. Previously, the results suggested that the average discounts were higher for issues made by firms with either very low or very high ownership concentration at the time of the offering, and for issues where the ownership concentration for the issuing firm did not change with more than 5%. In this sample, however, the initial ownership level of the firm does not matter much for the discount level in the issue. Overall, the discounts are more evenly spread over the different subgroups, suggesting that by excluding the ESOP issues, we increased the homogeneity of the sample. With regards to the average discount-adjusted abnormal returns, we observe, as in the full private placement sample, that abnormal returns tend to decrease with market capitalization and increase with the fraction placed in the issue and. It is also particularly high for moderate initial ownership levels and when the change in ownership concentration is large.

We observe fewer statistically significant average differences in Panel B of Table A-11 compared with the corresponding panel in Table A-10. As before, the A-list issues have significantly higher abnormal returns than other issues, which also holds for the *financial restructuring* and the *solidity* variable. In other words, excluding the ESOP issues do not change the inferences made in the previous section. This means that the discounts tend to be higher for issues made by high market capitalization firms compared to small firms and that higher discount-adjusted abnormal returns are observed when the fraction placed in the issue is high. Also, it means that large changes in the ownership concentration of the largest owner yield much higher discount-adjusted abnormal returns at the announcement of the offering compared to the returns observed for small changes in the ownership concentration level of the largest owner.

6 Cross-Sectional Analyses

6.1 Determinants of Discounts

One of the purposes of this paper is to examine what causes firms to issue shares with discounts, in order to understand how the market interprets the information conveyed by equity issues. As a step towards this, we run OLS regressions of the models discussed in the hypothesis section for rights offerings, private placements and the private placements that do not have ESOPs as underlying purposes. The discount models for rights offerings and private placements differ in one respect. In the private placement models, we include the dummy variable *Individual investor*. The discount model for rights offerings is:

$$\begin{aligned} DISCOUNT_i = & \alpha_0 + \alpha_1 MKTCAP_BN_i + \alpha_2 LOG_AMOUNT_i + \alpha_3 FRACTIONPLACED_i + \\ & + \alpha_4 BTM_i + \alpha_5 CAR_MM_60_i + \alpha_6 AFGX_60_i + \alpha_7 AFGX_STDEV_60_i + \\ & + \alpha_8 INT_RESTR_i + \alpha_9 LIST_A_i + \varepsilon_i, \end{aligned}$$

where the explanatory variables are defined in Table A-22. Running the cross-sectional regression for the discounts in the rights offering sample, we obtain the results presented in Table 21.

Table 21
Cross-Sectional Regression of Rights Offering Discounts

The dependent variable is the rights offering discount measured relative to share price one trading day after the announcement. The sample includes 186 rights issues between 1986 and 2005.

Independent variables ^a	Predicted sign	Coefficient	p-value
Intercept		2.7836	0.880
Market value of equity	(-)	0.2639	0.018
Log of issue size	(+)	1.5319	0.645
Fraction placed	(+)	0.5554	0.002
Book-to-market	(-)	-8.3211	0.355
Cumulative stock return 60 days prior	(-)	-0.0271	0.997
Cumulative market return 60 days prior	(-)	21.7530	0.514
Market return variance 60 days prior	(+)	1087.1	0.128
Financial restructuring	(+)	-20.9865	0.096
A-list	(-)	-24.5298	0.031
<i>R</i> ²	0.2045		
Adjusted <i>R</i> ²	0.1364		
F-value	3.00		
p-value, joint hypothesis	0.0032		
N	115		

^aAll variables are defined in Table A-1. As noted in the table, the number of observations is 113. This is because we only have book-to-market information on 127 out of 186 rights offerings. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 12, which reduces the number of observations to 115.

To capture the high information costs present in small firms, we include the variable *market value of equity*. Theory predicts that small firms, as opposed to larger ones, have higher asymmetric information and consequently higher adverse selection costs that investors demand compensation

for. Our results show, however, that firm size has a positive effect on the level discounts. The variables *log of issue size* and *fraction placed* are used to capture the effects of higher adverse selection costs in large issues, and indeed, we find that large issues tend to have higher discounts for rights offerings, especially in proportion to firm size, as captured by the *fraction placed* variable. Naturally, this effect can also be explained from supply-demand point of view, where illiquidity in the markets make discounts necessary to ensure high subscription. The *book-to-market* variable is yet another proxy for the level of asymmetric information, although inversely related to discounts, since low book-to-market values indicate high asymmetric information. This effect was also found in the sample, but not at a statistically significant level, leading us to conclude that managers do not take this factor into account when setting discounts in rights offerings. Proxies for windows of opportunity during which adverse selection costs are thought to be momentarily low and by consequence, demands on discounts are thought to be low, include *cumulative stock return 60 days prior* and *cumulative market return 60 days prior*. In our sample, however, these variables were found to have little effect on discounts. The market volatility can be thought of as a proxy for windows of opportunity or the risk of the stock being momentarily low at the signing period, which might lead to failure of the issue with its related costs. Whatever the underlying rationale, the market volatility variable was found to have a positive, although not significant effect on the discount level with a *p*-value of 0.128, speaking in favour of above mentioned theories. Surprisingly, stating the purpose of a financial restructuring through the issue is associated with low discounts, significantly so at the 1% level. In other words, investors might demand lower discounts in these rights issues or firms might be reluctant to set discounts too low, possibly because they already consider them to be overvalued. Another explanation might be that the stock market was unaware of the severity of the situation, and was given a clear signal of the true financial prospects by the choice of conducting a rights issue. Lastly, as expected through the theory of higher liquidity in stocks on the A-list, the *A-list* variable has a negative and significant correlation to discounts. This indicates that firms on the A-list on the Stockholm Stock Exchange are more liquid and that investors demand less illiquidity compensation through discounts in these issues. Fundamentally, all these explanations rely on convincing existing shareholders to participate in the issue through discounts, and avoid reselling of pre-emptive rights to outside investors. Investors have personal wealth constraints and buying additional shares in the same company might affect the diversification benefits in their portfolios, which might cause them to sell their subscription rights on the open market if the discount is too low. In such a situation, adverse selection costs would increase, and to prevent this, managers set high discounts. In addition, long periods between announcements and the signing period, as well as simple supply and demand considerations along the lines of Silber's (1997) illiquidity theory, are likely to affect discount levels. As judged by the R^2 of 20.45% and the adjusted R^2 of 13.64%, the model seems to explain quite a lot of the variability in rights offering discounts, considering that discounts are determined by managers

themselves and not by any market mechanism. When running a robust regression, we find the results to stay largely the same.

Proceeding with the discount model for private placements, we present the regression equation for the private placement model below:

$$\begin{aligned} DISCOUNT_j = & \beta_0 + \beta_1 MKTCAP_BN_j + \beta_2 LOG_AMOUNT_j + \beta_3 FRACTIONPLACED_j + \\ & + \beta_4 TARG_IND_j + \beta_5 BTM_j + \beta_6 CAR_MM_60_j + \beta_7 AFGX_60_j + \\ & + \beta_8 AFGX_STDEV_60_j + \beta_9 INT_RESTR_j + \beta_{10} LIST_A_j + e_j, \end{aligned}$$

where the explanatory variables are defined in Table A-22. Running an OLS regression for this model on discount for the full private placement sample yields the results presented in Table 22.

Table 22
Cross-Sectional Regression of Private Placement Discounts

The dependent variable is the private placement discount measured relative to share price one trading day after the announcement. The sample includes 480 private placements between 1986 and 2005.			
Independent variables ^a	Predicted sign	Coefficient	p-value
Intercept		13.2798	0.035
Market value of equity	(-)	0.0200	0.687
Log of issue size	(+)	-0.5159	0.544
Fraction placed	(+)	0.2469	0.006
Individual investor	(-)	-10.8570	0.006
Book-to-market	(-)	-12.4811	0.001
Cumulative stock return 60 days prior	(-)	8.7142	0.030
Cumulative market return 60 days prior	(-)	30.0729	0.051
Market return variance 60 days prior	(+)	-445.4611	0.223
Financial restructuring	(+)	24.2759	0.168
A-list	(-)	2.2216	0.664
<i>R</i> ²	0.1353		
Adjusted <i>R</i> ²	0.1086		
<i>F</i> -value	5.07		
<i>p</i> -value, joint hypothesis	0.0000		
<i>N</i>	335		

^aAll variables are defined in Table A-1. As noted in the table, the number of observations is 335. This is because we only have book-to-market information on 379 out of 480 private placements. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 42, which reduces the number of observations to 337. Also, 2 additional observations had to be excluded due to lack of fraction placed information.

As can be inferred from Table 22, we find that the firm size variable, *market value of equity*, is not correlated to discount at any reasonable significance level. In theory, the market value of equity should be negatively correlated to discounts, since small firms are thought to suffer from higher adverse selection costs that originate from high asymmetric information. We include two variables that aim to capture the size of the issue and by consequence the adverse selection costs that investors demand to be compensated for, the *log of issue size* and the *fraction placed*. The *log of issue size* is not

significant at any reasonable level, but the *fraction placed*, on the other hand, was found to have a significant, positive effect, as predicted by theory. The effect of the size of the issue may also be explained by changes in expected future monitoring services by the new block holders, an activity for which investors demand to be compensated. Further, we hypothesize, in accordance to Hertzell and Smith (1993), that individual investors demand less discounts since they place a high value on control. This hypothesis was found to be correct, as judged by the significantly negative correlation between the individual investor variable and the discount level. The *book-to-market* ratio, capturing the due diligence costs private placement investors bear in the issue, is indeed negatively correlated to discount, at a very high significance level. As proxies for the due diligence costs that emerge in periods classified in windows of opportunity, the variables *cumulative stock return 60 days prior* and *cumulative market return 60 days prior* are believed to be negatively correlated to the discount level. The *market return variance 60 days prior* works in the opposite way since periods of *low* volatility indicate hot periods instead. Surprisingly, the effect of the first two variables are both significant, but not with the expected signs. These results are intriguing, yet cannot be explained by any of the theories available for this purpose as of today. Firms undergoing financial restructurings via private placements have larger discounts, as expected through their high due diligence costs, but this variable is not significant at any reasonable significance level. Lastly, the *A-list* variable was not found to be statistically significant either, i.e. the stock list of the issuing company does not seem to affect the discount to any larger extent, as previously noted in Table 21. All in all, the R^2 of 13.53% and the adjusted R^2 of 10.86% show that a large portion of the variability in discounts, but far from all, can be explained by signalling, timing and monitoring theories. Again, we emphasize the inherent idiosyncrasy of the discounts since they are in effect determined by managerial discretion.

As a robustness check, we also run a regression on private placement sample that excludes issues with ESOPs purposes, and find similar results as the full private placement sample. The results for the private placement sample excluding ESOPs are presented in Table A-12 in the Appendix. As in the pure private placement sample, neither the firm size variable *market value of equity*, nor the variable *log of issue size*, are significantly different from zero. The *fraction placed* variable has now become *less* significant, and most likely, the effect on discount is caused by monitoring compensations. The *individual investor* variable is also still negative, albeit with a higher p -value. The market timing variables do still have the incorrect signs, but at less significant levels. The *financial restructuring* variable has become considerably more significant than before, and seem to explain a lot of the variability in discounts. Lastly, we do not find any significant relation between the stock exchange list and the discount. Overall, we find the explanatory power of the model to remain reasonably high, having an R^2 of 12.40% and an adjusted R^2 of 9.46%.

6.2 Determinants of Abnormal Returns for Rights Issues

To find support of the causes of abnormal returns in conjunction with rights offerings, we proceed with a cross-sectional analysis, using a *signalling* and a *timing* model, as shown in Table 23. The signalling model defined in the theoretical framework and hypotheses section is used to predict the abnormal return in the following fashion:

$$AR_i = \alpha_0 + \alpha_1 MKTCAP_BN_i + \alpha_2 LOG_AMOUNT_i + \alpha_3 INT_RESTR_i + \alpha_4 INT_SOL_i + \alpha_5 INT_SPEC_i + \alpha_6 FRACTIONPLACED_i + \alpha_7 BTM + \alpha_8 LIST_A_i + \alpha_9 DISCOUNT + \varepsilon_i$$

The timing model is structured in the following way:

$$AR_j = \beta_0 + \beta_1 HOTDUMMY_j + \beta_2 CAR_MM_60_j + \beta_3 AFGX_60_j + \beta_4 AFGX_STDEV_60_j + e_j$$

All these explanatory variables are defined in Table A-22. Running these regression using an OLS procedure, we obtain the results presented in Table 23.

The signalling model includes variables that are proxies for signalling effects, either signals of the type in the Myers and Majluf (1984) framework, that reflect private benefits of control in line with Wu and Wang (2002), or other information conveyed through the issue. The first variable, the *market value of equity* is thought to be negatively correlated with the level of adverse selection since small firms are connected with higher information asymmetries, thus affecting abnormal returns negatively. The results support this theory, but since it is not statistically significant, we hesitate to draw any definite conclusions from this. The *log of issue size* variable captures information asymmetries associated with large issues, and should therefore be negatively correlated with abnormal return. This effect was found in our results, but not at any reasonable significance level, either. Of the variables relating to the purpose behind the issue, *financial restructuring* and *solidity* both showed negative correlation, although neither at a level significantly different from zero. These negative reactions go hand in hand with the theory that firms stating these purposes behind their issues are associated with higher levels of asymmetric information, aggravating the adverse selection in a Myers and Majluf (1984) framework. The third variable connected to the purpose of the issue, *specific investment*, is positively related to abnormal return, with a *p*-value of 0.454. We were unsure of the what reaction this variable would be associated with, but this result suggests that the market reacts positively to issues with purposes of specific investments, indicating that resolution of information asymmetries take place and this specification carries favourable information about the firm. The *fraction placed* variable should in theory be a signal of investment opportunities not known by the market beforehand, and should as such yield a positive effect on abnormal return. In our sample, however, no significant correlation was found for this proxy and abnormal return. As a

Table 23
Cross-Sectional Regression of Rights Offering Abnormal Returns

The dependent variable is the rights offering announcement day abnormal return. The sample includes 186 rights offerings between 1986 and 2005.

<i>Panel A: Signalling</i>				
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value	
Intercept		0.0227	0.601	
Market value of equity	(-)	-0.0002	0.524	
Log of issue size	(-)	-0.0056	0.505	
Financial restructuring	(-)	-0.0300	0.368	
Solidity/financial strength	(-)	-0.0234	0.192	
Specific investment	(+/-)	0.0193	0.454	
Fraction placed	(+)	-0.0007	0.118	
Book-to-market	(-)	-0.0037	0.872	
A-list	(+)	0.0389	0.176	
Discount	(-)	0.0002	0.491	
<i>R</i> ²	0.1041			
Adjusted <i>R</i> ²	0.0273			
<i>F</i> -value	1.36			
<i>p</i> -value, joint hypothesis	0.2181			
N	115			
<i>Panel B: Timing</i>				
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value	
Intercept		-0.0023	0.900	
Hot market	(+)	-0.0074	0.571	
Cumulative stock return 60 days prior	(+)	0.0458	0.001	
Cumulative market return 60 days prior	(+)	0.0552	0.363	
Market return variance 60 days prior	(-)	-2.0354	0.129	
<i>R</i> ²	0.0987			
Adjusted <i>R</i> ²	0.0788			
<i>F</i> -value	4.95			
<i>p</i> -value, joint hypothesis	0.0008			
N	186			

^aAll variables are defined in Table A-1. As noted above, in the Signalling model the number of observations is 115. This is because we only have book-to-market information on 127 out of 186 rights offerings. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 12, which reduces the number of observations to 115.

proxy for the firm's investment opportunities, we include the *book-to-market* ratio for each individual firm. This proxy was not found to have a significant impact on rights issue abnormal return, either, indicating that the underlying theory does not have any support in the Swedish case. Moreover, we find that the A-list, which is supposed to proxy for the level of media coverage and hence, inversely, the level of asymmetric information, has a positive correlation with abnormal return. This effect was also predicted by the hypothesis stated earlier, which said that a high media coverage on the firm should reduce the information asymmetries and mitigate the otherwise negative abnormal return predicted by the Myers and Majluf (1984) model. Lastly, we include a variable capturing the discount level in each respective issue. Based on the theory that setting discounts low signals to the market that managers believe the stock price will fall until the signing period, we argue that the effect of

discounts on abnormal return should be negative. However, no significant relation was found for the discount level and the stock market reaction for rights issues.

As for the timing model, which on a fundamental level builds on the Myers and Majluf (1984) framework as well, periods of low asymmetric information, so called windows of opportunity, are thought to mitigate the otherwise negative stock market reactions to rights offerings. We find that the first proxy for windows of opportunity, the *hot market* variable is negatively correlated with abnormal return. This is somewhat puzzling, but nevertheless, since it is not significant, we refrain from drawing any conclusions from this. We do acknowledge, however, that the classification of hot and cold periods is rather crude, and that the years classified as hot periods, i.e. 2001, 2002 and 2005, are periods that are quite different from the sample as a whole (see Table A-2). The correlation between abnormal return and the variable *cumulative market return 60 days prior*, however, is significantly positive, at a very high significance level. This means that issuing equity during windows of opportunity, is associated with a mitigation of the negative abnormal return predicted by a Myers and Majluf (1984) framework, contingent on a certain subscription rate. The correlation between abnormal return in the estimation period and the event window can also be regarded as an indication of market inefficiency, indicating that abnormal returns prevail, even after adjusting for systematic risk in our market model.⁶¹ The variable *cumulative market return 60 days prior*, on the other hand, should not be affected in the same way as the stock run-up variable by market anomalies, and was found to have a positive, yet not significant effect on abnormal return. Lastly, the proxy for market volatility shows that periods of high volatility decreases the abnormal return in line with the Myers and Majluf (1984) model, whereby adverse selection costs increase due to increased asymmetric information.

In general, we find the signalling model to have a similar explanatory power for abnormal return as the timing model, having an R^2 of 10.41% compared to 9.87% for the timing model. This can be compared to the rights issue model by Wu and Wang (2002), having an R^2 of 6.0%, and the rights issue model by Ching, Firth and Rui (2001), which has an R^2 of 7.1%. To what extent our results reflect the choice of variables and not the market's true assessment of the underlying factors, we leave unsaid.

⁶¹ At a more fundamental level, one may argue that the abnormal returns in the stock run-up variable and the abnormal returns in the event window are attributable to other factors priced in the market, but not captured by the systematic risk factor included in the market model. The Fama and French (1993) three-factor model is one such model, with two additional factors, high-minus-low (HML) and small-minus-big (SMB), that capture other underlying risk factors. One may argue that the abnormal returns are affected by *additional*, so far unidentified risk-factors priced in the market that are orthogonal to the three factors included in the Fama and French (1993) model, but such considerations are beyond the scope of this paper.

6.3 Determinants of Discount-Adjusted Abnormal Returns for Private Placements

In a similar fashion as for the rights offering sample above, although adjusting the abnormal return for dilution, we proceed with a cross-sectional analysis of the discount-adjusted abnormal return for the private placement samples. In addition to the signalling and timing models presented above, we include a *monitoring* model for the private placement samples, as shown in Table 24. The signalling model is defined in Section 2. *Theoretical Framework and Hypotheses* and is structured in the following fashion:

$$AR_i^{adj} = \alpha_0 + \alpha_1 MKTCAP_BN_i + \alpha_2 LOG_AMOUNT_i + \alpha_3 INT_RESTR_i + \alpha_4 INT_SOL_i + \alpha_5 INT_SPEC_i + \alpha_6 FRACTIONPLACED_i + \alpha_7 BTM + \alpha_8 LIST_A_i + \varepsilon_i$$

The timing model is structured as follows:

$$AR_j^{adj} = \beta_0 + \beta_1 HOTDUMMY_j + \beta_2 CAR_MM_60_j + \beta_3 AFGX_60_j + \beta_4 AFGX_STDEV_60_j + e_j$$

Finally, we define the monitoring model as shown below:

$$AR_i^{adj} = \delta_0 + \delta_1 CHANGEOWN(1)_i + \delta_2 CHANGEOWN(2)_i + \delta_3 CHANGEOWN(3)_i + \delta_4 \Delta NON_CONTROL_i + \delta_5 FAM_YES_i + \delta_6 FRACTIONPLACED_i + u_i$$

Again, these explanatory variables are all defined in Table A-22. Running these regressions using an OLS procedure yields the results presented in Table 24.

As can be deduced from Panel A in Table 24, the signalling model seems to be able to explain the variability in discount-adjusted abnormal return quite well. In a Hertzell and Smith (1993) framework, the level of asymmetric information is positively related to the stock market reaction through the information conveyed by the commitment of investors and the willingness of management to forgo a rights issue. The first variable in Panel A, *market value of equity*, is thought to be negatively related to the level of asymmetric information, leading to a negative correlation with (discount-adjusted) abnormal return in theory. The regression does not show support of this theory, yielding an insignificant coefficient for this variable. The same goes for the *log of issue size*, not being statistically significant either. As for the purpose variables, we find that the *financial restructuring* variable is significantly different from zero, having a *p*-value of 0.000, which is quite remarkable in our opinion. An explanation for this is that private placements sends a strong signal that investors are willing to commit funds to the company, despite the large due diligence costs private placement investors need to bear in the presence of high asymmetric information. The purpose of adjusting the firm's capital structure, captured by the *solidity/financial strength* variable, was found to be positively correlated to discount-adjusted abnormal return, but not significant at any conventional significance levels. Theoretically, this might be explained by the same logic as the *financial restructuring* variable, i.e. that investors are willing to commit funds to the firm, but seemingly, this signal is not strong

Table 24
Cross-Sectional Regression of Private Placement Discount-Adjusted Abnormal Returns

The dependent variable is the private placement announcement day discount-adjusted abnormal return. The sample includes 481 private placements between 1986 and 2005.

<i>Panel A: Signalling</i>				
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value	
Intercept		-0.1173	0.096	
Market value of equity	(-)	0.0002	0.842	
Log of issue size	(+)	0.0131	0.417	
Financial restructuring	(+)	2.8002	0.000	
Solidity/financial strength	(+)	0.0863	0.405	
Specific investment	(+)	-0.0812	0.538	
Fraction placed	(+)	0.0119	0.000	
Book-to-market	(-)	-0.0972	0.174	
A-list	(-)	0.1144	0.236	
<i>R</i> ²	0.3392			
Adjusted <i>R</i> ²	0.3230			
<i>F</i> -value	21.04			
<i>p</i> -value, joint hypothesis	0.0000			
N	337			
<i>Panel B: Timing</i>				
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value	
Intercept		0.0621	0.455	
Hot market	(-)	-0.1182	0.051	
Cumulative stock return 60 days prior	(-)	0.2654	0.000	
Cumulative market return 60 days prior	(-)	-0.0154	0.952	
Market return variance 60 days prior	(+)	6.5761	0.289	
<i>R</i> ²	0.0456			
Adjusted <i>R</i> ²	0.0375			
<i>F</i> -value	5.65			
<i>p</i> -value, joint hypothesis	0.0002			
N	478			
<i>Panel C: Monitoring</i>				
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value	
Intercept		-0.0381	0.253	
Change in ownership concentration (1)	(+/-)	-0.0077	0.090	
Change in ownership concentration (2)	(+/-)	0.0207	0.000	
Change in ownership concentration (3)	(+/-)	0.0072	0.032	
Change in non-controlling owners	(+)	-0.0007	0.761	
Family controlled	(+)	-0.0143	0.845	
Fraction placed	(+)	0.0112	0.000	
<i>R</i> ²	0.2111			
Adjusted <i>R</i> ²	0.2011			
<i>F</i> -value	21.14			
<i>p</i> -value, joint hypothesis	0.0000			
N	481			

^aAll variables are defined in Table A-1. As noted above, in the Signalling model the number of observations is 337. This is because we only have book-to-market information on 379 out of 481 private placements. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 42, which reduces the number of observations to 337.

enough to yield a significant stock market reaction. Furthermore, having a purpose of investing in specific projects yielded a negative effect on discount-adjusted abnormal return, but not statistically

different from zero. The *fraction placed* variable is positively correlated to the dependent variable as expected, and is statistically different from zero with a p -value of 0.000. From a signalling perspective, this can be explained by the theory that the level of asymmetric information is higher in firms with large investment opportunities relative to firm size, and that this signals undervaluation to the market in line with Hertzell and Smith (1993). The book-to-market ratio, meant to capture the asymmetric information in firms with large growth opportunities, is negative as expected from theory, but cannot be considered to be statistically significant. The coefficient for the *A-list* variable is not significant for the private placements, and hence we hesitate to draw any conclusions from this variable.

The first variable in the timing model, *hot market*, is negatively correlated to the discount-adjusted abnormal return for private placements as expected from theory, indicating that periods with high frequency of private placement offerings are characterized by low asymmetric information, leading to lower stock market reactions. The run-up for the specific stock has a significant positive sign, which strikes us as somewhat puzzling. The decision to issue equity after a period of high abnormal return might reflect management's intention to issue equity when the perceived degree of overvaluation is high. Investors understand that managers reason this way, and the stock price should therefore decrease at the announcement of the private placement since the stock is likely to be overvalued. We hypothesize ourselves that the reason for this positive correlation might be that the strong abnormal returns continue even into the event window. That is, the abnormal return, and consequently the discount-adjusted abnormal returns, have nothing to do with the announcement itself. The *general* stock market run-up, on the other hand, is not significantly different from zero, but carries the predicted sign. As for the stock market variance, we expected a positive association with the discount-adjusted abnormal return, since high stock market variance reflect high information asymmetries between management and investors, leading to positive effects on abnormal return. The sign is as expected, but unfortunately, this effect is not statistically significant.

In the monitoring model, we defined three *ownership concentration* variables where the change of ownership of the largest owner was measured for initial voting right levels of 0-25%, 25-50% and more than 50%. We argued that for small ownership levels of the largest owner, the ownership structure could be regarded as dispersed, where neither has any significant control over the management of the company. Accordingly, we hypothesized that these firms should benefit from increases in voting power of the largest owner through private placements since its economic incentives to monitor incumbent management would become stronger. On the other hand, we hypothesized that in firms with large initial voting power of the largest owner, the largest owner could be regarded as practically affiliated with management. In line with this, one should expect firms to lose from an increase in ownership levels of the largest owner following a private

placement, since this would lead to further entrenchment of the incumbent management. Our results show a slightly different pattern, however. Looking at the regression results in Panel C in Table 24, it seems that for initial ownership levels of under 25%, an increase in ownership of the largest owner has a negative effect on discount-adjusted abnormal return, suggesting that the increased ownership concentration of the largest owner helps entrench management when the largest owner is small. This relation, however, is only significant at the 10% level. For initial ownership levels of 25% to 50% or more than 50%, we find positive relationships, with p -values of 0.000 and 0.032, respectively. This suggests that the change in ownership concentration of the largest owner puts more pressure on management to engage in value-creating activities, i.e. the direct monitoring increases. These results are not entirely in line with what we had expected, but are exactly in line with Molin (1996), who argue himself that a change in ownership level of the largest owner following a private placement should always increase firm value. These are highly interesting results, since it means that private placements can reduce the agency problems present in Swedish stock-listed firms, to such an extent that the direct dilution effects from private placements are offset. The variable *change in non-controlling owners* is used to measure the effect of increased monitoring from minority shareholders on the controlling shareholder. This variable was not significantly correlated to discount-adjusted abnormal return, however. Moreover, the *family controlled* variable was not found to be significant, either. We had expected the variable to be positively related to discount-adjusted abnormal return, since new block holders could emerge and put pressure on the family-controlled management to create value. The last variable included in the monitoring model is the *fraction placed*, which can be viewed as the size of the potential new block holders that might monitor incumbent management. This coefficient turns out to be significant and positively related to abnormal return, indicating that the relative increase in ownership concentration of the largest owner is positively related to firm value, theoretically because of the reduction of agency problems. One should have in mind, however, that the fraction placed can also be viewed from a signalling perspective, where a high fraction placed signals the investment opportunities facing the firm.

The signalling model was found to be very successful at explaining the variability in abnormal return, as indicated by the R^2 of 33.92%. Moreover, the timing model had an R^2 of 4.56%, and hence, timing theories cannot explain much of the variation in abnormal returns, at least using these proxy variables. Lastly, we find the monitoring model to be almost as successful as the signalling model in this respect, having an R^2 -value of 21.25%. These results should be considered to be quite satisfying, since returns are highly idiosyncratic in nature and we cannot expect to explain every variation in return through models of these kinds. The results also suggest that much of the variation in discount-adjusted abnormal returns in conjunction with announcements of private placements can be explained from a signalling point of view, as in the signal that comes from the purpose of the issue

and the fraction placed in the issue. The results also show that ownership concentration is an important factor that the market takes into account when judging the merits of a private placement.

Again, as a robustness check, we have performed the same analysis for private placements excluding ESOP purposes behind the issue. The results is found in Table A-13 in the Appendix. Overall, we find similar results as in the case for private placements in general. The main difference that can be observed in Table A-13, as opposed to Table 24, is that most variables are less significant. The signs on all variables, however, are the same as in the case where we did not exclude private placements with ESOP purposes behind the issues. As predicted by the lower significance of the coefficients of these variables, the R^2 -values are about as high as before, suggesting that the conclusions drawn from the previous section hold for the private placement sample excluding ESOP issues as well. Specifically, we draw the conclusions that the purpose of a *financial restructuring*, that firms' investment opportunities, as captured by the *fraction placed* variable, and that the change in ownership level of the largest owner, are the best determinants to the discount-adjusted abnormal return following announcements of private placements.

The results also suggest that a large amount of the variation in discount-adjusted abnormal returns in conjunction to announcements of private placements can be explained from a signalling point of view, as in the signal that comes from the purpose of the issue and the fraction placed in the issue. Again, judging from the general performance of the monitoring model, we find that ownership concentration is an important factor that the market takes into account when judging the merits of a private placement.

7 Summary and Conclusions

The purpose of this paper is to examine the characteristics of Swedish equity issues between 1986 and 2005, and to understand how the stock market interprets the signals sent by the announcement of rights offerings and private placements. The paper is of interest to academics in Sweden through its strong support of previous, mainly US related, research as well as through its findings on the characteristics of Swedish equity issues. In addition, the paper is relevant for practitioners thanks to its predictions of value-creation by rights issues and private placements. We make a distinction between rights offerings, private placements and private placements with the purpose of employee stock ownership programmes (ESOPs), since the latter differ somewhat from other types of private placements.

The main conclusions we draw from our findings are that rights offerings tend to have a *negative* stock market response while private placements are rewarded with a *positive* stock market reaction on average. Even after excluding private placements with ESOPs as the underlying purpose, the

abnormal return is still positive at very high significance levels, suggesting that private placements are indeed value-creating in the eyes of the stock market.

Regarding the descriptive characteristics of our sample, we find several noteworthy results. For example, we find that the number of private placements has exploded in recent years. In terms of the issue size, we find that the average rights issue is more than twice the size of the average private placement. In addition, firms rarely conduct more than one rights issue during a 20-year time period but individual firms conducting a large number of private placements are much more common. Most private placements were made by firms listed on the Stockholm Stock Exchange O-list, while rights offerings were quite evenly distributed over the different stock lists. With regard to the purpose behind the issues, we find that a large share of the private placements were accounted for by issues with mergers or acquisitions as the stated purpose. Most of the private placements, however, did not have any intent specified. The majority of the rights offerings specified capital structure adjustments as the underlying purpose. In terms of whom a private placement was directed to, most of these offerings were placed to institutions, even after excluding placements with ESOP purposes. As for the ownership concentration of issuing firms, rights offerings tend to have been issued by firms that have somewhat larger ownership concentrations than firms carrying out private placements.

Discounts during the time period 1986-2005 amounted to 40.9%, 5.5% and 8.7% on average for rights issues, private placements and private placements excluding ESOP purposes, respectively. These values, both for rights offerings and private placements, have decreased over the 20-year period, although the small sample of issues from the mid-1980s to the mid-1990s lead to somewhat inefficient estimates. Variability in discounts for rights issues can be explained largely by the fraction placed and the market value of equity, while variability in discounts for private placements can be explained best by the book-to-market ratio, the target of the issue and the fraction placed.

On the announcement day of the issue, rights offerings have a negative -2.2%, private placements a 1.5% and private placements excluding ESOPs a positive 1.7% market model adjusted abnormal return, all of which being statistically significant. We consider the positive abnormal returns for private placements to be quite remarkable since the effect of dilution, *ceteris paribus*, predicts a negative return. In other words, both the investors who participate in the issue, as well as existing shareholders, gain from the private placement. Rights issues with the purpose of adjusting the capital structure, and issues made by firms on the O-list have strong negative market reactions. For private placements, having purposes of financial restructurings, joint ventures or specific investments all give rise to positive stock market reaction at the announcement, but neither of these coefficients are statistically significant. Interestingly, the negative stock market reactions for rights offerings and positive stock market reactions for private placements have been particularly

pronounced during the last decade and especially towards the end of the 1990s. We find support of the observation in previous research that discount-adjusted abnormal returns for private placements are best explained by signalling theories, but proxies for the change in expected monitoring also explain a large portion of these abnormal returns. For rights offerings, however, the timing model seems to be slightly better than the signalling model at explaining the variability in abnormal returns. Important factors for determining the abnormal return for rights offerings are the cumulative abnormal return for the stock 60 days prior to the issue until the announcement date, i.e. the stock run-up effect, and to some extent, the market volatility prior to the issue. The purpose behind the issue and the fraction placed are two large factors behind the abnormal returns for private placements. Excluding ESOP issues from the sample, our conclusions remain the same.

Comparing the abnormal returns for rights offerings and private placements, it is interesting to interpret these results in light of the current corporate legislation. Corporate legislators in Sweden are in general positive towards raising capital through rights issues, while being sceptical towards private placements. Legal practitioners typically emphasize different characteristics of the private placement to judge its desirability. The Stock Market Committee argues that private placements should only be permitted if the company finds itself in financial distress and a private placement is the only way of avoiding the crisis. According to Johansson (2004), three factors influence the legal assessment of issuing equity through a private placement – the discount, the change in ownership conditions and the purpose behind the issue. Obviously, the discount level plays a major role in determining abnormal returns in private placements because of its dilutive effects. The impact of the change in ownership level on abnormal return depends on the initial ownership concentration of the issuing company, and there exists no clear-cut relation between the change in ownership level and the stock market reaction. In addition, the only purpose leading to a statistically significant stock market reaction is M&A transactions, which in fact turns out to be positively correlated to abnormal return. Overall, we find that using these three criteria to assess a private placement's legal acceptability would lead to distorted results in terms of shareholder value maximization, considering the fact that only one of the three above mentioned factors has strong empirical evidence. Therefore, we question the application of such criteria and argue that the stock market's opinion of value creation, i.e. the overall shareholder gains, should determine if an equity issue is desirable from the firm's point of view. In general, our results show that private placements are value-creating on average, as opposed to rights issues, which are in fact value-destroying. Even after excluding issues related to incentive programmes, the reactions are still highly positive, further strengthening our case. Thus, even though some investors do not have the option to participate in the issue, investors seem to be at least as well off after the offering on average, as they were before. On a more fundamental level, we relax the assumption made in the beginning of this paper about stock price

increases being equivalent to increases in firm value. Our findings show that a significant portion of the variability in abnormal returns can be explained by signalling effects, which by definition resolve the asymmetric information between managers and investors, but do not necessarily increase firm value. Monitoring arguments, on the other hand, should most definitely affect firm value since agency problems give rise to inefficiencies in the corporate governance system. We argue that rights offerings tend to perpetuate these problems since they do not change the ownership structure to any major extent. Private placements, on the other hand, were found to mitigate these problems through new block holders with incentives to monitor incumbent management. However, to what extent abnormal returns reflect true increases in firm value can only be speculated about. Nevertheless, all evidence points toward the fact that, on average, rights offerings are interpreted negatively by the market, while private placements are looked upon positively. In line with these observations, we find no basis for the restrictive take of Swedish corporate law and the Stock Market Committee's standpoint on private placements.

8 Suggestions for Further Research

Rights offering and private placement research is still a relatively unexplored area by academics, especially in the Swedish setting. To inspire further studies in the area, we present some suggestions of topics for further research in terms of rights issues, private placements and, to some extent, public offerings as well.

First, from a legal standpoint, what is the true cause of the surge of private placements in Sweden and why do firms use private placements at all, considering the fact that the Swedish corporate law has such a restrictive view of this type of issue method? Second, expanding the event window to investigate the long-run performance of equity-issuing firms, would our results persist? Third, what are the characteristics of firms issuing bonds as opposed to equity as a vehicle for raising funds? Also, what determines the choice of method of raising capital, in terms of bond and equity offerings as well as different kinds of mezzanine financing? Fourth, we know from fact that public offerings are the most common method of raising equity in the United States, as opposed to e.g. the United Kingdom and Sweden, where rights issues are much more prevalent. On the other hand, private placements are virtually non-existent in the United Kingdom, whereas they are practically the most common method of raising equity capital in Sweden. What are the true causes of these regional differences and how can one explain the differences in stock market reactions of certain types of issues between different countries? Fifth, some previous, mostly non-Swedish, research have categorised between insured and uninsured issues, affiliated and unaffiliated target investors in private placements etc. and further classifications of these kinds of our sample would most surely yield interesting results in further papers. Sixth, interestingly enough, we have observed that the

discount levels are higher for rights issues than for previously reported levels for public offerings. How can this phenomenon be explained? In general, we are confident that our database of rights offerings and private placements during the years 1986 to 2005 can be used in numerous subsequent studies in the field of corporate finance.

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Appendix

A-1 Definition of Variables

Table A-1
Definition of Variables

Variable	Description
Issue price [SEK]	Issue price is the offering price measured in SEK.
Issue size [million SEK]	Issue size is measured as the SEK gross proceeds from the issue.
Discount [%]	Discount is (closing price on the day after the offering minus issue price)/closing price on the day after the offering). Premiums are viewed as negative discounts.
Market value of equity [billion SEK]	Market value of equity is measured as the product of share price and the number of shares outstanding one trading day prior to the offering.
Fraction placed [%]	Fraction placed is measured in relation to total shares outstanding after the offering and is defined as Shares offered/(Shares offered + Shares outstanding), where Shares outstanding is measured as total shares reported at announcement.
Book-to-market	Book-to-market is defined as the ratio of the last reported book value of equity before announcement to the market value of outstanding equity the day before announcement.
Ownership concentration [%]	Voting rights of the largest shareholder.
Change in ownership concentration [%]	Change of voting rights between year t and year t-1 for the largest shareholder.
A-list	Equals 1 if the issue is made by firms listed on the Stockholm Stock Exchange A-, former AI- and AII-lists.
O-list	Equals 1 if the issue is made by firms listed on the Stockholm Stock Exchange O-list (incl. Attract 40) or the former O-reg list.
OTC-list	Equals 1 if the issue is made by firms listed on the Stockholm Stock Exchange OTC-list.
Merger and acquisition	Equals 1 if the issue is made as part of an M&A financing.
Solidity/financial strength	Equals 1 if the purpose of the issue is to reach a target capital structure.
Financial restructuring	Equals 1 if the purpose of the issue is a financial restructuring of the firm.
Joint venture	Equals 1 if the issue is made to form a joint venture.
Expansion	Equals 1 if the purpose of the issue is to fund a business expansion.
Specific investment	Equals 1 if the purpose of the issue is to finance a specific investment, e.g. to develop a particular product.
Incentive/option rights	Equals 1 if issue is made for employee/managerial stock options or incentive programmes.
Intent not specified	Equals 1 if purpose of the issue is not specified explicitly or not found.
Institution(s)	Equals 1 if the issue is directed to institution(s).
Individual(s)	Equals 1 if the issue is directed to individual(s).
Both institutions(s) and individual(s)	Equals 1 if the issue is directed to both institution(s) and individual(s).
Unclear	Equals 1 if the target is unknown in a private placement.
Current shareholders	Equals 1 if the target is the current shareholders.
Largest owner [%]	Per cent of voting rights of the largest owner.
Acc. share > 5% [%]	Sum of shares of holdings that individually exceed 5% of the voting rights.
Acc. share, 25 largest owners [%]	Sum of shares of holdings of the 25 largest owners in terms of voting rights.
Family controlled	Equals 1 if a family owns more than other investors with >5% of shares of holdings in terms of voting rights.
Change in ownership concentration (1)	Change in ownership level of the largest owner if the initial ownership level is < 25%.
Change in ownership concentration (2)	Change in ownership level of the largest owner if the initial ownership level is between 25% and 50%.
Change in ownership concentration (3)	Change in ownership level of the largest owner if the initial ownership level is > 50%.

Table A-1 (continued)

Variable	Description
Change in non-controlling owners	Change in non-controlling owners is the <i>post announcement</i> difference between the accumulated holdings of the shareholders owning at least 5% of the voting rights in the company and the largest owner <i>less</i> the <i>prior to announcement</i> difference between the accumulated holdings of the shareholders owning at least 5% of the voting rights in the company and the largest owner.
Hot market	Equals 1 if the number of equity issue observations a particular year exceed the average value plus one standard deviation ($\mu + \sigma$). See Table A-2.
Cumulative stock return 60 days prior	Stock run-up effect, i.e. cumulative abnormal stock return 60 days prior to the announcement of the equity issue.
Cumulative market return 60 days prior	Market sentiment variable, i.e. cumulative return for the AFGX index 60 days prior to the announcement of the equity issue.
Market return variance 60 days prior	Standard deviation of the cumulative return for the AFGX index 60 days prior to the announcement of the equity issue.
Years 1986-1995	Equals 1 if the issue is made during years 1986-1995.
Years 1996-2005	Equals 1 if the issue is made during years 1996-2005.
Years 1986-1990	Equals 1 if the issue is made during years 1986-1990.
Years 1991-1995	Equals 1 if the issue is made during years 1991-1995.
Years 1996-2000	Equals 1 if the issue is made during years 1996-2000.
Years 2001-2005	Equals 1 if the issue is made during years 2001-2005.

A-2 Classification of Hot and Cold Periods

Table A-2
Classification of Hot and Cold periods

The table shows the number of equity issues per year, which are used to classify the periods into Hot, Cold, and Normal ones. The average number of equity issues is calculated per type of offering together with their respective standard deviations. If the number of observations a particular year exceed the average value plus one standard deviation ($\mu + \sigma$), it is classified as a hot period. In the same fashion, if the number of observations a particular year is lower than one standard deviation below the average number of equity issues, i.e. ($\mu - \sigma$), that particular period is classified as a Cold one. If the number of equity issues falls within the ($\mu \pm \sigma$) limit, naturally it is considered a Normal period.

<i>Panel A: Rights issues (N = 186)</i>		
Year	Number of equity issues	Hot/Cold/Normal period
1986	4	Normal
1987	1	Cold
1988	0	Cold
1989	3	Cold
1990	3	Cold
1991	2	Cold
1992	2	Cold
1993	13	Normal
1994	12	Normal
1995	7	Normal
1996	6	Normal
1997	13	Normal
1998	7	Normal
1999	13	Normal
2000	13	Normal
2001	18	Hot
2002	16	Hot
2003	14	Normal
2004	14	Normal
2005	25	Hot
Average		9.30
Stdev		6.74
Lower limit Hot period (No of observations)		16
Upper limit Cold period (No of observations)		3
No of observations in Hot periods		79 (40.7%)
<i>Panel B: Private placements (N = 481)</i>		
Year	Number of equity issues	Hot/Cold/Normal period
1986	4	Normal
1987	0	Cold
1988	0	Cold
1989	5	Normal
1990	2	Normal
1991	4	Normal
1992	8	Normal
1993	9	Normal
1994	19	Normal
1995	12	Normal
1996	9	Normal
1997	29	Normal
1998	22	Normal
1999	52	Hot
2000	78	Hot
2001	49	Hot
2002	32	Normal
2003	47	Hot
2004	58	Hot
2005	42	Normal
Average		24.05
Stdev		23.05
Lower limit Hot period (No of observations)		47
Upper limit Cold period (No of observations)		1
No of observations in Hot periods		284 (59.0%)

Table A-2 (continued)

<i>Panel C: Private placements excl. ESOP purpose (N = 441)</i>		
Year	Number of equity issues	Hot/Cold/Normal period
1986	4	Normal
1987	0	Cold
1988	0	Cold
1989	4	Normal
1990	2	Normal
1991	4	Normal
1992	8	Normal
1993	9	Normal
1994	19	Normal
1995	12	Normal
1996	9	Normal
1997	29	Normal
1998	16	Normal
1999	48	Hot
2000	69	Hot
2001	44	Hot
2002	29	Normal
2003	40	Normal
2004	58	Hot
2005	37	Normal
Average		22.05
Stdev		20.94
Lower limit Hot period (No of observations)		43
Upper limit Cold period (No of observations)		1
No of observations in Hot periods		219 (49.7%)

A-3 *Equity Issues by Year for Equity Offerings in the Sample*

Table A-3
Equity Issues by Year for Equity Offerings in the Sample

The table shows the number of equity issues per year from firms listed on the Stockholm Stock Exchange 1986-2005. Five categories are used: rights offerings, private placements, private placements excl. ESOP purpose, private placements only M&A purpose, and private placement only ESOP purpose. The total number of equity offerings is 1304.

Year	Rights offerings		Private placements		Private placements excl. ESOP purpose		Private placements only M&A purpose		Private placements only ESOP purpose	
	N	%	N	%	N	%	N	%	N	%
1986	10	4	45	4.3	42	4.4	17	4.7	3	3.4
1987	4	1.6	32	3	25	2.6	1	0.3	7	7.9
1988	3	1.2	28	2.7	27	2.8	1	0.3	1	1.1
1989	6	2.4	34	3.2	32	3.3	7	1.9	2	2.2
1990	12	4.7	24	2.3	23	2.4	3	0.8	1	1.1
1991	8	3.2	15	1.4	15	1.6	6	1.7	0	0
1992	3	1.2	16	1.5	15	1.6	6	1.7	1	1.1
1993	16	6.3	20	1.9	20	2.1	6	1.7	0	0
1994	14	5.5	25	2.4	25	2.6	11	3	0	0
1995	8	3.2	16	1.5	16	1.7	4	1.1	0	0
1996	7	2.8	18	1.7	18	1.9	10	2.8	0	0
1997	13	5.1	40	3.8	40	4.2	22	6.1	0	0
1998	8	3.2	48	4.6	39	4.1	17	4.7	9	10.1
1999	15	5.9	80	7.6	73	7.6	34	9.4	7	7.9
2000	16	6.3	184	17.5	168	17.5	74	20.4	16	18
2001	24	9.5	105	10	96	10	32	8.8	9	10.1
2002	22	8.7	69	6.6	60	6.2	18	5	9	10.1
2003	21	8.3	84	8	74	7.7	28	7.7	10	11.2
2004	18	7.1	83	7.9	82	8.5	34	9.4	1	1.1
2005	25	9.9	85	8.1	72	7.5	31	8.6	13	14.6
Total	253	100	1051	100	962	100	362	100	89	100

A-4 Event Study Results

Table A-4
Event Study Results - Part I

Daily Abnormal Returns (AR) around 201 rights offerings and 610 private placements of common stock by Stockholm Stock Exchange firms, 1986-2005. The total sample includes 811 offerings made by 262 firms.

Event day	Rights offerings (N = 201)				Private placements (N = 610)			
	AR	t-stat	CAR	Negative [%]	AR	t-stat	CAR	Positive [%]
-20	0.0043	1.1328*	0.0043	50.7	0.0025	1.4529	0.0025	47.9
-19	0.0021	0.4958	0.0064	54.2	0.0011	0.5332	0.0036	44.3
-18	0.0026	0.7375	0.0089	55.7	0.0021	1.0340	0.0058	46.7
-17	-0.0019	-0.4459	0.0070	55.7	0.0037	1.6243	0.0095	46.9
-16	-0.0019	-0.4571	0.0052	59.7	0.0005	0.1811	0.0099	42.6
-15	0.0044	0.6065	0.0095	51.2	0.0004	0.2426	0.0103	49.8
-14	0.0029	1.0156	0.0124	50.2	-0.0012	-0.6370	0.0092	44.3
-13	-0.0008	-0.2953	0.0116	54.2	0.0024	0.7339	0.0115	43.8
-12	-0.0036	-1.1038	0.0080	55.7	-0.0003	-0.1853	0.0112	46.1
-11	-0.0073	-2.0890**	0.0007	57.7	0.0023	1.2385	0.0135	46.2
-10	0.0011	0.3783	0.0018	54.7	-0.0008	-0.4885	0.0127	41.0
-9	0.0055	1.4272	0.0074	54.2	-0.0013	-0.8068	0.0114	44.6
-8	-0.0041	-1.5841	0.0032	58.7	0.0023	1.4682	0.0137	48.4
-7	0.0023	0.6053	0.0055	53.2	0.0007	0.5014	0.0144	50.7
-6	0.0023	0.4453	0.0078	55.2	-0.0018	-1.0773	0.0126	46.1
-5	-0.0003	-0.1194	0.0075	50.7	-0.0004	-0.2419	0.0122	47.0
-4	-0.0056	-1.7749*	0.0019	55.7	-0.0013	-0.7973	0.0109	46.4
-3	0.0040	1.3845	0.0059	52.7	-0.0022	-1.1177	0.0087	46.6
-2	0.0033	1.0099	0.0092	48.3	0.0069	3.3675***	0.0156	50.3
-1	0.0013	0.4241	0.0105	55.2	0.0004	0.2246	0.0160	46.1
0	-0.0220	-2.3891**	-0.0115	63.7	0.0151	3.3706***	0.0311	53.1
1	-0.0068	-1.5382	-0.0183	53.2	0.0011	0.4544	0.0322	45.6
2	0.0036	0.9460	-0.0148	49.8	-0.0044	-2.7027***	0.0278	40.7
3	0.0012	0.2449	-0.0136	59.7	-0.0030	-1.9142*	0.0249	44.9
4	0.0017	0.4496	-0.0119	57.7	-0.0033	-2.0000**	0.0216	42.5
5	0.0026	0.7686	-0.0093	51.7	-0.0023	-1.2065	0.0193	43.0
6	-0.0013	-0.3488	-0.0105	56.2	0.0041	1.5881	0.0233	49.7
7	-0.0018	-0.6078	-0.0123	53.2	0.0008	0.4177	0.0241	46.4
8	-0.0034	-1.1590	-0.0157	59.2	-0.0011	-0.5971	0.0231	44.1
9	-0.0010	-0.2767	-0.0167	52.7	-0.0036	-2.4151**	0.0194	43.4
10	0.0055	1.3777	-0.0113	53.7	0.0003	0.2006	0.0197	47.0
11	0.0043	0.6194	-0.0069	55.2	-0.0050	-2.9100***	0.0147	38.9
12	0.0025	0.7433	-0.0044	54.7	0.0022	1.2453	0.0169	50.2
13	0.0059	1.4743	0.0015	55.7	-0.0013	-0.6698	0.0156	44.6
14	-0.0007	-0.2299	0.0008	58.7	-0.0022	-1.3410	0.0134	44.4
15	0.0045	1.4108	0.0053	48.8	-0.0083	-5.4325***	0.0051	43.8
16	-0.0009	-0.2334	0.0044	51.2	0.0032	1.3296	0.0083	46.2
17	0.0048	1.2727	0.0092	53.2	-0.0007	-0.3486	0.0076	45.9
18	-0.0025	-0.7079	0.0067	55.7	0.0015	0.8750	0.0091	49.0
19	0.0038	-1.4952	0.0105	48.3	-0.0023	-1.3748	0.0068	41.5
20	0.0025	1.4517	0.0130	54.7	0.0004	0.2082	0.0072	47.0

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

Table A-5
Event Study Results - Part II

Daily Abnormal Returns (AR) around 552 private placements excl. ESOP purpose, and 303 private placements only M&A purpose by Stockholm Stock Exchange companies, 1986-2005. The total sample includes 811 offerings made by 262 firms.

Event day	Private placements excl. ESOP purpose (N = 552)				Private placements only M&A purpose (N = 303)			
	AR	<i>t</i> -stat	CAR	Positive [%]	AR	<i>t</i> -stat	CAR	Positive [%]
-20	0.0018	0.9853	0.0018	47.1	0.0033	1.4749	0.0033	47.2
-19	0.0018	0.7988	0.0036	44.7	0.0022	0.7753	0.0055	45.2
-18	0.0023	1.0431	0.0060	46.2	0.0017	0.8095	0.0072	48.5
-17	0.0041	1.6591*	0.0101	47.1	0.0036	1.1609	0.0108	49.8
-16	0.0003	0.1008	0.0104	41.7	-0.0016	-0.5513	0.0092	39.9
-15	0.0003	0.1504	0.0107	50.0	0.0018	0.7585	0.0110	50.8
-14	-0.0008	-0.4149	0.0099	44.0	-0.0022	-1.0067	0.0088	44.9
-13	0.0015	0.4354	0.0114	41.8	-0.0019	-0.9211	0.0069	40.6
-12	-0.0005	-0.3069	0.0109	44.9	-0.0014	-0.7297	0.0055	41.6
-11	0.0009	0.4682	0.0117	45.7	-0.0006	-0.2738	0.0049	46.9
-10	-0.0015	-0.8807	0.0102	40.4	-0.0021	-0.9988	0.0028	39.6
-9	-0.0015	-0.8422	0.0087	44.7	0.0010	0.4121	0.0038	47.5
-8	0.0029	1.7357*	0.0116	48.6	0.0010	0.4840	0.0048	46.2
-7	0.0000	0.0107	0.0116	48.7	-0.0021	-1.0338	0.0027	47.2
-6	-0.0018	-1.0005	0.0098	46.2	-0.0030	-1.2290	-0.0003	45.9
-5	-0.0002	-0.1094	0.0096	46.9	0.0031	1.3502	0.0028	49.5
-4	-0.0010	-0.5838	0.0086	46.6	-0.0024	-1.1189	0.0004	46.5
-3	-0.0030	-1.4103	0.0056	46.0	-0.0048	-1.7046*	-0.0044	46.2
-2	0.0076	3.4229***	0.0132	51.3	0.0045	1.7063*	0.0001	48.8
-1	0.0008	0.3837	0.0140	45.5	0.0039	1.4323	0.0040	47.9
0	0.0174	3.5248***	0.0314	54.0	0.0291	3.7887***	0.0331	60.4
1	0.0014	0.5315	0.0328	46.2	0.0038	1.1187	0.0369	47.2
2	-0.0046	-2.5963***	0.0282	40.6	-0.0062	-2.6206***	0.0307	43.6
3	-0.0029	-1.7258*	0.0254	45.3	0.0010	0.4640	0.0317	50.2
4	-0.0035	-1.9391*	0.0219	42.9	-0.0091	-3.7314***	0.0226	36.6
5	-0.0017	-0.8439	0.0201	43.5	-0.0004	-0.1642	0.0222	43.2
6	0.0041	1.4668	0.0243	49.6	0.0043	1.9001*	0.0265	54.8
7	0.0005	0.2429	0.0248	46.4	-0.0018	-0.8428	0.0247	44.6
8	-0.0012	-0.6377	0.0235	43.1	0.0003	0.1067	0.0250	42.6
9	-0.0039	-2.4211**	0.0196	42.9	-0.0078	-3.8412***	0.0172	38.9
10	0.0002	0.1224	0.0198	46.2	-0.0002	-0.0896	0.0170	47.2
11	-0.0051	-2.7286***	0.0147	38.6	-0.0069	-3.4572***	0.0101	37.0
12	0.0025	1.2589	0.0171	50.2	0.0014	0.6184	0.0115	51.5
13	-0.0012	-0.5890	0.0159	44.4	-0.0056	-2.7574***	0.0059	40.6
14	-0.0026	-1.4895	0.0133	44.0	0.0010	0.4255	0.0069	47.2
15	-0.0085	-5.2057***	0.0048	43.5	-0.0064	-3.4557***	0.0005	45.5
16	0.0031	1.1948	0.0079	46.2	-0.0010	-0.4463	-0.0005	45.9
17	-0.0013	-0.6053	0.0066	45.5	0.0029	1.0449	0.0024	44.2
18	0.0006	0.3639	0.0073	48.4	0.0016	0.6936	0.0040	47.2
19	-0.0019	-1.0491	0.0054	41.8	-0.0002	-0.0849	0.0038	43.6
20	0.0000	-0.0118	0.0054	46.7	0.0006	0.3224	0.0044	48.8

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

Table A-6
Event Study Results - Part III

Daily Abnormal Returns (AR) around all equity issues of common stock by Stockholm Stock Exchange firms, 1986-2005. The total sample includes 811 offerings made by 262 firms.

Event day	Private placements only ESOP purpose (N = 58)			
	AR	t-stat	CAR	Positive [%]
-20	0.0092	1.7730*	0.0092	55.2
-19	-0.0054	-0.9454	0.0038	39.7
-18	0.0001	0.0327	0.0039	51.7
-17	-0.0004	-0.1191	0.0035	44.8
-16	0.0022	0.6124	0.0057	51.7
-15	0.0017	0.4333	0.0074	48.3
-14	-0.0046	-0.8137	0.0028	46.6
-13	0.0102	2.4502**	0.0130	62.1
-12	0.0019	0.3475	0.0149	56.9
-11	0.0158	1.9027*	0.0307	51.7
-10	0.0058	0.8958	0.0365	46.6
-9	0.0003	0.0992	0.0368	43.1
-8	-0.0034	-0.7506	0.0334	46.6
-7	0.0075	2.1279**	0.0409	69.0
-6	-0.0020	-0.4166	0.0389	44.8
-5	-0.0025	-0.6750	0.0364	48.3
-4	-0.0040	-0.9772	0.0324	44.8
-3	0.0052	1.0170	0.0376	51.7
-2	0.0002	0.0417	0.0378	41.4
-1	-0.0028	-0.5543	0.0350	51.7
0	-0.0062	-1.3590	0.0288	44.8
1	-0.0018	-0.4050	0.0270	39.7
2	-0.0029	-0.7712	0.0241	41.4
3	-0.0038	-1.0138	0.0203	41.4
4	-0.0019	-0.4907	0.0184	37.9
5	-0.0074	-2.3917**	0.0110	37.9
6	0.0037	0.8891	0.0147	50.0
7	0.0036	0.9227	0.0183	46.6
8	0.0006	0.1717	0.0189	53.4
9	-0.0009	-0.2467	0.0180	48.3
10	0.0014	0.3101	0.0194	55.2
11	-0.0045	-1.1135	0.0149	41.4
12	0.0001	0.0351	0.0150	50.0
13	-0.0018	-0.5027	0.0132	46.6
14	0.0015	0.3199	0.0147	48.3
15	-0.0067	-1.5462	0.0080	46.6
16	0.0037	1.0455	0.0117	46.6
17	0.0050	1.1018	0.0167	50.0
18	0.0094	1.7609*	0.0261	55.2
19	-0.0063	-1.4216	0.0198	37.9
20	0.0043	0.7377	0.0241	50.0

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

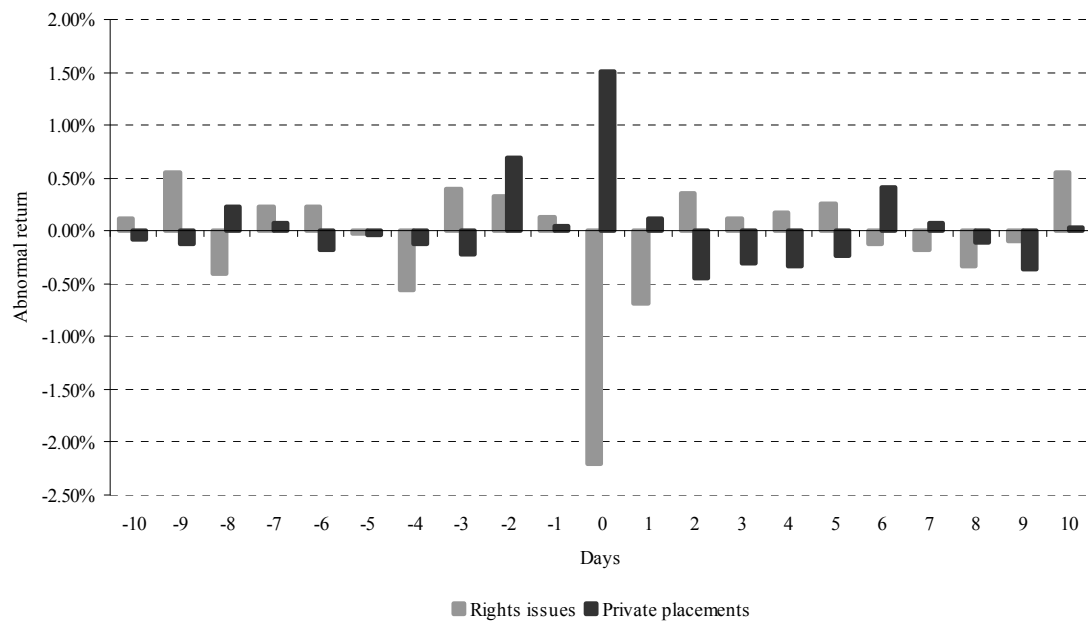


Figure A-1 Market model adjusted average abnormal returns for each event day in the -10 to 10 event window.

Table A-7
Cumulative Abnormal Returns Around Announcements of Equity Offerings

The mean Cumulative Abnormal Returns (CAR) are calculated using both the market-model-implied returns (using 180 days daily returns for estimating the market model coefficients), and a value-weighted market index (AFGX) as benchmarks. The sample include 201 rights offerings, 610 private placements, 552 private placements excl. ESOP purpose, 303 private placements only M&A purpose, and 58 private placements only ESOP purpose announcements (total of 811) between 1986 and 2005.

	Market Model Adjusted						Market Index Adjusted					
<i>Panel A: Rights offerings</i>												
Statistics	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}
Mean CAR	0.0059	-0.0207	-0.0220	-0.0276	-0.0204	0.0003	0.0202	-0.0201	-0.0218	-0.0266	-0.0177	0.0041
<i>t</i> -stat	0.2541	-2.151**	-2.3891**	-2.4636**	-1.6891*	0.0231	0.9342	-2.0684**	-2.3653**	-2.341**	-1.4399	0.3487
% negative	51.2	64.2	63.7	61.7	59.2	54.2	51.7	64.2	62.7	59.2	56.2	52.2
<i>Panel B: Private placements</i>												
Statistics	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}
Mean CAR	0.0072	0.0156	0.0151	0.0166	0.0213	-0.0114	0.0387	0.0173	0.0156	0.0194	0.0249	-0.0028
<i>t</i> -stat	0.5966	3.1077***	3.3706***	3.3231***	3.7103***	-1.9415*	3.4412***	3.4301***	3.4659***	3.8798***	4.3108***	-0.4838
% positive	46.6	50.5	53.1	52.6	53.3	43.3	53.8	51.0	52.8	54.9	54.3	46.9
<i>Panel C: Private placements excl. ESOP purpose</i>												
Statistics	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}
Mean CAR	0.0055	0.0181	0.0174	0.0195	0.0241	-0.0116	0.0389	0.0202	0.0180	0.0226	0.0280	-0.0030
<i>t</i> -stat	0.4145	3.3163***	3.5248***	3.5678***	3.8478***	-1.8160*	3.1876***	3.6695***	3.6325***	4.1342***	4.4276***	-0.4856
% positive	46.2	51.8	54.0	53.8	54.3	43.5	53.3	52.2	54.0	56.7	55.4	46.7
<i>Panel D: Private placements only M&A purpose</i>												
Statistics	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}
Mean CAR	0.0047	0.0330	0.0291	0.0367	0.0363	-0.0161	0.0518	0.0359	0.0305	0.0404	0.0419	-0.0041
<i>t</i> -stat	0.2727	3.9515***	3.7887***	4.4321***	3.7718***	-2.1484**	3.2828***	4.2806***	3.9698***	4.8785***	4.3181***	-0.5521
% positive	51.2	57.8	60.4	59.1	58.4	42.2	59.4	58.1	58.4	64.0	61.1	45.2
<i>Panel E: Private placements only ESOP purpose</i>												
Statistics	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}	{-20, 20}	{-1, 0}	Event day	{-1, 1}	{-3, 1}	{1, 10}
Mean CAR	0.0242	-0.0090	-0.0062	-0.0110	-0.0057	-0.0093	0.0371	-0.0104	-0.0067	-0.0111	-0.0041	-0.0004
<i>t</i> -stat	0.9938	-1.2728	-1.3590	-1.6939*	-0.6790	-0.8928	1.6096	-1.4354	-1.4386	-1.7679*	-0.4912	-0.0328
% positive	50.0	37.9	44.8	41.4	43.1	41.4	58.6	39.7	41.4	37.9	43.1	48.3

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

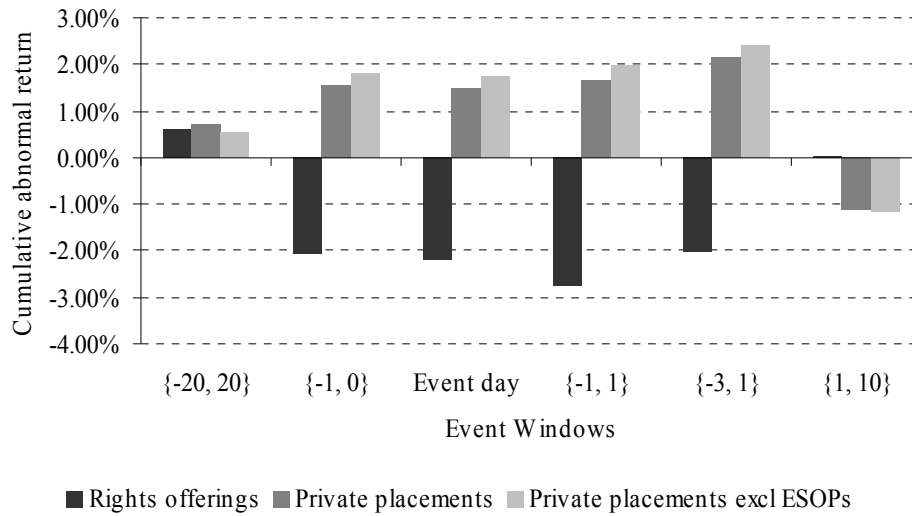


Figure A-2 Market model adjusted average cumulative abnormal returns for six different event windows.

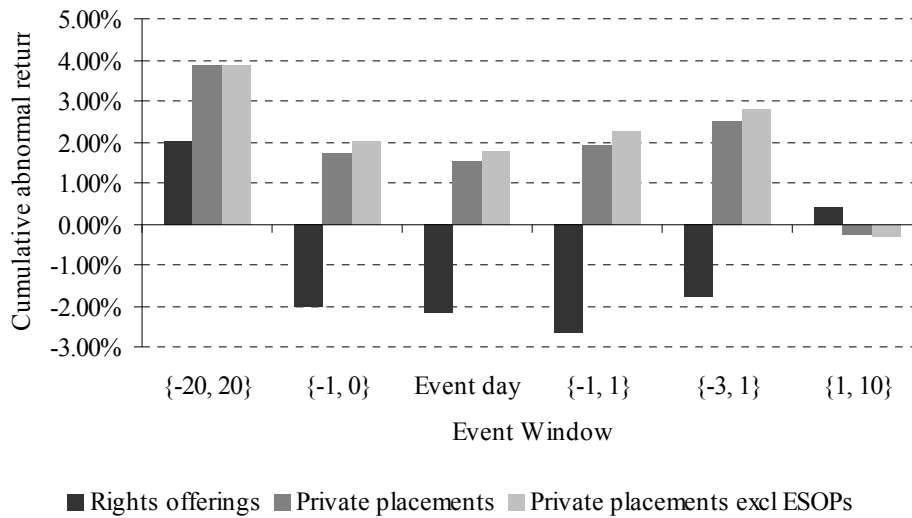


Figure A-3 Market index adjusted average cumulative abnormal returns for six different event windows.

Table A-8
Event Study Results per Category

The table reports the mean five-day Cumulative Abnormal Returns (CAR{-3, 1}). To measure CAR{-3, 1}, we estimate the market model by OLS for each firm using an estimation window of 180 days (-200 to -20). The value-weighted AFGX is used as a proxy for the return on the market portfolio. The dataset for rights offerings, private placements, private placements excl ESOP purpose, private placements only M&A purpose, and private placements only ESOP purpose contains 201, 610, 552, 303 and 58 announcements, respectively, during the period 1986-2005. All variables are defined in Table A-1.

<i>Panel A: Rights issues</i>			
	Mean	t-stat	N
All rights issues	-0.0204	-1.6891*	201
Merger and acquisition	0.0256	1.2409	25
Solidity/financial strength	-0.0461	-2.0009**	72
Financial restructuring	-0.0882	-1.2750	14
Expansion	-0.0427	-1.7019	28
Specific investment	0.0074	0.4602	24
Incentive/option rights/convertibles	0.0768	1.9775**	2
Not specified	0.0190	0.6364	36
A-list	-0.0170	-0.8654	53
O-list	-0.0298	-1.8597*	130
OTC-list	0.0381	1.0627	18
Years 1986-1995	0.0017	0.0890	49
Years 1996-2005	-0.0275	-1.8714*	152
Years 1986-1990	0.0063	0.3776	12
Years 1991-1995	0.0002	0.0086	37
Years 1996-2000	0.0028	0.1498	55
Years 2001-2005	-0.0447	-2.1982**	97
<i>Panel B: Private placements</i>			
	Mean	t-stat	N
All private placements	0.0213	3.7103***	610
Merger and acquisition	0.0367	4.4321***	303
Solidity/financial strength	-0.0156	-0.9911	51
Financial restructuring	0.0809	0.7913	7
Joint venture	0.0606	1.0488	6
Expansion	-0.0170	-0.5703	16
Specific investment	0.0109	0.7410	34
Incentive/option rights/convertibles	-0.0057	-0.6790	58
Not specified	0.0152	1.6180	135
Institution(s)	0.0294	4.2755***	412
Individual(s)	0.0179	1.2702	130
Both institution(s) and individual(s)	-0.0441	-1.8049	9
Unclear	-0.0184	-1.3574	59
A-list	0.0058	0.7542	101
O-list	0.0210	2.9011***	453
OTC-list	0.0507	3.2776***	56
Years 1986-1995	0.0118	1.1380	83
Years 1996-2005	0.0227	3.5388***	527
Years 1986-1990	0.0189	1.4898	26
Years 1991-1995	0.0085	0.6110	57
Years 1996-2000	0.0341	3.5509***	229
Years 2001-2005	0.0140	1.6232	298

Table A-8 (continued)

<i>Panel C: Private placements excl. ESOP purpose</i>			
	Mean	t-stat	N
All private placements excl. ESOP purpose	0.02408	3.8478***	552
Merger and acquisition	0.0363	3.7718***	303
Solidity/financial strength	-0.0156	-0.9911	51
Financial restructuring	0.0809	0.7913	7
Joint venture	0.0606	1.0488	6
Expansion	-0.0170	-0.5703	16
Specific investment	0.0109	0.7410	34
Not specified	0.0152	1.6180	135
Institution(s)	0.0298	4.2716***	406
Individual(s)	0.0317	1.6030	90
Both institution(s) and individual(s)	-0.0693	-3.5087**	7
Unclear	-0.0236	-1.4840	49
A-list	0.0107	1.2420	88
O-list	0.0235	2.9807***	412
OTC-list	0.0510	3.0640***	52
Years 1986-1995	0.0114	1.0747	81
Years 1996-2005	0.0263	3.6974***	471
Years 1986-1990	0.0181	1.3382	24
Years 1991-1995	0.0085	0.6110	57
Years 1996-2000	0.0390	3.6830***	205
Years 2001-2005	0.0165	1.7253*	266
<i>Panel D: Private placements only M&A purpose</i>			
	Mean	t-stat	N
All private placements only M&A purpose	0.0363	3.7718***	303
Institution(s)	0.0354	3.6305***	237
Individual(s)	0.0621	1.9357*	53
Both institution(s) and individual(s)	-0.0858	-2.5570*	4
Unclear	-0.0369	-0.7518	9
A-list	0.0196	1.9319*	54
O-list	0.0349	2.6478***	209
OTC-list	0.0664	3.3898***	40
Years 1986-1995	0.0128	1.0841	38
Years 1996-2005	0.0397	3.6521***	265
Years 1986-1990	0.0262	1.2697	12
Years 1991-1995	0.0066	0.4554	26
Years 1996-2000	0.0476	3.4693***	134
Years 2001-2005	0.0316	1.8638*	131
<i>Panel E: Private placements only ESOP purpose</i>			
	Mean	t-stat	N
All private placements only ESOP purpose	-0.0057	-0.6790	58
Institution(s)	0.0059	0.1894	6
Individual(s)	-0.0130	-1.3043	40
Both institution(s) and individual(s)	0.0443	0.7819	2
Unclear	0.0068	0.3794	10
A-list	-0.0272	-2.4183**	13
O-list	-0.0040	-0.3677	41
OTC-list	0.0469	3.4136**	4

Table A-8 (continued)

<i>Panel E: Private placements only ESOP purpose (continued)</i>			
	Mean	t-stat	N
Years 1986-1995	0.0284	0.6965	2
Years 1996-2005	-0.0069	-0.8062	56
Years 1986-1990	0.0284	0.6965	2
Years 1991-1995	-	-	0
Years 1996-2000	-0.0070	-0.5198	24
Years 2001-2005	-0.0068	-0.6070	32

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

A-5 Descriptive Statistics on Discounts and Discount-Adjusted Abnormal Returns

Table A-9

Descriptive Statistics on Rights Offering Discounts and Abnormal Returns

Discounts are measured relative to share price one trading day post-announcement. Abnormal returns are the announcement day abnormal returns. The dataset include 186 rights offerings between 1986 and 2005. All variables are defined in Table A-1.

<i>Panel A: Continuous variables</i>						
	Range of values	Discount [%]		AR [%]		N
		Mean	<i>p</i> -value	Mean	<i>p</i> -value	
Market value of equity [billion SEK]	≤ 0.1	46.0797	0.0000	-4.4248	0.0014	41
	0.1 < ≤ 1.0	38.5853	0.0000	-3.4249	0.0006	82
	1.0 < ≤ 5.0	30.9946	0.0134	-1.3402	0.3382	29
	5.0 < ≤ 10.0	33.0033	0.0019	0.4806	0.7232	10
	> 10.0	44.8936	0.0000	-0.5675	0.6550	24
Fraction placed [%]	≤ 5.0	15.3683	0.4548	1.1226	0.3804	16
	5.0 < ≤ 10.0	37.9455	0.0017	2.6652	0.0966	11
	10.0 < ≤ 15.0	26.5719	0.0092	0.2286	0.9362	10
	15.0 < ≤ 20.0	32.4772	0.0000	-3.8721	0.0018	29
	> 20.0	45.7395	0.0000	-3.7268	0.0000	120
Issue size [million SEK]	≤ 50	43.2318	0.0000	-3.8533	0.0016	54
	50 < ≤ 100	36.4704	0.0000	-2.0933	0.0611	33
	100 < ≤ 300	41.0819	0.0000	-3.7157	0.0035	45
	300 < ≤ 600	32.6022	0.0121	-1.1076	0.4925	28
	> 600	40.7694	0.0000	-1.3294	0.4154	26
Ownership concentration [%]	≤ 25.0	37.8557	0.0000	-3.5331	0.0008	86
	25.0 < ≤ 50.0	45.0361	0.0000	-2.4810	0.0095	66
	> 50.0	33.2826	0.0033	-1.2456	0.0467	34
Change in ownership concentration [%]	≤ -5.0	44.4243	0.0000	-3.0873	0.0585	32
	-5.0 < ≤ 0.0	36.4927	0.0000	-2.7404	0.0009	83
	0.0 < ≤ 5.0	39.0762	0.0000	-0.8958	0.5259	32
	> 5.0	42.5303	0.0000	-0.3975	0.0067	39
<i>Panel B: Dummy variables</i>						
		Discount [%]		AR [%]		N
		Mean	<i>p</i> -value	Mean	<i>p</i> -value	
A-list		39.2870	0.0000	-1.1295	0.2045	52
Other		39.6766	0.0000	-3.3672	0.0000	134
	Difference (A-list - Other)	0.3895	0.9425	-2.2377	0.0857	186
O-list		37.4316	0.0000	-3.7390	0.0000	117
Other		43.1897	0.0000	-1.0503	0.1871	69
	Difference (O-list - Other)	5.7581	0.2505	2.6887	0.0258	186
OTC-list		55.1274	0.0000	-0.8081	0.6565	17
Other		38.0025	0.0000	-2.9361	0.0000	169
	Difference (OTC-list - Other)	-17.1249	0.0407	-2.1281	0.2952	186
Merger and acquisition		44.6802	0.0000	0.5941	0.6220	22
Other		38.8819	0.0000	-3.1891	0.0000	164
	Difference (Merger and acquisition - Other)	-5.7983	0.4397	-3.7832	0.0362	186
Solidity/financial strength		35.4839	0.0000	-3.7479	0.0003	65
Other		41.7615	0.0000	-2.2011	0.0029	121
	Difference (Solidity/fin. strength - Other)	6.2776	0.2162	1.5468	0.2078	186
Financial restructuring		43.2185	0.0003	-7.5854	0.0165	13
Other		39.2933	0.0000	-2.3776	0.0001	173
	Difference (Financial restructuring - Other)	-3.9252	0.6798	5.2078	0.0227	186

Table A-9 (continued)

	Discount [%]		AR [%]		N
	Mean	<i>p</i> -value	Mean	<i>p</i> -value	
Expansion	34.3211	0.0000	-5.6762	0.0024	27
Other	40.4586	0.0000	-2.2433	0.0004	159
Difference (Expansion - Other)	6.1375	0.3721	3.4329	0.0382	186
Specific investment	42.2031	0.0000	-0.8694	0.5255	24
Other	39.1772	0.0000	-3.0190	0.0000	162
Difference (Specific investment - Other)	-3.0259	0.6757	-2.1495	0.2184	186
Incentive/option rights/convertibles	47.4450	0.3180	-0.5759	0.7871	2
Other	39.4821	0.0000	-2.7651	0.0000	184
Difference (Incentive/op. rights/conv. - Other)	-7.9630	0.7348	-2.1892	0.7003	186
Intent not specified	44.6636	0.0000	-0.1671	0.8976	33
Other	38.4686	0.0000	-3.2969	0.0000	153
Difference (Intent not specified - Other)	-6.1950	0.3285	-3.1298	0.0404	186
Family controlled	31.3785	0.0149	-3.7837	0.0091	29
Other	41.0803	0.0000	-2.5491	0.0001	157
Difference (Family controlled - Other)	9.7016	0.1455	1.2346	0.4449	186

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

Note that we excluded 10 observations when first describing the discount characteristics for the rights offering sample in the paper, see Table 14. From our event study sample of rights offerings numbering to 201 observations, 194 had valid discount information. However, as we have a few large outliers with respect to the abnormal returns as well, we exclude all observations below the 2.5 percentile and above the 97.5 percentile, respectively. The number of observations excluded by this procedure amounts to 8 for the rights offering sample. Hence, the rights offering sample shown in this table boils down to 186 observations.

Table A-10
Descriptive Statistics on Private Placement Discounts and Discount-Adjusted Abnormal Returns

Discounts are measured relative to share price one trading day post-announcement. Discount-adjusted abnormal returns are the announcement day abnormal returns adjusted for discounts, as defined in Section 3.2. *Discount-Adjustment of Abnormal Return*. The dataset include 481 private placements between 1986 and 2005. All variables are defined in Table A-1.

Panel A: Continuous variables

	Range of values	Discount [%]		AR ^{adj} [%]		N
		Mean	p-value	Mean	p-value	
Market value of equity [billion SEK]	≤ 0.1	-1.6752	0.5738	17.6706	0.1243	94
	0.1 < ≤ 1.0	2.8130	0.1688	4.5819	0.0324	199
	1.0 < ≤ 5.0	7.5864	0.0366	12.5079	0.0464	110
	5.0 < ≤ 10.0	13.5972	0.0112	2.7881	0.2451	34
	> 10.0	12.3944	0.0699	2.5422	0.0703	44
Fraction placed [%]	≤ 5.0	1.2076	0.5963	0.8032	0.0537	212
	5.0 < ≤ 10.0	2.7173	0.4165	1.1664	0.1798	84
	10.0 < ≤ 15.0	8.3632	0.0595	2.6392	0.0458	46
	15.0 < ≤ 20.0	13.1961	0.0136	5.3600	0.0306	23
	> 20.0	9.2414	0.0069	31.4003	0.0063	116
Issue size [million SEK]	≤ 50	4.0908	0.0345	2.7202	0.0883	257
	50 < ≤ 100	2.7793	0.5431	24.3550	0.1351	61
	100 < ≤ 300	10.7001	0.0027	7.9884	0.0051	95
	300 < ≤ 600	-3.7329	0.5423	13.2199	0.4128	29
	> 600	2.9577	0.6306	21.2397	0.1939	39
Ownership concentration [%]	≤ 25.0	6.5060	0.0012	4.1216	0.005	228
	25.0 < ≤ 50.0	1.1958	0.6704	17.0242	0.0179	178
	> 50.0	7.3104	0.0325	2.4710	0.4968	75
Change in ownership concentration [%]	≤ -5.0	5.5728	0.0683	5.1486	0.1071	123
	-5.0 < ≤ 0.0	5.5913	0.0167	8.5100	0.0293	197
	0.0 < ≤ 5.0	6.7699	0.02	6.4505	0.0125	87
	> 5.0	-1.7761	0.6927	17.3573	0.2092	74

Panel B: Dummy variables

	Discount [%]		AR ^{adj} [%]		N
	Mean	p-value	Mean	p-value	
A-list	6.5678	0.1259	20.1904	0.0492	75
Other	4.3150	0.0071	6.5052	0.0175	406
Difference (A-list - Other)	-2.2528	0.5859	-13.6852	0.0754	481
O-list	4.0750	0.0159	6.8110	0.0226	362
Other	6.4649	0.0485	14.2000	0.0376	119
Difference (O-list - Other)	2.3899	0.4918	7.3890	0.2540	481
OTC-list	6.2895	0.2174	3.9891	0.5056	44
Other	4.5029	0.0044	9.1072	0.0027	437
Difference (OTC-list - Other)	-1.7866	0.7314	5.1181	0.5977	481
Merger and acquisition	11.9290	0.0000	5.9380	0.0002	235
Other	-2.2717	0.2529	11.2193	0.0338	246
Difference (Merger and acquisition - Other)	-14.2007	0.0000	5.2813	0.3450	481
Solidity/financial strength	4.9533	0.2024	30.2973	0.0642	45
Other	4.6367	0.0041	6.4036	0.0138	436
Difference (Solidity/fin. strength - Other)	-0.3166	0.9510	-23.8937	0.0126	481
Financial restructuring	18.2369	0.6224	261.3723	0.2427	5
Other	4.5237	0.0023	5.9843	0.0011	476
Difference (Financial restructuring - Other)	-13.7132	0.3537	-255.3880	0.0000	481

Table A-10 (continued)

	Discount [%]		AR ^{adj} [%]		N
	Mean	<i>p</i> -value	Mean	<i>p</i> -value	
Joint venture	-5.8405	0.3883	-0.5310	0.8637	6
Other	4.7990	0.0016	8.7548	0.0021	475
Difference (Joint venture - Other)	10.6395	0.4311	9.2859	0.7125	481
Expansion	4.1251	0.2044	0.1520	0.9522	15
Other	4.6837	0.0025	8.9122	0.0021	466
Difference (Expansion - Other)	0.5586	0.9484	8.7602	0.5861	481
Specific investment	-3.8365	0.2850	-7.6324	0.1133	33
Other	5.2926	0.0009	9.8376	0.0010	448
Difference (Specific investment - Other)	9.1292	0.1235	17.4700	0.1139	481
Incentive/option rights/convertibles	-22.7221	0.0001	-1.4995	0.0231	40
Other	7.1505	0.0000	9.5586	0.0018	441
Difference (Incentive/op. rights/conv. - Other)	29.8726	0.0000	11.0581	0.2746	481
Intent not specified	1.3309	0.6777	3.9456	0.0815	102
Other	5.5640	0.0011	9.9022	0.0048	379
Difference (Intent not specified - Other)	4.2331	0.2485	5.9566	0.3838	481
Institution(s)	8.1534	0.0000	9.8948	0.0054	334
Other	-3.2567	0.2789	5.7858	0.1893	147
Difference (Institution(s) - Other)	-11.4101	0.0004	-4.1089	0.4984	481
Individual(s)	-6.9541	0.0747	7.3254	0.2702	96
Other	7.5639	0.0000	8.9666	0.0038	385
Difference (Individual(s) - Other)	14.5180	0.0001	1.6412	0.8146	481
Both institutions(s) and individual(s)	4.4598	0.7823	-1.5426	0.4693	7
Other	4.6693	0.0020	8.7894	0.0020	474
Difference (Both inst. and ind. - Other)	0.2095	0.9867	10.3320	0.6582	481
Unclear	3.5828	0.4569	3.5928	0.1981	44
Other	4.7754	0.0026	9.1471	0.0030	437
Difference (Unclear - Other)	1.1926	0.8187	5.5543	0.5669	481
Family controlled	5.7612	0.1193	4.5186	0.0703	68
Other	4.4860	0.0065	9.3174	0.0041	413
Difference (Family controlled - Other)	-1.2752	0.7671	4.7988	0.5499	481

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

Note that we excluded 26 observations when first describing the discount characteristics for the private placement sample in the paper, see Table 14. From our event study sample of private placements numbering to 610 observations, 534 had valid discount information and consequently, we are able to compute 514 discount-adjusted abnormal returns for this sample. As we have a few large outliers with respect to the discount-adjusted abnormal returns as well, we exclude all observations below the 2.5 percentile and above the 97.5 percentile, respectively. The number of observations excluded by this procedure amounts to 24 for the private placement sample. Since some information with regards to the discount and discount-adjusted abnormal returns coincide, the final cross-sectional private placement sample boils down to 481 observations.

Table A-11
Descriptive Statistics on Private Placement excl. ESOP Purpose Discounts and Discount-Adjusted Abnormal Returns

Discounts are measured relative to share price one trading day post-announcement. Discount-adjusted abnormal returns are the announcement day abnormal returns adjusted for discounts, as defined in Section 3.2. *Discount-Adjustment of Abnormal Return*. The dataset include 441 private placements excl. ESOP purpose between 1986 and 2005. All variables are defined in Table A-1.

Panel A: Continuous variables

	Range of values	Discount [%]		AR ^{adj} [%]		N
		Mean	p-value	Mean	p-value	
Market value of equity [billion SEK]	≤ 0.1	-1.2482	0.6751	17.9811	0.1218	93
	0.1 < ≤ 1.0	4.4636	0.0394	5.0843	0.0288	183
	1.0 < ≤ 5.0	13.8758	0.0001	14.5339	0.0410	97
	5.0 < ≤ 10.0	14.4630	0.0112	2.9710	0.2589	31
	> 10.0	17.7922	0.0106	2.9941	0.0684	37
Fraction placed [%]	≤ 5.0	5.4666	0.0199	1.1689	0.0128	180
	5.0 < ≤ 10.0	4.8879	0.1466	1.4902	0.1023	79
	10.0 < ≤ 15.0	9.3826	0.0410	2.7967	0.0426	44
	15.0 < ≤ 20.0	13.1961	0.0136	5.3600	0.0306	23
	> 20.0	9.2773	0.0072	31.6599	0.0064	115
Issue size [million SEK]	≤ 50	5.4656	0.0063	2.9760	0.0775	243
	50 < ≤ 100	8.1527	0.0792	27.7767	0.1314	54
	100 < ≤ 300	13.4582	0.0002	9.2780	0.0044	83
	300 < ≤ 600	-3.3928	0.5924	13.7228	0.4121	28
	> 600	10.9986	0.0717	25.3919	0.1892	33
Ownership concentration [%]	≤ 25.0	7.1488	0.0005	4.2597	0.0053	219
	25.0 < ≤ 50.0	6.0468	0.0353	19.9885	0.0154	155
	> 50.0	9.7095	0.0090	2.7499	0.4994	67
Change in ownership concentration [%]	≤ -5.0	6.0965	0.0431	5.4418	0.1081	116
	-5.0 < ≤ 0.0	9.6215	0.0001	9.7317	0.0267	175
	0.0 < ≤ 5.0	8.1311	0.0051	6.7634	0.0114	84
	> 5.0	1.2032	0.7970	19.8928	0.1994	66

Panel B: Dummy variables

	Discount [%]		AR ^{adj} [%]		N
	Mean	p-value	Mean	p-value	
A-list	11.4288	0.0079	23.9112	0.0467	64
Other	6.4242	0.0001	7.1221	0.0157	377
Difference (A-list - Other)	-5.0046	0.2452	-16.7891	0.0518	441
O-list	6.3286	0.0003	7.4899	0.0202	335
Other	9.7481	0.0030	16.0965	0.0356	106
Difference (O-list - Other)	3.4196	0.3355	8.6066	0.2270	441
OTC-list	7.1872	0.1639	4.1883	0.5047	42
Other	7.1467	0.0000	10.1239	0.0023	399
Difference (OTC-list - Other)	-0.04051	0.9938	5.9356	0.5673	441
Merger and acquisition	11.9290	0.0000	5.9380	0.0002	235
Other	1.6993	0.4076	13.6889	0.0300	206
Difference (Merger and acquisition - Other)	-10.2297	0.0007	7.7509	0.2039	441
Solidity/financial strength	4.9533	0.2024	30.2973	0.0642	45
Other	7.4002	0.0000	7.2019	0.0118	396
Difference (Solidity/fin. strength - Other)	2.4469	0.6256	-23.0954	0.0214	441

Table A-11 (continued)

	Discount [%]		AR ^{adj} [%]		N
	Mean	p-value	Mean	p-value	
Financial restructuring	18.2369	0.6224	261.3723	0.2427	5
Other	7.0234	0.0000	6.6708	0.0008	436
Difference (Financial restructuring - Other)	-11.2136	0.4340	-254.7015	0.0000	441
Joint venture	-5.8405	0.3883	-0.5310	0.8637	6
Other	7.3297	0.0000	9.6978	0.0018	435
Difference (Joint venture - Other)	13.1702	0.3146	10.2288	0.6973	441
Expansion	4.1251	0.2044	0.1520	0.9522	15
Other	7.2570	0.0000	9.8898	0.0018	426
Difference (Expansion - Other)	3.1319	0.7084	9.7378	0.5623	441
Specific investment	-3.8365	0.2850	-7.6324	0.1133	33
Other	8.0392	0.0000	10.9491	0.0008	408
Difference (Specific investment - Other)	11.8757	0.0391	18.5815	0.1081	441
Intent not specified	1.3309	0.6777	3.9456	0.0815	102
Other	8.9016	0.0000	11.2475	0.0041	339
Difference (Intent not specified - Other)	7.5707	0.0350	7.3019	0.3120	441
Institution(s)	8.0689	0.0000	10.0110	0.0054	330
Other	4.4201	0.1954	8.2137	0.1591	111
Difference (Institution(s) - Other)	-3.6488	0.2966	-1.7972	0.7979	441
Individual(s)	1.7876	0.7020	11.2102	0.2393	67
Other	8.1112	0.0000	9.2627	0.0037	374
Difference (Individual(s) - Other)	6.3236	0.1343	-1.9475	0.8185	441
Both institutions(s) and individual(s)	18.5196	0.3562	0.1422	0.9377	5
Other	7.0201	0.0000	9.6666	0.0018	436
Difference (Both inst. and ind. - Other)	-11.4994	0.4224	9.5244	0.7407	441
Unclear	7.1350	0.1602	4.1008	0.1929	39
Other	7.1520	0.0000	10.0881	0.0026	402
Difference (Unclear - Other)	0.0170	0.9975	5.9874	0.5768	441
Family controlled	6.2614	0.0994	4.6482	0.0707	66
Other	7.3070	0.0000	10.4228	0.0035	375
Difference (Family controlled - Other)	1.0456	0.8059	5.7746	0.4989	441

* Significant at the 10% level. ** Idem., 5%. *** Idem., 1%.

Note that we excluded 24 observations when first describing the discount characteristics for the private placement excl. ESOP purpose sample in the paper, see Table 14. From our event study sample of private placements excl. ESOP purpose numbering to 552 observations, 487 had valid discount information and consequently, we are able to compute 470 discount-adjusted abnormal returns for this sample. As we have a few large outliers with respect to the discount-adjusted abnormal returns as well, we exclude all observations below the 2.5 percentile and above the 97.5 percentile, respectively. The number of observations excluded by this procedure amounts to 22 for the private placement excl. ESOP purpose sample. Since some information with regards to the discount and discount-adjusted abnormal returns coincide, the final cross-sectional private placement excl. ESOP purpose sample boils down to 441 observations.

A-6 Determinants of Discounts for Private Placements excluding ESOPs

Table A-12

Cross-sectional Regression of Private Placement excl. ESOP Purpose Discounts

The dependent variable is the private placement excl. ESOP purpose discount measured relative to share price one trading day after the announcement. The sample includes 441 private placements excl. ESOP purpose between 1986 and 2005.

Independent variables ^a	Predicted sign	Coefficient	p-value
Intercept		8.7541	0.158
Market value of equity	(-)	-0.0389	0.429
Log of issue size	(+)	0.3439	0.701
Fraction placed	(+)	0.1746	0.047
Individual(s)	(-)	-2.1522	0.628
Book-to-market	(-)	-12.3694	0.000
Cumulative stock return 60 days prior	(-)	6.4300	0.104
Cumulative market return 60 days prior	(-)	38.0453	0.014
Market return variance 60 days prior	(+)	-221.4493	0.547
Financial restructuring	(+)	28.0167	0.098
A-list	(-)	2.9977	0.571
R^2	0.1240		
Adjusted R^2	0.0946		
F-value	4.22		
p-value, joint hypothesis	0.0000		
N	309		

^aAll variables are defined in Table A-1. As noted in the table, the number of observations is 309. This is because we only have book-to-market information on 345 out of 441 private placements excl. ESOP purpose. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 34, which reduces the number of observations to 311. Also, 2 additional observations had to be excluded due to lack of fraction placed information.

A-7 Determinants of Discount-Adjusted Abnormal Returns for Private Placements excluding ESOPs

Table A-13
Cross-sectional Regression of Private Placement excl. ESOP Purpose Discount-Adjusted Abnormal Returns

The dependent variable is the private placement excl. ESOP purpose announcement day discount-adjusted abnormal return. The sample includes 441 private placements excl. ESOP purpose between 1986 and 2005.

<i>Panel A: Signalling</i>			
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value
Intercept		-0.1303	0.087
Market value of equity	(-)	0.0001	0.911
Log of issue size	(+)	0.0142	0.439
Financial restructuring	(+)	2.8020	0.000
Solidity/financial strength	(+)	0.0878	0.418
Specific investment	(+)	-0.0727	0.590
Fraction placed	(+)	0.0119	0.000
Book-to-market equity	(-)	-0.0800	0.238
A-list	(-)	0.1263	0.245
<i>R</i> ²	0.3367		
Adjusted <i>R</i> ²	0.3191		
<i>F</i> -value	19.16		
<i>p</i> -value, joint hypothesis	0.0000		
N	311		
<i>Panel B: Timing</i>			
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value
Intercept		0.0506	0.573
Hot market	(-)	-0.0983	0.128
Cumulative stock return 60 days prior	(-)	0.2821	0.000
Cumulative market return 60 days prior	(-)	-0.0590	0.830
Market return variance 60 days prior	(+)	6.6524	0.322
<i>R</i> ²	0.0444		
Adjusted <i>R</i> ²	0.0356		
<i>F</i> -value	5.03		
<i>p</i> -value, joint hypothesis	0.0006		
N	438		
<i>Panel C: Monitoring</i>			
Independent variables ^a	Predicted sign	Coefficient	<i>p</i> -value
Intercept		-0.0367	0.319
Change in ownership concentration (1)	(+)	-0.0080	0.094
Change in ownership concentration (2)	(+)	0.0221	0.000
Change in ownership concentration (3)	(+)	0.0085	0.022
Change in non-controlling owners	(+)	-0.0013	0.609
Family controlled	(+)	-0.0168	0.828
Fraction placed	(+)	0.0114	0.000
<i>R</i> ²	0.2181		
Adjusted <i>R</i> ²	0.2072		
<i>F</i> -value	20.17		
<i>p</i> -value, joint hypothesis	0.0000		
N	441		

^aAll variables are defined in Table A-1. As noted above, in the Signalling model the number of observations is 311. This is because we only have book-to-market information on 345 out of 441 private placements excl. ESOP purpose. In addition, it turns out that these values are highly volatile and hence we decided to exclude all values below the 5 percentile and above the 95 percentile, respectively. The number of observations excluded by this procedure amounts to 34, which reduces the number of observations to 311.

Table A-14
Statistical Considerations for the Cross-Sectional Regression of Rights Offering Discounts

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of rights offering discounts.

Independent variables ^a	Mkt val. eq.	Log of i.size	Frac. pl.	B-to-m	Cum. st. ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Mkt ret. var. 60 d. p.	Fin. rest.	A-list	VIF	1/VIF
Market value of equity	1.0000	0.5575	-0.0620	-0.1185	-0.0345	-0.0277	-0.0102	0.2730	0.3909	1.71	0.59
Log of issue size	0.5575	1.0000	-0.3158	-0.0739	-0.0654	-0.0654	-0.0537	0.0859	0.5811	2.06	0.48
Fraction placed	-0.0620	-0.3158	1.0000	0.4259	0.0753	-0.0768	0.1473	0.1635	-0.2795	1.55	0.64
Book-to-market	-0.1185	-0.0739	0.4259	1.0000	0.0744	-0.0993	0.0998	-0.0934	-0.0374	1.34	0.74
Cum. stock ret. 60 days pr.	-0.0345	-0.0654	0.0753	0.0744	1.0000	0.1803	0.1027	0.0724	-0.0156	1.10	0.91
Cum. market ret. 60 days pr.	-0.0277	-0.0654	-0.0768	-0.0993	0.1803	1.0000	-0.3821	-0.0888	0.2234	1.40	0.72
Market ret. var. 60 days pr.	-0.0102	-0.0537	0.1473	0.0998	0.1027	-0.3821	1.0000	0.1503	-0.0112	1.28	0.78
Financial restructuring	0.2730	0.0859	0.1635	-0.0934	0.0724	-0.0888	0.1503	1.0000	-0.0301	1.19	0.84
A-list	0.3909	0.5811	-0.2795	-0.0374	-0.0156	0.2234	-0.0112	-0.0301	1.0000	1.67	0.60
									Mean:	1.48	0.68

^aAll variables are defined in Table A-1.

White's test for H₀: homoscedasticity against H_a: unrestricted heteroscedasticity

χ^2 : 96.25
 Prob > χ^2 : 0.0002

Table A-15
Statistical Considerations for the Cross-Sectional Regression of Private Placement Discounts

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of private placement discounts.

Independent variables ^a	Mkt val. eq.	Log of i.size	Frac. pl.	B-to-m	Cum. st. ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Mkt ret. var. 60 d. p.	Ind.	Fin. rest.	A-list	VIF	1/VIF
Market value of equity	1.0000	0.2553	-0.1184	0.004	0.1349	0.0909	0.0937	0.1291	-0.0208	0.0982	1.15	0.87
Log of issue size	0.2553	1.0000	0.0955	0.102	0.0927	0.0651	0.0206	0.0284	-0.0234	0.298	1.21	0.83
Fraction placed	-0.1184	0.0955	1.0000	0.084	0.0937	0.0614	-0.126	-0.0185	0.2257	-0.008	1.12	0.89
Book-to-market	0.0039	0.1022	0.0842	1.0000	0.0241	-0.014	-0.0745	0.024	0.0216	0.0437	1.03	0.98
Cum. stock ret. 60 days pr.	0.1349	0.0927	0.0937	0.024	1.0000	0.2928	0.0387	0.0128	0.1753	-0.053	1.18	0.85
Cum. market ret. 60 days pr.	0.0909	0.0651	0.0614	-0.014	0.2928	1.0000	-0.331	-0.023	-0.0089	0.0171	1.28	0.78
Market ret. var. 60 days pr.	0.0937	0.0206	-0.126	-0.075	0.0387	-0.331	1.0000	-0.0529	0.0904	-0.112	1.23	0.82
Individual(s)	0.1291	0.0284	-0.0185	0.024	0.0128	-0.023	-0.0529	1.0000	-0.0497	0.0929	1.03	0.97
Financial restructuring	-0.0208	-0.0234	0.2257	0.022	0.1753	-0.0089	0.0904	-0.0497	1.0000	-0.036	1.10	0.91
A-list	0.0982	0.298	-0.0078	0.044	-0.0531	0.0171	-0.1123	0.0929	-0.0355	1.0000	1.13	0.88

^aAll variables are defined in Table A-1.

White's test for H₀: homoscedasticity against H_a: unrestricted heteroscedasticity

χ^2 : 82.48
Prob > χ^2 : 0.0096

Table A-16

Statistical Considerations for the Cross-Sectional Regression of Private Placement excl. ESOP Purpose Discounts

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of private placement excl. ESOP purpose discounts.

Independent variables ^a	Mkt val. eq.	Log of i.size	Frac. pl.	B-to-m	Cum. st. ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Mkt ret. var. 60 d. p.	Ind.	Fin. rest.	A-list	VIF	1/VIF	
Market value of equity	1.0000	0.2595	-0.1154	-0.0248	0.1357	0.1034	0.1004	0.1461	-0.0201	0.0875	1.18	0.85	
Log of issue size	0.2595	1.0000	0.1309	0.0969	0.1112	0.1004	0.0203	-0.0266	-0.0216	0.2976	1.25	0.80	
Fraction placed	-0.1154	0.1309	1.0000	0.0732	0.0831	0.0476	-0.1067	0.0667	0.2240	0.0055	1.14	0.88	
Book-to-market	-0.0248	0.0969	0.0732	1.0000	-0.0054	-0.0253	-0.0353	0.0364	0.0151	0.0044	1.02	0.98	
Cum. stock ret. 60 days pr.	0.1357	0.1112	0.0831	-0.0054	1.0000	0.2940	0.0306	0.0122	0.1785	-0.0469	1.18	0.85	
Cum. market ret. 60 days pr.	0.1034	0.1004	0.0476	-0.0253	0.2940	1.0000	-0.3356	-0.0176	-0.0110	0.0306	1.29	0.77	
Market ret. var. 60 days pr.	0.1004	0.0203	-0.1067	-0.0353	0.0306	-0.3356	1.0000	-0.1356	0.0969	-0.1126	1.24	0.80	
Individual(s)	0.1461	-0.0266	0.0667	0.0364	0.0122	-0.0176	-0.1356	1.0000	-0.0435	0.0925	1.08	0.925	
Financial restructuring	-0.0201	-0.0216	0.2240	0.0151	0.1785	-0.0110	0.0969	-0.0435	1.0000	-0.0354	1.11	0.90	
A-list	0.0875	0.2976	0.0055	0.0044	-0.0469	0.0306	-0.1126	0.0925	-0.0354	1.0000	1.14	0.88	
											Mean:	1.15	0.86

^aAll variables are defined in Table A-1.

White's test for H₀: homoscedasticity against H_a: unrestricted heteroscedasticity

χ^2 : 72.19
 Prob > χ^2 : 0.0598

Table A-17
Statistical Considerations for the Cross-Sectional Regression of Rights Offering Abnormal Returns

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of rights offering abnormal returns.

<i>Panel A: Signalling</i>												
Independent variables ^a	Mkt value eq.	Log of i.size	Fin. rest.	Sol./fin. str.	Spec. inv.	Fraction placed	Book-to-market	A-list	Discount	VIF	1/VIF	
Market value of equity	1.0000	0.5575	0.2730	-0.0506	-0.0610	-0.0620	-0.1185	0.3909	0.1533	1.74	0.57	
Log of issue size	0.5575	1.0000	0.0859	-0.0494	0.0441	-0.3158	0.5811	-0.0739	-0.0438	2.05	0.49	
Financial restructuring	0.2730	0.0859	1.0000	-0.2252	-0.1085	0.1635	-0.0301	-0.0934	0.0083	1.29	0.78	
Solidity/financial strength	-0.0506	-0.0494	-0.2252	1.0000	-0.2877	0.0019	-0.0687	0.0970	-0.0639	1.21	0.83	
Specific investment	-0.0610	0.0441	-0.1085	-0.2877	1.0000	-0.0059	-0.0052	0.0337	0.0355	1.15	0.87	
Fraction placed	-0.0620	-0.3158	0.1635	0.0019	-0.0059	1.0000	-0.2795	0.4259	0.3224	1.68	0.60	
Book-to-market	-0.1185	0.5811	-0.0301	-0.0687	-0.0052	-0.2795	1.0000	-0.0374	-0.1786	1.32	0.75	
A-list	0.3909	-0.0739	-0.0934	0.0970	0.0337	0.4259	-0.0374	1.0000	0.0459	1.67	0.60	
Discount	0.1533	-0.0438	0.0083	-0.0639	0.0355	0.3224	-0.1786	0.0459	1.0000	1.24	0.81	
										Mean:	1.48	0.68
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity										χ^2 :	44.16	
										Prob > χ^2 :	0.5908	
<i>Panel B: Timing</i>												
Independent variables ^a	Hot market	Cum. stock ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Market ret. var. 60 d. p.	VIF	1/VIF						
Hot market	1.0000	0.0115	-0.3591	0.1952	1.16	0.859						
Cumulative stock return 60 days prior	0.0115	1.0000	0.2108	0.0226	1.07	0.937						
Cumulative market return 60 days prior	-0.3591	0.2108	1.0000	-0.3545	1.35	0.738						
Market return variance 60 days prior	0.1952	0.0226	-0.3545	1.0000	1.16	0.86						
										Mean:	1.19	0.84
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity										χ^2 :	22.00	
										Prob > χ^2 :	0.0553	

^aAll variables are defined in Table A-1.

^aAll variables are defined in Table A-1.

Table A-18

Statistical Considerations for the Cross-Sectional Regression of Private Placement Discount-Adjusted Abnormal Returns

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of private placement discount-adjusted abnormal returns.

<i>Panel A: Signalling</i>												
Independent variables ^a	Mkt value of eq.	Log of i.size	Fin. rest.	Sol./fin. str.	Spec. inv.	Fraction placed	Book-to-market	A-list	VIF	1/VIF		
Market value of equity	1.0000	0.2553	-0.0208	-0.0306	-0.0491	-0.1179	0.0983	0.0044	1.10	0.91		
Log of issue size	0.2553	1.0000	-0.0233	-0.0549	-0.0067	0.0959	0.2982	0.1026	1.21	0.83		
Financial restructuring	-0.0208	-0.0233	1.0000	-0.0317	-0.0232	0.2258	-0.0353	0.0220	1.07	0.94		
Solidity/financial strength	-0.0306	-0.0549	-0.0317	1.0000	-0.0819	0.2450	-0.0041	-0.0137	1.09	0.92		
Specific investment	-0.0491	-0.0067	-0.0232	-0.0819	1.0000	0.0203	0.1058	0.0755	1.03	0.97		
Fraction placed	-0.1179	0.0959	0.2258	0.2450	0.0203	1.0000	-0.0063	0.0875	1.18	0.85		
Book-to-market	0.0983	0.2982	-0.0353	-0.0041	0.1058	-0.0063	1.0000	0.0457	1.02	0.98		
A-list	0.0044	0.1026	0.0220	-0.0137	0.0755	0.0875	0.0457	1.0000	1.12	0.90		
									Mean:	1.10	0.91	
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	303.28		
									Prob > χ^2 :	0.0000		
<i>Panel B: Timing</i>												
Independent variables ^a	Hot market	Cum. stock ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Market ret. var. 60 d. p.						VIF	1/VIF	
Hot market	1.0000	-0.0366	0.1433	0.2861						1.16	0.86	
Cumulative stock return 60 days prior	-0.0366	1.0000	0.2500	-0.0105						1.08	0.93	
Cumulative market return 60 days prior	0.1433	0.2500	1.0000	-0.2430						1.21	0.83	
Market return variance 60 days prior	0.2861	-0.0105	-0.2430	1.0000						1.20	0.83	
									Mean:	1.17	0.86	
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	183.66		
									Prob > χ^2 :	0.0000		
<i>Panel C: Monitoring</i>												
Independent variables ^a	Change own. conc. (1)	Change own. conc. (2)	Change own. conc. (3)	Change non-contr. own.	Fam. contr.	Fraction placed					VIF	1/VIF
Change in ownership conc. (1)	1.0000	0.0162	0.0243	0.0390	-0.0535	0.1529					1.03	0.97
Change in ownership conc. (2)	0.0162	1.0000	-0.0354	-0.1345	0.0223	0.0151					1.03	0.97
Change in ownership conc. (3)	0.0243	-0.0354	1.0000	-0.4341	-0.1799	-0.1430					1.30	0.77
Change of non-controlling owner	0.0390	-0.1345	-0.4341	1.0000	0.1023	0.0878					1.27	0.79
Family controlled	-0.0535	0.0223	-0.1799	0.1023	1.0000	-0.0245					1.04	0.96
Fraction placed	0.1529	0.0151	-0.1430	0.0878	-0.0245	1.0000					1.05	0.95
									Mean:	1.12	0.89	
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	363.37		
									Prob > χ^2 :	0.0000		

^aAll variables are defined in Table A-1.

^aAll variables are defined in Table A-1.

^aAll variables are defined in Table A-1.

Table A-19

Statistical Considerations for the Cross-Sectional Regression of Private Placement excl. ESOP Purpose Discount-Adjusted Abnormal Returns

The table shows the correlation matrix, variance inflation factors (VIF) and the results from the White's general heteroscedasticity test for the independent variables from the cross-sectional regression of private placement excl. ESOP purpose discount-adjusted abnormal returns.

<i>Panel A: Signalling</i>											
Independent variables ^a	Mkt value of eq.	Log of i.size	Fin. rest.	Sol./fin. str.	Spec. inv.	Fraction placed	Book-to-market	A-list	VIF	1/VIF	
Market value of equity	1.0000	0.2595	-0.0200	-0.0274	-0.0482	-0.1148	-0.0243	0.0877	1.10	0.91	
Log of issue size	0.2595	1.0000	-0.0215	-0.0467	0.0116	0.1311	0.0972	0.2977	1.23	0.81	
Financial restructuring	-0.0200	-0.0215	1.0000	-0.0346	-0.0259	0.2241	0.0156	-0.0351	1.07	0.94	
Solidity/financial strength	-0.0274	-0.0467	-0.0346	1.0000	-0.0918	0.2308	-0.0280	0.0057	1.09	0.92	
Specific investment	-0.0482	0.0116	-0.0259	-0.0918	1.0000	0.0022	0.1064	0.1140	1.04	0.96	
Fraction placed	-0.1148	0.1311	0.2241	0.2308	0.0022	1.0000	0.0768	0.0071	1.18	0.84	
Book-to-market	-0.0243	0.0972	0.0156	-0.0280	0.1064	0.0768	1.0000	0.0064	1.03	0.97	
A-list	0.0877	0.2977	-0.0351	0.0057	0.1140	0.0071	0.0064	1.0000	1.12	0.90	
									Mean:	1.11	0.90
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	281.30	
									Prob > χ^2 :	0.0000	
<i>Panel B: Timing</i>											
Independent variables ^a	Hot market	Cum. stock ret. 60 d. p.	Cum. mkt ret. 60 d. p.	Market ret. var. 60 d. p.	VIF	1/VIF					
Hot market	1.0000	-0.0097	0.1350	0.2833	1.15	0.87					
Cumulative stock return 60 days prior	-0.0097	1.0000	0.2498	-0.0154	1.07	0.93					
Cumulative market return 60 days prior	0.1350	0.2498	1.0000	-0.2434	1.20	0.83					
Market return variance 60 days prior	0.2833	-0.0154	-0.2434	1.0000	1.20	0.84					
									Mean:	1.15	0.87
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	173.45	
									Prob > χ^2 :	0.0000	
<i>Panel C: Monitoring</i>											
Independent variables ^a	Change own. conc. (1)	Change own. conc. (2)	Change own. conc. (3)	Change non-contr. own.	Fam. contr.	Fraction placed	VIF	1/VIF			
Change in ownership conc. (1)	1.0000	0.0186	0.0263	0.0498	-0.0586	0.1506	1.03	0.97			
Change in ownership conc. (2)	0.0186	1.0000	-0.0384	-0.1201	0.0274	0.0230	1.03	0.97			
Change in ownership conc. (3)	0.0263	-0.0384	1.0000	-0.3896	-0.1640	-0.1605	1.24	0.80			
Change of non-controlling owner	0.0498	-0.1201	-0.3896	1.0000	0.0847	0.0927	1.21	0.82			
Family controlled	-0.0586	0.0274	-0.1640	0.0847	1.0000	-0.0382	1.04	0.97			
Fraction placed	0.1506	0.0230	-0.1605	0.0927	-0.0382	1.0000	1.06	0.95			
									Mean:	1.10	0.91
White's test for H ₀ : homoscedasticity against H _a : unrestricted heteroscedasticity									χ^2 :	331.59	
									Prob > χ^2 :	0.0000	

^aAll variables are defined in Table A-1.

^aAll variables are defined in Table A-1.

^aAll variables are defined in Table A-1.

A-9 *Excluded Observations***Table A-20****Observations Excluded due to Lack of Any Information Except Name, Year and Type**

The table describes the 380 equity offerings between 1986 and 2005 that we did not have sufficient information about in order to include them in the final sample.

Year	Rights issue	Private placement
1986	0	2
1987	0	6
1988	0	5
1989	1	3
1990	1	1
1991	1	0
1992	0	0
1993	0	2
1994	1	1
1995	0	3
1996	0	1
1997	0	0
1998	0	13
1999	1	14
2000	0	69
2001	1	79
2002	1	60
2003	0	41
2004	0	31
2005	1	41
Total	8	372

Table A-21
Observations Excluded due to No Announcement Date Found

The table describes the 414 equity offerings between 1986 and 2005 that were excluded from the sample because of no announcement date found.

<i>Panel A: Descriptive statistics</i>					
Variable	Mean	Median	Stdev	N	Valid [%]
Issue price [SEK]	109.87	50.00	427.15	362	87.4
Issue size [million SEK]	205.65	18.35	1342.14	403	97.3
Market value of equity [billion SEK]	2.84	0.69	6.68	414	100.0
Largest owner [%]	33.06	27.75	21.06	414	100.0
Acc. share > 5% [%]	51.93	54.65	24.22	414	100.0
Acc. share, 25 largest owners [%]	78.51	83.05	15.57	414	100.0

<i>Panel B: Equity issues per year</i>		
Year	Rights offerings	Private placements
1986	2	16
1987	3	28
1988	2	26
1989	1	23
1990	3	19
1991	4	9
1992	1	5
1993	2	7
1994	2	3
1995	0	0
1996	1	5
1997	0	5
1998	0	18
1999	0	21
2000	3	84
2001	2	41
2002	3	15
2003	2	18
2004	2	20
2005	0	18
Total	33	381

<i>Panel C: Purpose of the issue</i>				
Number of offerings per purpose of the issue	Rights offerings		Private placements	
	N	%	N	%
Merger and acquisition	1	3.0	27	7.1
Solidity/fin. strength	6	18.2	7	1.8
Financial restructuring	1	3.0	4	1.0
Joint venture	0	0.0	0	0.0
Expansion	2	6.1	4	1.0
Specific investment	3	9.1	1	0.3
Incentive/opt. rights	0	0.0	21	5.5
Intent not specified	20	60.6	317	83.2
Total	33	100.0	381	100.0

<i>Panel C: Equity offerings per stock list</i>				
Stock list	Rights offerings		Private placements	
	N	%	N	%
A-list	12	36.4	88	23.1
O-list	15	45.5	246	64.6
OTC-list	6	18.2	47	12.3
Total	33	100.0	381	100.0

<i>Panel D: Private placements per target investor</i>		
Target	N	%
Institution(s)	166	43.6
Individual(s)	88	23.1
Both institutions(s) and individual(s)	8	2.1
Unclear	119	31.2
Total	381	100.0

A-10 Overview of Explanatory Variables

Table A-22
Overview of Explanatory Variables

The table shows the explanatory variables used in the regression models in the paper together with their corresponding variable as defined in Table A-1.

Explanatory variable	Variable in Table A-1
<i>AFGX_60</i>	Cumulative market return 60 days prior
<i>AFGX_STDEV_60</i>	Market return variance 60 days prior
<i>BTM</i>	Book-to-market
<i>CAR_MM_60</i>	Cumulative stock return 60 days prior
<i>CHANGEOWN(1)</i>	Change in ownership concentration (1)
<i>CHANGEOWN(2)</i>	Change in ownership concentration (2)
<i>CHANGEOWN(3)</i>	Change in ownership concentration (3)
<i>DISCOUNT</i>	Discount [%]
<i>FAM_YES</i>	Family controlled
<i>FRACTIONPLACED</i>	Fraction placed [%]
<i>HOTDUMMY</i>	Hot market
<i>INT_RESTR</i>	Financial restructuring
<i>INT_SOL</i>	Solidity/financial strength
<i>INT_SPEC</i>	Specific investment
<i>LIST_A</i>	A-list
<i>LOG_AMOUNT</i>	The logarithm of Issue size [million SEK]
<i>MKTCAP_BN</i>	Market value of equity [billion SEK]
<i>TARG_IND</i>	Individual(s)
<i>ΔNON_CONTROL</i>	Change in non-controlling owners