Private placements
on the Oslo Stock Exchange

An event study on the market reaction to private placements
in the time period from 01.01.2004 to 31.12.2010

Geir Ove Fagerheim and Stefan Schander Slemdal

Supervisors: Thore Johnsen and Tore Leite

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Abstract

This thesis examines the share price reaction to private placements with cash settlements on the Oslo Stock Exchange in the time period from January 1st 2004 to December 31st 2010. A significant negative average abnormal return is observed on the announcement day. This market reaction is primarily explained by dilution to current shareholders from private placement discounts. The sample shows evidence of a significant run-up in the year before the private placement, and a significant negative share price development in the years after the private placement. The results contradict both the monitoring hypothesis and the certification hypothesis, and offers support to alternative hypotheses, such as managerial entrenchment and timing.

1. Preface

1.1 Introduction

The purpose of this thesis is to assess the recent use of private placements in the Norwegian stock market as requested by the Norwegian Corporate Governance Board (NUES). Each year NUES produces and publishes the Norwegian Code of Practice for Corporate Governance with the purpose "to clarify the respective roles of shareholders, board of directors and executive officers beyond the requirements of the legislation." NUES initiated this study for their annual Forum for Corporate Governance after they had observed a recent surge in the use of private placements on the Oslo Stock Exchange (OSE).

This thesis will focus on how the private placements affect shareholders' wealth, both new and existing. Most international studies indicate that the market reacts positively to the announcement of a private placement even though they are often issued at a discount (Eckbo et al., 2007). Eckbo and Norli (2005) showed that this also held for the Norwegian market in the time period from 1984 to 1996. These results are in contrast to the negative announcement returns found for public equity issues (Eckbo et al., 2007).

Two hypotheses for the observed positive market reaction to private placements are prevalent in the literature. Wruck`s monitoring hypothesis (1989) suggests that purchasers of private placements of common stock are active investors that increase the monitoring of management, particularly in firms with low ownership concentrations. Hertzel and Smith`s information hypothesis (1993) claims that a private placement induces value verification by informed investors. They argue that private placement discounts are compensation for information costs, while the observed positive abnormal announcement day returns reflect positive signaling.

To analyze the recent surge in the use of private placements, as observed by NUES, the sample period for this study was set to be from 01.01.2004 to 31.12.2010. After careful examination of the raw sample, the final sample consisted of 222 private placements with cash settlements. Private placements that coincided with press releases judged to significantly impact the company's share price, particularly announcements of acquisitions, contracts and issues of other types of securities were omitted from the sample. It would be advantageous to look at private placements over a longer period with a larger sample size, but the use of private placements prior to 2004 was very limited.

Contrary to previous research on the OSE, a significant negative abnormal share price reaction on the announcement date was observed in the sample period. However, when adjusting the share price reaction for the private placement discount, the share price reaction was only significant at the 10% level. This indicates that the sample private placements did not significantly change the market`s perception of the firm.

The long-run event study analysis showed evidence of both a highly significant positive drift the year before the private placement announcement and a highly significant negative drift the years after. The effect was most pronounced in the months prior to and after the event date. The average firm in the sample had a cumulative abnormal return of +28.6% in the year before the private placement, and a cumulative abnormal return of -16.1% in the two years after the private placement. These results are similar to those found by Barclay et al. (2007), who proposed managerial entrenchment as a possible explanation for this phenomenon. They argue that managers can use private placements to further their own interests at the expense of the shareholders. Shares are placed in the hands of friendly investors, to discourage takeover bids.

An alternative explanation for the run-up before the private placement, and the subsequent drop after the issue, could be timing by managers. The sample results indicate that managers conduct private placements when they view the firm as overvalued. If this is the case, the firms conducting a private placement is skewed towards firms with a value above their intrinsic value – explaining both the observed pre-issue and post-issue share price development.

Molin's (1996) research on the Swedish stock market showed that "examining private placements in a slightly different market environment may provide useful insights into the mechanisms at work". Institutional differences between the various stock markets may help explaining why the literature is so divided when it comes to private placements.

In the sense that they are not targeted towards specific investors, the sample private placements resemble public placements. This could explain why the observed share price reaction is more similar to the reactions observed for studies of public placements than to those of most other private placements studies. The choice to conduct a private placement instead of a rights issue seems to be dominated by costs and a perceived need to issue stock quickly, more so than the desire to acquire valuable investors.

The paper is organized as follows. Section 1.2 provides an introduction to private placements and describes how they are typically carried out on the OSE, while section 1.3 delves into the history of the OSE to investigate how the ownership concentration and the mix of firms and investors have changed during the sample period. Section 2 overviews the existing research and theories on private placements. Section 3 and 4 describes the sample data and the event study methodology, respectively. The results from both the short-run and the long-run event study are reported in section 5, while section 6 contains the analysis of the results. Section 7 includes conclusions and a discussion of the limitations of this thesis.

1.2   Private placements

The following section describes private placements and how they differ from other types of equity issues, before going into detail about the history of equity issues on the Oslo Stock Exchange (OSE) and how a typical private placement is carried out. This includes the recent development of the use of board authorizations to issue equity.

Seasoned Equity Offerings

After the initial public offering (IPO) the company has a variety of options to raise new equity capital. An offering subsequent to the IPO is often called a follow-on offering, secondary equity offering, or seasoned equity offering (SEO). In these offerings, the company issues new shares and offers them to investors. The argument to raise new capital could be to do structural changes such as acquisitions or mergers, to be able to fund capital expenditures and investments, to provide strategic flexibility, or to improve the financial situation. In extreme cases, the SEO is conducted to avoid facing bankruptcy. The three most applied issues are direct issues, rights issues and private placements. The difference between the various types of equity issues is to whom they are directed.
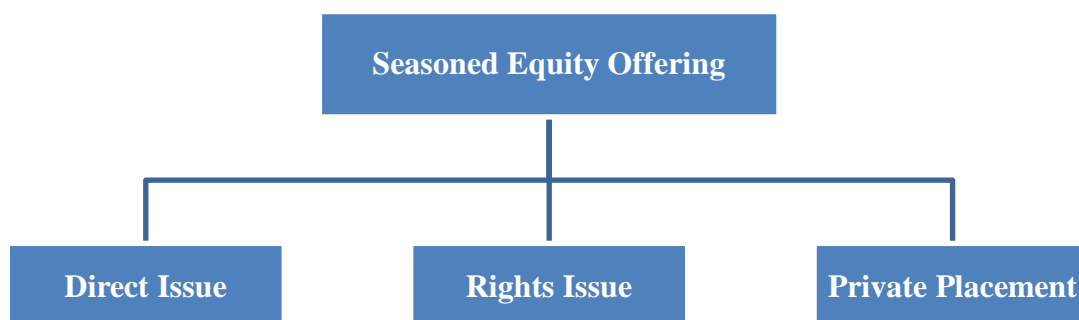
First, direct issues are directed towards all investors, both existing and potentially new investors. It resembles an IPO in the sense that it is accessible to everyone. This is also why it is often called a public issue.

Second, rights issues are directed towards existing shareholders. The existing shareholders have the right to buy a specified number of shares at a specified price within a specified period of time. The number of shares allocated to each shareholder depends on the number of shares owned prior to the rights issue. Outside investors are not invited to participate.

Third, private placements are directed towards a predefined group of investors. The group of investors may consist of a subgroup of existing investors, potentially new investors or both. Only some of the existing investors are invited to participate in the private placement.

Dilution

New shares in an equity issue are typically issued at a discount to the prevailing market price, thus diluting the investment of existing shareholders. In addition, the total number of shares increases – resulting in ownership dilution. The existing shareholders will own a smaller part of a larger company.

To make the issue of new capital attractive to investors, the equity issue must be backed by earnings growth. More specifically, the reinvested proceeds must offer a return on equity equal to or higher than the return on the existing business. If this is not the case, the value of existing shareholders' investment will be diluted.

However, since the proceeds from the equity issue is usually a part of the firm's long-term strategy, the current earnings per share will be diluted as a result of the increase in shares outstanding. To investors with a short investment horizon, this may be viewed as unfavorable.

The various types of equity issues affect existing shareholders differently. In a rights issue the allocation of new shares are decided on a pro rata basis. Thus, if all the existing investors participate in the equity issue, none will find their investment diluted. This is the only scenario where none of the existing shareholders will see their investment or ownership diluted. The new share price will reflect both the share price of the old shares and the issue price of the new discounted shares. Subscription rights in a rights issue are transferable to reduce dilution to existing investors who do not want to participate in the offering.

In the case of a private placement, a subgroup of investors may be invited to invest in the company. In any case there will be some existing shareholders that will find their investment diluted. To reduce this dilution effect, a private placement is sometimes followed by a "repair issue". A repair issue is an additional private placement, most often given on equal terms to the original private placement, where existing shareholders who were not invited to participate in the original private placement are allowed to participate.

A rich history of issuing equity on the Oslo Stock Exchange

The importance of private placements on the Oslo Stock Exchange (OSE) has been significant over a long period of time. Between 1997 and 2010 the number of private placements on the OSE totaled 1269, according to the Oslo Stock Exchange (2011). This number is higher than the actual number, however, due to errors in the reporting from the OSE.

The majority of the private placements have been carried out within the last seven years, between 2004 and 2010. The number of rights issues between 1997 and 2010 has been far less than the observed number of private placements, totaling 257 over the period. In addition, the number of direct issues has been negligible over the period, contrary to what is observed on American stock exchanges. Figure 1 compares the number of private placements to the number of right issues between 1997 and 2010. Deposits to derivatives, equity certificates and placements with an insignificant value have been excluded.

Private placements and rights issues on the OSE between 1997 and 2010
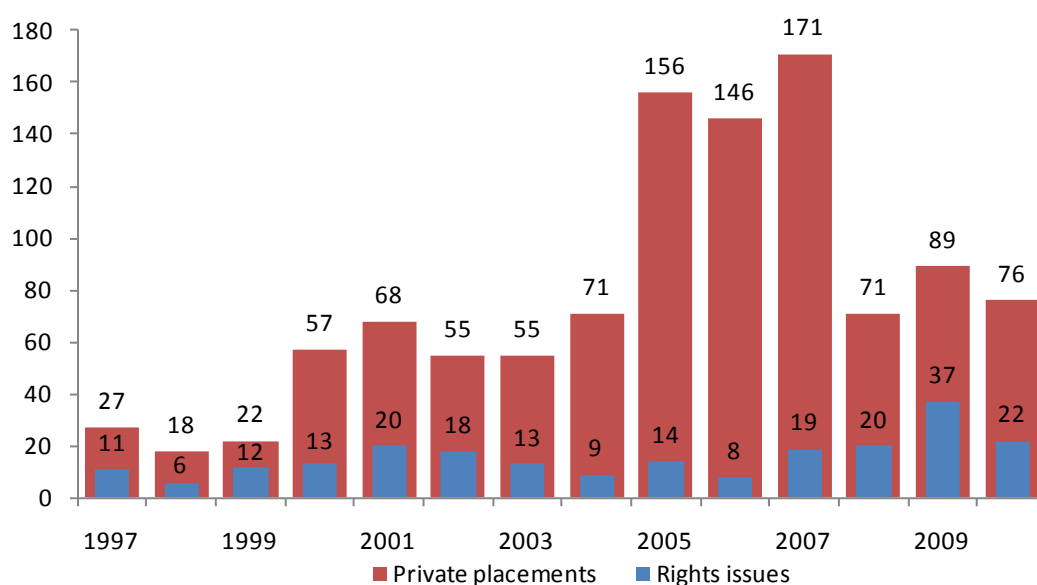
Figure 1

Over the period from 1997 to 2010 the share of private placements of the seasoned equity offerings at the OSE bottomed at 64.7% in 1999, while during the private placement surge from 2005 to 2007, the private placement share peaked at 94.8% in 2006. Overall, the share of private placements has increased in the latter part of the depicted period.

Generally, rights issues are larger than private placements. The observed average size of private placements in the sample shown in Figure 1 is NOK 157mill, while the corresponding number for rights issues is NOK 525mill. Hence, the private placements average size is 30% of the size of rights issues. The relative size between the two different equity issues on the OSE is somewhat higher than what is found on other stock exchanges.

In total, NOK 288bn has been issued throughout 1997-2010, with NOK 171bn being raised through private placements and NOK 117bn through rights issues, respectively. Between 2004 and 2010, NOK 208bn has been raised, with NOK 134bn in private placements and NOK 74bn through rights issues.

How private placements are carried out at the OSE

Choosing a private placement allows for an easier process when issuing equity compared to a rights issue, due to a more straightforward book-building process and a smaller chance of information leakage. This reduces both the direct costs and the time needed to conduct an equity issue.

A private placement on the OSE is typically carried out during the course of a single day, pursuant to an existing board authorization to increase the share capital by issuing new shares granted by the previous general meeting. If the board does not have an existing authorization or if the issued share capital exceeds the authorization, the private placement is completed conditional on the approval by an extraordinary general meeting.

A general board authorization increases the flexibility of the firm's management, particularly with regards to investments and acquisitions, since a general meeting is not necessary to approve the issue. Sometimes the authorization could also be used to defend against a hostile takeover or to control the ownership composition.

The decision to grant the board of directors a mandate to increase a company's share capital must be approved by two thirds of the shares represented at the general meeting and the authorization must be registered in the Register of Business Enterprises before it can be

applied. By law, the mandate must specify an upper ceiling on the authorization to increase the share capital, how long the authorization will be valid for, if the current shareholder's preferential rights can be set aside, if the consideration for the shares must be cash and if the authorization can be used in a merger and/or acquisition. The board authorization is limited to 50 percent of the company's current share capital and cannot be granted for more than two years.

The Norwegian Code of Practice for Corporate Governance

The Norwegian Code of Practice for Corporate Governance is issued by the Norwegian Corporate Governance Board (NUES). Companies listed at Oslo Stock Exchange are subject to comply with the code or explain deviations from it. The current version of the Norwegian Code of Practice restricts the use of board authorizations to issue new equity in the following way:

> Mandates granted to the board of directors to increase the company's share capital should be restricted to defined purposes. If the general meeting is to consider mandates to the board of directors for the issue of shares for different purposes, each mandate should be considered separately by the meeting. Mandates granted to the board should be limited in time to no later than the date of the next annual general meeting. (NUES, 2011)

Development of board authorizations 2004-2010

Between 2004 and 2010 the Board of Directors of firms listed on the OSE firms were granted an authorization to issue new shares at 59% of the ordinary general meetings. This is equivalent to 692 instances out of 1170 general meetings in the period.

Development of board authorizations
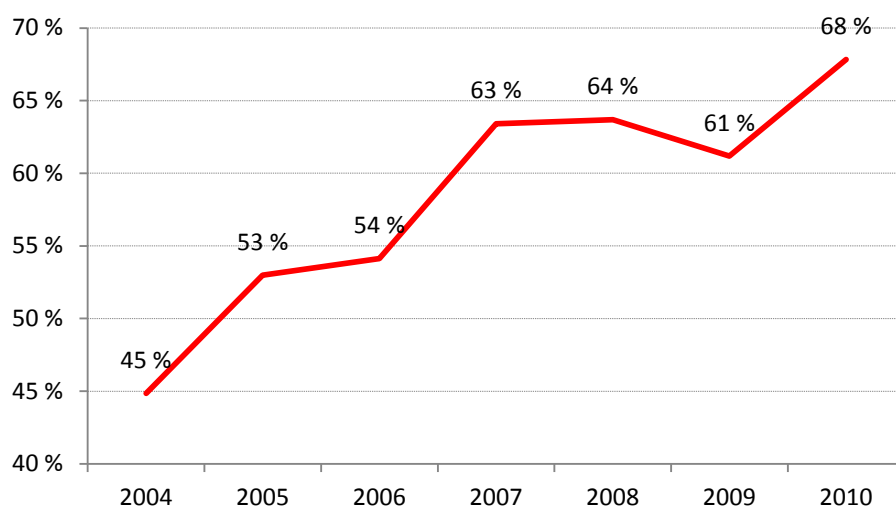
Figure 2

Figure 2 illustrates how the share of firms with this type of board authorization has been steadily increasing from 45% in 2004 to 68% in 2010, with a single drop in 2009. The development shows that most firms that start granting the Board of Directors with the authorization to issue additional equity continue to do this in following years. The upper ceiling on the size of the board authorizations is usually set at 10% of the current share capital; however, some boards request a significantly higher ceiling at the general meeting.

1.3 Background Oslo Stock Exchange

The following section is a review of the Oslo Stock Exchange (OSE). The section gives a brief introduction to the composition of the listed firms, including an overview of the industry segmentation and the size distribution. Then a description of the ownership concentration is provided. In the end this section elaborates on the holdings by different types of investors. These are key areas to interpret the results from the obtained data. The relative importance of the mechanisms at work with regards to private placements changes as the market changes.

Composition of listed firms on the Oslo Stock Exchange

The OSE is a unique stock exchange worldwide, due to the wide range of listed firms in historically strong Norwegian sectors such as oil, oil-service, shipping and seafood. The number of listed firms at the end of 2010 was 206, while the number has varied between 189 and 242 in the period between 2004 and 2010. By the end of 2010, the OSE was the second largest stock exchange in the world with respect to the oil-service sector, while it is the world's largest with respect to the shipping sector and the seafood sector. All measured by the number of listed firms. Other significant sectors present on the OSE are the manufacturing industry sector, the finance sector and the telecom sector. Each of these three sectors comprises roughly 10% of the market capitalization on the OSE.

Many of the strong Norwegian sectors rely heavily on the development of the price of oil. This makes the OSE heavily reliant on one explanatory variable. The lack of diversification makes the OSE more volatile than most other stock exchanges. In addition, the OSE is more capital intensive than comparable stock exchanges.

Ownership concentration

Comparing the findings of Franks et al. (1993) and Døskeland and Mjøs (2008), the difference in the ownership stake of the single largest shareholder between the London Stock

Exchange and the OSE is significant. While more than 50 percent of the listed firms on the OSE in 2007 had a single owner holding more than 25% of the outstanding shares, the corresponding number for the London Stock Exchange in 1993 was 12.9%. Conversely, 15.5% of the listed firms on the London Stock Exchange had the single largest shareholder holding less than 5% of the outstanding shares. On the OSE, the corresponding number was 0.5%. In other words, only one firm on the OSE had the largest shareholder holding less than 5%.

Ownership share of largest shareholder in listed firms

	London, 1993	Oslo, 2007
< 5%	15.5%	0.5%
5 - 15%	58.1%	29.2%
15 - 25%	13.5%	20.0%
25 - 50%	11.6%	33.5%
> 50%	1.3%	16.8%

Table 1

The differences noted above are found in comparison to other countries as well. While the observed ownership concentration on the London Stock Exchange resembles stock markets in the US, the concentration on the OSE resembles German and French stock markets. In Germany and France the single largest shareholder owns more than 25% of the outstanding shares in 80% and 85% of the listed firms, respectively, as shown by Franks and Mayer (1997).

Investors

The monitoring of a firm occurs in different forms and from different sources. The board of directors, auditors, banks, equity researchers, credit rating agencies and large shareholders are all potential monitors. These will actively monitor in order to strengthen the firm with respect to returns, growth and risk. This should positively affect the value of the firm. Nevertheless, the participants often have different incentives for monitoring. Banks have strong incentives to decrease risk and will seldom support risky projects. Shareholders, conversely, have incentives to accept risk in order to create value. However, not all shareholders are actively monitoring the management.

Active shareholders participate in the day-to-day operations of the firm to support long-term value creation in investee firms. The use of resources to monitor and influence managers only makes sense if the holdings are large enough to justify the effort. As a result, active investors have larger holdings, limiting their ability to quickly sell their shares at any time.

In addition, active investors invest in a limited number of firms since they commit much of their time to monitor their investments.

Conversely, passive investors play no particular role in firm affairs and they usually have a shorter investment horizon. Most international institutional investors and mutual funds are the prototype of a passive investor, since they have neither the time nor resources to influence the day-to-day operations of the firm. The international institutional investors primarily view their investments on the OSE as portfolio investments, intended to provide international diversification. The relatively short investment horizon of passive investors may not always be in the best interest of the firm's long-term development.

Døskeland and Mjøs (2008) find that the share of the OSE held by active shareholders has dropped from 45% in the mid 1990's to 25% in 2007. Over this period, the interest from international institutional investors has increased, while individuals have reduced their share of directly owned Norwegian stocks in favor of mutual funds and internationally diversified portfolios. Foreign investors have increased their share from 28% at the start of 2004 to 35% at the end of 2010, and are now hold the largest ownership share of any group on the OSE.

2. Theory

2.1 Capital structure and the choice of issuing equity

Assuming perfect capital markets and an unchanged investment policy, the Modigliani-Miller irrelevance proposition (Brealey and Myers, 2003) states that the choice of equity level does not impact shareholder wealth. In the Modigliani-Miller world, corporate leverage does not affect the total value of the firm, since investors can undo corporate leverage changes as long as they can borrow at the same rate as the firm.

In the real world, however, taxes and bankruptcy costs introduce market imperfections. Because debt interest payments provide a tax shield, borrowing more can sometimes increase firm value. Bankruptcy costs, on the other hand, decrease the potential value creation when issuing debt. Since creditors factor in a potential bankruptcy when the company issues debt, the costs are ultimately borne by shareholders through a higher interest rate. Trade-off theory suggests that a company decides the amount of debt financing by balancing tax savings and bankruptcy costs.

Pecking order theory (Myers and Majluf, 1984) addresses additional considerations when a firm decides between debt and equity financing. Information asymmetry and agency costs lead to a ranking of additional financing. Primarily, internal financing is preferred to debt financing. Equity follows as a matter of last resort if the first two options are not available. According to the pecking order theory, the market response to an equity issue should therefore be negative, due to the signal it sends to investors.

2.2 Private Placement Theories

Numerous articles have attempted to explain the announcement effect of equity issues in different markets. Several of these contribute to the literature regarding private placements. Molin (1996) suggests that mechanisms that directly or indirectly translate into share price movements can be divided into three distinct effects: Agency-costs effects, information effects and price-pressure effects. Private placements of stock have historically been interpreted to be beneficial to existing shareholders. Most of the research on the topic regarding private placements has been favoring the monitoring and certification hypotheses. We will proceed to elaborate on the empirical implications of the major hypotheses in the following section.

Agency-costs effects

Monitoring hypothesis

Wruck (1989) suggests that purchasers of private placements of common stock are active investors that will monitor management closely. These investors will ensure that management maximizes value through better allocation of resources. The effect is most notable in firms with low ownership concentrations. This is consistent with Jensen and Meckling (1976), who find a positive reaction to private placements directed towards outside investors. They believe this share price reaction occurs due to investors' belief that management will be monitored more closely. Moreover, Morck, Shleifer and Vishny (1988) add that if a purchaser of stock in the private placement has a substantial stake in the firm prior to the private placement, the share price reaction to the private placement will then include a reaction to the ownership increase by a potential acquirer of the firm. They conclude that the increased probability of a takeover bid induces a positive share price reaction. This is consistent with Wruck's findings, as she finds that the abnormal returns from private placements are positively related to ownership changes when ownership concentration is high or low. However, she finds a negative reaction in the middle range of ownership concentration.

Managerial entrenchment hypothesis

The managerial-entrenchment hypothesis is an alternative hypothesis to the monitoring hypothesis. Weisbach (1988) says that managerial entrenchment occurs when managers gain so much power that they are able to use the firm to further their own interests rather than the interests of shareholders. Both Dann and DeAngelo (1988) and Wruck (1989) take some time to elaborate on this hypothesis. Dann and DeAngelo find that private placements are an efficient mechanism to reduce the potential threat from takeovers, while Wruck finds that the market reacts negatively to a private placement that leads a shareholder to a controlling position of the firm. Barclay et al. (2007) argue that management uses private placements to place stock in the hands of friendly investors. Thus, private placements dissuade bids from acquiring firms, decreasing the chance of a take-over. In most cases, this does not benefit the shareholders.

Convergence-of-interest hypothesis

Jensen and Meckling (1976) present a convergence-of-interest hypothesis. They believe that private placements in which management or other insiders increase their percentage ownership share will result in a positive share price reaction, while a private placement that

reduces their ownership share will result in a negative share price reaction. The convergence-of-interests hypothesis expects that these share price reactions reflect the improving and the worsening alignment between shareholders and management.

Redistribution of wealth

Furthermore, Galai and Masulis (1976) note that a private placement restructures the firm's financing. This will implicitly induce a redistribution of wealth between shareholders and debt holders. As the loan term agreements to the debt are fixed, the decreased risk in the firm will increase the value of the debt, thus reducing the wealth of the shareholders. According to this, they expect a negative share price reaction to follow an announcement of a private placement.

Price-pressure effects

The price-pressure hypothesis states that the demand for a stock is a downward sloping curve. This contradicts financial theory, which implies a perfectly elastic demand curve. Scholes (1972) argues that the demand curve should be downward sloping, as he finds that each share is unique and the market does not provide a perfect substitute. A private placement increases the supply of a share, decreasing the equilibrium price.

Asquith and Mullins (1986) find that larger equity issues show a greater negative excess return on the day of announcement than smaller equity issues. This supports the hypothesis as the demand curve will make a larger shift in larger equity issues. However, Baghat and Frost (1986) and Masulis and Korwar (1986) do not find this relationship between the size of the equity issue and the announcement effect. Thus, the price-pressure hypothesis lacks consistent empirical support.

Information effects

Leland and Pyle (1977) reason that private placements where members of management increase their ownership fraction should induce a positive share price reaction. They argue that these issues signal asymmetric information between insiders and outside investors regarding future cash flows. They argue that management has extensive knowledge of the future, and thus they know when it is wise to increase their stakes in the firm. Later, Myers and Majluf (1984) tried to capture this asymmetric information in a model. They argued that the firm would issue public equity at a time when the firm is overvalued. Thus, new

investors would pay an excessively high price to the value they receive in return, while the wealth of existing investors is maximized.

Hertzel and Smith (1993) further extended the model by Myers and Majluf to capture information effects. They argued that value certification by informed investors buying shares in a private placement should increase the share price. They found results consistent with both Leland and Pyle, and Myers and Majluf.

Hertzel and Smith argue that the associated discount in private placements reflects the information costs borne by existing investors, while the abnormal share price return reflects the positive signal regarding firm value from management. However, the research was weighted towards growth firms on the NASDAQ stock exchange. Thus, the information regarding the firm's value is excessively high compared to studies that focused on large and mature firms.

Ross (1977) argues that the capital structure decision itself reveals information. He believes management will protect their positions by minimizing the risk of bankruptcy, and decreasing the financial leverage by issuing equity in a private placement conveys negative information with respect to future cash flows. Masulis (1983) expects the management to maximize the existing shareholders wealth in its decision-making. Given that information asymmetries exist between management and investors, the market will react negatively to a leverage-decreasing private placement of shares. In his model, he finds that an increase in leverage is positively related to changes in the share price, as investors expect a decrease in future earnings. Healy and Palepu (1990) suggest, on the other hand, that there is no subsequent drop in earnings after an equity issue relative to prior years' earnings or to the firms' industry earnings. In addition, they do not discover any drop in earnings forecasts by equity analysts subsequent to the equity issue. However, they find that asset betas and equity betas increase as leverage falls. This suggests increased earnings volatility subsequent to equity issues.

Miller and Rock (1985) illustrate a third information effect. They look at equity issues as a compensation for a shortfall of internal cash flows. The signaling effect of the equity issue is related to a negative impact on firm value, as the drop in expected future cash flows exceed the value in making extra investments.

3. Data

3.1 Determining the private placements sample

The raw list of 937 unique private equity issues in the Norwegian stock market in the period 2004-2010 was obtained from Oslo Stock Exchange's webpage. The entries were then matched with information from the press releases in the Newsweb database in order to decide whether or not the private equity issues qualified as relevant private placements with cash settlements. Private placements that coincided with press releases judged to significantly impact the company's share price, particularly announcements of acquisitions, contracts and issues of other types of securities were omitted from the sample. This resulted in 222 clean private placements with cash settlements. Table 2 shows the general classification of the 937 unique private equity issues. The classification explains the rationale to exclude the observation from the final sample.

Classification of the unique equity issues entries between 2004 and 2010

Type	Entries
Final sample of private placements	**222**
Share issue of acquisitions, earn-outs and contracts	240
Employee options	247
Warrants and rights issues	55
Coincides with financial restructuring, bond issues etc.	43
Coincides with significant announcements in the event window	30
Different type of equity issue (IPO, stock split, offering)	18
Insignificant value, Information uncertainty	79
No accurate stock price history	3
Total	**937**

Table 2

For the final sample of 222 private placements, qualitative and quantitative data was gathered. The Newsweb database provided the announcement date, issue price and shares issued, together with the firms' stated reasons for issuing directed equity, and the type of investors they targeted. If the announcement was made after the stock market closed, the following trading day was selected as the announcement date as the next day would contain the reaction to the private placement announcement.

3.2 Sample description

Sample statistics

The average size of the private placements in the sample was NOK 245 Million with a median of NOK 117 Million. On average, the relative issue size was 14.5% with a median of 9.6%. Table 3 summarizes the statistics of the sample.

Size statistics

	Average	Median
Issue size, gross proceeds (MNOK)	245	117
Firm size, pre-issue (MNOK)	3052	1035
Relative issue size (%)	14.5 %	9.6 %

Table 3

This data suggests that it is common to issue ~10% of the company's shares outstanding on the Oslo Stock Exchange.

Industry overview

The mix of firms with private placements in the sample does not perfectly reflect the market capitalization the Oslo Stock Exchange. Table 4 and Figure 3 report the private placements sample divided by the firm's Global Industry Classification Standard (GICS) at the time of the equity issue. The number of private placements and the resulting share of the sample are then compared to each industry's market capitalization share of the OSE over the sample period (Kvaal and Ødegaard, 2011).

The sample divided by the Global Industry Classification Standard

Sector	Market cap of private placements	Market cap of OSE 2000-2010
10 Energy	67.9%	39.8 %
15 Materials	1.8%	2.6 %
20 Industrials	9.1%	13.3 %
25 Consumer Discretionary	2.6%	5.9 %
30 Consumer Staples	6.8%	6.4 %
35 Health Care	1.3%	3.9 %
40 Financials	3.8%	12.0 %
45 Information Technology	6.8%	5.8 %
50 Telecommunication services	0.0%	9.3 %
55 Utilities	0.0%	1.0 %

Table 4

Industry share of private placements on the Oslo Stock Exchange (by total issue size)
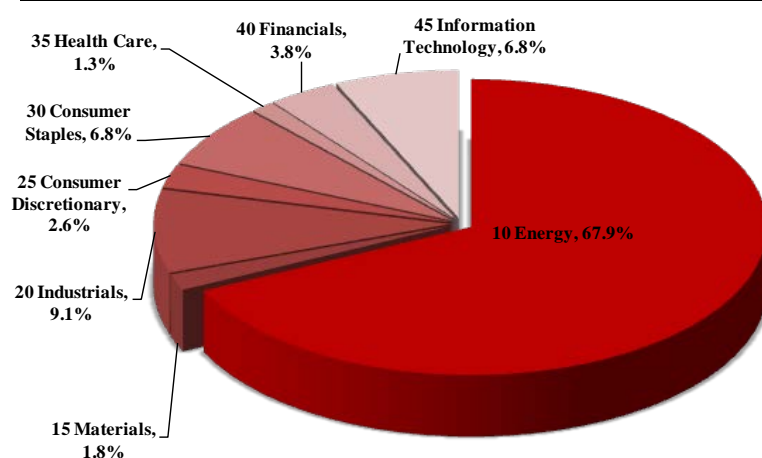
Figure 3

The figure above shows that the energy industry constitutes the majority of the sample private placements, measured by total issue size (67.9%). The average market capitalization of the energy industry relative to the OSE during the last decade was 39.8%. In addition, since Statoil ASA makes up more than half of the energy industry on the OSE, and has not issued equity in the period, it is clear that small energy firms are overrepresented in the sample.

The energy industry`s annual share of the sample (by issue size)

Year	Energy industry
2004	21.3%
2005	38.6%
2006	76.3%
2007	59.5%
2008	75.5%
2009	64.4%
2010	82.5%

Table 5

Table 5 shows how the energy industry dominates the sample towards the end of the period. Lead by a surging oil service sector, the industry has grown through both equity issues and organic growth. In 2010, the energy sector constituted 82.5% of the sample, based on issue size, the highest share observed in the period.

Although the information technology (IT) industry represents only 5.8% of the OSE during the sample period, IT firms conducted 49 out of the 222 private placements in the sample. This sector probably consists of a higher fraction of growth companies, with a relatively higher perceived need for capital. Still, based on total issue size, the IT industry constitutes only 6.8% of the sample.

Annual overview

The sample divided by issue year, as depicted by Table 6, indicates a higher level of activity in periods where the stock market is performing well.

Annual number of private placements with cash settlements

Year	Private placements
2004	22
2005	41
2006	55
2007	38
2008	18
2009	25
2010	23

Table 6

The economic upturn up until the financial crisis resulted in a record high number of private placements with cash settlements. The maximum was reached in 2006, with 55 observations. The financial crisis made it more difficult to issue equity from 2008 and onward. The sample contains only 18 private placements from 2008 and all of them were conducted before the fall of Lehman Brothers.

Figure 4 depicts the sample private placements with respect to the historical development of the Oslo Stock Exchange Benchmark Index (OSEBX). Each red dot represents the announcement of a private placement. The figure reflects how the market for equity issues dried up after the 2008 financial crisis.

Private placements with cash settlements on the OSE
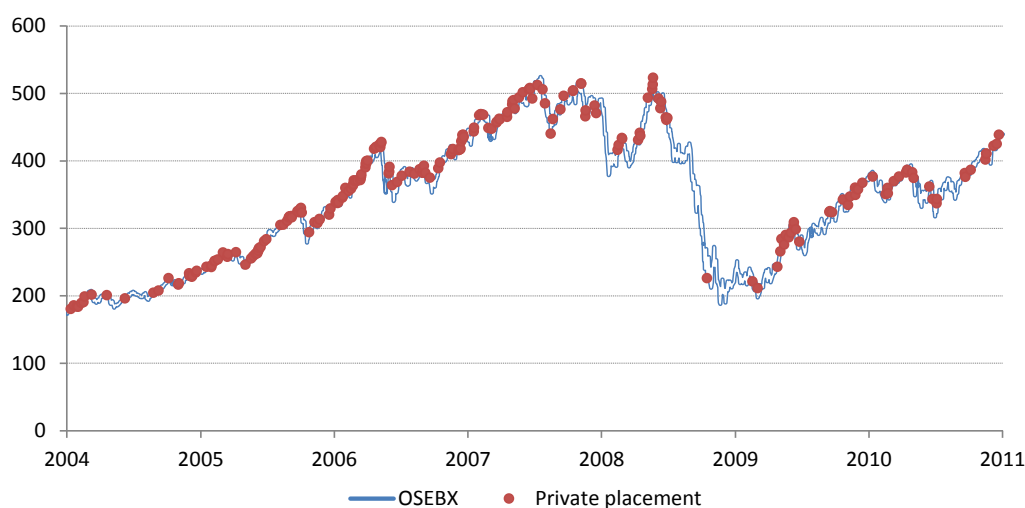
Figure 4

The high frequency of private placements pre-crisis and low frequency post-crisis should not come as a surprise; it is both easier and more advantageous to issue equity when the market is booming. The period shortly after a crisis is often characterized by fear and uncertainty. This limits the number of firms that wants to issue equity, as existing shareholders are likely to find the firm undervalued.

Company age

Table 7 indicates that newly listed firms performed a significant number of the private placements in the sample, although somewhat mature firms – in their 5th year since listing or older – represent half of the sample. Newly listed firms often need capital to finance their growth prospects. In addition, there is conducted a fairly large number of private placements by firms in their first year since listing. This might be the result of fewer firms combining

the initial listing with an initial public offering. Instead, newly listed firms choose to conduct a private placement subsequent to the listing.

Sample by age

Years since listing	Private placements
1st year	39
2nd year	30
3rd year	25
4th year	17
5th year or older	111

Table 7

Stated purpose for the private placement

The justifications for the private placements stated in the announcement press releases differed in their specificity among the firms in the sample. Some firms are very specific when explaining why they intend to issue more equity (and a few times even states why the preferential rights for existing shareholders are set aside), while other firms are very vague in their explanation for the intended use of the proceeds. Based on the wording in the private placement press release, the sample was divided into five categories, as shown in Table 8.

Sample by stated purpose

Stated purpose	Observations	Typical wording
Growth	114	"The purpose of the placement is to strengthen the equity of the company in a growth phase and to take advantage of emerging strategic opportunities."
Acquisitions	35	"The purpose of the private placement is to finance the previously announced acquisition of the shares in company X."
Financial	21	"The purpose of the private placement is to strengthen the company's balance sheet."
Working Capital	13	The net proceeds of the private placement will be used to fund operational initiatives and increased working capital requirements.
Other (or no explanation)	39	"The proceeds from the private placement are for general corporate purposes."

Table 8

"Growth" and "Working Capital" include actions meant to increase the organic growth of the firm, while "Acquisitions" covers acquisitive growth. When the purpose is "Financial" it is often related to repayment of debt. "Other" covers the private placements where the stated purpose is vague, ambiguous or non-existing.

Repair issues

For the private placements followed by a repair issue, the announcement date and the relative size of the repair issue to the private placement was obtained. On average, 14% of the private placements were followed by a repair issue, as shown in Table 9. The relatively

low fraction of private placements followed by a repair issue supports the view that private placements might be disadvantageous to the existing shareholders who do not participate in the private placement.

General statistics for repair issues

	Statistics
Private placements	222
Repair issues	31
Repair issues relative to private placements	14%
Average intended gross proceed per repair issue (MNOK)	71.7 (48.3)
Average actual gross proceeds after subscriptions (MNOK)	40.2 (18)
Average intended size of repair issue relative to private placement	27.9% (20.0 %)
Average actual size of repair issue relative to private placement	18.4% (6.2%)

Table 9

The average intended size of the repair issue relative to the private placement was 27.9% with a median of 20.0%, however, the actual relative issue size turned out to be 18.4% on average with a median of 6.2%. The reason the actual issue size of some repair issues is lower than intended comes from the possibility that the share price might be lower than the issue price when the subscription period ends. A rational investor will then buy shares in the market, instead of subscribing at a higher price in a subsequent offering.

Number of issues per firm

The 222 observations in the sample consist of 98 unique companies, as shown in Table 10. About half of these companies appear one time in the sample, while the rest of the companies have issued shares in several private placements during the sample period.

Recurring firms

	Firms
1 issue	46
2 issues	24
3 issues	8
4 issues	6
5 issues	9
6 issues	2
7 issues	1
8 issues	2
Unique firms in sample	98

Table 10

Sevan Marine AS and PA Resources AB both completed eight private placements, almost exclusively prior to the financial crisis. Global Geo Services AS (7), Norse Energy Corp. AS (6) and TTS Group AS (6) are also examples of so-called "serial offenders" during this boom period.

4. Method

4.1 Event Study

An event study is conducted in order to analyze the share price reaction with respect to the announcement of a private placement. The vast amount of data material in the financial market makes an event study highly suitable to capture effects from newly acquired information such as announcements. MacKinley (1997) argues that the usefulness of such a study comes from the fact that, given rationality in the marketplace, the effects of an event will be reflected immediately in security prices. MacKinley further states that event study data can be divided into three distinct subgroups, depending on when the data was obtained relative to the specific event. He calls this the estimation window, the event window and the post-event window, depicted on a timeline below.
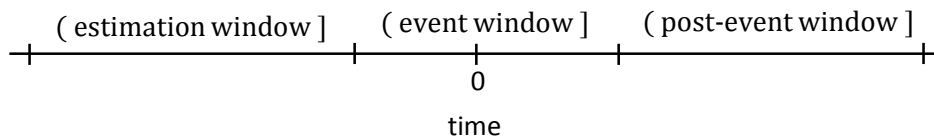
This design illustrates that the data used in the estimation of parameters to the models relevant for the event study should not overlap with data from the event window itself. With this in mind, the parameters will not have been influenced by the share price reactions close to the event. Thus, the design removes the possibility of having the abnormal returns observed around the announcement included in the estimated parameters themselves. This will increase the reliability of the observed effect in the event window.

The length of the different windows is a highly debated topic. The estimation window must be applicable and current, thus some argue for a short estimation window of less than one year. Others argue for a longer estimation window of up to five years. The main argument behind this view is that the data must contain both longer positive and negative periods for the shares. The event window should be long enough to capture the significant effect of the event, but short enough to exclude confounding effects, according to McWilliams and Siegel (1997). In addition, Brown and Wagner (1985) show that a long event window severely reduces the power of the test statistic. They further prove that this reduction leads to false inferences about the significance of the event. The post-event window is sometimes included as part of the estimation window to find the most applicable parameters. This is done when

there are doubts regarding the reliability of the parameters found in the estimation window alone.

Since this thesis includes both a short-run and a long-run event study, it is appropriate to choose different sets of timelines for each study. The choice of length of the different windows and the reasoning behind the choices are discussed in the two sections below.

Short-run windows

The short-run event window is set from 10 days prior to the event to 10 days after the event (-10,10). This defines the event day as day 0. Within this window, the focus will be on the announcement day (t=0) return of the issuing firm, and whether there is evidence of any positive or negative drifts before or after the private placement announcement.

The short-run estimation window is set from 260 trading days prior to the event to 11 trading days prior to the event (-260,-11). This approximately corresponds to a calendar year. The relatively long estimation window is chosen to ensure that the parameters of the model are relevant, and that the results have high statistical power. The estimation window is closed 11 days prior to the private placement to make sure potential information leakages to the market do not reduce the quality of the estimated parameters.

Long-run windows

In the long-run study, the event window is set from 250 days prior to the event to 750 days after the event (-250,750). This makes it possible to investigate the share price performance of the issuing firm in the period between one year prior to and three years after the private placement announcement.

Since the event window includes 250 days prior to the event, the estimation window is set from 500 trading days prior to the event to 251 trading days prior to the event (-500,-251). The reasoning behind the choice of this estimation window is the same as for the short-run study.

4.2 Estimating abnormal returns

Standard event study methodology is used to estimate abnormal returns, AR_{it}, for security i at trading day t relative to the event. Abnormal returns are measured by observing security return R_{it} relative to risk-adjusted normal return NR_t, as shown by the equation below.

$$AR_{it} = R_{it} - NR_t$$

The normal return, NR_t, for firm i's share at time t, is defined as the expected return without conditioning on the event taking place, or, in other words, the return on the share if the event had not occurred.

Three different normal returns metrics were used to estimate abnormal returns

- Market-adjusted normal returns
- Market-model normal returns (CAPM)
- Factor-model normal returns (Fama-French)

Market returns

As a proxy for the market return, we employ the Oslo Stock Exchange Benchmark Index (OSEBX). The OSEBX is a total return index consisting of a representative selection of all the shares listed on the Oslo Stock Exchange.

Capital Asset Pricing Model

The capital asset pricing model (CAPM) is a pricing model for both individual securities and portfolios. The model states that investors should only be rewarded for taking on non-diversifiable risk, measured by the market beta (β). The CAPM is given by the following formula:

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

$E(R_i)$ represents the expected period return on security i, R_f the risk free rate and R_m the expected return of the market. The beta describes the relationship between the security return R_i and the market return R_m, or more precisely the relative correlation between the two. The formula for estimating the beta of security i is given below.

$$\beta_i = \frac{Cov(r_i, r_m)}{Var(r_m)}$$

Fama-French Three-Factor Model

Fama and French (1993) added two additional factors to the CAPM. Based on empirical evidence that two classes of stocks – namely small caps and value stocks – historically performed better than the rest of the market, Fama and French (1993) extended the CAPM to reflect an investment's exposure to "size" and "value". The Fama-French three-factor model is given by this formula:

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f) + \beta_{SMB} \times SMB + \beta_{HML} \times HML$$

SMB stands for "small minus big", and refers to the return on a portfolio of long positions in stocks with a small market capitalization and short positions in stocks with a big market capitalization. β_{SMB} is the estimated relative correlation between security i and the SMB-portfolio. HML stands for "high minus low" and refers to the return on a portfolio of long positions in value stocks (high book-to-market ratio) and short positions in growth stocks (low book-to-market ratio). β_i is similar to the market beta from the CAPM, although it is now calculated simultaneously with β_{SMB} and β_{HML}.

The inclusion of the "size" factor in the model refers to empirical evidence indicating that investments in small firms on average results in a positive risk-adjusted abnormal return relative to investments in large firms. According to Dimson and Marsh (1999), the size effect is the most documented stock market deviation in the world. The inclusion of the "value" factor was based on the observation by Fama and French (1992) that firms with a relatively high book-to-market ratio have a systematic higher market-model adjusted return than firms with a relatively low book-to-market ratio.

Both of these effects have been widely discussed during the last decade, and the size effect especially has proved to be very sensitive to the choice of estimation period. Næs et al. (2008) found the "market" and "size" factors to be relevant for the Oslo Stock Exchange. The "value" factor was estimated to be irrelevant.

Model specifications

Market adjusted	$AR_{it} = R_{it} - R_{mt}$
Market-model adjusted	$AR_{it} = R_{it} - \beta_i R_{mt}$
Fama-French adjusted	$AR_{it} = R_{it} - \beta_i^m R_{mt} - \beta_i^{SMB} R_{SMBt} - \beta_i^{HML} R_{HMLt}$

To calculate arithmetic daily returns R_{it} for share i at trading day t, events and dividends-adjusted equity prices are obtained from "Børsprosjektet NHH".

4.3 Estimating the parameters of the normal return models

The linear regression model parameters are estimated in the estimation window with an Ordinary Least Squares (OLS) procedure. The OLS method minimizes the sum of squared residuals between observed values and the values predicted by the linear approximation. Both the beta coefficient of the market model and the market beta of the Fama-French model

are estimated by a regression of R_{it} on R_{mt}. Since the three coefficients of the Fama-French model are estimated simultaneously, the market beta, β_i^m, will differ from the one estimated in the market model. The SMB- and HML-beta estimations are based on regressing R_{it} on the returns of Ødegaard's (2011) SMB and HML factor series for the Oslo Stock Exchange.

As a result of different estimation periods for the short-run and long-run studies, two sets of beta coefficients were estimated. The short-run beta coefficients are estimated based on 250 daily observations in the interval between 260 days before the event and up to 11 days prior to the event, while the long-run beta coefficients are based on 250 observations in the interval between 500 days before to 251 days before the event.

4.4   Abnormal returns and cumulative abnormal returns

In order to be able to draw overall inferences, the abnormal returns must be aggregated over the sample. To compute sample statistics, abnormal returns were first aggregated across each day t in the event window. The average abnormal return formula is given below. The median abnormal return and the percentage of positive observations were also calculated.

$$AR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it}$$

Abnormal returns are cumulated for each share i from trading day τ_1 to trading day τ_2, in order to compute $CAR_i(\tau_1,\tau_2)$. Cumulative abnormal returns (CAR) for each share i are then aggregated across the sample to estimate sample $CAR_t(\tau_1,\tau_2)$. The following formula illustrates this process, where $CAR(\tau_1,\tau_2)$ is the average cumulative abnormal return between time τ_1 and τ_2 averaged across the sample. The median cumulative abnormal return and the percentage positive cumulative abnormal returns were also calculated.

$$CAR(\tau_1, \tau_2) = \frac{1}{N}\sum_{i=1}^{N}\sum_{t=\tau_1}^{\tau_2} AR_{it}$$

Daily versus monthly stock returns

As summarized by Brown and Warner (1994), the use of daily stock returns presents a number of potential problems when conducting an event study. Fama (1976) showed that the distribution of daily stock returns generally have fatter tails than the normal distribution, and

Brown and Warner found this to also hold true for abnormal returns. Daily abnormal returns also exhibit autocorrelation, or serial dependence.

Brown and Warner conclude that methodologies based on the OLS market model and standard parametric tests are generally well specified with the use of daily data. However, their study focuses on short-run event studies. To account for the autocorrelation present in daily abnormal returns, monthly abnormal returns are used for the long-run event study, unless stated otherwise. This also helps to reduce the potential problem of low trading volumes and little liquidity for some of the sample stocks.

Test-statistics

To test whether the cumulative abnormal returns significantly differ from zero, standard test statistics are applied, assuming normally distributed abnormal returns. With a null hypothesis of a zero mean, the *t*-statistic is computed as the number of standard errors the sample average abnormal return departs from zero.

$$t = \frac{AR_t}{s} \qquad s = \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} (AR_{it} - AR_t)^2}$$

The formulas above specify how the t-values are calculated for abnormal returns. The same formulas are applicable to cumulative abnormal returns. The sample standard deviation is represented by *s*.

Sample tests will be performed at the 5% level, meaning that the probability of rejecting the null hypothesis when the true mean is in fact zero is 5%. If the true mean of the sample is zero, the chances of observing a sample *t*-statistic with an absolute value larger than 1.96 is 5%. Thus +/-1.96 are the rejection limits, unless stated otherwise.

Winsorizing

Due to a limited sample size and high dispersion in the data, particularly for the long-run study, a winsorized mean suggested by Tukey (1962) is employed to reduce the influence of large, possible spurious outliers. "Winsorizing" means to set the bottom 5% observations equal to the 5th percentile and the top 5% observations equal to the 95th percentile, then averaging across the sample. This method increases the stability of the long-run test statistics significantly.

5. Results

As described in the preceding section, slightly different methods were used for short-run and long-run results. While the short-run event study employs generally accepted event study methodology, the methods used for the long-run event study are more controversial. The choice of a normal return model for longer horizons is a widely discussed subject. The challenges faced when conducting long-run event studies will be discussed more thoroughly later.

Section 5.1 portrays the result of the short-run event study. The abnormal returns reported are based on *daily* return data, and as a check for robustness both the market model and the market index are used as normal return models.

Section 5.2 reports the long-run results, based on *monthly* return data for the reasons mentioned in section 4. In addition to the market model adjusted abnormal returns, Fama-French and sector index adjusted abnormal returns are reported as a check for robustness. The winsorized mean was used as the test statistic for the long-run event study to reduce problems with large outliers.

5.1 Short-run results

Sample short-run results

The results from the event study on announcement effect of private placements on the OSE are summarized in Table 11-Table 13. Table 11 shows the abnormal return results using the beta-adjusted market model (CAPM) as the benchmark, while Table 12 shows an alternative approach using the market index (OSEBX). Since the results do not seem sensitive to the choice of benchmark, the beta-adjusted market model will be referred to as the benchmark unless stated otherwise. Table 13 summarizes the cumulative abnormal returns statistics.

Share price return vs. beta-adjusted market model (CAPM)

N = 222	AR(-5)	AR(-4)	AR(-3)	AR(-2)	AR(-1)	AR(0)	AR(1)	AR(2)	AR(3)	AR(4)	AR(5)
Average	0.1 %	0.7 %	0.4 %	0.6 %	1.0 %	**-1.51%**	0.1 %	-0.6 %	0.0 %	-0.1 %	-0.2 %
Median	0.0 %	0.1 %	0.1 %	0.0 %	0.1 %	**-1.17%**	-0.1 %	-0.5 %	-0.3 %	-0.3 %	-0.3 %
% Positive	50%	53%	52%	50%	52%	**36%**	49%	38%	42%	42%	44%
P-value	0.63586	0.00809	0.12151	0.04778	0.00568	**0.00026**	0.70438	0.10076	1.00707	1.31653	0.72550
t-value	0.47	2.65	1.55	1.98	2.77	**-3.60**	0.38	-3.07	-0.01	-0.50	-1.19

Table 11

Share price return vs. market index (OSEBX)

N = 222	AR(-5)	AR(-4)	AR(-3)	AR(-2)	AR(-1)	AR(0)	AR(1)	AR(2)	AR(3)	AR(4)	AR(5)
Average	0.2 %	0.6 %	0.3 %	0.6 %	1.0 %	**-1.52%**	0.1 %	-0.5 %	0.1 %	-0.1 %	-0.2 %
Median	-0.1 %	0.2 %	0.1 %	0.0 %	0.1 %	**-1.16%**	-0.1 %	-0.5 %	-0.2 %	-0.5 %	-0.3 %
% Positive	50%	54%	51%	50%	53%	**38%**	48%	40%	44%	42%	44%
P-value	0.54548	0.01105	0.18832	0.05156	0.00558	**0.00026**	0.66168	0.00795	0.82629	0.50089	0.17457
t-value	0.60	2.54	1.32	1.95	2.77	**-3.65**	0.44	-2.65	0.22	-0.67	-1.36

Table 12

Cumulative abnormal returns

N = 222	CAR[-5,-1]	CAR[0,5]	CAR[1,5]
Average	2.9 %	-2.3 %	-0.8 %
Median	0.8 %	-3.2 %	-1.2 %
% Positive	56%	34%	38%
P-value	0.00000	0.04735	1.55431
t-value	4.63	-3.64	-1.52

Table 13

The average announcement effect to private placements on the OSE is -1.51% (median: -1.17%), significant at the 1% level. All of the pre-event day abnormal returns are positive. AR(-4), AR(-2) and AR(-1) are all significant at the 5% level.

In the days before the announcement of a private placement, the abnormal returns are evenly distributed between positive and negative returns among the firms in the sample. However, after the announcement, the sample is clearly skewed towards negative abnormal returns, with approximately 60% negative observations. In addition, this result is consistent for the event day itself, where the data shows 64% negative abnormal returns.

The apparent positive drift in the days before the announcement of a private placement, and the negative drift in the days after, is supported by measures of cumulative abnormal returns for the pre-event and post-event periods. The cumulative abnormal return for the four days before the announcements, CAR[-5,-1], is 2.87% (0.75% median) and highly significant. Nevertheless, it is noteworthy that the median is close to zero. The same measure for the event day and the following five days shows a -3.04% (-4.35%) and significant at the 5% level. However, when the abnormal return on the event day is removed, the post-announcement cumulative abnormal return, CAR[1,5], is not significant.

The P-values in Table 11 indicate that AR(-4), AR(-2), AR(-1), AR(0) and AR(2) are statistically significant at the 5% level, while the other observed short-run abnormal returns are not significant. The abnormal returns are significant at the 5% level when the t-values are above 1.96 or below -1.96.

Observed t-values in the short-run event window
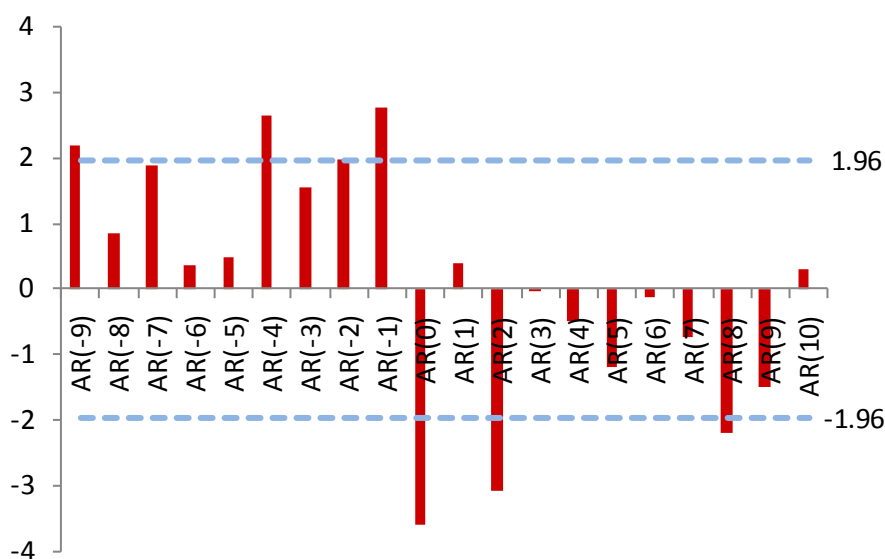
Figure 5

As the short-run period is extended, the observed positive drift prior to the event and the negative drift after the event are even more evident. The significant positive share price performance in the period leading up to the private placement supports the view that management issues equity when they think the firm is overvalued, as indicated by the observed t-values of the abnormal returns prior to the event in Figure 5. It is possible private placements are perceived as a negative signal by the market, contributing to the significant negative share price reaction observed following a private placement.

Adjusting for the private placement discount

In a private placement, the subscription price typically deviates from the current share price. Most often it is priced at a discount, however, it can happen that the subscription price comes with a premium. The size of the discount/premium will affect the reaction of the stock market due to the dilution suffered by existing shareholders.

Any rational investor in a share transaction will include the dilution effect in the investment decision. Thus, the close price on the announcement day seems to be the best comparison when estimating the deviation, whether it is a discount or a premium.

Discount statistics

Average discount to event day close price (median)	-3.3% (-2.2%)
Number of private placements with a discount	162 (73%)
Number of private placements with a premium	41 (18%)
Number of private placements with close equal to subscription price	19 (9%)

Table 14

As summarized in Table 14, the sample shows an average discount of -3.3%. This is within the range of observed discounts at comparable European stock exchanges. Close to three out of four placements are priced lower than the event day close price. In 19 out of the 222 observations the close price on the event day is equal to the subscription price in the private placement, while 41 private placements are issued with a premium. To adjust for dilution, we employ the discount-adjusted abnormal return formula proposed by Wruck (1989).

$$AR_0^{adj} = AR_0 + \frac{issued\ shares}{shares\ post-issue} * \frac{(share\ price_0 - subscription\ price)}{share\ price_{-1}}$$

The adjusted share price reaction should then reflect any changes in how investors view the company as a result of the private placement announcement.

Discount-adjusted share price reaction

N = 222	AR (0)	Adj. AR (0)
Average	-1.51%	-0.75 %
Median	-1.17%	-0.95%
% Positive observations	36 %	43 %
P-value	0.00026	0.09952%

Table 15

Table 15 shows the result of this adjustment on the announcement effect. The discount-adjusted average announcement effect is still -0.75%, though only significant at the 10% level. However, a -0.95% median adjusted share price reaction does indicate that most private placement announcements are perceived as containing negative information regarding firm valuation.

Private placements announcement effects by stated purpose

In the press releases for the private placement, the firms must justify why the raised equity is needed. These statements have been generalized into five categories: Growth, Acquisitions, Financial, Working Capital (WC) and Other.

AR(0) by stated purpose

	Growth	Acquisitions	Financial	WC	Other	All
Number of observations	114	35	21	13	39	222
Average	-0.97%	-1.38%	-6.03%	-1.54%	-0.75%	-1.52%
Median	-1.08%	-1.27%	-2.31%	-1.09%	-0.77%	-1.16%
% Positive observations	37%	34%	24%	38%	38%	38%
P-value	0.04459	0.01429	0.03610	0.31355	0.33360	0.00026
t-value	-2.01	-2.45	-2.10	-1.01	-0.97	-3.65
Average discount	-3.65%	-4.43%	-3.00%	-2.60%	-3.41%	3.27%

Table 16

The different categories show different announcement effects in the sample, as shown in Table 16. The numbers above are not adjusted for share dilution, but the reported average discounts do not indicate any systematic differences in the size of discounts between the subsamples.

The Financial category stands out among the different categories with an average -6.0% announcement effect. The median -2.3% shows that the Financial category contains a few large negative share price reactions, however, the median is still close to twice as large as any other category in the sample. The Financial category also contains the lowest percentage of firms with a positive abnormal share price reaction (24%). The Financial category is still only significant at the 5% level, which is explained by the low sample size and the high variance. The small sample size within the Financial category follows from the original exclusion of private placements that coincide with other types of fundraising, such as convertible bonds.

The results for the categories Growth, Acquisitions, Working Capital and Other are all very similar to those found for the entire sample, with a negative ~1% abnormal return on the announcement day.

Adjusted for private placement discount, none of the five categories show a significant abnormal return, as reported in Table 17. The results still indicate that the market reaction is stronger for private placement announcements motivated by financial restructuring, though the small sample sizes make it unwise to draw any conclusions.

Discount-adjusted share price reaction by stated purpose

	Growth	Acquisitions	Financial	WC	Other	All
Number of observations	114	35	21	13	39	222
Average	-0.23%	-1.06%	-3.22%	-1.42%	-0.42%	-0.75%
Median	-0.77%	-0.83%	-2.04%	-0.89%	-0.84%	-0.95%
% Positive observations	46%	43%	29%	38%	44%	43%
P-value	0.65842	0.07172	0.33046	0.35709	0.60307	0.09952
t-value	-0.44	-1.80	-0.97	-0.92	-0.52	-1.65

Table 17

Before and after the financial crisis

The composition of the sample changed through the period. From 2004 to 2008 up to the financial crisis, the share of private placements in the Financial category in the sample was 7%, while in 2009-2010 the share had increased to 18%. The small number of observations in the financial category makes it hard to draw any conclusions, other than the basic

economic interpretation that more firms would need financial restructuring after the financial turmoil. However, the increased share of private placements by financially distressed firms after the financial crisis does seem to have had a negative impact on the average abnormal returns. These data are summarized in Table 18.

Announcement effect by period

	2004-2008	2009-2010
Number of observations	177	45
Average AR(0)	-0.8 %	-4.3 %
Median AR(0)	-0.8 %	-3.0 %
% Positive observations	38%	24%
P-value	0.04982	0.00045
t-value	-1.96	-3.51
Financial	13	8
% Financial	7%	18%
Average discount adjusted AR(0)	-0.2 %	-3.0 %
Average discount	-3.5 %	-4.0 %
P-value	0.72447	0.00520
t-value	-0.35	-2.79

Table 18

Following to the financial turmoil, the market reaction to private placements is -4.3%, compared to -0.8% prior to the financial turmoil. The discounted adjusted average shows a similar pattern with a -3.0% relative to -0.2%. For the simple average the result for both periods are significant at the 5% level. Moreover, when the adjustment from the share price dilution is taken into account, only the negative announcement effect in 2009-2010 is perceived to contain negative information. The adjusted announcement effect from 2009-2010 is significant at the 1% level. It seems likely that the higher sense of uncertainty in the market in the post-crisis slump of 2009-2010 contributed to a more negative perception of private placement announcements.

5.2 Long-run results

Sample long-run results

The abnormal share price movement in the sample in the year leading up to the private placement displays a clear increasing trend, with a 28.6% cumulative abnormal share price return. Averaged across the sample, 40 of the 50 days prior to the private placement show a positive abnormal share price return. Most of the positive cumulative abnormal returns (CAR) are observed within the last half year prior to the private placement announcement. The event day constitutes the top point on the graph. After the event, the average cumulative abnormal return the following year is -6.1% (-7.5%). The abnormal return subsequent to the event day continues to fall over a three-year period, as shown in Figure 6.

Long-run cumulative abnormal return[1]
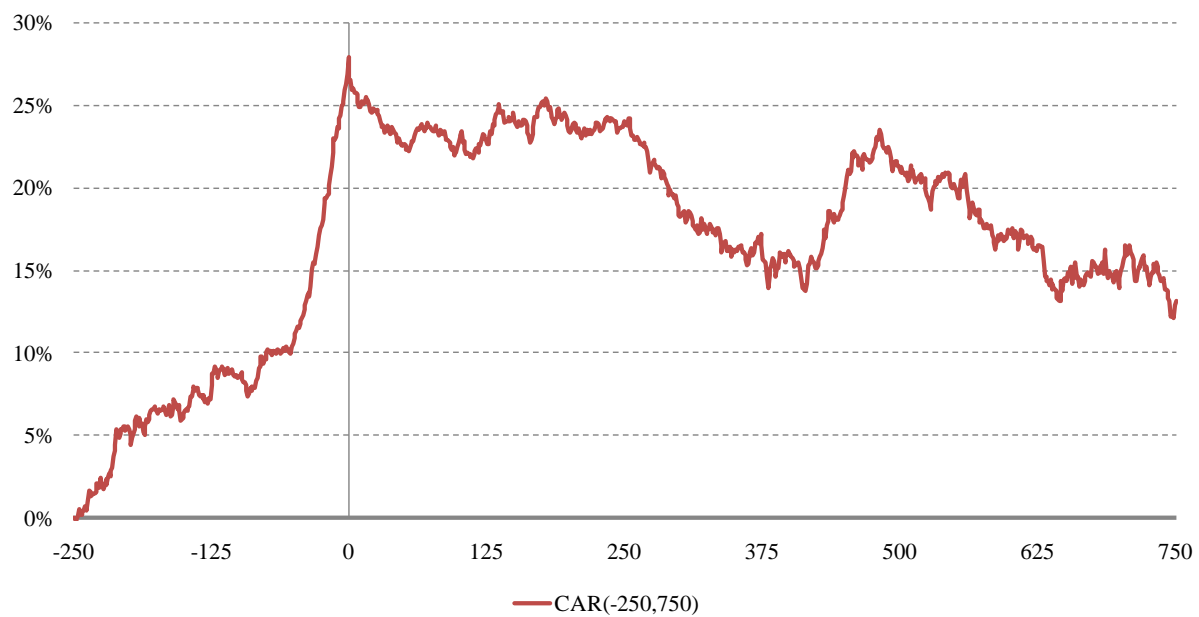
Figure 6

1) Daily observations averaged across the sample

The cumulative abnormal returns (based on monthly observations) are presented in Table 19. The CAR(1,125), CAR(1,500) and CAR(1,750) are all significant at the 5% level. However, the interpretation of the results become less clear as the event window is extended. A long-run study with the event study methodology becomes a simultaneous test of the model and the results. Thus, an analysis over several years can at most indicate a trend. Over the three year period, the number of observations fell to 131 from the original 222 private placements in the sample. Thus, the mix of firms in the sample is highly altered. The sample for CAR(1,750) includes only the firms with a private placement between 2004 and 2007, still listed on the Oslo Stock Exchange three years after their observed private placement. All private placements in this sample occurred before the financial crisis.

Cumulative abnormal returns (CAPM)

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	181	222	212	193	157	131
Average	28.6 %	-1.5 %	-5.4 %	-6.1 %	-16.1 %	-18.0 %
Median	18.8 %	-1.1 %	-7.1 %	-7.5 %	-13.7 %	-19.7 %
% Positive observations	69%	37%	40%	44%	43%	44%
P-value	0.00000	0.00033	0.02100	0.15495	0.01097	0.04478
t-value	6.11	-3.59	-2.31	-1.42	-2.54	-2.01
Annualized average	28.6 %		-10.8 %	-6.1 %	-8.0 %	-6.0 %
Annualized median	18.8 %		-14.2 %	-7.5 %	-6.8 %	-6.6 %

Table 19

The sharpest decline in the cumulative abnormal returns is observed within the first six months of the private placement announcement, as the annualized cumulative abnormal return is -10.8% (-14.2%) over the first half year subsequent to the event.

Table 20-Table 21 show the cumulative abnormal returns when applying the Fama-French-model abnormal returns and the sector index adjusted abnormal returns, respectively. Note, however, that Næs et al. (2007) find the Fama-French model to be less applicable for the Norwegian stock market than for other stock markets.

Cumulative abnormal returns (Fama-French-model)

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	181	222	212	193	157	131
Average	24.5 %	-1.2 %	-7.0 %	-8.6 %	-19.2 %	-21.5 %
Median	17.4 %	-1.1 %	-7.7 %	-11.6 %	-16.4 %	-22.0 %
% Positive observations	64%	36%	37%	41%	42%	40%
P-value	0.00000	0.00000	0.00346	0.05308	0.00368	0.01907
t-value	5.16	-4.76	-2.92	-1.93	-2.90	-2.34
Annualized average	24.5 %		-14.0 %	-8.6 %	-9.6 %	-7.2 %
Annualized median	17.4 %		-15.5 %	-11.6 %	-8.2 %	-7.3 %

Table 20

Cumulative abnormal returns (Sector index)

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	181	222	212	193	157	131
Average	24.2 %	-1.1 %	-4.1 %	-4.9 %	-23.4 %	-28.5 %
Median	16.3 %	-0.9 %	-6.3 %	-5.0 %	-19.8 %	-21.0 %
% Positive observations	68%	42%	40%	46%	36%	44%
P-value	0.00000	0.00002	0.06123	0.23715	0.00027	0.00117
t-value	5.49	-4.26	-1.87	-1.18	-3.64	-3.25
Annualized average	24.2 %		-8.2 %	-4.9 %	-11.7 %	-9.5 %
Annualized median	16.3 %		-12.6 %	-5.0 %	-9.9 %	-7.0 %

Table 21

The different approaches do not significantly alter the results from the observed short-run results. Thus, the following analyses will be based on the market-model abnormal returns.

Sample divided by market capitalization

The positive development in cumulative abnormal returns (CAR) within the last year prior to the private placement announcement are significant at the 1% level for both the largest 50 percent of firms and the smallest 50 percent of firms in the sample, measured by market capitalization on the day prior to the announcement. However, differences still exist between the groups, as depicted in Figure 7.

Cumulative abnormal returns by size

Figure 7

The smallest 50 percent of firms in the sample show an average annualized cumulative abnormal return of 39.2% (24.0% median) over the year prior to the private placement, while the largest 50 percent show a 17.2% (15.5%) cumulative abnormal return over the same period. Thus, the smallest 50 percent of firms outperform the largest 50 percent of firms leading up to the private placement; however, in the months leading up to the equity issue, the two samples develop similarly, as depicted in Figure 7.

Subsequent to the private placement announcement, the groups show clear divergent trends. The smallest 50 percent of firms by market capitalization do not show any clear positive or negative trend after the private placement announcement. Even though the first year shows more negative returns than positive, this characteristic disappears in the CAR(1,500) and the CAR(1,750). None of the post-issue cumulated abnormal returns are significant at the 5% level. Conversely, the largest 50 percent of firms display a negative trend, where all the post-issue cumulated abnormal returns are significant at the 5% level. Throughout the three years subsequent to the private placement announcement, the largest 50 percent of firms show an annualized average cumulative abnormal return of approximately -17%. The first half year post-issue shows an annualized average cumulative abnormal return of -23.1% (-18.7%). The results are summarized in Table 22.

Cumulative abnormal returns by size

50% Smallest firms	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	90	90	86	77	61	48
Average	39.2 %	-1.8 %	-3.2 %	-4.2 %	3.0 %	7.4 %
Median	24.0 %	-1.4 %	-9.3 %	-7.5 %	3.1 %	7.4 %
% Positive	69%	37%	37%	40%	52%	52%
P-value	0.00000	0.00176	0.53180	0.62750	0.83506	0.64153
t-value	5.29	-3.13	-0.63	-0.49	0.21	0.47
Annualized average	39.2 %		-6.4 %	-4.2 %	1.5 %	2.5 %
Annualized median	24.0 %		-18.6 %	-7.5 %	1.6 %	2.5 %
50% Largest firms	**CAR(-250,-1)**	**AR(0)**	**CAR(1,125)**	**CAR(1,250)**	**CAR(1,500)**	**CAR(1,750)**
Number of observations	91	91	86	77	61	49
Average	17.2 %	-2.1 %	-11.5 %	-17.2 %	-34.5 %	-55.1 %
Median	15.5 %	-1.0 %	-9.3 %	-16.6 %	-23.5 %	-31.6 %
% Positive	69%	37%	36%	45%	34%	33%
P-value	0.00123	0.00559	0.00004	0.00113	0.00005	0.00030
t-value	3.23	-2.77	-4.09	-3.26	-4.06	-3.62
Annualized average	17.2 %		-23.1 %	-17.2 %	-17.3 %	-18.4 %
Annualized median	15.5 %		-18.7 %	-16.6 %	-11.7 %	-10.5 %

Table 22

Without looking at underlying factors, it is difficult to interpret these results. The relative outperformance by the smallest firms in the sample, both before and after the private placement announcement, might be a result of smaller firms generally offering a higher return, as observed by Fama and French (1993). However, as shown above, the use of the Fama-French model did not significantly alter the results in this thesis.

The observed share price development observed for the smallest 50 percent of firms in the sample, are similar to those expected in an efficient market. Equity is issued after a growth period, and after the equity issue the return to the investors is not abnormal.

One possible explanation for the extreme negative performance by the largest 50 percent of firms in the sample after the equity issue could be extra "attention" from investment banks, since larger companies tend to be more lucrative customers. The private placements undertaken by smaller firms might be more necessary than the ones conducted by the largest firms.

Because of the small sample size, the large differences between the subsamples could also be spurious, or a result of other factors, such as firms or industries represented. The results could also be specific to the observed time period.

Sample divided by price-to-book ratio

The sample was split in half dependent on the price-to-book ratio of the stocks 250 days prior to the private placement. The group with the highest 50 percent price-to-book ratios is

called "growth stocks", while the group with the lowest 50 percent price-to-book ratios is called "value stocks". However, the overall sample is relatively rich on growth stock observations. Thus, the "value stocks" includes both value stocks and the growth stocks with the lowest book-to-market ratios. The numbers are not adjusted for the relative price-to-book ratio on the Oslo Stock Exchange at the time of the observation.

Both samples show a significant positive cumulative abnormal return in the year prior to the private placement. The value stocks show a 44.8% (43.3%) cumulative abnormal return the year prior to the private placement. The high return number is supported by the observed median and the fact that 76% of the observations in the sample show a positive return. The growth stocks on the other hand show a 12.9% (8.1%) cumulative abnormal return the year prior to the private placement. These observations are depicted in Figure 8 below.

Cumulative abnormal returns by price-to-book ratio
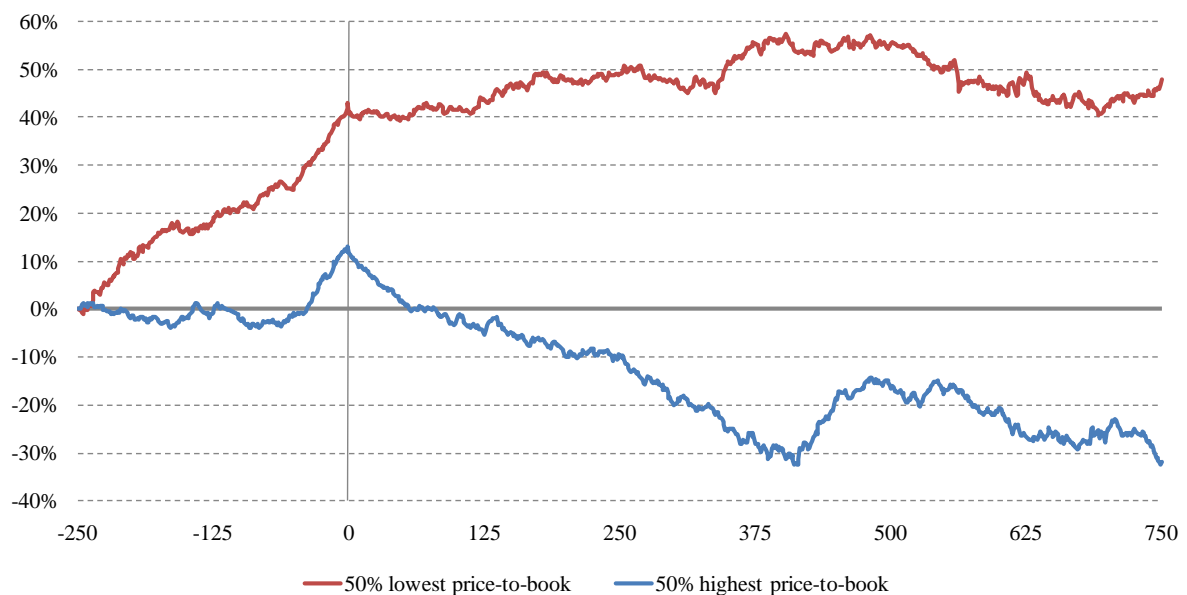
Figure 8

After the private placement, the value stocks do not diverge significantly from the expected return given by the market model. The growth stocks, however, show a severe and prolonged drop subsequent to the private placement. The first year after the private placement they had a -25.4% (-29.9%) cumulative abnormal return. By the end of the first six months after the private placement, the abnormal rise in stocks prior to the private placement is reversed. The steepest drop in cumulative abnormal returns is observed in the first half year after the private placement. The negative annualized share price return falls over the time. In addition, only about 30% of the observed cumulative abnormal returns are

positive over the sample period for the growth stocks, and by the end of the three years subsequent to the private placement, the average firm in the group of growth stocks has lost 49.8 percent of its value. These statistics are summarized in Table 23.

Cumulative abnormal returns by price-to-book ratio

50% lowest price-to-book	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	87	87	82	74	58	46
Average	44.8 %	-2.3 %	0.8 %	0.7 %	2.1 %	1.2 %
Median	43.3 %	-1.4 %	-3.8 %	-1.0 %	4.1 %	19.7 %
% Positive	76%	36%	44%	50%	53%	54%
P-value	0.00000	0.00166	0.85747	0.92700	0.87516	0.95000
t-value	6.82	-3.14	0.18	0.09	0.16	0.06
Annualized average	44.8 %		1.7 %	0.7 %	1.0 %	0.4 %
Annualized median	43.3 %		-7.7 %	-1.0 %	2.0 %	6.6 %
50% highest price-to-book	**CAR(-250,-1)**	**AR(0)**	**CAR(1,125)**	**CAR(1,250)**	**CAR(1,500)**	**CAR(1,750)**
Number of observations	87	87	83	74	58	47
Average	12.9 %	-1.7 %	-17.5 %	-25.4 %	-41.2 %	-49.8 %
Median	8.1 %	-1.1 %	-16.0 %	-29.9 %	-30.0 %	-31.6 %
% Positive	62%	38%	29%	34%	31%	32%
P-value	0.04185	0.00949	0.00000	0.00004	0.00002	0.00013
t-value	2.04	-2.59	-5.67	-4.12	-4.26	-3.82
Annualized average	12.9 %		-34.9 %	-25.4 %	-20.6 %	-16.6 %
Annualized median	8.1 %		-31.9 %	-29.9 %	-15.0 %	-10.5 %

Table 23

Similar to when the sample was divided by market capitalization, there seems to be large differences between the subsamples. The growth stocks in the sample underperformed drastically compared to value stocks. This could be a result of differences in risk not picked up by the market model. However, it might also be a result of growth firms being hit particularly hard by the financial crisis of 2008, influencing those CAR-measures overlapping the crisis.

Sample divided by Small/Large and Growth/Value

The observed differences between the smallest and largest firms as well as between growth stock and value stock are somewhat puzzling. This is particularly true since the results from the Fama-French model do not significantly differ from the results obtained through CAPM.

Table 24-Table 27 divide the sample into four subgroups, first by market capitalizations, then by price-to-book-ratios. Although the sample sizes are very limited, Table 24 indicates that the small value stocks in the sample performed extremely well both in the years before and after the private placement announcement. This could be a result of outliers, or perhaps these types of firms actually have better motives for conducting private placements. The rest of the sample subgroups seem to be in line with the results for the entire sample. Due to the

limited sample sizes when the sample is divided into four, weight will not be put upon these results in the following analysis, although the apparently large differences between subgroups in the sample are noteworthy and worthy of further research.

Small/Growth

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	44	44	43	42	38	32
Average	28.5 %	-1.8 %	-20.3 %	-28.3 %	-39.8 %	-49.6 %
Median	8.1 %	-2.8 %	-15.7 %	-16.2 %	-24.1 %	-23.0 %
% Positive observations	61%	30%	23%	26%	39%	41%
P-value	0.01390	0.00027	0.00003	0.00153	0.00569	0.01309
t-value	2.46	-3.64	-4.15	-3.17	-2.77	-2.48
Annualized average	28.5 %		-40.6 %	-28.3 %	-19.9 %	-16.5 %
Annualized median	8.1 %		-31.4 %	-16.2 %	-12.1 %	-7.7 %

Table 24

Small/Value

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	42	42	38	30	24	23
Average	44.5 %	-2.2 %	10.3 %	22.3 %	50.8 %	52.0 %
Median	38.3 %	-1.0 %	-1.3 %	8.1 %	49.7 %	42.4 %
% Positive observations	76%	43%	50%	57%	63%	61%
P-value	0.00000	0.01528	0.25300	0.12795	0.07045	0.07898
t-value	5.08	-2.43	1.14	1.52	1.81	1.76
Annualized average	44.5 %		20.6 %	22.3 %	25.4 %	17.3 %
Annualized median	38.3 %		-2.6 %	8.1 %	24.8 %	14.1 %

Table 25

Large/Growth

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	44	44	43	41	32	22
Average	9.5 %	-0.9 %	-14.8 %	-25.6 %	-36.2 %	-54.0 %
Median	13.5 %	-0.3 %	-16.0 %	-34.7 %	-30.3 %	-34.3 %
% Positive observations	70%	43%	35%	37%	28%	27%
P-value	0.11887	0.06081	0.00125	0.00163	0.00022	0.00337
t-value	1.56	-1.87	-3.23	-3.15	-3.69	-2.93
Annualized average	9.5 %		-29.6 %	-25.6 %	-18.1 %	-18.0 %
Annualized median	13.5 %		-31.9 %	-34.7 %	-15.2 %	-11.4 %

Table 26

Large/Value

	CAR(-250,-1)	AR(0)	CAR(1,125)	CAR(1,250)	CAR(1,500)	CAR(1,750)
Number of observations	43	43	40	34	21	15
Average	26.6 %	-2.0 %	-7.9 %	-10.0 %	-38.7 %	-25.0 %
Median	19.7 %	-1.7 %	-5.3 %	1.1 %	-17.4 %	-17.1 %
% Positive observations	67%	33%	38%	53%	43%	47%
P-value	0.00275	0.00081	0.01263	0.14803	0.06252	0.29941
t-value	2.99	-3.35	-2.49	-1.45	-1.86	-1.04
Annualized average	26.6 %		-15.8 %	-10.0 %	-19.3 %	-8.3 %
Annualized median	19.7 %		-10.5 %	1.1 %	-8.7 %	-5.7 %

Table 27

6. Analysis

6.1 Agency-costs effects

Monitoring hypothesis

According to Wruck's (1989) monitoring hypothesis, the share price reaction to a private placement should be positive, since the number of active investors and the ownership concentration both increase. However, the results between 2004 and 2010 from private placements on the OSE show a significant -1.5% abnormal return on the announcement day. Overall, only 37% of the observed abnormal share price returns on the announcement day were positive. There are numerous possible explanations for this discrepancy.

Wruck's findings of a positive share price reaction are notably higher for firms with a low ownership concentration, namely in firms where the largest owner owns less than 5% of the outstanding shares. Less than 1% of the listed firms on the OSE between 2004 and 2010 match this criterion. In nearly 50 percent of the firms on the OSE, the largest shareholder holds between 5% and 25% of the outstanding shares, according to Døskeland and Mjøs (2007). Within this group, Wruck observes a negative share price reaction, similar to the findings of this thesis.

Schleifer and Vishny (1988) add that if a purchaser in the private placement has a substantial stake in the firm prior to the private placement, the share price reaction should reflect the increased probability of a takeover bid. It would be advantageous to investigate how the sample private placements affect ownership structure, though this is beyond the scope of this thesis. However, the observed negative abnormal market reaction does not indicate an increased probability of a takeover bid.

Furthermore, Wruck suggests that the purchasers in a private placement are active investors, and thus, there should be an increase in the monitoring of management following a private placement. The increased monitoring should induce a positive share price reaction. Jensen and Meckling support this view, as they find a positive share price reaction to private placements directed towards outside investors. However, based on the description in the associated press releases, most of the private placements on the OSE between 2004 and 2010 are directed towards an extended group of investors – most often towards private, professional and institutional investors, both Norwegian and international. Hence, it is difficult to claim that private placements on the OSE are especially targeted towards active

investors. In addition, Døskeland and Mjøs find a decreasing share of active investors on the OSE over a period leading up to 2007. The extensive use of private placement within the period has probably contributed to this development.

Managerial-entrenchment hypothesis

Both Dann and DeAngelo (1988) and Wruck (1989) report some evidence of managerial entrenchment. While Dann and DeAngelo find a negative share price reaction when the private placements are used to reduce the potential threat of a takeover, Wruck finds a negative share price reaction to private placements in which a large owner come into a position of control.

Barclay et al. (2007) argue that private placements are used to place shares in the hands of friendly investors to dissuade bidders of the firm. They suggest this is done to solidify the managers' control of the firm. Their findings are supported by results from a large sample size. The long-run event study results of this thesis offer strong support to the managerial entrenchment hypothesis, albeit with a smaller sample size.

The announcement press releases indicate that most private placements on the OSE are used to obtain cash quickly, while the targeted investors seem to resemble those of a public issue. Many of the firms on the OSE are relatively small and highly capital intensive, so private placements could be a way for managers to increase firm size in a matter that increase the share held by passive investors and consequently solidifies their own position. If this is the case, it would be in line with the findings of Barclay et al. Out of the 222 private placements in the sample, the great majority resemble *passive* placements, as Barclay et al. called the private placements with "no evidence of interactions between the purchasers and the issuing firms either before or after the placements". To determine what type of investors actually bought stock in the private placements, however, one would need to obtain additional data from the Norwegian Central Securities Depository (The VPS). This is beyond the scope of this thesis.

The observed cumulative abnormal return (CAR) on the OSE prior to the announcement is comparable to Barclay et al.. They observe an abnormal positive share price development in the ten days leading up to the announcement for *passive* private placements, similar to the 2.87% CAR(-5,-1) observed in this thesis. After the private placement announcement the data from the OSE shows a -5.4% CAR[1,125], while Barclay et al. reports a -9.9%

CAR[1,130]. The difference between the datasets is only distinctive in the short-run. On the announcement day, Barclay et al. find a 1.4% abnormal return for passive placements, while the OSE shows a -1.5% abnormal return. Over the first 20 days subsequent to the private placement, Barclay et al. find no distinctive trend in the cumulative abnormal returns for passive placements. However, from that point forward these placements show a similar negative trend to the one found in the private placements on the OSE.

The results from the OSE are in line with what the managerial entrenchment hypothesis predicts. On the announcement day, the stock market should react negatively, as the discounted shares provided in the private placement are compensation for more entrenchment. This contributes to a lower valuation of the firm. The drop in share value on the announcement day supports this view, although the drop is only significant before adjusting for the private placement discount. In the long-run event window, the data continues to support the managerial-entrenchment hypothesis. By extending the event window, the likelihood of capturing the value effects of the private placement decision will be vastly improved. The long-run event study shows highly significant negative cumulative abnormal returns subsequent to the announcement, with the annualized drop in share price being the largest in the first six months subsequent to the private placement. These results suggest that the managerial-entrenchment hypothesis – more than the monitoring hypothesis – capture the observed share price reactions on the OSE.

Comparable studies from other countries find positive cumulative abnormal returns for a period subsequent to the private placement. However, after this period the abnormal returns turn negative, as observed on the OSE. Participants in other markets might be more optimistic on private placements than their Norwegian counterparts, or investment banks might take on more underwriting in the private placements, thus giving incentives to continue to feed the market with positive information in the period subsequent to the private placement. This will provide time to sell off the investment bank's stake with a profit.

Convergence of interest

The convergence-of-interest hypothesis presented by Jensen and Meckling (1976) is focused on the alignment of interests between shareholders and management. It predicts a positive share price reaction to the announcement of a private placement if the management or other insiders increase their ownership share in the firm.

The evidence from the OSE can give some support to this hypothesis. Based on the announcement press releases, a large majority of the private placements on the OSE are targeted towards a wide range of investors. These issues should lead to less alignment between shareholders and management, as the large shareholders should be worse off when the range of investors that participate increases. However, the OSE has many family-owned firms, and firms with high ownership concentrations, each with groups of investors that would be favored in a private placement. Thus, it is impossible to say anything significant about the share owned by insiders without ownership data.

Redistribution of wealth

Galai and Masulis (1976) look at private placements as a redistribution of wealth. The issue of additional equity reduces the risk; hence, the debt is more likely to be paid off and will increase in value. The shareholders will obtain the rest of the added value in the private placement. However, the increased value of the debt will, in effect, decrease the share price. This is consistent with the results from the OSE, as firms that mention financial restructuring in their press releases show a larger negative announcement effect than the rest of the private placements. These firms should be the most distressed firms in the sample, and as a result one would expect a larger wealth transfer between debt holders and shareholders in these firms.

6.2 Price-pressure effects

Scholes (1972) stated that since each share is unique, the lack of perfect substitutes in the market causes the demand curve for each share to be a downward sloping curve. Different papers have found inconsistent support of this hypothesis. Both analyzing the relative size of the equity issue to the firm size as well as the size relative to other equity issues in the sample has given mixed results. The data on the OSE offers some support to the price-pressure hypothesis, with 62 percent of the shares showing a negative abnormal return on the announcement date. However, the change in the stock market from when the hypothesis was stated in 1972 until today has been significant. The stock markets have become more easily accessible, and the market place has become a global arena. The transaction costs have been greatly reduced, and more data is spread between market participants. The development of the markets should have dramatically decreased the relevance of the price pressure hypothesis, as each share has become less unique. Most likely, the observed abnormal returns observed on the announcement day are due to other effects than price-pressure.

6.3 Information effects

Numerous hypotheses based on information effects try to explain the observed abnormal share price movements in the short-run period around private placements. However, in assessing the consistency of information effects, it is essential to note that issuing firms can be in very different situations. Healthy firms can use private placements as a sophisticated way of providing information to the market, while the information effects from private placements by distressed firms are more primitive. The information effects come in different forms; changes in ownership structure, changes in capital structure, and changes in capital expenditure. The significant negative announcement effect on the OSE is supported by some information effects, while the results are inconsistent with others.

Information effects from changes in ownership structure

Leland and Pyle (1977) predict an abnormal positive share price reaction if insiders increase their ownership share through a private placement. They argue that insiders have better information regarding future cash flow, and the market should perceive it as positive information if they increase their ownership share. Based on the press releases collected from Newsweb and talks with market participants, most private placements on the OSE are targeted towards the most important shareholders. Thus, the negative market reaction to private placements observed in this thesis, albeit insignificant when adjusting for discounts, does not support Leland and Pyle`s theories.

Classic financial theory says that raising capital is costless, as you get a fair price in an efficient capital market. Hence, every project with a positive net present value should be undertaken regardless of how you raise the money for the initial investment. Myers and Majluf (1984) created a model that tries to capture the effects of information asymmetry between managers of the firm and investors. With information asymmetry, investors expect that the announcement of an equity issue conceals negative information. This causes the market to revise the share price, since the management of the firm would only issue equity if the share price is higher than the intrinsic value of the shares.

The results from the OSE offer some support to this pecking order theory. The private placements on the OSE undertaken between 2004 and 2010 have an announcement effect of -0.95% (-0.75% median) after adjusting for the private placement discount. This is consistent with the downward revision predicted by the adverse-selection hypothesis, but it is only significant at the 10% level. About two-thirds of the private placements led to a negative

abnormal return on the announcement day, indicating that a larger sample size might lead to a more significant adjusted announcement effect.

Another effect that a change in ownership may imply was put forward by Hertzel and Smith (1993). They found a positive abnormal return on the announcement of a private placement on the NASDAQ and argued that the value certification by informed led to the positive effect. The results of this thesis are not consistent with the positive market reaction predicted by the certification hypothesis. However, certification is expected to be more needed in growth firms with low book values. This type of firm is nearly non-existent on the OSE. Thus, one cannot reject this information effect based on the inconsistent results from the OSE, even though the market reaction to private placements in the subsample consisting of the firms with the largest price-to-book ratios was very similar to the rest of the sample.

Information effects from changes in capital structure

Ross (1977) argues that given value maximization by managers, private placements convey information about lower future cash flows. He argues that the managers will decrease leverage and provide more flexibility on the asset side in order to face more demanding times. This is highly consistent with the long-run returns following the average private placement in the OSE sample. The results indicate that earnings expectations are exaggerated in the months leading up to the private placement. This leads to favorable conditions for existing shareholders, as it costs less to obtain the necessary cash. Nevertheless, it signals to the market that the share could face a downward trend subsequent to the private placement, as observed on the OSE in the sample period. Earnings estimates from management and investment banks should be researched further to determine whether or not they explain the results of this thesis.

Information effects from changes in capital expenditure

Miller and Rock (1985) view a private placement as a signal of lack of internal funding for upcoming investments, leading to a downward revision of the value of current earnings. The negative discount-adjusted market reaction to the private placement announcement, significant on the 10% level, is in line with Miller and Rock`s view – although the breakdown of the sample into categories dependent on the intended use of the proceeds from the private placements did not provide any clear support for the existence of information asymmetries.

Overall, the results suggest that the market finds the intended use of the proceeds in the private placement inferior to the firms existing business, or that the proceeds are needed because the ongoing projects expected cash flow generation is overstated. This results in a downward revision of the value of the firm. However, one should not draw too many conclusions based on these results, due to the limited sample size for each category.

6.4 Timing and value destruction

Timing by managers seems to be the most likely explanation for the apparent peak in share prices observed around the announcement day. As previously noted, this peak is particularly pronounced in the half year before and after the private placement. Managers should have better information than the market, making them able to issue equity when they see the company as overvalued. Managers have a responsibility both towards existing and new investors, however, and if this is the current practice, it favors the former group.

The year before the private placement announcement the average sample firm has a 28.6% (18.8% median) positive cumulative abnormal return. This is significant at conventional levels. The results are consistent with the predicted overvaluation of firms conducting an equity issue. Although an overvaluation of the firm's assets will cause both the equity and the risky debt to be overvalued, the relative overvaluation of the debt is less than that of the equity. Thus, the firm avoids a wealth transfer to new shareholders. On average, there is a significant run-up in the year before the private placement, with an accelerated pace the last 50 trading days. A possible key factor to this could be investment banks and managers deliberately feeding the market with positive information to increase the issue price, though further analyses must be undertaken to confirm or reject this hypothesis.

The long-run effects subsequent to the private placement further build to approve the hypothesis that firms issuing equity are overvalued. In the following six months CAR[1,125] the shares fell by an average of -5.4% (-7.1%). The negative trend continues over three years, as CAR[1,750] shows a fall of -18.0% (19.7%). One cannot read too much into the magnitude of the drop in the share price over such a long period, due to the difficulties in conducting a long-run event study and the decreasing number of firms in the sample. In addition, the sample period was a very unique period because of the financial crisis. The market model is unlikely to fully capture these properties.

The trend in the dataset is still clear; the average firm issuing equity through a private placement on the OSE during 2004-2010 was overvalued on the announcement day. However, from one year prior to the private placement to three years after, the average firm has a positive cumulative abnormal return. However, since the observed cumulative abnormal returns over the four-year period peak exactly on the announcement date, one could argue that the average private placement investor invested in the firm at the worst possible time. Then again, this could be specific for the sample period.

It is unlikely that timing is the only explanation for the underperformance of sample firms in the years after the private placement. As mentioned earlier, part of the explanation probably has to do with the period itself. Energy firms dominate the sample, a group that was hit hard by the fall of oil prices in 2008. This surely impacts the sample results, although using sector indices as benchmarks leads to the same conclusions.

Nonetheless, the long-run results indicate that the money invested in private placements was not put to good use. Subsample analysis suggests that this is mainly driven by the largest half of the sample, measured by market capitalization. Although it is difficult to interpret these findings without further research, one possible explanation could be that advisory firms and investment banks target larger firms, since they are more valuable customers. Managers could thus be encouraged to issue equity, even though this might not be in the best interest of the shareholders.

7. Conclusion

The results in this thesis support the managerial-entrenchment hypothesis presented by Barclay et al. (2007). The announcement of a private placement with cash settlements on the Oslo Stock Exchange between 1.1.2004 and 12.31.2010 was on average followed by a significant -1.5% abnormal return on the announcement day, while the two years subsequent to the announcement show an average cumulative abnormal return of -16.1%. However, the market reaction on the announcement day after adjusting for private placement discounts was only significant at the 10% level. The results also support management timing, as the cumulative abnormal return in the year prior to the private placement announcement was 28.6%, indicating that management raises new capital when they view the firm as overvalued.

Both the significant long-run positive abnormal return prior to, and the long-run negative abnormal return subsequent to the private placement is highly indicative of a share valuation above the intrinsic value on the announcement day. Over a four-year period, the average private placement is carried out when the cumulative abnormal return is at its highest. This indicates that managers hold better information of the true valuation of the firm and use it to issue equity when they know that the firm is overvalued. As the sample was further analyzed, the largest 50 percent of firms accounted for most of the timing effect. It appears that the necessity for the private placement was greater for the smaller firms, as the returns for larger firms seem to indicate inferior investment opportunities.

In addition, although there are many underlying factors, increased attention from investment banks could help explain the unambiguous run-up observed both for small and large firms in the months leading up to the private placement, though further analysis is needed to determine this.

The results are very similar to those observed for passive private placements by Barclay et al. (2007). They categorized a large sample of private placements into passive, active and managerial, depending on how the investor interacted with the issuing firm post-placement, and if the investor was part of the existing top management. They found significant negative post-placement abnormal returns for passive placements. Very few private placements on the OSE seem to be targeted towards active investors, supporting the managerial-entrenchment hypothesis that managers use private placements to solidify their control of the company by

placing shares in the hands of friendly investors. The significant negative long-run abnormal returns observed in this thesis support the view that passive private placements are the representative private placements on the OSE. Even though there are various other factors at work, the findings in this thesis strengthen the argument that managerial entrenchment explains many private placements conducted in the sample period.

The observed negative abnormal share price reaction on the announcement day contradicts both Wruck`s monitoring hypothesis (1989) and Hertzel and Smith`s (1993) certification hypothesis. Because of the high ownership concentration of the OSE and the focus towards capital-intensive sectors, these results are not surprising. In such an environment there will be a smaller need for certification, and most private placements will lead to lower monitoring. Hence, these popular hypotheses do not seem to be very relevant for the OSE.

Based on this thesis, private placements on the OSE do not seem to be targeted towards valuable investors aside from the firm's current main shareholders. Instead, it appears to be customary on the OSE to use private placements as a substitute for rights issues. There could be many reasons for this. Firstly, private placements provide management with the flexibility to act quickly with regards to investments and acquisitions, while also reducing the chance of information leakages. The benefits seems suited to the OSE which has a capital-intensive energy sector driven by contracts. Nonetheless, private placements dilute the shares of non-invited shareholders.

Secondly, as the private placements are carried out in just one trading day it is easier to take advantage of an overvaluation. In a rights issue, the share price can more easily adapt to the information from the announcement and move closer to the intrinsic value during the subscription period.

Lastly, the increased popularity of board authorizations has made it easier to conduct a private placement. This enhanced flexibility increases the managers' chances to solidify their position in the firm by allocating more shares to passive and friendly investors.

With more time and resources available, it would be interesting to look at ownership data and volume data to try to get a clearer explanation for the observed share price developments in this thesis. An alternative angle for further studies would be to research the earnings estimates of equity analysts connected to the investment bank carrying out the private

placement to see how they can be connected to the positive abnormal share price movement prior to private placements.

Criticism

The small sample size limits the possible inferences drawn from the data. The sample period could have been expanded, although the use of private placements was limited before 2004. The large variances in both daily and monthly stock returns made it difficult to analyze the results of the event studies.

At the time of this thesis, the event- and dividend-adjusted stock returns for 2011 were not yet available from Amadeus. As a result of this, the long term event study was limited to only include CAR(1,250) for 2004-2009, CAR(1,500) for 2004-2008 and CAR(1,750) for 2004-2007. The 2004-2008 stock market boom was a unique period for the Norwegian stock market, characterized by overoptimistic investors. The results of the long-run event study in this thesis must be viewed with this in mind.

While the methods used in the short-run event study are widely accepted throughout academia, the long-run event study was more challenging to conduct, as the longer time horizon makes the results more sensitive to the choice of normal returns model. Any test of market efficiency is a simultaneous test of the asset pricing model used (Fama 1977), but Fama (1998) argues that the joint hypothesis problem is smaller for short-run event studies, since daily returns are close to zero. Thus, the observed share price developments in the days around the private placements should be viewed with more validity than the positive drift in the year before and the negative drift in the years after.

The beta estimates used throughout this thesis are subject to discussion. Since the actual values are unobservable, the estimated beta values for some firms might be far from the actual relative correlation with the stock market.

References

Databases
Emisjonsstatistikk, Oslo Børs.
http://oslobors.no/Oslo-Boers/Statistikk/Emisjonsstatistikk (July 1, 2011)

Newsweb, Oslo Børs. http://www.newsweb.no

Textbooks
Brealey, Richard A. and Stewart C. Myers (2003): *Principles of Corporate Finance*. 7th ed. McGraw-Hill/Irwin, Boston, Mass.

Fama, Eugene F. (1976): *Foundations of finance: portfolio decisions and securities prices.* Basic Books, New York (p. 149).

Articles
Asquith, Paul and David W. Mullins Jr. (1986): *Equity issues and offering dilution.* Journal of Financial Economics, Volume 15, Issues 1-2, January-February 1986, p. 61-89.
http://www.sciencedirect.com/science/article/pii/0304405X86900504 (September 20, 2011)

Bhagat, Sanjai and Peter A. Frost (1986): *Issuing costs to existing shareholders in competitive and negotiated underwritten public utility equity offerings.* Journal of Financial Economics, Volume 15, Issues 1-2, January-February 1986, p. 233-259.
http://www.sciencedirect.com/science/article/pii/0304405X86900565 (September 20, 2011)

Barclay, Michael J., Clifford G. Holderness and Dennis P. Sheehan (2007): *Private placements and managerial entrenchment.* Journal of Corporate Finance, Volume 13, Issue 4, September 2007, p. 461-484.
http://www.sciencedirect.com/science/article/pii/S0929119907000284 (September 20, 2011)

Dann, Larry Y. and Harry DeAngelo (1988): *Corporate financial policy and corporate control: A study of defensive adjustments in asset and ownership structure.* Journal of Financial Economics, Volume 20, January-March 1988, p. 87-127.
http://www.sciencedirect.com/science/article/pii/0304405X88900414 (September 20, 2011)

Døskeland, Trond and Aksel Mjøs (2008): *Utviklingen av eierstrukturen på Oslo Børs: En beskrivelse av eierstrukturutviklingen for børsnoterte selskaper i perioden 1994 – 2007.* SNF-report 14/08.
http://www.ftf.no (September 20, 2011)

Eckbo, B. Espen, Ronald W. Masulis and Øyvind Norli (2007): *Security Offerings.* Handbook of corporate finance: empirical corporate finance, vol. 1. Chapter 6, p. 233-373.
http://ssrn.com/abstract=863664 (September 20, 2011)

Eckbo, B. Espen and Øyvind Norli (2005): *Liquidity risk, leverage and long-run IPO returns.* Journal of Corporate Finance, Volume 11, Issues 1-2, March 2005, p. 1-35.
http://www.sciencedirect.com/science/article/pii/S0929119904000276 (September 20, 2011)

Fama, Eugene F. (1998): *Market efficiency, long-term returns, and behavioral finance.* Journal of Financial Economics, Volume 49, Issue 3, 1 September 1998, p. 283-306.

http://www.sciencedirect.com/science/article/pii/S0304405X98000269 (December 5, 2011)

Fama, Eugene F. and Kenneth R. French (1993): *Common risk factors in the returns on stocks and bonds.* Journal of Financial Economics, Volume 33, Issue 1, February 1993, p. 3-56.
http://www.sciencedirect.com/science/article/pii/0304405X93900235 (September 20, 2011)

Franks, Julian, Colin Mayer and Luc Renneboog (1993): *Who Disciplines Management in Poorly Performing Companies?* Journal of Financial Intermediation Volume 10, Issues 3-4, July 2001, p. 209-248.
http://www.sciencedirect.com/science/article/pii/S1042957301903171 (September 20, 2011)

Franks, Julian and Colin Mayer (1997): *Corporate ownership and control in the U.K., Germany, and France.* Journal of Applied Corporate Finance, Volume 9, Issue 4, Winter 1997, p. 30-45.
http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6622.1997.tb00622.x/full (September 20, 2011)

Galai, Dan and Ronald W. Masulis (1976): *The option pricing model and the risk factor of stock.* Journal of Financial Economics, Volume 3, Issues 1-2, January-March 1976, Pages 53-81.
http://www.sciencedirect.com/science/article/pii/0304405X76900209 (September 20, 2011)

Healy, Paul M. and Krishna G. Palepu (1990): *Earnings and risk changes surrounding primary stock offers.* Journal of Accounting Research, Vol. 28, No. 1, Spring 1990, pp. 25-48.
http://www.jstor.org/stable/10.2307/2491216 (September 20, 2011)

Hertzel, Michael and Richard L. Smith (1993): *Market discounts and shareholder gains for placing equity privately.* The Journal of Finance , Vol. 48, No. 2, Jun. 1993, p. 459-485.
http://www.jstor.org/stable/10.2307/2328908 (September 20, 2011)

Jensen, Michael C. and William H. Meckling (1976): *Theory of the firm: Managerial behavior, agency costs and ownership structure.* Journal of Financial Economics, Volume 3, Issue 4, October 1976, p. 305-360.
http://www.sciencedirect.com/science/article/pii/0304405X7690026X (September 20,2011)

Kvaal, Erlend and Bernt A. Ødegaard (2011): *Egenkapitalutvidelser ved Oslo Børs.* Praktisk økonomi og finans, 02/2011.

Leland, Hayne E. and David H. Pyle (1977): *Informational asymmetries, financial structure, and financial intermediation.* The Journal of Finance , Vol. 32, No. 2, September 16-18 1976 (May, 1977), p. 371-387.
http://www.jstor.org/stable/10.2307/2326770 (September 20, 2011)

Masulis, Ronald W. and Ashok N. Korwar (1986): *Seasoned equity offerings: an empirical investigation.* Journal of Financial Economics, Volume 15, Issues 1-2, January-February 1986, Pages 91-118.
http://www.sciencedirect.com/science/article/pii/0304405X86900516 (September 20, 2011)

Miller, Merton H. and Kevin Rock (1985): *Dividend policy and asymmetric information.* The Journal of Finance , Vol. 40, No. 4, September 1985, p. 1031-1051. http://www.jstor.org/stable/10.2307/2328393 (September 20, 2011)

Myers, Stewart C. and Nicholas S. Majluf (1984): *Corporate financing and investment decisions when firms have information that investors do not have.* Journal of Financial Economics, Volume 13, Issue 2, June 1984, p. 187-221. http://www.sciencedirect.com/science/article/pii/0304405X84900230 (September 20, 2011)

Molin, Johan (1996): Shareholder gains from equity private placements: evidence from the Stockholm Stock Exchange. http://swopec.hhs.se/hastef/papers/hastef0101.pdf (September 20, 2011)

Morck, Randall, Andrei Shleifer and Robert W. Vishny (1988): *Management ownership and market valuation: an empirical analysis.* Journal of Financial Economics, Volume 20, January-March 1988, p. 293-315. http://www.sciencedirect.com/science/article/pii/0304405X88900487 (September 20, 2011)

Næs, Randi, Johannes A. Skjeltorp and Bernt Arne Ødegaard (2007): *Hvilke faktorer driver kursutviklingen på Oslo Børs?* http://finance.bi.no/~bernt/wps/faktorer_oslo_bors/wp_faktor_ob_nov_2007.pdf   (October 1, 2011)

Ross, Stephen A. (1977): *The determination of financial structure: the incentive-signalling approach.* The Bell Journal of Economics, Vol. 8, No. 1, Spring 1977, p. 23-40. http://www.jstor.org/stable/10.2307/3003485 (September 20, 2011)

Scholes, Myron S. (1972): *The market for securities: substitution versus price pressure and the effects of information on share prices.* The Journal of Business, Vol. 45, No. 2, Apr., 1972, p. 179-211. http://www.jstor.org/stable/10.2307/2352030 (September 20, 2011)

Wruck, Karen Hopper (1989): *Financial distress, reorganization, and organizational efficiency.* Journal of Financial Economics, Volume 27, Issue 2, October 1990, p. 419-444. http://www.sciencedirect.com/science/article/pii/0304405X90900636 (September 20, 2011)

Internet sources
Norwegian Corporate Governance Board (NUES): *The Norwegian Code of Practice for Corporate Governance, 3. Equity and Dividends.* http://www.nues.no (November 1, 2011)

Oslo Børs. http://www.oslobors.no

Wikborg Rein: *Styrefullmakter.* http://www.e-pages.dk/wikborgrein/4/33 (November 1, 2011)

Presentations
Guro Steine (2010) *Børsens rolle i verdipapirmarkedet og samfunnet* (Presentation held at "AksjeNorge-dagen i Etne" November 2010). http://www.aksjenorge.no/filestore/Etne2010_Guro_Steine_brsens_rolle.pdf   (Oktober   20, 2011)

Appendix

Sample private placements

Company	Date	Size (NOK)
Norse Energy Corp.	13.01.2004	36 000 000
IGNIS	21.01.2004	21 888 090
Solstad Offshore	29.01.2004	107 000 000
Tandberg Storage	02.02.2004	11 045 000
Star Reefers Inc.	11.02.2004	63 463 377
Data Respons	17.02.2004	26 500 000
Birdstep Technology	20.02.2004	75 525 000
Eitzen Maritime Services	10.03.2004	7 800 000
Q-Free	20.04.2004	27 300 000
Technor	09.06.2004	100 008 000
Eltek	26.08.2004	166 380 000
PA Resources	09.09.2004	17 677 854
TTS Group	06.10.2004	22 778 800
Tandberg Storage	03.11.2004	12 335 864
Altinex	01.12.2004	44 000 000
Tandberg Television	02.12.2004	256 300 000
Hexagon Composites	10.12.2004	35 340 000
NextGen Tel Holding ASA	10.12.2004	98 182 500
Global Geo Services	20.12.2004	26 426 000
PA Resources	22.12.2004	18 750 000
Green Reefers	18.01.2005	58 420 000
TTS Group	31.01.2005	30 660 000
Lerøy Seafood Group	01.02.2005	130 872 000
Sevan Marine	09.02.2005	111 709 000
Hands ASA	10.02.2005	9 450 000
Blom	18.02.2005	35 112 500
PA Resources	04.03.2005	33 250 000
Stepstone	16.03.2005	51 800 000
Tandberg Data	16.03.2005	41 850 000
DiaGenic	08.04.2005	20 340 996
Opticom ASA	04.05.2005	58 197 330
Altinex	20.05.2005	105 710 000
Petrojack	26.05.2005	34 169 850
Tandberg Storage	01.06.2005	13 418 500
PA Resources	03.06.2005	153 000 000
Norse Energy Corp.	06.06.2005	63 500 000
Global Geo Services	08.06.2005	35 096 000
Crew Gold Corporation	09.06.2005	144 320 000
Domstein	10.06.2005	40 972 500
Rocksource	15.06.2005	43 547 280
Sevan Marine	24.06.2005	130 860 000
Norse Energy Corp.	30.06.2005	97 650 000

Company	Date	Size (NOK)
Nio Security	08.08.2005	11 475 000
Crew Gold Corporation	16.08.2005	204 225 000
TTS Group	26.08.2005	57 150 000
Tandberg Television	31.08.2005	591 500 000
Questerre Energy Corporation	02.09.2005	43 446 452
Rocksource	07.09.2005	260 000 000
Data Respons	08.09.2005	35 720 000
Mamut	23.09.2005	58 400 000
Sevan Marine	27.09.2005	257 685 000
IGE Resources	30.09.2005	31 500 000
Tandberg Data	30.09.2005	53 250 000
Global Geo Services	05.10.2005	49 549 500
Petrojack	25.10.2005	45 600 000
Opticom ASA	09.11.2005	90 302 980
Stepstone	17.11.2005	72 980 000
Fast Search & Transfer	22.11.2005	610 082 000
Kitron	22.11.2005	45 240 000
Petrolia	20.12.2005	119 768 190
Synnøve Finden	23.12.2005	25 150 900
Scorpion Offshore	06.01.2006	166 500 000
Altinex	11.01.2006	60 320 000
Nio Security	11.01.2006	14 025 000
PA Resources	13.01.2006	248 500 000
Sinvest	24.01.2006	280 500 000
Norse Energy Corp.	26.01.2006	124 800 000
Future Information Research Management	01.02.2006	30 090 000
Tandberg Television	10.02.2006	542 500 000
Questerre Energy Corporation	17.02.2006	42 350 000
SeaDrill	22.02.2006	1 415 000 000
Sevan Marine	22.02.2006	1 549 998 000
Petrolia	24.02.2006	196 100 000
Funcom	01.03.2006	131 150 000
Songa Offshore	07.03.2006	365 400 000
Global Geo Services	15.03.2006	36 708 000
Marine Harvest	16.03.2006	694 800 000
Fara	16.03.2006	14 315 543
DiaGenic	17.03.2006	33 250 000
Crew Gold Corporation	28.03.2006	419 900 000
Petrojack	30.03.2006	105 350 000
Opera Software	30.03.2006	211 250 000
Norwegian Air Shuttle	31.03.2006	119 600 000
SeaDrill	03.04.2006	3 510 000 000
Petrolia	21.04.2006	602 250 000
Lerøy Seafood Group	25.04.2006	440 300 000
Havila Shipping	26.04.2006	82 650 000

Company	Date	Size (NOK)
Data Respons	05.05.2006	37 675 000
SeaBird Exploration	08.05.2006	102 400 000
APL	10.05.2006	216 910 000
Norstat	11.05.2006	18 060 000
Simrad Optronics	31.05.2006	16 005 675
Eastern Drilling	01.06.2006	1 199 999 970
Altinex	02.06.2006	499 999 000
Questerre Energy Corporation	09.06.2006	56 118 020
Captura	23.06.2006	12 103 000
Atea	05.07.2006	420 000 010
PA Resources	27.07.2006	175 420 000
Golden Ocean Group	09.08.2006	128 625 000
Camillo Eitzen & Co	23.08.2006	229 250 000
Fara	01.09.2006	15 000 000
Global Geo Services	01.09.2006	80 024 970
Synnøve Finden	01.09.2006	40 250 000
SeaBird Exploration	08.09.2006	199 990 000
CanArgo Energy Corporation	20.09.2006	111 596 649
Navamedic	13.10.2006	9 884 160
Scorpion Offshore	18.10.2006	238 000 000
IGNIS	17.11.2006	37 920 000
Stepstone	17.11.2006	184 500 000
Mamut	22.11.2006	63 865 000
TTS Group	08.12.2006	131 534 850
IGE Resources	08.12.2006	126 000 000
DOF	12.12.2006	402 000 000
PA Resources	13.12.2006	270 000 000
AGR Group	15.12.2006	171 059 850
Petrolia	15.12.2006	264 880 000
Questerre Energy Corporation	19.12.2006	100 800 000
Songa Offshore	20.12.2006	218 750 000
Fairstar Heavy Transport	22.12.2006	85 215 000
Geo ASA	18.01.2007	276 500 000
Blom	18.01.2007	129 600 000
Marine Farms	02.02.2007	60 060 000
Revus Energy ASA	06.02.2007	217 793 400
Hexagon Composites	07.02.2007	50 500 000
Tandberg Storage	13.02.2007	44 999 000
Odfjell Invest	27.02.2007	510 365 850
IMAREX	08.03.2007	88 253 100
Sevan Marine	21.03.2007	743 487 500
Rocksource	22.03.2007	77 777 700
Norwegian Property	29.03.2007	499 999 992
Wentworth Resources	30.03.2007	215 020 000
Bionor Pharma	19.04.2007	24 381 500

Company	Date	Size (NOK)
BWG Homes	19.04.2007	652 399 110
Camillo Eitzen & Co	03.05.2007	228 203 438
DiaGenic	03.05.2007	25 805 000
Simrad Optronics	07.05.2007	55 838 010
Komplett	10.05.2007	129 000 000
Codfarmers	22.05.2007	49 244 800
Global Geo Services	01.06.2007	200 000 000
Copeinca	18.06.2007	780 000 000
Birdstep Technology	19.06.2007	117 000 000
Northland Resources	19.06.2007	604 001 250
Biotec Pharmacon	21.06.2007	92 402 700
Funcom	27.06.2007	180 950 000
Seadrill	11.07.2007	889 000 000
Scorpion Offshore	25.07.2007	279 300 000
Nio Security	01.08.2007	8 890 000
Simtronics	16.08.2007	32 016 000
Global Geo Services	22.08.2007	425 000 000
Goodtech	12.09.2007	80 000 000
Norstat	21.09.2007	14 418 819
Dolphin Group	16.10.2007	8 145 000
Sevan Marine	16.10.2007	1 064 630 000
TTS Group	07.11.2007	242 000 000
Wentworth Resources	08.11.2007	528 000 000
Apptix	19.11.2007	28 000 000
Golar LNG	19.11.2007	425 600 000
Revus Energy ASA	14.12.2007	437 470 000
Mamut	19.12.2007	52 390 000
Nio Security	15.02.2008	11 000 000
IMAREX	18.02.2008	149 994 400
Tandberg Storage	27.02.2008	11 100 000
SeaBird Exploration	28.02.2008	121 500 000
Seadrill	11.04.2008	195 000 000
Kongsberg Automotive Holding	16.04.2008	549 990 000
IGE Resources	17.04.2008	50 320 000
DiaGenic	08.05.2008	44 800 000
Revus Energy ASA	21.05.2008	366 383 776
Oceanteam ASA	21.05.2008	103 826 475
Questerre Energy Corporation	22.05.2008	178 500 000
Dolphin Group	06.06.2008	13 340 000
Sevan Marine	11.06.2008	1 210 672 000
Crew Gold Corporation	13.06.2008	324 563 850
Frontline	26.06.2008	1 071 000 000
AGR Group	27.06.2008	34 200 000
Scorpion Offshore	27.06.2008	434 700 000
Songa Offshore	16.10.2008	265 000 000

Company	Date	Size (NOK)
Algeta	18.02.2009	245 300 000
Scorpion Offshore	04.03.2009	432 432 432
Fara	27.04.2009	46 635 000
Norwegian Energy Company	05.05.2009	214 400 000
Marine Harvest	08.05.2009	302 400 000
Mamut	15.05.2009	34 425 000
DOF	20.05.2009	243 965 000
Petroleum Geo-Services	28.05.2009	656 999 964
Sevan Marine	03.06.2009	1 100 000 000
Grieg Seafood	10.06.2009	139 055 000
Rocksource	10.06.2009	126 225 000
PA Resources	16.06.2009	239 580 000
Scandinavian Property Development	26.06.2009	700 000 000
Norse Energy Corp.	16.09.2009	135 968 336
Austevoll Seafood	17.09.2009	653 200 000
Norwegian Energy Company	23.09.2009	1 200 000 000
Q-Free	23.10.2009	109 650 000
Norwegian Air Shuttle	06.11.2009	251 100 000
SeaBird Exploration	11.11.2009	189 000 000
Green Reefers	25.11.2009	60 000 000
Electromagnetic Geoservices	02.12.2009	135 000 000
IGNIS	02.12.2009	13 500 000
Star Reefers Inc.	15.12.2009	105 000 000
Norse Energy Corp.	12.01.2010	299 999 999
Songa Offshore	17.02.2010	594 500 000
IGNIS	22.02.2010	30 000 000
Fairstar Heavy Transport	23.02.2010	53 968 750
Norwegian Property	11.03.2010	543 912 000
Songa Offshore	25.03.2010	300 585 000
Seadrill	13.04.2010	1 893 750 000
Dolphin Group	16.04.2010	11 658 000
Rocksource	30.04.2010	249 093 300
IGE Resources	04.05.2010	31 023 679
Nio Security	16.06.2010	4 900 000
Fairstar Heavy Transport	25.06.2010	212 500 000
TTS Group	06.07.2010	42 354 396
Siem Offshore	07.07.2010	348 980 984
IGNIS	21.09.2010	27 798 400
IGE Resources	22.09.2010	88 641 747
Petroleum Geo-Services	16.11.2010	1 643 399 834
Clavis Pharma	18.11.2010	154 000 000
DNO International	18.11.2010	360 000 000
Morpol	08.12.2010	311 600 000
NorDiag	17.12.2010	11 171 750
Biotec Pharmacon	23.12.2010	22 050 000

CASE: Petrolia Drilling

To illustrate the use of private placements at the OSE during the 2004-2010 it can be worthwhile to take a closer look at a firm that conducted several private placements during a short amount of time within the sample period.

At the 2005 annual general meeting the board of Petrolia Drilling (now Petrolia) was given a mandate to issue new equity up to 50 percent of the existing share capital, the maximum allowed by law. They have since been given the same mandate every year.

In just over a year from late 2005 to late 2006, Petrolia Drilling issued equity in five separate private placements. After a turbulent couple of years for the firm without any significant revenue, they entered an expansion phase. The management expressed a positive view on the future, and talked about the opportunity to take part in what looked like the best rig market in years.

Petrolia Drilling share price development

Figure 9

On November 29th 2005, after a recent surge in the share price, Petrolia Drilling issued NOK 52 million (25% of existing share capital) in a private placement that increased the ownership share of the biggest owner to over 35%. A month later, the firm conducted another private placement, this time bringing in NOK 120 million. During the course of 2006, the firm carried out three additional private placements for total proceeds of over NOK

1 billion. The stated reasons for these private placements were a combination of rig investments and for general corporate purposes. They were all done within the limits of the 2005 and 2006 board authorizations given at the annual general meetings.

Plotting these five private placements together with the firm's share price development through the 2004-2010 period, as shown by figure X, Petrolia Drilling seems to be an example of a firm issuing equity at a time where the stock is overvalued. However, deeper analysis is needed to determine if dilution and value destruction as a result of extensive use of private placements are part of the reason for the share price plunge in the subsequent years. Rig companies are extremely influenced by the current market conditions, so it is to be expected that the fall of 2007-2008 was mainly due to a deterioration of the rates in the rig market.